APPENDIX A

UMR20-25 SAS STATISTICAL ANALYSIS

Appendix A

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A.0 Introduction

This appendix contains the SAS programs used to analyze the OMNI data provided by the U.S. Army Corps of Engineers. To model the system traffic accurately, "lockperf.sas" and "fitmodx.sas" contain macro variables to allow the programs to output statistics for tow and recreational vessels independently. A.4 and A.6 also contain programs and outputs for tows using the second level of enhancement following those using the level one enhancement. The resulting reports from each program, including the separate output produced by additional runs for recreational vessels only, appear in the appendix. As the SAS programs run, they export comma separated value files of certain datasets for use in other programs. These files, imported into the JMP IN 5.1 statistical software, then produce the numerous graphs, charts, and plots included throughout the appendix.

```
options mprint macrogen;
libname water v8 '~/waterway';
libname water '~/waterway';
%include '~/waterway/pctday.sas';

proc format ;
 value $lkgetyp  'S' = '2:SINGLE'
                 'C' = '1:DOUBLE'
                 'K' = '3:KNOCKOUT'
                 'V' = '4:JACKNIFE'
                  other   ='5:OTHER'
                  ;
run;

proc format ;
 value YN  0 = 'N'
           1 = 'Y'
               ;
run;
%macro subset; if river_code eq 'MI' and lock_no ge 19 and lock_no le 26  %mend;
%macro memco; if owner eq 'MEMCO'  %mend;
%macro ingram; if owner eq 'INGRAM' %mend;
%macro ACBL; if owner eq 'ACBL' %mend;
%macro KIRBY; if owner eq 'KIRBY' %mend;
 %macro lock24; if lock_no eq 24 %mend;
 %macro lock26; if lock_no eq 26 %mend;
 %macro critlock; if lock_no ge 19 and lock_no le 27 %mend;
 %macro critsix; if lock_no ge 20 and lock_no le 25 %mend;
 %macro mississ; if river_code eq 'MI'  %mend;
options ls=136;
%macro opstats (regen=no,  /* regenerate datasets  */
                traffic=traf0904,   /* input dataset for lock traffic  */
                opsdata=ops0904,   /* input dataset for lock operations  */
                debug=no, /* browse progress  */
                lockage=yes,   /* generate statistics for lock activities */
                csvexp=no,   /* export csv files for excel */
                vessels=yes,  /* generate statistics for vessel itineraries */
                ptrans=yes,  /* print matrix of pool transitions */
                pmvmt=yes ,  /* create data sets of pool directional movements */

                /* the following two parameters will eliminate all records if both are set to yes */
                norecs=yes,  /* eliminate recreational vehicles from stats */
                onlyrecs=no, /* run stats for recreational vehicles only */

               dstream=yes,  /* create data stream for transactions */
               queues=yes,  /* obtain queueing statistics at locks */
               subset=, /* name of macro for subsetting data for stat analysis*/
               firstdte=mdy(1,1,2000),  /* beginning day for statistical summaries*/
               lastdte=mdy(12,31,2003),  /* ending day for statistical summaries*/
               begdate=mdy(1,1,2000),  /* beginning day for itinerary data stream*/
               enddate=mdy(12,31,2003),  /* ending day for itinerary data stream*/
               frstlck=18,  /* first lock for queueing stats */
               lastlck=27,  /* last lock for queueing stats */
          );

 %if %upcase(&regen)=YES %then %do;
```

SAS Program “trafficstats.sas”


```
   ** regenerate basic data;

/*** Append direction from lock operations data to the traffic data  ***/

proc sort data=water.&traffic; by river_code ops_id; run;
data uord; set water.&opsdata;
   keep river_code ops_id direction chmbr_no;
run;

proc sort; by river_code ops_id; run;

data traffic;
     merge water.traf0904 (in=inf) Uord ;
     length  vess_no 8  ;
     by river_code ops_id; if inf;
     vessel_no = left(vessel_no);
     vess_no=vessel_no;
     * drop vessel_no;
 run;

/*** Append vessel type and horsepower from vessel data***/

data vessel; set water.vessdata;
 length  vess_type $1 vess_hp 4  vess_no 8  ;
 vessel_no=left(vessel_no);
 vess_no=vessel_no; vess_type=vessel_typ; vess_hp=vessel_hp;
 keep vess_no vessel_no  vess_type vess_hp owner;
run;

 proc sort data=vessel; by vess_no ; run;
proc sort data=traffic; by vess_no ; run;

data trffcv;
     merge traffic (in=inz) vessel ;
     by vess_no;  length vss_hp 4  ;
     if vess_hp gt 0 then vss_hp=vess_hp; else vss_hp= . ;
     drop vess_hp;
     if inz;
 run;

 data lockage badlockdata;
   set trffcv (rename=(arrival_date=arrtime sol_date=strtlcktime
                  end_of_lockage=deptime));
   ** identify first and last time in record;
    frsttime=min(arrtime,strtlcktime, deptime);
    lasttime=max( arrtime,strtlcktime, deptime);

   * identify old and new pool;
   length newpool oldpool $5;
    length lockno 4.; lockno=input(lock_no,2.); drop lockno;
    length newpoolno  oldpoolno 4  ;

    if direction eq 'U' then do;
       newpoolno=lockno; oldpoolno=lockno+1;
      if lockno not in (51,52,55,22) then do;
```

SAS Program “trafficstats.sas” (cont.)

```
      newpool=river_code||put(newpoolno,z2.)||'U';
      oldpool=river_code||put(oldpoolno,z2.)||'U';
     end;
    if river_code eq 'MI' then do;
     if lockno eq 5 then do ;
       newpool='MI05U';
       oldpool='MI5AU';
     end;
     if lockno eq 22 then do ;
       newpool='MI22U';
       oldpool='MI24U';
     end;
     if lockno eq 51 then do ;
       newpool='MIUSU';
       oldpool='MILSU';
     end;
     if lockno eq 52 then do ;
       newpool='MILSU';
       oldpool='MI01U';
     end;
     if lockno eq 55 then do ;
       newpool='MI5AU';
       oldpool='MI06U';
     end;
    end;
   end;

   if direction eq 'D' then do;
      newpoolno=lockno+1; oldpoolno=lockno;
     if lockno not in (51,52,55,22) then do;
      newpool=river_code||put(newpoolno,z2.)||'D';
      oldpool=river_code||put(oldpoolno,z2.)||'D';
     end;
    if river_code eq 'MI' then do;
     if lockno eq 5 then do ;
       newpool='MI5AD';
       oldpool='MI05D';
     end;
     if lockno eq 22 then do ;
       newpool='MI24D';
       oldpool='MI22D';
     end;
     if lockno eq 51 then do;
       newpool='MILSD';
       oldpool='MIUSD';
     end;
     if lockno eq 52 then do ;
       newpool='MI01D';
       oldpool='MILSD';
     end;
     if lockno eq 55 then do ;
       newpool='MI05D';
       oldpool='MI5AD';
     end;
    end;
   end;
```



```
    waitmin=(strtlcktime-arrtime)/60;
    lockmin=(deptime-strtlcktime)/60;
  ** screen out bad data for corrections;
  if arrtime gt strtlcktime or strtlcktime gt deptime
     or arrtime gt deptime then output badlockdata;
      else output lockage;

 run;



 *** summarize lock activity;
 proc freq data=lockage;
 where  river_code eq 'MI' ;
 title lockage records at each Mississipi River lock;
 title2 "for lockages with arrivals between &firstdte and &lastdte";
      tables lock_no * lockage_type lock_no * vess_type ;
  format lockage_type $lkgetyp.;
 run;
proc means data=lockage n nmiss sum mean min max;
     title summaries for records in vprocess prior to consolidation for cuts;
 title2 "for lockages with arrivals between &firstdte and &lastdte";
run;


 *** check for inconsistencies among time records and summarize pool changes;



proc sort data=lockage /*nodupkey*/ ; by river_code lock_no arrtime vess_no;
                          ;
data water.lockage; set lockage; by river_code lock_no arrtime vess_no;

retain carrtime clksttime cdeptime;
 drop  carrtime clksttime cdeptime;
 if first.vess_no then do;
   carrtime=  arrtime; clksttime=strtlcktime; cdeptime=deptime ;
 end;

  length multrec $1;
  multrec='N';
** identify multiple lockages;
if not first.vess_no then do;
  multrec='Y';
 end;

 if arrtime ne . then carrtime=min(carrtime,arrtime);
 if strtlcktime ne . then clksttime=min(clksttime,strtlcktime);
 if deptime ne . then cdeptime=max(cdeptime,deptime);

 if last.vess_no then do;
   arrtime=carrtime;
   strtlcktime=clksttime;
   deptime=cdeptime;
   waitmin=(strtlcktime-arrtime)/60;
```

```
    lockmin=(deptime-strtlcktime)/60;
  output water.lockage;
 end;
 label arrtime='Arriv/time'
       strtlcktime='Start/lockge/time'
       deptime='Leave/lockge/time'
       waitmin='Wait/before/lockge'
       lockmin='Wait/lockge/time'
       ;


%if %upcase(&debug) eq YES %then %do;
    proc fsbrowse data = water.lockage;
    run;
 %end; ** of debug;

 %end; *** of regen;


 %if %upcase(&lockage)=YES %then %do;

  data lockage; set water.lockage;    length lagdir $1 opstype $8;;

   length lagdir $1;
   lagdir=lag(direction);
   totmin=waitmin+lockmin;
   if waitmin eq 0 then opstype='FLY';
   if waitmin gt 0 and direction eq lagdir then opstype='TURNBACK';
   if waitmin gt 0 and direction ne lagdir then opstype='EXCHANGE';

   %if %upcase(&norecs)=YES %then %do;
   *if  abs( vess_no - 9999999. ) gt .1 ;
    if vess_type ne 'R';
   %end; ** of norecs;

   %if %upcase(&onlyrecs)=YES %then %do;
   *if  abs( vess_no - 9999999. ) gt .1 ;
    if vess_type eq 'R';
   %end; ** of onlyrecs;

  %if %upcase(&subset) ne %str() %then %subset  ; ;
   if datepart(arrtime) ge &firstdte and datepart(arrtime) le &lastdte ;
   run;


   proc sort data=lockage; by river_code lock_no;


  %if %upcase(&debug) eq YES %then %do;
    proc fsbrowse data = lockage;
    run;
 %end;

  *** summarize lock activity;
  proc freq data=lockage;
  * where  river_code eq 'MI' ;
```

SAS Program “trafficstats.sas” (cont.)


```
  title lockage activity at each River lock (after combining records for cuts);
  title2 "with elimination of recreational vessels = &norecs";
  title3 "%&&subset";
  title4 "for lockages with arrivals between &firstdte and &lastdte";
      tables lock_no*multrec  lock_no * lockage_type lockage_type*multrec
          lock_no * vess_type ;;
  format lockage_type $lkgetyp.;
  run;

 proc sort data=lockage;
   by river_code lock_no  chmbr_no opstype lockage_type direction;
 run;
 proc univariate noprint data=lockage;
    format lockage_type $lkgetyp.;
   by river_code lock_no chmbr_no opstype lockage_type direction;
   var totmin waitmin lockmin ;
 output out = tstat
        n= ntottime nwait nlock
        nmiss=nmisstt nmisswt nmisslck
        sum  = smtt smwt smlock
        mean = avtt avwt avlock
        median= mdtt mdwt mdlock
        min=mntt mnwt mnlock
        max=mxtt mxwt mxlock
        p5 = p5tt p5wt p5lock
        p95= p95tt p95wt p95lock
        std= stdtt stdwt stdlock;
 run;

 data tstat; set tstat;
 label
        chmbr_no='Lock/Chamber/Number'
        direction='Travel/Direction'
        opstype='Operation/Type'
        river_code='River/Code'
        lock_no='Lock/Number'
        lockage_type='Lockage/Type'
        ntottime='Num/Total/Time/Obs'
        nwait='Num/Wait/Obs'
        nlock='Num/Lockage/Obs'
        nmisstt='Num/Missing/Values'
        nmisswt='Num/Missing/Values'
        nmisslck='Num/Missing/Values'
        avtt='Avg Mins/Total/Time'
        smtt='Sum Mins/Total/Time'
        smlock='Sum Mins/Lock/Time'
        avlock='Avg Mins/Lock/Time'
        smwt='Sum Mins/Wait/to Lock'
        avwt='Avg Mins/Wait/to Lock'
        mdtt='Median/Total/Time'
        mdwt='Median/Wait/to Lock'
        mdlock='Median/Lock/Time'
        mntt='Smallest/Total/Time'
        mnwt='Smallest/Wait Time/to Lock'
        mnlock='Smallest/Lock/Time'
        mxtt='Largest/Total/Time'
```

SAS Program “trafficstats.sas” (cont.)

```
      mxwt='Largest/Wait/to Lock'
      mxlock='Largest/Lock/Time'
      p5tt='5th/Pctile/Total/Time'
      p5wt='5th/Pctile/Wait/to Lock'
      p5lock='5th/Pctile/Lock/Time'
      p95tt='95th/Pctile/Total/Time'
      p95wt='95th/Pctile/Wait/to Lock'
      p95lock='95th/Pctile/Lock/Time'
      stdtt='Std Dev/Total/Time'
      stdwt='Std Dev/Wait/to Lock'
      stdlock='Std Dev/Lock/Time';
 run;

 proc print data = tstat label split='/';
 title Summary Statistics for Locks in Simulation Model by lockage type;
 title2 Total Lockage Time from Arrival to Departure;
 title3 "%&&subset with elimination of recreational vessels = &norecs";
 title4 "for lockages with arrivals between &firstdte and &lastdte";
   format lockage_type $lkgetyp.;
 id river_code lock_no  chmbr_no opstype lockage_type direction;
 var nlock nmisstt smtt avtt stdtt mntt p5tt mdtt p95tt mxtt;
 run;

 proc print data = tstat label split='/';
 title Summary Transit Statistics for Locks in Simulation Model;
 title2 Wait Times (minutes from arrival to start of loackage) at Current Lockage by lockage type;
 title3 "%&&subset with elimination of recreational vessels = &norecs";
 title4 "for lockages with arrivals between &firstdte and &lastdte";
   format lockage_type $lkgetyp.;
 id river_code lock_no  chmbr_no opstype lockage_type direction;
 var  nwait nmisswt smwt avwt stdwt mnwt p5wt mdwt p95wt mxwt;
 run;

proc print data = tstat label split='/';
 title Summary Statistics for Locks in Simulation Model by lockage type;
 title2 Total Lockage Time in Lock;
 title3 "%&&subset with elimination of recreational vessels = &norecs";
 title4 "for lockages with arrivals between &firstdte and &lastdte";
   format lockage_type $lkgetyp.;
  id river_code lock_no  chmbr_no opstype lockage_type direction;
  var ntottime nmisslck smlock avlock stdlock mnlock p5lock mdlock p95lock mxlock;
 run;

 data water.tstattt; set tstat (rename=(lockage_type=lckage_type));
   length lockage_type $10;
   if lckage_type='C' then lockage_type='1:DOUBLE';
   if lckage_type='S' then lockage_type='2:SINGLE';
   if lckage_type='K' then lockage_type='3:KNOCKOUT';
   if lckage_type='V' then lockage_type='4:JACKKNIFE';
   if lckage_type ne 'C' and lckage_type ne 'S'
         and lckage_type ne 'K'  and lckage_type ne 'V' then
         lockage_type='5:OTHER';
   keep river_code lock_no  chmbr_no opstype lockage_type direction
        nlock nmisstt smtt avtt stdtt mntt p5tt mdtt p95tt mxtt;
 run;
```

SAS Program “trafficstats.sas” (cont.)


```
 data water.tstatwt; set tstat (rename=(lockage_type=lckage_type));
   length lockage_type $10;
   if lckage_type='C' then lockage_type='1:DOUBLE';
   if lckage_type='S' then lockage_type='2:SINGLE';
   if lckage_type='K' then lockage_type='3:KNOCKOUT';
   if lckage_type='V' then lockage_type='4:JACKKNIFE';
   if lckage_type ne 'C' and lckage_type ne 'S'
         and lckage_type ne 'K'  and lckage_type ne 'V' then
         lockage_type='5:OTHER';
   keep river_code lock_no  chmbr_no opstype lockage_type direction
        nwait nmisswt smwt avwt stdwt mnwt p5wt mdwt p95wt mxwt;
 run;

 data water.tstatlock; set tstat (rename=(lockage_type=lckage_type));
   length lockage_type $10;
   if lckage_type='C' then lockage_type='1:DOUBLE';
   if lckage_type='S' then lockage_type='2:SINGLE';
   if lckage_type='K' then lockage_type='3:KNOCKOUT';
   if lckage_type='V' then lockage_type='4:JACKKNIFE';
   if lckage_type ne 'C' and lckage_type ne 'S'
         and lckage_type ne 'K'  and lckage_type ne 'V' then
         lockage_type='5:OTHER';
   keep river_code lock_no  chmbr_no opstype lockage_type direction
        ntottime nmisslck smlock avlock stdlock mnlock p5lock mdlock p95lock mxlock;
 run;


 %end; ** of lockage analysis;


 %if %upcase(&vessels)=YES %then %do;

 *** study vessel itineraries;
  *** analyze subsequent pools;
  data vprocess; set lockage;
 run;

proc sort data=vprocess; by vess_no arrtime; run;


 data vprocess; set vprocess;
   by vess_no arrtime;

   length poldpool pnewpool $5 pdirection $1 sequpstr 4. seqdstr lock plock 4. plockagetype $1;

   label stop_code='Stop';

   lock=input(lock_no,2.);
   poldpool=lag(oldpool);
   pnewpool=lag(newpool);
   pempty=lag(num_empty_brg);
   plockagetype=lag(lockage_type);
   pfull=lag(num_loaded_brg);
   ldeptime=lag(deptime);
   pdirection=lag(direction);
   privercode=lag(river_code);
```

SAS Program “trafficstats.sas” (cont.)

```
  plock=lag(lock);
 if first.vess_no or first.year then do;
  poldpool=' ';
  pnewpool='BIRTH';
  ldeptime=.;
  pdirection=' ';
  plock=.;
 end;
  if ( (plock-lock = -1 and river_code eq privercode)
       or (lock eq 24  and plock eq 22 and privercode eq 'MI')
       or (lock eq 55 and plock eq 5 and privercode eq 'MI')
      or (lock eq 6 and river_code eq 'MI' and plock eq 55) or (lock eq 52 and plock eq 51)
          or (lock eq 1 and river_code eq 'MI'and plock eq 52)
      or (plock eq 8 and privercode='IL' and lock eq 26 ) )
            and (direction='D' and pdirection='D' )  and stop_code eq 'N'
              and pempty eq num_empty_brg and pfull eq num_loaded_brg
              then seqdstr=1; else seqdstr=0;
  if ( (plock-lock = 1 and river_code eq privercode)
       or (lock eq 22  and plock eq 24 and privercode eq 'MI')
     or (plock eq 55 and lock eq 5 and river_code eq 'MI')
      or (plock eq 6 and privercode eq 'MI' and lock eq 55) or (plock eq 52 and lock eq 51)
          or (plock eq 1 and privercode eq 'MI'and lock eq 52)
      or (lock eq 8 and river_code='IL' and plock eq 26 )  )
            and (direction='U' and pdirection='U' ) and stop_code eq 'N'
              and pempty eq num_empty_brg and pfull eq num_loaded_brg
              then sequpstr=1; else sequpstr=0;
  transithrs=(arrtime-ldeptime)/3600;


  *** subset;

  %if %upcase(&norecs)=YES %then %do;
  *if  abs( vess_no - 9999999. ) gt .1 ;
   if vess_type ne 'R';
  %end; ** of norecs;

  %if %upcase(&onlyrecs)=YES %then %do;
  *if  abs( vess_no - 9999999. ) gt .1 ;
   if vess_type eq 'R';
  %end; ** of onlyrecs;

 %if %upcase(&subset) ne %str() %then %&subset  ; ;
  if datepart(arrtime) ge &firstdte and datepart(arrtime) le &lastdte ;
 run;

 %if %upcase(&debug)=YES %then %do;
     proc fsbrowse data=vprocess;
     run;
%end;


 *** summarize pool transitions;
 %if %upcase(&ptrans)=YES %then %do;
 proc freq data=vprocess;
   title itinerary characteristics of lockage records;
 title2 "for lockages with arrivals between &firstdte and &lastdte";
```

SAS Program “trafficstats.sas” (cont.)


```
  tables newpool *  seqdstr newpool * sequpstr;

 proc freq data=vprocess;
 *  where substr(oldpool,1,4) in ('MI20','MI21','MI22','MI23','MI24','MI25');
   where substr(newpool,1,4) in ('MI19','MI20','MI21','MI22','MI23','MI24','MI25','MI26');
   title successive lock entry pools for vessels;
 title2 "%&&subset with elimination of recreational vessels = &norecs";
 title3 "for lockages with arrivals between &firstdte and &lastdte";
   tables poldpool * oldpool;
 label poldpool ='prev entry pool'
       oldpool ='curr entry pool' ;
 run;

 proc freq data=vprocess;
   where substr(newpool,1,4) in ('MI19','MI20','MI21','MI22','MI23','MI24','MI25','MI26');
   title successive lock exit pools for vessels;
 title2 "%&&subset with elimination of recreational vessels = &norecs";
 title3 "for lockages with arrivals between &firstdte and &lastdte";
   tables pnewpool * newpool;
 label pnewpool ='prev exit  pool'
       newpool ='curr exit  pool' ;
 run;
%end; * of ptrans;

*** compute transit statistics;

data transtat; set vprocess (keep= newpool  sequpstr seqdstr  stop_code owner
      arrtime deptime waitmin lockmin lockage_type transithrs );
 if substr(newpool,1,4) in ('MI20','MI21','MI22','MI23','MI24','MI25');
run;

proc  sort data=transtat; by newpool sequpstr seqdstr stop_code lockage_type;
run;

proc univariate noprint data=transtat;
  format lockage_type $lkgetyp. sequpstr YN. seqdstr YN.;

   by  newpool sequpstr seqdstr  stop_code           ;
 var transithrs waitmin lockmin ;
output out = tstat
      n= ntrans nwait nlock
      nmiss=nmisstr nmisswt nmisslck
      sum  = smtr smwt smlock
      mean = avtr avwt avlock
      median= mdtr mdwt mdlock
      min=mntr mnwt mnlock
      max=mxtr mxwt mxlock
      p5 = p5tr p5wt p5lock
      p95= p95tr p95wt p95lock
      std= stdtr stdwt stdlock;
run;

data tstat;  set tstat;
 label  ntrans='Num/Transit/Obs'
      chmbr_no='Lock/Chamber/Number'
      lockage_type='Lockage/Type'
```

SAS Program “trafficstats.sas” (cont.)

```
        nwait='Num/Wait/Obs'
        nlock='Num/Lock/Obs'
        nmisstr='Num/Missing/Values'
        nmisswt='Num/Missing/Values'
        nmisslck='Num/Missing/Values'
        sequpstr='Sequential/Locks/Upstream'
        seqdstr='Sequential/Locks/Downstream'
        smtr='Sum Hrs/Transit/Time'
        avtr='Avg Hrs/Transit/Time'
        smlock='Sum Mins/Lock/Time'
        avlock='Avg Mins/Lock/Time'
        smwt='Sum Mins/Wait/to Lock'
        avwt='Avg Mins/Wait/to Lock'
        mdtr='Median/Transit/Time'
        mdwt='Median/Wait/to Lock'
        mdlock='Median/Lock/Time'
        mntr='Smallest/Transit/Time'
        mnwt='Smallest/Wait Time/to Lock'
        mnlock='Smallest/Lock/Time'
        mxtr='Largest/Transit/Time'
        mxwt='Largest/Wait/to Lock'
        mxlock='Largest/Lock/Time'
        p5tr='5th/Pctile/Transit/Time'
        p5wt='5th/Pctile/Wait/to Lock'
        p5lock='5th/Pctile/Lock/Time'
        p95tr='95th/Pctile/Transit/Time'
        p95wt='95th/Pctile/Wait/to Lock'
        p95lock='95th/Pctile/Lock/Time'
        stdtr='Std Dev/Transit/Time'
        stdwt='Std Dev/Wait/to Lock'
        stdlock='Std Dev/Lock/Time';
 run;

  proc print data = tstat label split='/';
  title Summary Transit Statistics for Locks in Simulation Model;
  title2 Transit Times (hours) from Previous Lockage;
  title3 "%&&subset with elimination of recreational vessels = &norecs";
  title4 "for lockages with arrivals between &firstdte and &lastdte";
  id newpool;
   var sequpstr seqdstr stop_code ntrans nmisstr smtr avtr stdtr mntr p5tr mdtr p95tr mxtr;
  run;

 data water.tsum; set tstat (rename=(sequpstr=sequp seqdstr=seqd));
   length sequpstr $1 seqdstr $1;
   if sequp=0 then sequpstr='N';
   if seqd=1 then seqdstr='Y';
   keep newpool sequpstr seqdstr stop_code ntrans nmisstr smtr
            avtr stdtr mntr p5tr mdtr p95tr mxtr;
 run;


  proc univariate noprint data=transtat;
     format lockage_type $lkgetyp. sequpstr YN. seqdstr YN.;
      by  newpool sequpstr seqdstr stop_code lockage_type ;
    var transithrs waitmin lockmin ;
  output out = tstat
```

SAS Program “trafficstats.sas” (cont.)


```
        n= ntrans nwait nlock
        nmiss=nmisstr nmisswt nmisslck
        sum  = smtr smwt smlock
        mean = avtr avwt avlock
        median= mdtr mdwt mdlock
        min=mntr mnwt mnlock
        max=mxtr mxwt mxlock
        p5 = p5tr p5wt p5lock
        p95= p95tr p95wt p95lock
        std= stdtr stdwt stdlock;
 run;


 data tstat;  set tstat;
  label  ntrans='Num/Transit/Obs'
        lockage_type='Lockage/Type'
        chmbr_no='Lock/Chamber/Number'
        nwait='Num/Wait/Obs'
        nlock='Num/Lock/Obs'
        nmisstr='Num/Missing/Values'
        nmisswt='Num/Missing/Values'
        nmisslck='Num/Missing/Values'
        sequpstr='Sequential/Locks/Upstream'
        seqdstr='Sequential/Locks/Downstream'
        smtr='Sum Hrs/Transit/Time'
        avtr='Avg Hrs/Transit/Time'
        smlock='Sum Mins/Lock/Time'
        avlock='Avg Mins/Lock/Time'
        smwt='Sum Mins/Wait/to Lock'
        avwt='Avg Mins/Wait/to Lock'
        mdtr='Median/Transit/Time'
        mdwt='Median/Wait/to Lock'
        mdlock='Median/Lock/Time'
        mntr='Smallest/Transit/Time'
        mnwt='Smallest/Wait Time/to Lock'
        mnlock='Smallest/Lock/Time'
        mxtr='Largest/Transit/Time'
        mxwt='Largest/Wait/to Lock'
        mxlock='Largest/Lock/Time'
        p5tr='5th/Pctile/Transit/Time'
        p5wt='5th/Pctile/Wait/to Lock'
        p5lock='5th/Pctile/Lock/Time'
        p95tr='95th/Pctile/Transit/Time'
        p95wt='95th/Pctile/Wait/to Lock'
        p95lock='95th/Pctile/Lock/Time'
        stdtr='Std Dev/Transit/Time'
        stdwt='Std Dev/Wait/to Lock'
        stdlock='Std Dev/Lock/Time';
 run;

  proc print data = tstat label split='/';
  title Summary Transit Statistics for Locks in Simulation Model by lockage type;
  title2 Transit Times (hours) from Previous Lockage;
  title3 "%&&subset with elimination of recreational vessels = &norecs";
  title4 "for lockages with arrivals between &firstdte and &lastdte";
    format lockage_type $lkgetyp.;
```

SAS Program “trafficstats.sas” (cont.)

```
  id newpool lockage_type;
  var sequpstr seqdstr stop_code ntrans nmisstr smtr avtr stdtr mntr p5tr mdtr p95tr mxtr;
 run;

data water.tsumloc; set tstat (rename=(lockage_type=lckage_type sequpstr=sequp seqdstr=seqd));
   length lockage_type $10 sequpstr $1 seqdstr $1;
   if sequp=0 then sequpstr='N';
   if seqd=1 then seqdstr='Y';
   if lckage_type='C' then lockage_type='1:DOUBLE';
   if lckage_type='S' then lockage_type='2:SINGLE';
   if lckage_type='K' then lockage_type='3:KNOCKOUT';
   if lckage_type='V' then lockage_type='4:JACKKNIFE';
   if lckage_type ne 'C' and lckage_type ne 'S'
         and lckage_type ne 'K'  and lckage_type ne 'V' then
         lockage_type='5:OTHER';
  keep newpool lockage_type sequpstr seqdstr stop_code ntrans nmisstr smtr
               avtr stdtr mntr p5tr mdtr p95tr mxtr;
run;


  *** generate utilization statistics;
   proc sort data=vprocess; by arrtime;
   data vsum; set vprocess end=lastobs ;
     retain sttime endtime trantime waittime locktime mvments mvttime 0;
    if _n_ eq 1 then sttime=arrtime;
    if transithrs gt 0 and lockmin gt 0 and waitmin ge 0 then do;

      trantime+transithrs;
      locktime = locktime+(lockmin)/60;
      waittime = waittime+(waitmin)/60;
      mvttime = mvttime+transithrs+(lockmin+waitmin)/60;
      mvments+1;
    end;

    keep sttime endtime trantime waittime locktime mvments
        pctwait pcttran pctlock pctwait2 pcttran2 pctlock2 timespan mvttime;

    if lastobs then do;
       endtime=arrtime;
       timespan=(endtime-sttime)/86400;
       pcttran=100*trantime/mvttime;
       pctwait=100*waittime/mvttime;
       pctlock=100*locktime/mvttime;
       *pcttran2=100*trantime/timespan/numvess;
       *pctwait2=100*waittime/timespan/numvess;
       *pctlock2=100*locktime/timespan/numvess;
       output;
    end;

   data vsum;
   format sttime datetime8. endtime datetime8. ;
   set vsum;
   label sttime='Start/Date'
         endtime='End/Date'
         trantime='Sum/Transit/Hours'
         waittime='Sum/Wait/to Lock/Hours'
```

SAS Program “trafficstats.sas” (cont.)


```
         locktime='Sum/Lockage/Times/Hours'
         mvments='Number of/Movements'
         mvttime='Sum of/Total/Movement/Time'
         timespan='Total/Days of/Movement'
         pcttran='Percentage/of Total/Movement Time/in Transit'
         pctwait='Percentage/of Total/Movement Time/Waiting to Lock'
         pctlock='Percentage/of Total/Movement Time/in Lockage'
         ;



   proc print data = vsum label split='/';
   title  Utilization Statistics for Vessels;
  title2 "%&&subset with elimination of recreational vessels = &norecs";
  title3 "for lockages with arrivals between &firstdte and &lastdte";
     run;

 data water.utilstat; set vsum;
    keep sttime endtime trantime waittime locktime mvments mvttime timespan pcttran pctwait pctlock;
 run;


 %end; ** of vessel analysis;


 %if %upcase(&pmvmt)=YES %then %do;
    data water.pmvmt; set vprocess;
       length  nxtstep $15 temppool $4;
   if timenow ne . then do;
    format timenow datetime20.;
   end;
   /* removed line below to add nxtstep to all possible lockage events  */

 *where river_code='MI' and (lock=19 or lock=20 or lock=21 or lock=22 or lock=24 or lock=25 or lock=26);

   nxtstep='PROBLEM';
   temppool=substr(pnewpool,1,4);
   temppriv=substr(pnewpool,1,2);

         if pnewpool=oldpool and seqdstr eq 1 and sequpstr eq 0 then
                 nxtstep='CONTNOSTOP';
         else if pnewpool=oldpool and seqdstr eq 0 and sequpstr eq 1 then
                 nxtstep='CONTNOSTOP';
         else if pnewpool=oldpool and seqdstr eq 0 and sequpstr eq 0 then
                 nxtstep='CONTSTOP';
         else if temppool=substr(oldpool,1,4) then
                 nxtstep='Return';
         else if pnewpool='BIRTH' then
                 nxtstep='Birth';
         else if temppriv ne 'MI' then
                 nxtstep='EnterMI';
         else if temppool ne substr(oldpool,1,4) and pnewpool ne 'BIRTH' then
                 nxtstep='Other';


    keep vess_no river_code lock plock direction lockage_type
```

SAS Program “trafficstats.sas” (cont.)

```
      privercode newpool oldpool pnewpool nxtstep sequpstr seqdstr plockagetype;


*** summarize pool activity;
proc freq data=water.pmvmt;
where newpool in ('MI21D','MI22D','MI24D','MI25D','MI26D',
                  'MI25U','MI24U','MI22U','MI21U','MI20U')
             OR pnewpool in ('MI21D','MI22D','MI24D','MI25D','MI26D',
                  'MI25U','MI24U','MI22U','MI21U','MI20U');
title pool activity at prior Mississipi River lock;
title2 "for lockages with arrivals between &firstdte and &lastdte";
 format plockagetype $lkgetyp.;
    tables pnewpool * nxtstep pnewpool * plockagetype * nxtstep;
run;


%end;   ** of pool mvmt analysis;

%if %upcase(&queues)=YES %then %do;
 proc datasets ddname= water; delete dstr; run;

data water.dstr; set  vprocess;
    length  poolnow $5 event $1;
  format timenow datetime20.;
  keep timenow vess_no poolnow event river_code  lock direction lockage_type
       newpool oldpool privercode newpoolno oldpoolno arrtime strtlcktime deptime
       pnewpool;
*** create a record for the  arrival;

   event='A';
   timenow = arrtime;
   poolnow=oldpool;
   if mdy(month(datepart(timenow)),day(datepart(timenow)),year(datepart(timenow)))
         ge &begdate
     and   mdy(month(datepart(timenow)),day(datepart(timenow)),year(datepart(timenow)))
         le &enddate then
   output;

*** create a record for the start of lockage;
   event='S';
   timenow = strtlcktime;
   poolnow=oldpool;
   if mdy(month(datepart(timenow)),day(datepart(timenow)),year(datepart(timenow)))
         ge &begdate
     and   mdy(month(datepart(timenow)),day(datepart(timenow)),year(datepart(timenow)))
         le &enddate then
   output;

   *** create a record for the departure;
   event='D';
   timenow=deptime;
   poolnow=newpool;
   if mdy(month(datepart(timenow)),day(datepart(timenow)),year(datepart(timenow)))
         ge &begdate
     and   mdy(month(datepart(timenow)),day(datepart(timenow)),year(datepart(timenow)))
         le &enddate then
```



```
  output;
run;

proc sort data=water.dstr; by timenow event lock; run;

data water.dstr;  set water.dstr;
** define arrays for counts of vessels in lockage queues, in lock service and in
       pools;
 length  pool ulckq&frstlck-ulckq&lastlck dlckq&frstlck-dlckq&lastlck
     upool&frstlck-upool&lastlck dpool&frstlck-dpool&lastlck
     inlock&frstlck-inlock&lastlck
     upriver downriver 4;

   ** initialize counts to zero and retain them;
  retain  ulckq&frstlck-ulckq&lastlck dlckq&frstlck-dlckq&lastlck
     upool&frstlck-upool&lastlck dpool&frstlck-dpool&lastlck
     inlock&frstlck-inlock&lastlck  upriver downriver   0 ;

array ulckque {*}  ulckq&frstlck-ulckq&lastlck;
array dlckque {*}  dlckq&frstlck-dlckq&lastlck;
array upool {*} upool&frstlck-upool&lastlck;
array dpool {*} dpool&frstlck-dpool&lastlck;
array inlock {*} inlock&frstlck-inlock&lastlck;


 *** update counts for arrival;
*** NOTE  ***;
 *** vessels in pool are considered under way and not in queues;


 *** ADD vessels to queue and remove from pool for arrivals;

      * determine array position for lock record;
      if  river_code  eq 'MI'
         and lock ge &frstlck and lock le &lastlck
           then lcksub= 1+ lock- &frstlck; else lcksub=0;


 if event eq 'A' then do;
   if direction eq 'U' then do;
    if lcksub gt 0 then
     ulckque{lcksub}= ulckque{lcksub} +1;

     ** determine old pool from new pool of previous lockage;
     pool=input(substr(pnewpool,3,2),2.);
     if substr(pnewpool,1,2)='MI' then
      poolsub=1+pool-&frstlck ; else poolsub=0;
    *change pool 23 to pool 24;
     if poolsub eq 24 - &frstlck and poolsub gt 0 then poolsub=25-&frstlck;
      if poolsub ge 1 and poolsub le 1+&lastlck-&frstlck
       then do;
        if substr(pnewpool,5,1) eq 'U'  and
            upool{poolsub} gt 0 then upool{poolsub}= upool{poolsub} -1;
       if substr(pnewpool,5,1) eq 'D' and
         dpool{poolsub} gt 0 then dpool{poolsub}= dpool{poolsub} -1;
       end;
```

```
    end;
    if direction eq 'D' then do;
      if lcksub gt 0 and lcksub le &lastlck - &frstlck +1
        then dlckque{lcksub}= dlckque{lcksub} +1;
      ** determine old pool from new pool of previous lockage;
      pool=input(substr(pnewpool,3,2),2.);
      if substr(pnewpool,1,2)='MI' then
        poolsub=1+pool-&frstlck ; else poolsub=0;
     *change pool 23 to pool 24;
      if poolsub eq 24 - &frstlck and poolsub gt 0 then poolsub=25-&frstlck;
       if poolsub ge 1 and poolsub le 1+&lastlck-&frstlck
        then do;
         if substr(pnewpool,5,1) eq 'U'  and
              upool{poolsub} gt 0 then upool{poolsub}= upool{poolsub} -1;
        if substr(pnewpool,5,1) eq 'D' and
          dpool{poolsub} gt 0 then dpool{poolsub}= dpool{poolsub} -1;
        end;
   end;
end;    * of updates for arrival;

** REMOVE  vessel from queue and add to lock  for start lockage;
if event eq 'S' then do;
  if direction eq 'U' then do;
    * determine array position for lock;
    if lcksub gt 0 then do;
     inlock{lcksub}= inlock{lcksub} + 1;
     ulckque{lcksub}= ulckque{lcksub} -1;
   end;
  end;
  if direction eq 'D' then do;
    if lcksub gt 0 then do;
      inlock{lcksub}= inlock{lcksub} + 1;
      dlckque{lcksub}= dlckque{lcksub} -1;
    end;
  end;
end; * of updates for start lockage;

*** REMOVE vesssels from lock and add to pool on departure;
if event eq 'D' then do;
  if direction eq 'U' then do;
    if lcksub gt 0 then inlock{lcksub}= inlock{lcksub} - 1;
    pool=input(substr(newpool,3,2),2.);
    if substr(pnewpool,1,2)='MI' then
      poolsub=1+pool-&frstlck ; else poolsub=0;
   *change pool 23 to pool 24;
    if poolsub eq 24 - &frstlck and poolsub gt 0 then poolsub=25-&frstlck;
    if poolsub ge 1 and poolsub le 1+&lastlck-&frstlck then
     upool{poolsub}= upool{poolsub} + 1;
    if lock eq &frstlck then upstream=upstream+1;
  end;
  if direction eq 'D' then do;
    if lcksub gt 0 then inlock{lcksub}= inlock{lcksub} - 1;
    pool=input(substr(newpool,3,2),2.);
    if substr(pnewpool,1,2)='MI' then
      poolsub=1+pool-&frstlck ; else poolsub=0;
    if poolsub eq 24 - &frstlck and poolsub gt 0 then poolsub=25-&frstlck;
```

SAS Program “trafficstats.sas” (cont.)


```
       *change pool 23 to pool 24;
        if poolsub ge 1 and poolsub le 1+&lastlck-&frstlck then
          dpool{poolsub}= dpool{poolsub} + 1;
        if lock eq &lastlck then downstream=downstream+1;
      end;
  end;    * of updates for departure;
 ** subset for statistical analysis;

 run;

proc sort data=water.dstr; by timenow event;  run;
* keep time for  next event;
data nexttime; set water.dstr (keep=timenow);
  if _n_ gt 1;
   format nexttime datetime20.;
 nexttime=timenow; drop timenow;
run;

data water.dstr; merge water.dstr nexttime;
   * determine duration of the state;
   duration=nexttime-timenow;
run;

 data dstr; set water.dstr;
  ***** subset for desired time interval;
    if mdy(month(datepart(timenow)),day(datepart(timenow)),year(datepart(timenow)))
           ge &begdate
       and   mdy(month(datepart(timenow)),day(datepart(timenow)),year(datepart(timenow)))
           le &enddate ;
    month=month(datepart(timenow));
    year =year(datepart(timenow));
  sumupque = sum (of ulckq&frstlck-ulckq&lastlck);
  sumdnque= sum(of dlckq&frstlck-dlckq&lastlck);
  sumqueue= sumupque + sumdnque;
 run;


 ** take time-weighted (duration) average of queue and pool totals;

proc univariate data=dstr noprint;  by year month;
  weight duration;
  var ulckq&frstlck-ulckq&lastlck dlckq&frstlck-dlckq&lastlck
       upool&frstlck-upool&lastlck dpool&frstlck-dpool&lastlck
       inlock&frstlck-inlock&lastlck  upriver downriver   sumupque sumdnque;
  output out =qstats
       mean=  avulckq&frstlck-avulckq&lastlck avdlckq&frstlck-avdlckq&lastlck
       avupool&frstlck-avupool&lastlck avdpool&frstlck-avdpool&lastlck
       avinlock&frstlck-avinlock&lastlck  avupriver avdownriver avupque avdnque
       max=  mxulckq&frstlck-mxulckq&lastlck mxdlckq&frstlck-mxdlckq&lastlck
       mxupool&frstlck-mxupool&lastlck mxdpool&frstlck-mxdpool&lastlck
       mxinlock&frstlck-mxinlock&lastlck  mxupriver mxdownriver mxupque mxdnque;
 run;


/***********
proc print data=qstats;
```

SAS Program “trafficstats.sas” (cont.)

```
  title Time-weighted average and maximum queues and surrounding pool sizes;
  run;
************/

 ****  Reports for locks 19 - 26;
  data qstats;  set qstats;
 label  avdpool18='Average/in Pool 18'
        avdpool19='Average/in Pool 19'
        avdpool20='Average/in Pool 20'
        avdpool21='Average/in Pool 21'
        avdpool22='Average/in Pool 22'
        avdpool24='Average/in Pool 24'
        avdpool25='Average/in Pool 25'
        avdpool26='Average/in Pool 26'
        avdlckq19='Average/Queue/Lock 19'
        avdlckq20='Average/Queue/Lock 20'
        avdlckq21='Average/Queue/Lock 21'
        avdlckq22='Average/Queue/Lock 22'
        avdlckq24='Average/Queue/Lock 24'
        avdlckq25='Average/Queue/Lock 25'
        avdlckq26='Average/Queue/Lock 26'
        avupool18='Average/in Pool 18'
        avupool19='Average/in Pool 19'
        avupool20='Average/in Pool 20'
        avupool21='Average/in Pool 21'
        avupool22='Average/in Pool 22'
        avupool24='Average/in Pool 24'
        avupool25='Average/in Pool 25'
        avupool26='Average/in Pool 26'
        avulckq19='Average/Queue/Lock 19'
        avulckq20='Average/Queue/Lock 20'
        avulckq21='Average/Queue/Lock 21'
        avulckq22='Average/Queue/Lock 22'
        avulckq24='Average/Queue/Lock 24'
        avulckq25='Average/Queue/Lock 25'
        avulckq26='Average/Queue/Lock 26'
        mxdpool18='Maximum/in Pool 18'
        mxdpool19='Maximum/in Pool 19'
        mxdpool20='Maximum/in Pool 20'
        mxdpool21='Maximum/in Pool 21'
        mxdpool22='Maximum/in Pool 22'
        mxdpool24='Maximum/in Pool 24'
        mxdpool25='Maximum/in Pool 25'
        mxdpool26='Maximum/in Pool 26'
        mxdlckq19='Maximum/Queue/Lock 19'
        mxdlckq20='Maximum/Queue/Lock 20'
        mxdlckq21='Maximum/Queue/Lock 21'
        mxdlckq22='Maximum/Queue/Lock 22'
        mxdlckq24='Maximum/Queue/Lock 24'
        mxdlckq25='Maximum/Queue/Lock 25'
        mxdlckq26='Maximum/Queue/Lock 26'
        mxupool18='Maximum/in Pool 18'
        mxupool19='Maximum/in Pool 19'
        mxupool20='Maximum/in Pool 20'
        mxupool21='Maximum/in Pool 21'
        mxupool22='Maximum/in Pool 22'
```

SAS Program “trafficstats.sas” (cont.)


```
        mxupool24='Maximum/in Pool 24'
        mxupool25='Maximum/in Pool 25'
        mxupool26='Maximum/in Pool 26'
        mxulckq19='Maximum/Queue/Lock 19'
        mxulckq20='Maximum/Queue/Lock 20'
        mxulckq21='Maximum/Queue/Lock 21'
        mxulckq22='Maximum/Queue/Lock 22'
        mxulckq24='MaximumQueue/Lock 24'
        mxulckq25='Maximum/Queue/Lock 25'
        mxulckq26='Maximum/Queue/Lock 26'
        avinlock19='Average/Lock Utilization/Lock 19'
        avinlock20='Average/Lock Utilization/Lock 20'
        avinlock21='Average/Lock Utilization/Lock 21'
        avinlock22='Average/Lock Utilization/Lock 22'
        avinlock24='Average/Lock Utilization/Lock 24'
        avinlock25='Average/Lock Utilization/Lock 25'
        avinlock26='Average/Lock Utilization/Lock 26'
        mxinlock19='Maximum/Lock Utilization/Lock 19'
        mxinlock20='Maximum/Lock Utilization/Lock 20'
        mxinlock21='Maximum/Lock Utilization/Lock 21'
        mxinlock22='Maximum/Lock Utilization/Lock 22'
        mxinlock24='Maximum/Lock Utilization/Lock 24'
        mxinlock25='Maximum/Lock Utilization/Lock 25'
        mxinlock26='Maximum/Lock Utilization/Lock 26'
        avupque='Average/Upbound/Queue'
        avdnque='Average/Downbound/Queue'
        mxupque='Maximum/Upbound/Queue'
        mxdnque='Maximum/Downbound/Queue'
        year='Year'
        month='Month'
;
run;


 proc print data=qstats label split='/';
   id year month;
   title;
   title2 'Time-weighted average and maximum queues for lock 19 and surrounding pool sizes';
   title3;
   title4 '                |          Downbound          |    In Lockage
                           |           Upbound           | ';
   var avdpool18 avdlckq19 avdpool19 avinlock19 avupool19 avulckq19 avupool18
       mxdpool18 mxdlckq19 mxdpool19 mxinlock19 mxupool19 mxulckq19 mxupool18;
 format avdpool18 avdlckq19 avdpool19 avinlock19 avupool19 avulckq19 avupool18
   5.2; run;

 proc print data=qstats label split='/';
   id year month;
   title;
   title2 'Time-weighted average and maximum queues for lock 20 and surrounding pool sizes';
   title3;
   title4 '                |          Downbound          |    In Lockage
                           |           Upbound           | ';
   var avdpool19 avdlckq20 avdpool20 avinlock20 avupool20 avulckq20 avupool19
       mxdpool19 mxdlckq20 mxdpool20 mxinlock20 mxupool20 mxulckq20 mxupool19;
 format avdpool19 avdlckq20 avdpool20 avinlock20 avupool20 avulckq20 avupool19
```

SAS Program “trafficstats.sas” (cont.)

```
   5.2; run;

 proc print data=qstats label split='/';
   id year month;
   title;
   title2 'Time-weighted average and maximum queues for lock 21 and surrounding pool sizes';
   title3;
   title4 '                  |          Downbound          |    In Lockage
                             |           Upbound           | ';
   var avdpool20 avdlckq21 avdpool21 avinlock21 avupool21 avulckq21 avupool20
       mxdpool20 mxdlckq21 mxdpool21 mxinlock21 mxupool21 mxulckq21 mxupool20;
format avdpool20 avdlckq21 avdpool21 avinlock21 avupool21 avulckq21 avupool20
   5.2;  run;

 proc print data=qstats label split='/';
   id year month;
   title;
   title2 'Time-weighted average and maximum queues for lock 22 and surrounding pool sizes';
   title3;
   title4 '                  |          Downbound          |    In Lockage
                             |           Upbound           | ';
   var avdpool21 avdlckq22 avdpool22 avinlock22 avupool22 avulckq22 avupool21
       mxdpool21 mxdlckq22 mxdpool22 mxinlock22 mxupool22 mxulckq22 mxupool21;
format avdpool21 avdlckq22 avdpool22 avinlock22 avupool22 avulckq22 avupool21
   5.2;  run;

 proc print data=qstats label split='/';
   id year month;
   title;
   title2 'Time-weighted average and maximum queues for lock 24 and surrounding pool sizes';
   title3;
   title4 '                  |          Downbound          |    In Lockage
                             |           Upbound           | ';
   var avdpool22 avdlckq24 avdpool24 avinlock24 avupool24 avulckq24 avupool22
       mxdpool22 mxdlckq24 mxdpool24 mxinlock24 mxupool24 mxulckq24 mxupool22;
format  avdpool22 avdlckq24 avdpool24 avinlock24 avupool24 avulckq24 avupool22
   5.2;  run;

 proc print data=qstats label split='/';
   id year month;
   title;
   title2 'Time-weighted average and maximum queues for lock 25 and surrounding pool sizes';
   title3;
   title4 '                  |          Downbound          |    In Lockage
                             |           Upbound           | ';
   var avdpool24 avdlckq25 avdpool25 avinlock25 avupool25 avulckq25 avupool24
       mxdpool24 mxdlckq25 mxdpool25 mxinlock25 mxupool25 mxulckq25 mxupool24;
format  avdpool24 avdlckq25 avdpool25 avinlock25 avupool25 avulckq25 avupool24
   5.2;  run;

 proc print data=qstats label split='/';
   id year month;
   title;
   title2 'Time-weighted average and maximum queues for lock 26 and surrounding pool sizes';
   title3;
   title4 '                  |          Downbound          |    In Lockage
```



```
                             |           Upbound           | ';
   var avdpool25 avdlckq26 avdpool26 avinlock26 avupool26 avulckq26 avupool25
       mxdpool25 mxdlckq26 mxdpool26 mxinlock26 mxupool26 mxulckq26 mxupool25;
format  avdpool25 avdlckq26 avdpool26 avinlock26 avupool26 avulckq26 avupool25
   5.2;  run;

 proc print data=qstats label split='/';
   id year month;
   title;
   title2 'Time-weighted average and maximum queues for locks 19 - 26';
   var avdnque mxdnque avupque mxupque ;
format  avupque avdnque
   5.2;  run;


  *** generate plot of lock queues through time;

 %end; * of queue analysis;

%if %upcase(&dstream)=YES %then %do;

  data dstr; set water.dstr;
    if mdy(month(datepart(timenow)),day(datepart(timenow)),year(datepart(timenow)))
          ge &begdate
       and  mdy(month(datepart(timenow)),day(datepart(timenow)),year(datepart(timenow)))
          le &enddate ;
     file '~/waterway/dstream.dat';
   if event eq 'D' or event eq 'A' then  put timenow vess_no lock poolnow ;
  run;


 %end;  ** of data stream for GIS display;



  data water.qstats;set qstats;run;


 %if %upcase(&csvexp)=YES %then %do;
      PROC EXPORT DATA= water.qstats
       OUTFILE= "/accounts/research/cbis1/waterway/qstats.csv"
      DBMS=CSV REPLACE;
      run;
 %end;

 %if %upcase(&debug) ne YES %then %do;

%end;   ** of debug;

%mend;

%opstats;
```

lockage records at each Mississippi River lock 12:49 Friday, June 24, 2005 1
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of LOCK_NO by LOCKAGE_TYPE

LOCK_NO(LOCK_NO) LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
01	4 0.00 0.03 0.00	9 0.00 0.07 2.40	4377 0.73 33.89 18.78	8524 1.42 66.01 2.76	0 0.00 0.00 0.00	12914 2.16
02	5213 0.87 29.89 1.99	23 0.00 0.13 6.13	248 0.04 1.42 1.06	11834 1.98 67.85 3.83	123 0.02 0.71 3.22	17441 2.91
03	5262 0.88 22.76 2.00	4 0.00 0.02 1.07	224 0.04 0.97 0.96	17506 2.92 75.73 5.67	120 0.02 0.52 3.14	23116 3.86
04	5809 0.97 30.40 2.21	3 0.00 0.02 0.80	221 0.04 1.16 0.95	12966 2.16 67.85 4.20	111 0.02 0.58 2.91	19110 3.19
05	5856 0.98 35.68 2.23	0 0.00 0.00 0.00	224 0.04 1.36 0.96	10220 1.71 62.28 3.31	111 0.02 0.68 2.91	16411 2.74
06	7087 1.18 38.36 2.70	7 0.00 0.04 1.87	434 0.07 2.35 1.86	10822 1.81 58.58 3.50	123 0.02 0.67 3.22	18473 3.08
07	6856 1.14 33.84 2.61	68 0.01 0.34 18.13	584 0.10 2.88 2.51	12626 2.11 62.32 4.09	127 0.02 0.63 3.33	20261 3.38
08	7369 1.23 44.27 2.81	6 0.00 0.04 1.60	389 0.06 2.34 1.67	8746 1.46 52.54 2.83	135 0.02 0.81 3.54	16645 2.78
Total	262496 43.83	375 0.06	23306 3.89	308908 51.58	3816 0.64	598901 100.00

(Continued)

lockage records at each Mississippi River lock 12:49 Friday, June 24, 2005 2
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of LOCK_NO by LOCKAGE_TYPE

LOCK_NO(LOCK_NO) LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
09	8169 1.36 46.09 3.11	33 0.01 0.19 8.80	346 0.06 1.95 1.48	9042 1.51 51.02 2.93	133 0.02 0.75 3.49	17723 2.96
10	9749 1.63 52.87 3.71	5 0.00 0.03 1.33	259 0.04 1.40 1.11	8282 1.38 44.92 2.68	144 0.02 0.78 3.77	18439 3.08
11	9926 1.66 51.51 3.78	11 0.00 0.06 2.93	484 0.08 2.51 2.08	8713 1.45 45.22 2.82	136 0.02 0.71 3.56	19270 3.22
12	10845 1.81 57.86 4.13	7 0.00 0.04 1.87	399 0.07 2.13 1.71	7342 1.23 39.17 2.38	149 0.02 0.80 3.90	18742 3.13
13	10779 1.80 58.70 4.11	13 0.00 0.07 3.47	656 0.11 3.57 2.81	6754 1.13 36.78 2.19	161 0.03 0.88 4.22	18363 3.07
14	13309 2.22 51.48 5.07	14 0.00 0.05 3.73	545 0.09 2.11 2.34	11813 1.97 45.70 3.82	170 0.03 0.66 4.45	25851 4.32
15	13372 2.23 46.47 5.09	24 0.00 0.08 6.40	517 0.09 1.80 2.22	14686 2.45 51.03 4.75	179 0.03 0.62 4.69	28778 4.81
16	13970 2.33 64.39 5.32	12 0.00 0.06 3.20	981 0.16 4.52 4.21	6546 1.09 30.17 2.12	188 0.03 0.87 4.93	21697 3.62
Total	262496 43.83	375 0.06	23306 3.89	308908 51.58	3816 0.64	598901 100.00

(Continued)

lockage records at each Mississipi River lock 12:49 Friday, June 24, 2005 3
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of LOCK_NO by LOCKAGE_TYPE

LOCK_NO(LOCK_NO) LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
17	15039 2.51 76.60 5.73	6 0.00 0.03 1.60	579 0.10 2.95 2.48	3821 0.64 19.46 1.24	189 0.03 0.96 4.95	19634 3.28
18	15728 2.63 71.69 5.99	6 0.00 0.03 1.60	569 0.10 2.59 2.44	5432 0.91 24.76 1.76	204 0.03 0.93 5.35	21939 3.66
19	0 0.00 0.00 0.00	2 0.00 0.02 0.53	1 0.00 0.01 0.00	12911 2.16 99.97 4.18	1 0.00 0.01 0.03	12915 2.16
20	17033 2.84 77.68 6.49	5 0.00 0.02 1.33	237 0.04 1.08 1.02	4451 0.74 20.30 1.44	202 0.03 0.92 5.29	21928 3.66
21	17648 2.95 77.63 6.72	19 0.00 0.08 5.07	256 0.04 1.13 1.10	4608 0.77 20.27 1.49	203 0.03 0.89 5.32	22734 3.80
22	17736 2.96 80.17 6.76	13 0.00 0.06 3.47	311 0.05 1.41 1.33	3848 0.64 17.39 1.25	214 0.04 0.97 5.61	22122 3.69
24	18343 3.06 78.55 6.99	11 0.00 0.05 2.93	332 0.06 1.42 1.42	4452 0.74 19.06 1.44	214 0.04 0.92 5.61	23352 3.90
25	18374 3.07 73.90 7.00	1 0.00 0.00 0.27	358 0.06 1.44 1.54	5912 0.99 23.78 1.91	218 0.04 0.88 5.71	24863 4.15
Total	262496 43.83	375 0.06	23306 3.89	308908 51.58	3816 0.64	598901 100.00

(Continued)

lockage records at each Mississipi River lock 12:49 Friday, June 24, 2005 4
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of LOCK_NO by LOCKAGE_TYPE

LOCK_NO(LOCK_NO) LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
26	2772 0.46 7.79 1.06	22 0.00 0.06 5.87	446 0.07 1.25 1.91	32229 5.38 90.61 10.43	101 0.02 0.28 2.65	35570 5.94
27	405 0.07 1.07 0.15	19 0.00 0.05 5.07	460 0.08 1.21 1.97	37077 6.19 97.56 12.00	45 0.01 0.12 1.18	38006 6.35
51	0 0.00 0.00 0.00	17 0.00 0.13 4.53	4304 0.72 33.48 18.47	8534 1.42 66.39 2.76	0 0.00 0.00 0.00	12855 2.15
52	0 0.00 0.00 0.00	7 0.00 0.06 1.87	4340 0.72 39.65 18.62	6599 1.10 60.29 2.14	0 0.00 0.00 0.00	10946 1.83
55	5843 0.98 31.07 2.23	8 0.00 0.04 2.13	225 0.04 1.20 0.97	12612 2.11 67.07 4.08	115 0.02 0.61 3.01	18803 3.14
Total	262496 43.83	375 0.06	23306 3.89	308908 51.58	3816 0.64	598901 100.00

lockage records at each Mississipi River lock 12:49 Friday, June 24, 2005 5
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of LOCK_NO by vess_type

LOCK_NO(LOCK_NO) vess_type

Frequency Percent Row Pct Col Pct	G	M	N	P	R	T	U	Z	Total
01	91 0.02 0.70 1.53	22 0.00 0.17 61.11	0 0.00 0.00 0.00	296 0.05 2.29 2.62	7315 1.22 56.64 4.30	5190 0.87 40.19 1.26	0 0.00 0.00 0.00	0 0.00 0.00 0.00	12914 2.16
02	186 0.03 1.07 3.13	4 0.00 0.02 11.11	0 0.00 0.00 0.00	60 0.01 0.34 0.53	10472 1.75 60.04 6.16	6717 1.12 38.51 1.63	0 0.00 0.00 0.00	2 0.00 0.01 1.92	17441 2.91
03	184 0.03 0.80 3.09	5 0.00 0.02 13.89	0 0.00 0.00 0.00	349 0.06 1.51 3.08	15501 2.59 67.07 9.12	7072 1.18 30.60 1.72	0 0.00 0.00 0.00	2 0.00 0.01 1.92	23113 3.86
04	286 0.05 1.50 4.81	2 0.00 0.01 5.56	0 0.00 0.00 0.00	76 0.01 0.40 0.67	11660 1.95 61.02 6.86	7080 1.18 37.05 1.72	2 0.00 0.01 4.44	2 0.00 0.01 1.92	19108 3.19
05	295 0.05 1.80 4.96	2 0.00 0.01 5.56	0 0.00 0.00 0.00	77 0.01 0.47 0.68	8897 1.49 54.22 5.23	7134 1.19 43.48 1.74	2 0.00 0.01 4.44	2 0.00 0.01 1.92	16409 2.74
06	232 0.04 1.26 3.90	0 0.00 0.00 0.00	0 0.00 0.00 0.00	162 0.03 0.88 1.43	9443 1.58 51.14 5.55	8623 1.44 46.70 2.10	4 0.00 0.02 8.89	2 0.00 0.01 1.92	18466 3.08
07	265 0.04 1.31 4.45	0 0.00 0.00 0.00	0 0.00 0.00 0.00	340 0.06 1.68 3.01	10415 1.74 51.45 6.12	9215 1.54 45.52 2.24	6 0.00 0.03 13.33	2 0.00 0.01 1.92	20243 3.38
08	193 0.03 1.16 3.24	0 0.00 0.00 0.00	0 0.00 0.00 0.00	137 0.02 0.82 1.21	7350 1.23 44.17 4.32	8956 1.50 53.82 2.18	3 0.00 0.02 6.67	2 0.00 0.01 1.92	16641 2.78
Total	5952 0.99	36 0.01	2 0.00	11314 1.89	170060 28.41	411125 68.68	45 0.01	104 0.02	598638 100.00

(Continued)

lockage records at each Mississipi River lock 12:49 Friday, June 24, 2005 6
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of LOCK_NO by vess_type

LOCK_NO(LOCK_NO) vess_type

Frequency Percent Row Pct Col Pct	G	M	N	P	R	T	U	Z	Total
09	181 0.03 1.02 3.04	0 0.00 0.00 0.00	0 0.00 0.00 0.00	125 0.02 0.71 1.10	7699 1.29 43.45 4.53	9711 1.62 54.81 2.36	1 0.00 0.01 2.22	2 0.00 0.01 1.92	17719 2.96
10	129 0.02 0.70 2.17	0 0.00 0.00 0.00	0 0.00 0.00 0.00	68 0.01 0.37 0.60	6529 1.09 35.42 3.84	11706 1.96 63.50 2.85	1 0.00 0.01 2.22	2 0.00 0.01 1.92	18435 3.08
11	138 0.02 0.72 2.32	0 0.00 0.00 0.00	0 0.00 0.00 0.00	299 0.05 1.55 2.64	6028 1.01 31.29 3.54	12797 2.14 66.43 3.11	1 0.00 0.01 2.22	2 0.00 0.01 1.92	19265 3.22
12	146 0.02 0.78 2.45	0 0.00 0.00 0.00	0 0.00 0.00 0.00	700 0.12 3.74 6.19	4825 0.81 25.75 2.84	13066 2.18 69.72 3.18	1 0.00 0.01 2.22	2 0.00 0.01 1.92	18740 3.13
13	138 0.02 0.75 2.32	0 0.00 0.00 0.00	0 0.00 0.00 0.00	727 0.12 3.96 6.43	4193 0.70 22.84 2.47	13300 2.22 72.44 3.24	1 0.00 0.01 2.22	2 0.00 0.01 1.92	18361 3.07
14	252 0.04 0.97 4.23	0 0.00 0.00 0.00	0 0.00 0.00 0.00	199 0.03 0.77 1.76	7740 1.29 29.94 4.55	17654 2.95 68.30 4.29	2 0.00 0.01 4.44	2 0.00 0.01 1.92	25849 4.32
15	253 0.04 0.88 4.25	0 0.00 0.00 0.00	0 0.00 0.00 0.00	796 0.13 2.77 7.04	7431 1.24 25.82 4.37	20290 3.39 70.51 4.94	3 0.00 0.01 6.67	2 0.00 0.01 1.92	28775 4.81
16	175 0.03 0.81 2.94	0 0.00 0.00 0.00	0 0.00 0.00 0.00	88 0.01 0.41 0.78	2380 0.40 10.97 1.40	19048 3.18 87.80 4.63	2 0.00 0.01 4.44	2 0.00 0.01 1.92	21695 3.62
Total	5952 0.99	36 0.01	2 0.00	11314 1.89	170060 28.41	411125 68.68	45 0.01	104 0.02	598638 100.00

(Continued)

lockage records at each Mississipi River lock 12:49 Friday, June 24, 2005 7
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of LOCK_NO by vess_type

LOCK_NO(LOCK_NO) vess_type

Frequency Percent Row Pct Col Pct	G	M	N	P	R	T	U	Z	Total
17	171 0.03 0.87 2.87	0 0.00 0.00 0.00	0 0.00 0.00 0.00	72 0.01 0.37 0.64	1211 0.20 6.17 0.71	18166 3.03 92.57 4.42	2 0.00 0.01 4.44	2 0.00 0.01 1.92	19624 3.28
18	228 0.04 1.04 3.83	0 0.00 0.00 0.00	0 0.00 0.00 0.00	76 0.01 0.35 0.67	2589 0.43 11.80 1.52	19038 3.18 86.80 4.63	0 0.00 0.00 0.00	2 0.00 0.01 1.92	21933 3.66
19	168 0.03 1.30 2.82	0 0.00 0.00 0.00	0 0.00 0.00 0.00	80 0.01 0.62 0.71	1819 0.30 14.09 1.07	10842 1.81 83.97 2.64	0 0.00 0.00 0.00	2 0.00 0.02 1.92	12911 2.16
20	179 0.03 0.82 3.01	0 0.00 0.00 0.00	0 0.00 0.00 0.00	81 0.01 0.37 0.72	1559 0.26 7.11 0.92	20103 3.36 91.69 4.89	0 0.00 0.00 0.00	2 0.00 0.01 1.92	21924 3.66
21	199 0.03 0.88 3.34	0 0.00 0.00 0.00	0 0.00 0.00 0.00	94 0.02 0.41 0.83	1824 0.30 8.03 1.07	20609 3.44 90.68 5.01	0 0.00 0.00 0.00	2 0.00 0.01 1.92	22728 3.80
22	212 0.04 0.96 3.56	0 0.00 0.00 0.00	0 0.00 0.00 0.00	98 0.02 0.44 0.87	1633 0.27 7.38 0.96	20171 3.37 91.21 4.91	0 0.00 0.00 0.00	2 0.00 0.01 1.92	22116 3.69
24	360 0.06 1.54 6.05	0 0.00 0.00 0.00	0 0.00 0.00 0.00	88 0.01 0.38 0.78	2119 0.35 9.08 1.25	20777 3.47 89.00 5.05	0 0.00 0.00 0.00	2 0.00 0.01 1.92	23346 3.90
25	222 0.04 0.89 3.73	0 0.00 0.00 0.00	0 0.00 0.00 0.00	89 0.01 0.36 0.79	2601 0.43 10.46 1.53	21942 3.67 88.27 5.34	1 0.00 0.00 2.22	2 0.00 0.01 1.92	24857 4.15
Total	5952 0.99	36 0.01	2 0.00	11314 1.89	170060 28.41	411125 68.68	45 0.01	104 0.02	598638 100.00

(Continued)

lockage records at each Mississipi River lock 12:49 Friday, June 24, 2005 8
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of LOCK_NO by vess_type

LOCK_NO(LOCK_NO) vess_type

Frequency / Percent / Row Pct / Col Pct	G	M	N	P	R	T	U	Z	Total
26	262	0	1	141	4877	30186	1	28	35496
	0.04	0.00	0.00	0.02	0.81	5.04	0.00	0.00	5.93
	0.74	0.00	0.00	0.40	13.74	85.04	0.00	0.08	
	4.40	0.00	50.00	1.25	2.87	7.34	2.22	26.92	
27	426	0	1	197	2854	34414	8	28	37928
	0.07	0.00	0.00	0.03	0.48	5.75	0.00	0.00	6.34
	1.12	0.00	0.00	0.52	7.52	90.74	0.02	0.07	
	7.16	0.00	50.00	1.74	1.68	8.37	17.78	26.92	
51	45	0	0	3989	3875	4946	0	0	12855
	0.01	0.00	0.00	0.67	0.65	0.83	0.00	0.00	2.15
	0.35	0.00	0.00	31.03	30.14	38.48	0.00	0.00	
	0.76	0.00	0.00	35.26	2.28	1.20	0.00	0.00	
52	104	0	0	1736	4134	4971	0	0	10945
	0.02	0.00	0.00	0.29	0.69	0.83	0.00	0.00	1.83
	0.95	0.00	0.00	15.86	37.77	45.42	0.00	0.00	
	1.75	0.00	0.00	15.34	2.43	1.21	0.00	0.00	
55	232	1	0	74	11087	7401	4	2	18801
	0.04	0.00	0.00	0.01	1.85	1.24	0.00	0.00	3.14
	1.23	0.01	0.00	0.39	58.97	39.36	0.02	0.01	
	3.90	2.78	0.00	0.65	6.52	1.80	8.89	1.92	
Total	5952	36	2	11314	170060	411125	45	104	598638
	0.99	0.01	0.00	1.89	28.41	68.68	0.01	0.02	100.00

Frequency Missing = 263

summaries for records in vprocess prior to consolidation for cuts 12:49 Friday, June 24, 2005 9
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	848459	0	3.3126863E12	3904356.40	3493901.00	4333032.00
strtlcktime	SOL_DATE	848459	0	1.1258383E15	1326921334	1262304600	1394619600
arrtime	ARRIVAL_DATE	848459	0	1.1258343E15	1326916530	1262218800	1394619600
deptime	END_OF_LOCKAGE	848459	0	1.1258402E15	1326923554	1262305440	1394620740
BOW_OVER_SILL	BOW_OVER_SILL	604446	244013	8.0196455E14	1326776165	1262304900	1394619960
END_OF_ENTRY	END_OF_ENTRY	604446	244013	8.0196491E14	1326776762	1262304960	1394620140
START_OF_EXIT	START_OF_EXIT	604446	244013	8.0196528E14	1326777380	1262305380	1394620440
SIGNAL_DATE	SIGNAL_DATE	0	848459	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	848459	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	529102	319357	3744547.00	7.0771742	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	529102	319357	1797283.00	3.3968554	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	848459	.	.	.	.
vess_no		848459	0	2.7461108E12	3236586.28	1.0000000	9999999.00
vss_hp		545056	303403	2337942064	4289.36	60.0000000	81800.00
frsttime		848459	0	1.1258343E15	1326916530	1262218800	1394619600
lasttime		848459	0	1.1258402E15	1326923554	1262305440	1394620740
newpoolno		848459	0	11867964.00	13.9876694	1.0000000	56.0000000
oldpoolno		848459	0	11857691.00	13.9755616	1.0000000	56.0000000
waitmin		848459	0	67932985.00	80.0663143	0	23040.00
lockmin		848459	0	31396039.00	37.0036018	1.0000000	2390.00

lockage activity at each River lock (after combining records for cuts) 10
with elimination of recreational vessels = yes 12:49 Friday, June 24, 2005
%&
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of LOCK_NO by multrec

LOCK_NO(LOCK_NO) multrec

Frequency Percent Row Pct Col Pct	N	Y	Total
01	66965 15.12 100.00 23.97	2 0.00 0.00 0.00	66967 15.12
02	10445 2.36 64.52 3.74	5743 1.30 35.48 3.51	16188 3.65
03	11032 2.49 65.24 3.95	5878 1.33 34.76 3.59	16910 3.82
04	9016 2.04 56.43 3.23	6962 1.57 43.57 4.26	15978 3.61
05	8094 1.83 52.15 2.90	7427 1.68 47.85 4.54	15521 3.50
06	8893 2.01 50.44 3.18	8737 1.97 49.56 5.34	17630 3.98
07	12504 2.82 58.44 4.48	8891 2.01 41.56 5.44	21395 4.83
08	9915 2.24 51.13 3.55	9476 2.14 48.87 5.79	19391 4.38
Total	279362 63.07	163585 36.93	442947 100.00

(Continued)

lockage activity at each River lock (after combining records for cuts) 11
with elimination of recreational vessels = yes 12:49 Friday, June 24, 2005
%&
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of LOCK_NO by multrec

LOCK_NO(LOCK_NO) multrec

Frequency Percent Row Pct Col Pct	N	Y	Total
09	1662 0.38 28.44 0.59	4181 0.94 71.56 2.56	5843 1.32
10	2100 0.47 29.98 0.75	4905 1.11 70.02 3.00	7005 1.58
11	3269 0.74 39.60 1.17	4986 1.13 60.40 3.05	8255 1.86
12	2903 0.66 34.52 1.04	5507 1.24 65.48 3.37	8410 1.90
13	2950 0.67 34.46 1.06	5610 1.27 65.54 3.43	8560 1.93
14	4744 1.07 41.54 1.70	6675 1.51 58.46 4.08	11419 2.58
15	7925 1.79 54.33 2.84	6661 1.50 45.67 4.07	14586 3.29
16	4791 1.08 39.75 1.71	7263 1.64 60.25 4.44	12054 2.72
Total	279362 63.07	163585 36.93	442947 100.00

(Continued)

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lockage activity at each River lock (after combining records for cuts)                    12
           with elimination of recreational vessels = yes          12:49 Friday, June 24, 2005
                                %&
 for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

                        The FREQ Procedure

                    Table of LOCK_NO by multrec

                LOCK_NO(LOCK_NO)     multrec

                Frequency|
                Percent  |
                Row Pct  |
                Col Pct  |N       |Y       |  Total
                ---------+--------+--------+
                17       |   3235 |   7594 |  10829
                         |   0.73 |   1.71 |   2.44
                         |  29.87 |  70.13 |
                         |   1.16 |   4.64 |
                ---------+--------+--------+
                18       |   3466 |   7941 |  11407
                         |   0.78 |   1.79 |   2.58
                         |  30.38 |  69.62 |
                         |   1.24 |   4.85 |
                ---------+--------+--------+
                19       |  11090 |      0 |  11090
                         |   2.50 |   0.00 |   2.50
                         | 100.00 |   0.00 |
                         |   3.97 |   0.00 |
                ---------+--------+--------+
                20       |   3277 |   8533 |  11810
                         |   0.74 |   1.93 |   2.67
                         |  27.75 |  72.25 |
                         |   1.17 |   5.22 |
                ---------+--------+--------+
                21       |   3181 |   8849 |  12030
                         |   0.72 |   2.00 |   2.72
                         |  26.44 |  73.56 |
                         |   1.14 |   5.41 |
                ---------+--------+--------+
                22       |   2648 |   8917 |  11565
                         |   0.60 |   2.01 |   2.61
                         |  22.90 |  77.10 |
                         |   0.95 |   5.45 |
                ---------+--------+--------+
                24       |   2839 |   9197 |  12036
                         |   0.64 |   2.08 |   2.72
                         |  23.59 |  76.41 |
                         |   1.02 |   5.62 |
                ---------+--------+--------+
                25       |   3868 |   9191 |  13059
                         |   0.87 |   2.07 |   2.95
                         |  29.62 |  70.38 |
                         |   1.38 |   5.62 |
                ---------+--------+--------+
                Total      279362   163585   442947
                            63.07    36.93   100.00
                (Continued)
```

lockage activity at each River lock (after combining records for cuts) 13
with elimination of recreational vessels = yes 12:49 Friday, June 24, 2005
%&
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of LOCK_NO by multrec

LOCK_NO(LOCK_NO) / multrec	N	Y	Total
26	27339	1318	28657
	6.17	0.30	6.47
	95.40	4.60	
	9.79	0.81	
27	33579	203	33782
	7.58	0.05	7.63
	99.40	0.60	
	12.02	0.12	
51	8978	1	8979
	2.03	0.00	2.03
	99.99	0.01	
	3.21	0.00	
52	6812	0	6812
	1.54	0.00	1.54
	100.00	0.00	
	2.44	0.00	
55	1842	2937	4779
	0.42	0.66	1.08
	38.54	61.46	
	0.66	1.80	
Total	279362	163585	442947
	63.07	36.93	100.00

lockage activity at each River lock (after combining records for cuts) 14
with elimination of recreational vessels = yes 12:49 Friday, June 24, 2005
%&
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of LOCK_NO by LOCKAGE_TYPE

LOCK_NO(LOCK_NO) LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
01	2 0.00 0.00 0.00	18 0.00 0.03 0.18	4382 0.99 6.54 11.12	62565 14.12 93.43 28.08	0 0.00 0.00 0.00	66967 15.12
02	5571 1.26 34.41 3.44	38 0.01 0.23 0.38	4142 0.94 25.59 10.51	5671 1.28 35.03 2.55	766 0.17 4.73 8.92	16188 3.65
03	5886 1.33 34.81 3.63	19 0.00 0.11 0.19	3737 0.84 22.10 9.48	6526 1.47 38.59 2.93	742 0.17 4.39 8.64	16910 3.82
04	6943 1.57 43.45 4.28	13 0.00 0.08 0.13	3348 0.76 20.95 8.50	4756 1.07 29.77 2.13	918 0.21 5.75 10.69	15978 3.61
05	7412 1.67 47.75 4.57	10 0.00 0.06 0.10	2589 0.58 16.68 6.57	4568 1.03 29.43 2.05	942 0.21 6.07 10.97	15521 3.50
06	8592 1.94 48.74 5.30	17 0.00 0.10 0.17	2628 0.59 14.91 6.67	5460 1.23 30.97 2.45	933 0.21 5.29 10.87	17630 3.98
07	8667 1.96 40.51 5.35	4901 1.11 22.91 48.75	1733 0.39 8.10 4.40	5435 1.23 25.40 2.44	659 0.15 3.08 7.67	21395 4.83
08	9405 2.12 48.50 5.80	4845 1.09 24.99 48.19	1336 0.30 6.89 3.39	3141 0.71 16.20 1.41	664 0.15 3.42 7.73	19391 4.38
Total	162081 36.59	10054 2.27	39403 8.90	222822 50.30	8587 1.94	442947 100.00

(Continued)

lockage activity at each River lock (after combining records for cuts) 15
with elimination of recreational vessels = yes 12:49 Friday, June 24, 2005
%&
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of LOCK_NO by LOCKAGE_TYPE

LOCK_NO(LOCK_NO) LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
09	4085 0.92 69.91 2.52	19 0.00 0.33 0.19	263 0.06 4.50 0.67	1343 0.30 22.98 0.60	133 0.03 2.28 1.55	5843 1.32
10	4876 1.10 69.61 3.01	3 0.00 0.04 0.03	229 0.05 3.27 0.58	1753 0.40 25.02 0.79	144 0.03 2.06 1.68	7005 1.58
11	4965 1.12 60.15 3.06	9 0.00 0.11 0.09	462 0.10 5.60 1.17	2683 0.61 32.50 1.20	136 0.03 1.65 1.58	8255 1.86
12	5424 1.22 64.49 3.35	3 0.00 0.04 0.03	317 0.07 3.77 0.80	2517 0.57 29.93 1.13	149 0.03 1.77 1.74	8410 1.90
13	5398 1.22 63.06 3.33	8 0.00 0.09 0.08	432 0.10 5.05 1.10	2561 0.58 29.92 1.15	161 0.04 1.88 1.87	8560 1.93
14	6661 1.50 58.33 4.11	11 0.00 0.10 0.11	506 0.11 4.43 1.28	4071 0.92 35.65 1.83	170 0.04 1.49 1.98	11419 2.58
15	6637 1.50 45.50 4.09	23 0.01 0.16 0.23	492 0.11 3.37 1.25	7255 1.64 49.74 3.26	179 0.04 1.23 2.08	14586 3.29
16	6991 1.58 58.00 4.31	7 0.00 0.06 0.07	701 0.16 5.82 1.78	4167 0.94 34.57 1.87	188 0.04 1.56 2.19	12054 2.72
Total	162081 36.59	10054 2.27	39403 8.90	222822 50.30	8587 1.94	442947 100.00

(Continued)

lockage activity at each River lock (after combining records for cuts) 16
with elimination of recreational vessels = yes 12:49 Friday, June 24, 2005
%&
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of LOCK_NO by LOCKAGE_TYPE

LOCK_NO(LOCK_NO) LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
17	7508 1.70 69.33 4.63	3 0.00 0.03 0.03	519 0.12 4.79 1.32	2610 0.59 24.10 1.17	189 0.04 1.75 2.20	10829 2.44
18	7864 1.78 68.94 4.85	4 0.00 0.04 0.04	494 0.11 4.33 1.25	2841 0.64 24.91 1.28	204 0.05 1.79 2.38	11407 2.58
19	0 0.00 0.00 0.00	2 0.00 0.02 0.02	1 0.00 0.01 0.00	11086 2.50 99.96 4.98	1 0.00 0.01 0.01	11090 2.50
20	8520 1.92 72.14 5.26	4 0.00 0.03 0.04	218 0.05 1.85 0.55	2866 0.65 24.27 1.29	202 0.05 1.71 2.35	11810 2.67
21	8826 1.99 73.37 5.45	12 0.00 0.10 0.12	235 0.05 1.95 0.60	2754 0.62 22.89 1.24	203 0.05 1.69 2.36	12030 2.72
22	8873 2.00 76.72 5.47	8 0.00 0.07 0.08	261 0.06 2.26 0.66	2209 0.50 19.10 0.99	214 0.05 1.85 2.49	11565 2.61
24	9174 2.07 76.22 5.66	6 0.00 0.05 0.06	312 0.07 2.59 0.79	2331 0.53 19.37 1.05	213 0.05 1.77 2.48	12036 2.72
25	9212 2.08 70.54 5.68	1 0.00 0.01 0.01	324 0.07 2.48 0.82	3305 0.75 25.31 1.48	217 0.05 1.66 2.53	13059 2.95
Total	162081 36.59	10054 2.27	39403 8.90	222822 50.30	8587 1.94	442947 100.00

(Continued)

lockage activity at each River lock (after combining records for cuts) 17
with elimination of recreational vessels = yes 12:49 Friday, June 24, 2005
%&
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of LOCK_NO by LOCKAGE_TYPE

LOCK_NO(LOCK_NO) LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
26	1464 0.33 5.11 0.90	22 0.00 0.08 0.22	434 0.10 1.51 1.10	26636 6.01 92.95 11.95	101 0.02 0.35 1.18	28657 6.47
27	203 0.05 0.60 0.13	19 0.00 0.06 0.19	452 0.10 1.34 1.15	33063 7.46 97.87 14.84	45 0.01 0.13 0.52	33782 7.63
51	0 0.00 0.00 0.00	17 0.00 0.19 0.17	4303 0.97 47.92 10.92	4659 1.05 51.89 2.09	0 0.00 0.00 0.00	8979 2.03
52	0 0.00 0.00 0.00	7 0.00 0.10 0.07	4340 0.98 63.71 11.01	2465 0.56 36.19 1.11	0 0.00 0.00 0.00	6812 1.54
55	2922 0.66 61.14 1.80	5 0.00 0.10 0.05	213 0.05 4.46 0.54	1525 0.34 31.91 0.68	114 0.03 2.39 1.33	4779 1.08
Total	162081 36.59	10054 2.27	39403 8.90	222822 50.30	8587 1.94	442947 100.00

lockage activity at each River lock (after combining records for cuts) 18
with elimination of recreational vessels = yes 12:49 Friday, June 24, 2005
%&
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of LOCKAGE_TYPE by multrec

LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency / Percent / Row Pct / Col Pct	multrec N	multrec Y	Total
1:DOUBLE	412	161669	162081
	0.09	36.50	36.59
	0.25	99.75	
	0.15	98.83	
5:OTHER	9925	129	10054
	2.24	0.03	2.27
	98.72	1.28	
	3.55	0.08	
3:KNOCKOUT	37746	1657	39403
	8.52	0.37	8.90
	95.79	4.21	
	13.51	1.01	
2:SINGLE	222703	119	222822
	50.28	0.03	50.30
	99.95	0.05	
	79.72	0.07	
4:JACKNIFE	8576	11	8587
	1.94	0.00	1.94
	99.87	0.13	
	3.07	0.01	
Total	279362	163585	442947
	63.07	36.93	100.00

lockage activity at each River lock (after combining records for cuts) 19
with elimination of recreational vessels = yes 12:49 Friday, June 24, 2005
%&
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of LOCK_NO by vess_type

LOCK_NO(LOCK_NO) vess_type

Frequency Percent Row Pct Col Pct	G	M	N	P	T	U	Z	Total
01	368 0.10 3.37 5.59	22 0.01 0.20 61.11	0 0.00 0.00 0.00	659 0.17 6.03 5.55	9875 2.62 90.33 2.75	8 0.00 0.07 15.09	0 0.00 0.00 0.00	10932 2.90
02	206 0.05 1.51 3.13	4 0.00 0.03 11.11	0 0.00 0.00 0.00	83 0.02 0.61 0.70	13386 3.55 97.82 3.73	0 0.00 0.00 0.00	6 0.00 0.04 2.78	13685 3.63
03	222 0.06 1.53 3.37	5 0.00 0.03 13.89	0 0.00 0.00 0.00	382 0.10 2.63 3.22	13925 3.69 95.77 3.88	0 0.00 0.00 0.00	6 0.00 0.04 2.78	14540 3.85
04	370 0.10 2.57 5.62	2 0.00 0.01 5.56	0 0.00 0.00 0.00	104 0.03 0.72 0.88	13918 3.69 96.51 3.88	2 0.00 0.01 3.77	26 0.01 0.18 12.04	14422 3.82
05	381 0.10 2.61 5.79	2 0.00 0.01 5.56	0 0.00 0.00 0.00	106 0.03 0.73 0.89	14088 3.73 96.46 3.93	2 0.00 0.01 3.77	26 0.01 0.18 12.04	14605 3.87
06	439 0.12 2.64 6.67	0 0.00 0.00 0.00	0 0.00 0.00 0.00	189 0.05 1.14 1.59	15955 4.23 96.04 4.45	4 0.00 0.02 7.55	26 0.01 0.16 12.04	16613 4.40
07	471 0.12 2.28 7.15	0 0.00 0.00 0.00	0 0.00 0.00 0.00	370 0.10 1.79 3.12	19752 5.23 95.79 5.51	6 0.00 0.03 11.32	22 0.01 0.11 10.19	20621 5.46
08	261 0.07 1.35 3.96	0 0.00 0.00 0.00	0 0.00 0.00 0.00	160 0.04 0.83 1.35	18857 5.00 97.69 5.26	3 0.00 0.02 5.66	22 0.01 0.11 10.19	19303 5.11
Total	6585 1.74	36 0.01	2 0.00	11868 3.14	358731 95.03	53 0.01	216 0.06	377491 100.00

(Continued)

lockage activity at each River lock (after combining records for cuts) 20
with elimination of recreational vessels = yes 12:49 Friday, June 24, 2005
%&
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of LOCK_NO by vess_type

LOCK_NO(LOCK_NO) vess_type

Frequency Percent Row Pct Col Pct	G	M	N	P	T	U	Z	Total
09	166	0	0	125	5545	1	2	5839
	0.04	0.00	0.00	0.03	1.47	0.00	0.00	1.55
	2.84	0.00	0.00	2.14	94.96	0.02	0.03	
	2.52	0.00	0.00	1.05	1.55	1.89	0.93	
10	113	0	0	68	6817	1	2	7001
	0.03	0.00	0.00	0.02	1.81	0.00	0.00	1.85
	1.61	0.00	0.00	0.97	97.37	0.01	0.03	
	1.72	0.00	0.00	0.57	1.90	1.89	0.93	
11	122	0	0	299	7826	1	2	8250
	0.03	0.00	0.00	0.08	2.07	0.00	0.00	2.19
	1.48	0.00	0.00	3.62	94.86	0.01	0.02	
	1.85	0.00	0.00	2.52	2.18	1.89	0.93	
12	124	0	0	700	7581	1	2	8408
	0.03	0.00	0.00	0.19	2.01	0.00	0.00	2.23
	1.47	0.00	0.00	8.33	90.16	0.01	0.02	
	1.88	0.00	0.00	5.90	2.11	1.89	0.93	
13	116	0	0	727	7712	1	2	8558
	0.03	0.00	0.00	0.19	2.04	0.00	0.00	2.27
	1.36	0.00	0.00	8.49	90.11	0.01	0.02	
	1.76	0.00	0.00	6.13	2.15	1.89	0.93	
14	228	0	0	199	10986	2	2	11417
	0.06	0.00	0.00	0.05	2.91	0.00	0.00	3.02
	2.00	0.00	0.00	1.74	96.22	0.02	0.02	
	3.46	0.00	0.00	1.68	3.06	3.77	0.93	
15	228	0	0	796	13554	3	2	14583
	0.06	0.00	0.00	0.21	3.59	0.00	0.00	3.86
	1.56	0.00	0.00	5.46	92.94	0.02	0.01	
	3.46	0.00	0.00	6.71	3.78	5.66	0.93	
16	155	0	0	88	11805	2	2	12052
	0.04	0.00	0.00	0.02	3.13	0.00	0.00	3.19
	1.29	0.00	0.00	0.73	97.95	0.02	0.02	
	2.35	0.00	0.00	0.74	3.29	3.77	0.93	
Total	6585	36	2	11868	358731	53	216	377491
	1.74	0.01	0.00	3.14	95.03	0.01	0.06	100.00

(Continued)

lockage activity at each River lock (after combining records for cuts) 21
with elimination of recreational vessels = yes 12:49 Friday, June 24, 2005
%&
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of LOCK_NO by vess_type

LOCK_NO(LOCK_NO) vess_type

Frequency Percent Row Pct Col Pct	G	M	N	P	T	U	Z	Total
17	152 0.04 1.40 2.31	0 0.00 0.00 0.00	0 0.00 0.00 0.00	72 0.02 0.67 0.61	10591 2.81 97.89 2.95	2 0.00 0.02 3.77	2 0.00 0.02 0.93	10819 2.87
18	208 0.06 1.82 3.16	0 0.00 0.00 0.00	0 0.00 0.00 0.00	76 0.02 0.67 0.64	11115 2.94 97.49 3.10	0 0.00 0.00 0.00	2 0.00 0.02 0.93	11401 3.02
19	168 0.04 1.52 2.55	0 0.00 0.00 0.00	0 0.00 0.00 0.00	80 0.02 0.72 0.67	10836 2.87 97.74 3.02	0 0.00 0.00 0.00	2 0.00 0.02 0.93	11086 2.94
20	157 0.04 1.33 2.38	0 0.00 0.00 0.00	0 0.00 0.00 0.00	81 0.02 0.69 0.68	11566 3.06 97.97 3.22	0 0.00 0.00 0.00	2 0.00 0.02 0.93	11806 3.13
21	168 0.04 1.40 2.55	0 0.00 0.00 0.00	0 0.00 0.00 0.00	94 0.02 0.78 0.79	11760 3.12 97.80 3.28	0 0.00 0.00 0.00	2 0.00 0.02 0.93	12024 3.19
22	189 0.05 1.64 2.87	0 0.00 0.00 0.00	0 0.00 0.00 0.00	97 0.03 0.84 0.82	11271 2.99 97.51 3.14	0 0.00 0.00 0.00	2 0.00 0.02 0.93	11559 3.06
24	338 0.09 2.81 5.13	0 0.00 0.00 0.00	0 0.00 0.00 0.00	88 0.02 0.73 0.74	11602 3.07 96.44 3.23	0 0.00 0.00 0.00	2 0.00 0.02 0.93	12030 3.19
25	196 0.05 1.50 2.98	0 0.00 0.00 0.00	0 0.00 0.00 0.00	89 0.02 0.68 0.75	12765 3.38 97.79 3.56	1 0.00 0.01 1.89	2 0.00 0.02 0.93	13053 3.46
Total	6585 1.74	36 0.01	2 0.00	11868 3.14	358731 95.03	53 0.01	216 0.06	377491 100.00

(Continued)

lockage activity at each River lock (after combining records for cuts) 22
with elimination of recreational vessels = yes 12:49 Friday, June 24, 2005
%&
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of LOCK_NO by vess_type

LOCK_NO(LOCK_NO) vess_type

Frequency Percent Row Pct Col Pct	G	M	N	P	T	U	Z	Total
26	252 0.07 0.88 3.83	0 0.00 0.00 0.00	1 0.00 0.00 50.00	141 0.04 0.49 1.19	28179 7.46 98.54 7.86	1 0.00 0.00 1.89	23 0.01 0.08 10.65	28597 7.58
27	417 0.11 1.24 6.33	0 0.00 0.00 0.00	1 0.00 0.00 50.00	196 0.05 0.58 1.65	33073 8.76 98.08 9.22	8 0.00 0.02 15.09	25 0.01 0.07 11.57	33720 8.93
51	45 0.01 0.50 0.68	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3989 1.06 44.43 33.61	4945 1.31 55.07 1.38	0 0.00 0.00 0.00	0 0.00 0.00 0.00	8979 2.38
52	104 0.03 1.53 1.58	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1736 0.46 25.49 14.63	4971 1.32 72.98 1.39	0 0.00 0.00 0.00	0 0.00 0.00 0.00	6811 1.80
55	221 0.06 4.63 3.36	1 0.00 0.02 2.78	0 0.00 0.00 0.00	74 0.02 1.55 0.62	4475 1.19 93.68 1.25	4 0.00 0.08 7.55	2 0.00 0.04 0.93	4777 1.27
Total	6585 1.74	36 0.01	2 0.00	11868 3.14	358731 95.03	53 0.01	216 0.06	377491 100.00

Frequency Missing = 65456

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 23
Total Lockage Time from Arrival to Departure
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Lockage Obs	Num Missing Values	Sum Mins Total Time	Avg Mins Total Time	Std Dev Total Time	Smallest Total Time	5th Pctile Total Time	Median Total Time	95th Pctile Total Time	Largest Total Time
CH	01	1	EXCHANGE	3:KNOCKOUT	D	1	0	14.00	14.000	.	14.000	14.000	14.000	14.000	14.00
CH	01	1	EXCHANGE	2:SINGLE	D	12941	0	186500.00	14.412	11.843	8.000	12.000	14.000	20.000	674.00
CH	01	1	EXCHANGE	2:SINGLE	U	12750	0	181058.00	14.201	3.874	8.000	12.000	14.000	20.000	192.00
CH	01	1	EXCHANGE	5:OTHER	U	1	0	13.00	13.000	.	13.000	13.000	13.000	13.000	13.00
CH	01	1	FLY	2:SINGLE	D	59	0	638.00	10.814	3.076	4.000	8.000	10.000	17.000	20.00
CH	01	1	FLY	2:SINGLE	U	73	0	776.00	10.630	3.151	8.000	8.000	10.000	19.000	23.00
CH	01	1	TURNBACK	2:SINGLE	D	11346	0	167176.00	14.734	7.812	8.000	12.000	14.000	21.000	563.00
CH	01	1	TURNBACK	2:SINGLE	U	11833	0	172675.00	14.593	5.571	8.000	12.000	14.000	22.000	314.00
CH	01	1	TURNBACK	5:OTHER	U	1	0	13.00	13.000	.	13.000	13.000	13.000	13.000	13.00
IL	01	1	EXCHANGE	2:SINGLE	D	474	0	20650.00	43.565	31.269	9.000	25.000	40.000	70.000	492.00
IL	01	1	EXCHANGE	2:SINGLE	U	365	0	17977.00	49.252	36.733	10.000	25.000	40.000	80.000	440.00
IL	01	1	FLY	2:SINGLE	D	4093	0	130019.00	31.766	10.491	4.000	16.000	30.000	50.000	145.00
IL	01	1	FLY	2:SINGLE	U	4126	0	150771.00	36.542	13.681	4.000	17.000	35.000	60.000	135.00
IL	01	1	FLY	5:OTHER	D	1	0	47.00	47.000	.	47.000	47.000	47.000	47.000	47.00
IL	01	1	FLY	5:OTHER	U	1	0	41.00	41.000	.	41.000	41.000	41.000	41.000	41.00
IL	01	1	FLY	5:OTHER	D	3	0	24.00	8.000	6.928	4.000	4.000	4.000	16.000	16.00
IL	01	1	TURNBACK	2:SINGLE	D	434	0	19205.00	44.251	15.671	5.000	29.000	42.000	65.000	165.00
IL	01	1	TURNBACK	2:SINGLE	U	494	0	26378.00	53.397	41.069	10.000	30.000	48.000	85.000	621.00
IL	01	1	TURNBACK	5:OTHER	D	1	0	47.00	47.000	.	47.000	47.000	47.000	47.000	47.00
IL	02	1	EXCHANGE	1:DOUBLE	D	466	0	157957.00	338.964	145.041	144.000	186.000	300.000	625.000	1205.00
IL	02	1	EXCHANGE	1:DOUBLE	U	517	0	167590.00	324.159	153.905	110.000	179.000	281.000	599.000	1396.00
IL	02	1	EXCHANGE	5:OTHER	D	4	0	1290.00	322.500	255.800	123.000	123.000	253.000	661.000	661.00
IL	02	1	EXCHANGE	3:KNOCKOUT	D	601	0	129563.00	215.579	144.645	40.000	75.000	177.000	506.000	1209.00
IL	02	1	EXCHANGE	3:KNOCKOUT	U	571	0	123146.00	215.667	139.815	46.000	80.000	177.000	515.000	1087.00
IL	02	1	EXCHANGE	2:SINGLE	D	613	0	106812.00	174.245	125.079	29.000	48.000	136.000	405.000	830.00
IL	02	1	EXCHANGE	2:SINGLE	U	589	0	102008.00	173.188	150.362	31.000	48.000	120.000	480.000	1135.00
IL	02	1	EXCHANGE	5:OTHER	U	1	0	230.00	230.000	.	230.000	230.000	230.000	230.000	230.00
IL	02	1	EXCHANGE	4:JACKNIFE	D	81	0	23027.00	284.284	171.816	78.000	109.000	225.000	640.000	893.00
IL	02	1	EXCHANGE	4:JACKNIFE	U	130	0	33161.00	255.085	149.423	85.000	110.000	212.500	510.000	980.00
IL	02	1	EXCHANGE	5:OTHER	D	1	0	69.00	69.000	.	69.000	69.000	69.000	69.000	69.00
IL	02	1	FLY	1:DOUBLE	D	558	0	95653.00	171.421	50.407	85.000	120.000	168.000	230.000	970.00
IL	02	1	FLY	1:DOUBLE	U	645	0	122407.00	189.778	37.486	113.000	135.000	186.000	255.000	450.00
IL	02	1	FLY	5:OTHER	D	3	0	227.00	75.667	18.148	59.000	59.000	73.000	95.000	95.00
IL	02	1	FLY	5:OTHER	U	5	0	527.00	105.400	38.063	66.000	66.000	97.000	150.000	150.00
IL	02	1	FLY	3:KNOCKOUT	D	810	0	51372.00	63.422	15.937	25.000	42.000	60.000	94.000	158.00
IL	02	1	FLY	3:KNOCKOUT	U	751	0	53679.00	71.477	16.426	31.000	50.000	69.000	103.000	200.00
IL	02	1	FLY	2:SINGLE	D	1017	0	45667.00	44.904	15.169	17.000	26.000	42.000	71.000	150.00
IL	02	1	FLY	2:SINGLE	U	870	0	44090.00	50.678	23.680	22.000	29.000	48.000	75.000	530.00
IL	02	1	FLY	5:OTHER	D	2	0	314.00	157.000	130.108	65.000	65.000	157.000	249.000	249.00
IL	02	1	FLY	4:JACKNIFE	D	99	0	9692.00	97.899	23.669	53.000	64.000	96.000	148.000	160.00
IL	02	1	FLY	4:JACKNIFE	U	120	0	12653.00	105.442	21.911	50.000	76.000	103.000	150.500	175.00
IL	02	1	FLY	5:OTHER	U	1	0	180.00	180.000	.	180.000	180.000	180.000	180.000	180.00
IL	02	1	TURNBACK	1:DOUBLE	D	417	0	153837.00	368.914	193.751	115.000	165.000	315.000	785.000	1585.00
IL	02	1	TURNBACK	1:DOUBLE	U	359	0	124457.00	346.677	163.732	136.000	189.000	288.000	696.000	1100.00
IL	02	1	TURNBACK	5:OTHER	D	1	0	410.00	410.000	.	410.000	410.000	410.000	410.000	410.00
IL	02	1	TURNBACK	5:OTHER	U	3	0	508.00	169.333	19.858	155.000	155.000	161.000	192.000	192.00
IL	02	1	TURNBACK	3:KNOCKOUT	D	567	0	146158.00	257.774	188.515	50.000	74.000	200.000	673.000	1128.00
IL	02	1	TURNBACK	3:KNOCKOUT	U	621	0	155300.00	250.081	163.196	56.000	88.000	201.000	585.000	1365.00
IL	02	1	TURNBACK	2:SINGLE	D	614	0	129938.00	211.625	178.315	30.000	52.000	149.000	566.000	1714.00
IL	02	1	TURNBACK	2:SINGLE	U	607	0	132307.00	217.969	175.381	35.000	60.000	165.000	549.000	1476.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 24
Total Lockage Time from Arrival to Departure
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Lockage Obs	Num Missing Values	Sum Mins Total Time	Avg Mins Total Time	Std Dev Total Time	Smallest Total Time	5th Pctile Total Time	Median Total Time	95th Pctile Total Time	Largest Total Time
IL	02	1	TURNBACK	5:OTHER	D	1	0	197.00	197.000	.	197.000	197.000	197.000	197.000	197.00
IL	02	1	TURNBACK	5:OTHER	U	1	0	469.00	469.000	.	469.000	469.000	469.000	469.000	469.00
IL	02	1	TURNBACK	4:JACKNIFE	D	79	0	22794.00	288.532	177.085	80.000	96.000	244.000	660.000	776.00
IL	02	1	TURNBACK	4:JACKNIFE	U	134	0	38463.00	287.037	158.829	85.000	125.000	255.000	633.000	848.00
IL	03	1	EXCHANGE	1:DOUBLE	D	553	0	150372.00	271.920	130.327	111.000	150.000	245.000	435.000	1790.00
IL	03	1	EXCHANGE	1:DOUBLE	U	526	0	180978.00	344.065	251.704	138.000	187.000	290.000	592.000	3275.00
IL	03	1	EXCHANGE	5:OTHER	D	1	0	267.00	267.000	.	267.000	267.000	267.000	267.000	267.00
IL	03	1	EXCHANGE	5:OTHER	U	2	0	532.00	266.000	49.497	231.000	231.000	266.000	301.000	301.00
IL	03	1	EXCHANGE	3:KNOCKOUT	D	536	0	98100.00	183.022	128.856	43.000	58.000	149.500	440.000	1083.00
IL	03	1	EXCHANGE	3:KNOCKOUT	U	501	0	108258.00	216.084	179.910	54.000	77.000	167.000	489.000	1706.00
IL	03	1	EXCHANGE	2:SINGLE	D	716	0	102365.00	142.968	117.570	30.000	42.000	105.500	360.000	1124.00
IL	03	1	EXCHANGE	2:SINGLE	U	629	0	107196.00	170.423	190.663	23.000	45.000	120.000	444.000	3375.00
IL	03	1	EXCHANGE	4:JACKNIFE	D	85	0	18164.00	213.694	111.293	89.000	105.000	188.000	440.000	735.00
IL	03	1	EXCHANGE	4:JACKNIFE	U	113	0	38038.00	336.619	230.730	88.000	120.000	268.000	789.000	1645.00
IL	03	1	FLY	1:DOUBLE	D	707	0	111778.00	158.102	29.261	88.000	114.000	156.000	205.000	315.00
IL	03	1	FLY	1:DOUBLE	U	671	0	122418.00	182.441	34.609	106.000	137.000	180.000	227.000	572.00
IL	03	1	FLY	5:OTHER	D	2	0	152.00	76.000	26.870	57.000	57.000	76.000	95.000	95.00
IL	03	1	FLY	5:OTHER	U	6	0	632.00	105.333	37.147	70.000	70.000	99.000	175.000	175.00
IL	03	1	FLY	3:KNOCKOUT	D	729	0	41225.00	56.550	17.483	28.000	39.000	53.000	85.000	301.00
IL	03	1	FLY	3:KNOCKOUT	U	630	0	42671.00	67.732	20.093	32.000	45.000	65.500	91.000	387.00
IL	03	1	FLY	2:SINGLE	D	971	0	37607.00	38.730	12.790	19.000	25.000	36.000	58.000	225.00
IL	03	1	FLY	2:SINGLE	U	927	0	43250.00	46.656	13.911	18.000	30.000	45.000	72.000	157.00
IL	03	1	FLY	5:OTHER	D	1	0	24.00	24.000	.	24.000	24.000	24.000	24.000	24.00
IL	03	1	FLY	4:JACKNIFE	D	95	0	9039.00	95.147	23.029	54.000	58.000	94.000	127.000	203.00
IL	03	1	FLY	4:JACKNIFE	U	125	0	12494.00	99.952	18.362	65.000	75.000	97.000	133.000	150.00
IL	03	1	TURNBACK	1:DOUBLE	D	303	0	84053.00	277.403	140.737	115.000	143.000	229.000	560.000	1145.00
IL	03	1	TURNBACK	1:DOUBLE	U	482	0	181842.00	377.266	267.400	145.000	189.000	310.000	706.000	2830.00
IL	03	1	TURNBACK	5:OTHER	D	2	0	788.00	394.000	48.083	360.000	360.000	394.000	428.000	428.00
IL	03	1	TURNBACK	5:OTHER	U	1	0	528.00	528.000	.	528.000	528.000	528.000	528.000	528.00
IL	03	1	TURNBACK	3:KNOCKOUT	D	503	0	104499.00	207.751	155.254	50.000	67.000	163.000	465.000	1325.00
IL	03	1	TURNBACK	3:KNOCKOUT	U	623	0	170239.00	273.257	218.018	49.000	85.000	225.000	619.000	2900.00
IL	03	1	TURNBACK	2:SINGLE	D	691	0	120210.00	173.965	130.669	9.000	50.000	134.000	432.000	950.00
IL	03	1	TURNBACK	2:SINGLE	U	587	0	121269.00	206.591	163.324	35.000	55.000	157.000	505.000	1669.00
IL	03	1	TURNBACK	5:OTHER	U	1	0	105.00	105.000	.	105.000	105.000	105.000	105.000	105.00
IL	03	1	TURNBACK	4:JACKNIFE	D	61	0	15183.00	248.902	159.087	70.000	85.000	196.000	565.000	865.00
IL	03	1	TURNBACK	4:JACKNIFE	U	143	0	55478.00	387.958	322.321	92.000	122.000	325.000	887.000	2930.00
IL	04	1	EXCHANGE	1:DOUBLE	D	552	0	134946.00	244.467	174.756	93.000	130.000	211.000	423.000	2991.00
IL	04	1	EXCHANGE	1:DOUBLE	U	550	0	143338.00	260.615	118.747	105.000	145.000	232.000	470.000	1456.00
IL	04	1	EXCHANGE	5:OTHER	D	2	0	543.00	271.500	218.496	117.000	117.000	271.500	426.000	426.00
IL	04	1	EXCHANGE	5:OTHER	U	1	0	110.00	110.000	.	110.000	110.000	110.000	110.000	110.00
IL	04	1	EXCHANGE	3:KNOCKOUT	D	420	0	68888.00	164.019	114.174	37.000	55.000	135.000	373.500	886.00
IL	04	1	EXCHANGE	3:KNOCKOUT	U	449	0	75698.00	168.592	108.921	40.000	60.000	140.000	370.000	817.00
IL	04	1	EXCHANGE	2:SINGLE	D	463	0	61190.00	132.160	97.731	16.000	37.000	105.000	309.000	860.00
IL	04	1	EXCHANGE	2:SINGLE	U	385	0	50244.00	130.504	164.399	20.000	35.000	95.000	305.000	2652.00
IL	04	1	EXCHANGE	5:OTHER	D	1	0	140.00	140.000	.	140.000	140.000	140.000	140.000	140.00
IL	04	1	EXCHANGE	4:JACKNIFE	D	105	0	18817.00	179.210	80.824	75.000	86.000	160.000	338.000	535.00
IL	04	1	EXCHANGE	4:JACKNIFE	U	118	0	27783.00	235.449	147.063	75.000	100.000	190.500	510.000	980.00
IL	04	1	FLY	1:DOUBLE	D	953	0	131839.00	138.341	42.200	75.000	95.000	135.000	185.000	1085.00
IL	04	1	FLY	1:DOUBLE	U	1000	0	150726.00	150.726	25.675	57.000	110.000	151.000	190.500	308.00
IL	04	1	FLY	5:OTHER	D	1	0	45.00	45.000	.	45.000	45.000	45.000	45.000	45.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 25
Total Lockage Time from Arrival to Departure
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Lockage Obs	Num Missing Values	Sum Mins Total Time	Avg Mins Total Time	Std Dev Total Time	Smallest Total Time	5th Pctile Total Time	Median Total Time	95th Pctile Total Time	Largest Total Time
IL	04	1	FLY	5:OTHER	U	2	0	169.00	84.500	55.86	45.000	45.000	84.500	124.00	124.00
IL	04	1	FLY	3:KNOCKOUT	D	659	0	34875.00	52.921	13.77	25.000	35.000	52.000	76.00	120.00
IL	04	1	FLY	3:KNOCKOUT	U	686	0	39801.00	58.019	12.47	30.000	40.000	56.000	80.00	145.00
IL	04	1	FLY	2:SINGLE	D	855	0	29546.00	34.557	10.71	8.000	20.000	34.000	50.00	125.00
IL	04	1	FLY	2:SINGLE	U	818	0	30458.00	37.235	10.44	15.000	21.000	35.000	55.00	116.00
IL	04	1	FLY	4:JACKNIFE	D	142	0	13282.00	93.535	23.18	45.000	62.000	92.000	130.00	243.00
IL	04	1	FLY	4:JACKNIFE	U	178	0	16769.00	94.208	35.04	45.000	65.000	90.000	124.00	376.00
IL	04	1	FLY	5:OTHER	D	1	0	30.00	30.000	.	30.000	30.000	30.000	30.00	30.00
IL	04	1	TURNBACK	1:DOUBLE	D	485	0	121135.00	249.763	149.37	55.000	120.000	210.000	495.00	1585.00
IL	04	1	TURNBACK	1:DOUBLE	U	498	0	139881.00	280.886	142.89	93.000	148.000	240.000	540.00	1580.00
IL	04	1	TURNBACK	5:OTHER	D	1	0	86.00	86.000	.	86.000	86.000	86.000	86.00	86.00
IL	04	1	TURNBACK	5:OTHER	U	3	0	993.00	331.000	105.53	210.000	210.000	379.000	404.00	404.00
IL	04	1	TURNBACK	3:KNOCKOUT	D	474	0	85873.00	181.167	156.25	42.000	56.000	140.500	432.00	1646.00
IL	04	1	TURNBACK	3:KNOCKOUT	U	448	0	94426.00	210.772	134.78	35.000	65.000	182.500	485.00	740.00
IL	04	1	TURNBACK	2:SINGLE	D	506	0	77452.00	153.067	124.26	23.000	42.000	110.000	435.00	745.00
IL	04	1	TURNBACK	2:SINGLE	U	423	0	74656.00	176.492	156.38	26.000	45.000	130.000	445.00	1545.00
IL	04	1	TURNBACK	4:JACKNIFE	D	109	0	26588.00	243.927	351.92	60.000	79.000	185.000	495.00	3665.00
IL	04	1	TURNBACK	4:JACKNIFE	U	155	0	43270.00	279.161	199.14	72.000	95.000	242.000	610.00	1720.00
IL	05	1	EXCHANGE	1:DOUBLE	D	656	0	205761.00	313.660	205.99	100.000	151.000	268.500	600.00	2855.00
IL	05	1	EXCHANGE	1:DOUBLE	U	783	0	252176.00	322.064	171.57	118.000	167.000	282.000	586.00	1958.00
IL	05	1	EXCHANGE	5:OTHER	D	3	0	2443.00	814.333	1072.57	124.000	124.000	269.000	2050.00	2050.00
IL	05	1	EXCHANGE	5:OTHER	U	1	0	395.00	395.000	.	395.000	395.000	395.000	395.00	395.00
IL	05	1	EXCHANGE	3:KNOCKOUT	D	350	0	75245.00	214.986	179.83	43.000	64.000	170.000	528.00	1870.00
IL	05	1	EXCHANGE	3:KNOCKOUT	U	388	0	86187.00	222.131	144.02	52.000	78.000	190.000	460.00	1227.00
IL	05	1	EXCHANGE	2:SINGLE	D	468	0	80736.00	172.513	137.15	28.000	45.000	135.500	433.00	1186.00
IL	05	1	EXCHANGE	2:SINGLE	U	468	0	85274.00	182.209	175.10	27.000	43.000	143.000	428.00	2095.00
IL	05	1	EXCHANGE	5:OTHER	D	2	0	465.00	232.500	86.97	171.000	171.000	232.500	294.00	294.00
IL	05	1	EXCHANGE	4:JACKNIFE	D	128	0	35529.00	277.570	275.35	80.000	97.000	220.000	637.00	2778.00
IL	05	1	EXCHANGE	4:JACKNIFE	U	172	0	45770.00	266.105	178.65	80.000	100.000	220.000	640.00	1240.00
IL	05	1	FLY	1:DOUBLE	D	950	0	150702.00	158.634	31.81	82.000	115.000	159.000	200.00	697.00
IL	05	1	FLY	1:DOUBLE	U	873	0	146687.00	168.026	27.82	97.000	130.000	165.000	210.00	389.00
IL	05	1	FLY	5:OTHER	D	1	0	117.00	117.000	.	117.000	117.000	117.000	117.00	117.00
IL	05	1	FLY	3:KNOCKOUT	D	458	0	31241.00	68.212	17.98	35.000	45.000	65.000	100.00	208.00
IL	05	1	FLY	3:KNOCKOUT	U	391	0	28815.00	73.696	17.67	40.000	51.000	72.000	97.00	205.00
IL	05	1	FLY	2:SINGLE	D	715	0	32867.00	45.968	21.91	19.000	25.000	45.000	70.00	495.00
IL	05	1	FLY	2:SINGLE	U	617	0	31763.00	51.480	16.57	10.000	30.000	50.000	79.00	240.00
IL	05	1	FLY	4:JACKNIFE	D	122	0	12205.00	100.041	22.69	60.000	71.000	97.000	135.00	241.00
IL	05	1	FLY	4:JACKNIFE	U	138	0	14620.00	105.942	19.93	55.000	75.000	107.000	140.00	195.00
IL	05	1	TURNBACK	1:DOUBLE	D	620	0	189014.00	304.861	176.22	110.000	143.500	246.500	643.00	1352.00
IL	05	1	TURNBACK	1:DOUBLE	U	602	0	195446.00	324.661	184.50	120.000	161.000	269.000	685.00	1650.00
IL	05	1	TURNBACK	5:OTHER	U	1	0	145.00	145.000	.	145.000	145.000	145.000	145.00	145.00
IL	05	1	TURNBACK	3:KNOCKOUT	D	394	0	89219.00	226.444	172.64	47.000	70.000	185.000	533.00	1660.00
IL	05	1	TURNBACK	3:KNOCKOUT	U	393	0	91567.00	232.995	167.91	59.000	80.000	182.000	534.00	1255.00
IL	05	1	TURNBACK	2:SINGLE	D	508	0	87513.00	172.270	144.74	27.000	45.000	130.000	485.00	1195.00
IL	05	1	TURNBACK	2:SINGLE	U	469	0	95137.00	202.851	174.42	27.000	55.000	145.000	520.00	1530.00
IL	05	1	TURNBACK	5:OTHER	D	1	0	320.00	320.000	.	320.000	320.000	320.000	320.00	320.00
IL	05	1	TURNBACK	5:OTHER	U	1	0	130.00	130.000	.	130.000	130.000	130.000	130.00	130.00
IL	05	1	TURNBACK	4:JACKNIFE	D	102	0	31008.00	304.000	358.19	67.000	105.000	197.500	721.00	2171.00
IL	05	1	TURNBACK	4:JACKNIFE	U	169	0	49941.00	295.509	178.33	90.000	105.000	259.000	665.00	912.00
IL	06	1	EXCHANGE	1:DOUBLE	D	722	0	194458.00	269.332	139.84	88.000	138.000	239.000	489.00	2025.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 26
Total Lockage Time from Arrival to Departure
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Lockage Obs	Num Missing Values	Sum Mins Total Time	Avg Mins Total Time	Std Dev Total Time	Smallest Total Time	5th Pctile Total Time	Median Total Time	95th Pctile Total Time	Largest Total Time
IL	06	1	EXCHANGE	1:DOUBLE	U	693	0	200916.00	289.922	138.418	93.000	146.000	256.000	568.000	1492.00
IL	06	1	EXCHANGE	3:KNOCKOUT	D	297	0	55218.00	185.919	116.082	46.000	62.000	160.000	405.000	689.00
IL	06	1	EXCHANGE	3:KNOCKOUT	U	333	0	66589.00	199.967	158.008	46.000	70.000	154.000	497.000	1372.00
IL	06	1	EXCHANGE	2:SINGLE	D	524	0	76564.00	146.115	131.050	15.000	33.000	105.000	392.000	844.00
IL	06	1	EXCHANGE	2:SINGLE	U	491	0	75205.00	153.167	153.048	10.000	32.000	110.000	437.000	1830.00
IL	06	1	EXCHANGE	4:JACKNIFE	D	97	0	23747.00	244.814	124.652	65.000	96.000	213.000	509.000	608.00
IL	06	1	EXCHANGE	4:JACKNIFE	U	141	0	34149.00	242.191	168.401	83.000	103.000	205.000	530.000	1407.00
IL	06	1	FLY	1:DOUBLE	D	1207	0	164720.00	136.471	29.261	74.000	96.000	134.000	185.000	405.00
IL	06	1	FLY	1:DOUBLE	U	1117	0	160526.00	143.712	28.399	84.000	104.000	141.000	190.000	347.00
IL	06	1	FLY	5:OTHER	D	1	0	93.00	93.000	.	93.000	93.000	93.000	93.000	93.00
IL	06	1	FLY	5:OTHER	U	3	0	264.00	88.000	37.643	45.000	45.000	104.000	115.000	115.00
IL	06	1	FLY	3:KNOCKOUT	D	483	0	26625.00	55.124	20.974	26.000	36.000	53.000	82.000	381.00
IL	06	1	FLY	3:KNOCKOUT	U	472	0	27237.00	57.706	14.539	34.000	40.000	55.000	81.000	150.00
IL	06	1	FLY	2:SINGLE	D	995	0	33804.00	33.974	16.123	12.000	18.000	31.000	57.000	240.00
IL	06	1	FLY	2:SINGLE	U	1009	0	36083.00	35.761	20.582	12.000	19.000	32.000	58.000	377.00
IL	06	1	FLY	5:OTHER	D	2	0	128.00	64.000	48.083	30.000	30.000	64.000	98.000	98.00
IL	06	1	FLY	5:OTHER	U	1	0	167.00	167.000	.	167.000	167.000	167.000	167.000	167.00
IL	06	1	FLY	4:JACKNIFE	D	146	0	13553.00	92.829	39.504	51.000	60.000	88.000	123.000	447.00
IL	06	1	FLY	4:JACKNIFE	U	167	0	15423.00	92.353	16.265	49.000	67.000	92.000	124.000	147.00
IL	06	1	FLY	5:OTHER	D	1	0	92.00	92.000	.	92.000	92.000	92.000	92.000	92.00
IL	06	1	TURNBACK	1:DOUBLE	D	606	0	162930.00	268.861	153.588	95.000	126.000	220.000	603.000	1173.00
IL	06	1	TURNBACK	1:DOUBLE	U	701	0	213716.00	304.873	159.125	98.000	138.000	266.000	594.000	1572.00
IL	06	1	TURNBACK	5:OTHER	U	1	0	168.00	168.000	.	168.000	168.000	168.000	168.000	168.00
IL	06	1	TURNBACK	3:KNOCKOUT	D	382	0	77100.00	201.832	143.268	45.000	62.000	161.500	485.000	950.00
IL	06	1	TURNBACK	3:KNOCKOUT	U	344	0	78790.00	229.041	183.336	50.000	65.000	177.000	581.000	1463.00
IL	06	1	TURNBACK	2:SINGLE	D	582	0	97185.00	166.985	134.943	19.000	38.000	124.500	445.000	835.00
IL	06	1	TURNBACK	2:SINGLE	U	481	0	87387.00	181.678	152.825	22.000	38.000	134.000	477.000	1040.00
IL	06	1	TURNBACK	5:OTHER	U	2	0	450.00	225.000	193.747	88.000	88.000	225.000	362.000	362.00
IL	06	1	TURNBACK	4:JACKNIFE	D	91	0	19877.00	218.429	142.900	65.000	81.000	173.000	474.000	930.00
IL	06	1	TURNBACK	4:JACKNIFE	U	168	0	51248.00	305.048	223.354	75.000	96.000	234.000	763.000	1168.00
IL	06	1	TURNBACK	5:OTHER	U	1	0	128.00	128.000	.	128.000	128.000	128.000	128.000	128.00
IL	07	1	EXCHANGE	1:DOUBLE	D	953	0	313224.00	328.672	187.537	96.000	131.000	273.000	709.000	1249.00
IL	07	1	EXCHANGE	1:DOUBLE	U	936	0	296329.00	316.591	172.987	87.000	135.000	273.000	665.000	1158.00
IL	07	1	EXCHANGE	3:KNOCKOUT	D	154	0	35701.00	231.825	180.550	40.000	65.000	172.000	607.000	1006.00
IL	07	1	EXCHANGE	3:KNOCKOUT	U	272	0	60624.00	222.882	140.790	53.000	70.000	179.500	505.000	737.00
IL	07	1	EXCHANGE	5:OTHER	D	12	0	988.00	82.333	146.021	5.000	5.000	29.500	444.000	444.00
IL	07	1	EXCHANGE	5:OTHER	U	12	0	850.00	70.833	112.698	6.000	6.000	26.500	384.000	384.00
IL	07	1	EXCHANGE	5:OTHER	D	2	0	17.00	8.500	2.121	7.000	7.000	8.500	10.000	10.00
IL	07	1	EXCHANGE	5:OTHER	U	2	0	34.00	17.000	11.314	9.000	9.000	17.000	25.000	25.00
IL	07	1	EXCHANGE	2:SINGLE	D	522	0	93762.00	179.621	150.431	13.000	30.000	135.500	457.000	1123.00
IL	07	1	EXCHANGE	2:SINGLE	U	480	0	68076.00	141.825	135.690	13.000	30.000	100.000	372.500	886.00
IL	07	1	EXCHANGE	5:OTHER	U	3	0	527.00	175.667	116.899	83.000	83.000	137.000	307.000	307.00
IL	07	1	EXCHANGE	4:JACKNIFE	D	58	0	17954.00	309.552	184.560	72.000	95.000	274.500	742.000	848.00
IL	07	1	EXCHANGE	4:JACKNIFE	U	117	0	31300.00	267.521	156.047	72.000	92.000	235.000	577.000	908.00
IL	07	1	FLY	1:DOUBLE	D	753	0	97933.00	130.057	48.064	52.000	91.000	124.000	177.000	784.00
IL	07	1	FLY	1:DOUBLE	U	752	0	98253.00	130.656	33.630	65.000	90.000	130.000	175.000	540.00
IL	07	1	FLY	5:OTHER	D	1	0	4.00	4.000	.	4.000	4.000	4.000	4.000	4.00
IL	07	1	FLY	3:KNOCKOUT	D	156	0	8718.00	55.885	21.663	4.000	30.000	54.000	90.000	170.00
IL	07	1	FLY	3:KNOCKOUT	U	234	0	14339.00	61.278	16.006	4.000	37.000	60.000	90.000	120.00
IL	07	1	FLY	5:OTHER	D	2352	0	9762.00	4.151	1.586	1.000	4.000	4.000	5.000	44.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 27
Total Lockage Time from Arrival to Departure
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Lockage Obs	Num Missing Values	Sum Mins Total Time	Avg Mins Total Time	Std Dev Total Time	Smallest Total Time	5th Pctile Total Time	Median Total Time	95th Pctile Total Time	Largest Total Time
IL	07	1	FLY	5:OTHER	U	2397	0	9908.00	4.134	2.56	1.000	4.000	4.000	5.00	123.00
IL	07	1	FLY	5:OTHER	D	27	0	110.00	4.074	0.27	4.000	4.000	4.000	5.00	5.00
IL	07	1	FLY	5:OTHER	U	33	0	157.00	4.758	3.09	4.000	4.000	4.000	14.00	19.00
IL	07	1	FLY	2:SINGLE	D	694	0	21440.00	30.893	24.03	4.000	14.000	28.000	50.00	374.00
IL	07	1	FLY	2:SINGLE	U	548	0	17636.00	32.182	14.07	4.000	13.000	30.000	58.00	90.00
IL	07	1	FLY	4:JACKNIFE	D	60	0	5428.00	90.467	16.42	56.000	64.500	91.000	115.50	125.00
IL	07	1	FLY	4:JACKNIFE	U	86	0	8083.00	93.988	21.81	55.000	65.000	90.000	140.00	163.00
IL	07	1	TURNBACK	1:DOUBLE	D	968	0	314758.00	325.163	194.50	95.000	127.000	270.500	729.00	1344.00
IL	07	1	TURNBACK	1:DOUBLE	U	867	0	275890.00	318.212	203.02	87.000	125.000	252.000	748.00	1306.00
IL	07	1	TURNBACK	5:OTHER	D	1	0	754.00	754.000	.	754.000	754.000	754.000	754.00	754.00
IL	07	1	TURNBACK	3:KNOCKOUT	D	248	0	58847.00	237.286	181.79	42.000	60.000	182.000	642.00	1140.00
IL	07	1	TURNBACK	3:KNOCKOUT	U	285	0	68213.00	239.344	186.60	54.000	67.000	180.000	627.00	1209.00
IL	07	1	TURNBACK	5:OTHER	D	10	0	166.00	16.600	19.25	4.000	4.000	8.000	65.00	65.00
IL	07	1	TURNBACK	5:OTHER	U	10	0	454.00	45.400	62.48	9.000	9.000	23.500	209.00	209.00
IL	07	1	TURNBACK	2:SINGLE	D	543	0	112349.00	206.904	192.44	17.000	36.000	145.000	642.00	1055.00
IL	07	1	TURNBACK	2:SINGLE	U	438	0	69271.00	158.153	151.11	13.000	30.000	117.000	440.00	1017.00
IL	07	1	TURNBACK	5:OTHER	U	2	0	706.00	353.000	182.43	224.000	224.000	353.000	482.00	482.00
IL	07	1	TURNBACK	4:JACKNIFE	D	91	0	21921.00	240.890	139.85	60.000	92.000	207.000	465.00	824.00
IL	07	1	TURNBACK	4:JACKNIFE	U	120	0	32897.00	274.142	172.72	75.000	97.500	226.000	607.00	1087.00
IL	07	1	TURNBACK	5:OTHER	D	1	0	85.00	85.000	.	85.000	85.000	85.000	85.00	85.00
IL	08	1	EXCHANGE	1:DOUBLE	D	1182	0	602799.00	509.982	565.35	88.000	134.000	327.000	1520.00	9150.00
IL	08	1	EXCHANGE	1:DOUBLE	U	1160	0	569620.00	491.052	479.79	74.000	125.000	309.500	1548.50	3263.00
IL	08	1	EXCHANGE	3:KNOCKOUT	D	177	0	71289.00	402.763	450.29	7.000	65.000	247.000	1543.00	2415.00
IL	08	1	EXCHANGE	3:KNOCKOUT	U	204	0	89856.00	440.471	798.35	5.000	55.000	223.500	1532.00	8291.00
IL	08	1	EXCHANGE	5:OTHER	D	117	0	4872.00	41.641	156.10	5.000	5.000	9.000	194.00	1195.00
IL	08	1	EXCHANGE	5:OTHER	U	86	0	5204.00	60.512	236.99	5.000	5.000	7.000	67.00	1445.00
IL	08	1	EXCHANGE	5:OTHER	D	9	0	106.00	11.778	11.63	5.000	5.000	6.000	35.00	35.00
IL	08	1	EXCHANGE	5:OTHER	U	67	0	2000.00	29.851	83.44	5.000	5.000	13.000	55.00	631.00
IL	08	1	EXCHANGE	2:SINGLE	D	317	0	82081.00	258.931	342.12	9.000	33.000	142.000	1004.00	2847.00
IL	08	1	EXCHANGE	2:SINGLE	U	343	0	89894.00	262.082	595.34	13.000	27.000	122.000	755.00	7490.00
IL	08	1	EXCHANGE	5:OTHER	D	1	0	122.00	122.000	.	122.000	122.000	122.000	122.00	122.00
IL	08	1	EXCHANGE	4:JACKNIFE	D	62	0	36701.00	591.952	1195.19	67.000	105.000	305.000	1535.00	9258.00
IL	08	1	EXCHANGE	4:JACKNIFE	U	144	0	49902.00	346.542	368.90	35.000	85.000	225.000	1175.00	2626.00
IL	08	1	EXCHANGE	5:OTHER	D	1	0	29.00	29.000	.	29.000	29.000	29.000	29.00	29.00
IL	08	1	FLY	1:DOUBLE	D	383	0	52970.00	138.303	34.17	59.000	100.000	135.000	180.00	405.00
IL	08	1	FLY	1:DOUBLE	U	380	0	49005.00	128.961	27.44	65.000	90.500	128.000	175.00	248.00
IL	08	1	FLY	3:KNOCKOUT	D	91	0	5630.00	61.868	26.82	4.000	5.000	60.000	118.00	135.00
IL	08	1	FLY	3:KNOCKOUT	U	99	0	5865.00	59.242	20.31	4.000	32.000	55.000	100.00	119.00
IL	08	1	FLY	5:OTHER	D	2082	0	10191.00	4.895	2.32	1.000	4.000	5.000	6.00	55.00
IL	08	1	FLY	5:OTHER	U	1887	0	9328.00	4.943	3.13	1.000	4.000	5.000	7.00	65.00
IL	08	1	FLY	5:OTHER	D	54	0	241.00	4.463	1.53	4.000	4.000	4.000	5.00	15.00
IL	08	1	FLY	5:OTHER	U	241	0	1884.00	7.817	6.26	4.000	4.000	5.000	20.00	35.00
IL	08	1	FLY	2:SINGLE	D	177	0	6677.00	37.723	17.05	4.000	16.000	36.000	65.00	130.00
IL	08	1	FLY	2:SINGLE	U	149	0	5293.00	35.523	15.01	4.000	15.000	35.000	67.00	85.00
IL	08	1	FLY	5:OTHER	U	1	0	111.00	111.000	.	111.000	111.000	111.000	111.00	111.00
IL	08	1	FLY	4:JACKNIFE	D	32	0	3023.00	94.469	21.87	64.000	65.000	93.000	150.00	150.00
IL	08	1	FLY	4:JACKNIFE	U	66	0	6668.00	101.030	19.44	62.000	72.000	98.500	135.00	150.00
IL	08	1	TURNBACK	1:DOUBLE	D	1332	0	762150.00	572.185	721.48	85.000	131.000	341.500	1790.00	9094.00
IL	08	1	TURNBACK	1:DOUBLE	U	1279	0	760800.00	594.840	734.63	59.000	115.000	319.000	2017.00	11074.00
IL	08	1	TURNBACK	5:OTHER	D	1	0	242.00	242.000	.	242.000	242.000	242.000	242.00	242.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 28
Total Lockage Time from Arrival to Departure
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Lockage Obs	Num Missing Values	Sum Mins Total Time	Avg Mins Total Time	Std Dev Total Time	Smallest Total Time	5th Pctile Total Time	Median Total Time	95th Pctile Total Time	Largest Total Time
IL	08	1	TURNBACK	3:KNOCKOUT	D	239	0	88829.00	371.67	417.997	5.00	55.00	223.00	1392.00	2323.00
IL	08	1	TURNBACK	3:KNOCKOUT	U	245	0	100161.00	408.82	549.022	25.00	55.00	230.00	1580.00	3997.00
IL	08	1	TURNBACK	5:OTHER	D	133	0	11145.00	83.80	318.977	5.00	5.00	8.00	535.00	1895.00
IL	08	1	TURNBACK	5:OTHER	U	87	0	3313.00	38.08	158.140	5.00	5.00	7.00	65.00	1200.00
IL	08	1	TURNBACK	5:OTHER	D	6	0	107.00	17.83	13.512	5.00	5.00	16.00	40.00	40.00
IL	08	1	TURNBACK	5:OTHER	U	64	0	2896.00	45.25	153.432	5.00	5.00	13.00	40.00	1105.00
IL	08	1	TURNBACK	2:SINGLE	D	416	0	104693.00	251.67	363.133	18.00	35.00	134.00	995.00	4072.00
IL	08	1	TURNBACK	2:SINGLE	U	343	0	73420.00	214.05	268.854	16.00	27.00	121.00	720.00	1897.00
IL	08	1	TURNBACK	5:OTHER	D	1	0	1189.00	1189.00	.	1189.00	1189.00	1189.00	1189.00	1189.00
IL	08	1	TURNBACK	5:OTHER	U	2	0	937.00	468.50	146.371	365.00	365.00	468.50	572.00	572.00
IL	08	1	TURNBACK	4:JACKNIFE	D	101	0	38802.00	384.18	375.777	71.00	87.00	276.00	1183.00	1913.00
IL	08	1	TURNBACK	4:JACKNIFE	U	124	0	42487.00	342.64	297.581	65.00	88.00	250.00	870.00	1609.00
KS	01	1	EXCHANGE	2:SINGLE	D	16	0	450.00	28.12	5.476	21.00	21.00	27.50	41.00	41.00
KS	01	1	EXCHANGE	2:SINGLE	U	15	0	1021.00	68.07	152.901	20.00	20.00	27.00	620.00	620.00
KS	01	1	FLY	3:KNOCKOUT	D	4	0	88.00	22.00	6.683	16.00	16.00	21.00	30.00	30.00
KS	01	1	FLY	2:SINGLE	D	1160	0	23755.00	20.48	5.256	10.00	14.00	20.00	30.00	84.00
KS	01	1	FLY	2:SINGLE	U	1157	0	21839.00	18.88	4.541	9.00	14.00	18.00	26.00	76.00
KS	01	1	FLY	5:OTHER	U	1	0	20.00	20.00	.	20.00	20.00	20.00	20.00	20.00
KS	01	1	TURNBACK	2:SINGLE	D	11	0	318.00	28.91	6.300	20.00	20.00	27.00	41.00	41.00
KS	01	1	TURNBACK	2:SINGLE	U	9	0	235.00	26.11	8.521	16.00	16.00	24.00	39.00	39.00
MI	01	1	EXCHANGE	5:OTHER	D	1	0	51.00	51.00	.	51.00	51.00	51.00	51.00	51.00
MI	01	1	EXCHANGE	5:OTHER	U	2	0	74.00	37.00	0.000	37.00	37.00	37.00	37.00	37.00
MI	01	1	EXCHANGE	3:KNOCKOUT	D	110	0	4915.00	44.68	57.348	20.00	25.00	38.00	65.00	630.00
MI	01	1	EXCHANGE	3:KNOCKOUT	U	120	0	6843.00	57.03	141.157	19.00	25.00	40.00	62.50	1470.00
MI	01	1	EXCHANGE	2:SINGLE	D	28	0	1122.00	40.07	14.772	15.00	25.00	37.00	72.00	83.00
MI	01	1	EXCHANGE	2:SINGLE	U	41	0	2203.00	53.73	91.996	20.00	24.00	38.00	78.00	620.00
MI	01	1	FLY	1:DOUBLE	U	1	0	84.00	84.00	.	84.00	84.00	84.00	84.00	84.00
MI	01	1	FLY	5:OTHER	D	1	0	25.00	25.00	.	25.00	25.00	25.00	25.00	25.00
MI	01	1	FLY	5:OTHER	U	2	0	66.00	33.00	5.657	29.00	29.00	33.00	37.00	37.00
MI	01	1	FLY	3:KNOCKOUT	D	1983	0	59765.00	30.14	5.249	15.00	23.00	30.00	40.00	90.00
MI	01	1	FLY	3:KNOCKOUT	U	1970	0	61046.00	30.99	5.706	14.00	25.00	30.00	40.00	90.00
MI	01	1	FLY	2:SINGLE	D	573	0	14597.00	25.47	6.705	10.00	16.00	25.00	36.00	60.00
MI	01	1	FLY	2:SINGLE	U	523	0	13546.00	25.90	6.985	9.00	18.00	25.00	35.00	87.00
MI	01	1	FLY	5:OTHER	D	2	0	50.00	25.00	0.000	25.00	25.00	25.00	25.00	25.00
MI	01	1	TURNBACK	1:DOUBLE	D	1	0	116.00	116.00	.	116.00	116.00	116.00	116.00	116.00
MI	01	1	TURNBACK	5:OTHER	D	1	0	46.00	46.00	.	46.00	46.00	46.00	46.00	46.00
MI	01	1	TURNBACK	3:KNOCKOUT	D	81	0	4031.00	49.77	69.126	20.00	29.00	36.00	67.00	630.00
MI	01	1	TURNBACK	3:KNOCKOUT	U	113	0	6175.00	54.65	58.983	24.00	30.00	45.00	74.00	625.00
MI	01	1	TURNBACK	2:SINGLE	D	21	0	853.00	40.62	9.625	22.00	30.00	38.00	60.00	60.00
MI	01	1	TURNBACK	2:SINGLE	U	23	0	990.00	43.04	13.858	25.00	26.00	40.00	70.00	72.00
MI	02	1	EXCHANGE	1:DOUBLE	D	303	0	51938.00	171.41	65.526	90.00	105.00	150.00	310.00	517.00
MI	02	1	EXCHANGE	1:DOUBLE	U	290	0	49348.00	170.17	85.545	80.00	95.00	140.00	315.00	745.00
MI	02	1	EXCHANGE	5:OTHER	U	1	0	230.00	230.00	.	230.00	230.00	230.00	230.00	230.00
MI	02	1	EXCHANGE	3:KNOCKOUT	D	26	0	3490.00	134.23	76.051	52.00	55.00	97.50	265.00	321.00
MI	02	1	EXCHANGE	3:KNOCKOUT	U	8	0	1105.00	138.12	53.914	65.00	65.00	140.00	205.00	205.00
MI	02	1	EXCHANGE	2:SINGLE	D	101	0	8861.00	87.73	66.110	19.00	23.00	65.00	210.00	376.00
MI	02	1	EXCHANGE	2:SINGLE	U	179	0	16379.00	91.50	75.661	22.00	26.00	65.00	235.00	573.00
MI	02	1	EXCHANGE	5:OTHER	U	2	0	239.00	119.50	45.962	87.00	87.00	119.50	152.00	152.00
MI	02	1	EXCHANGE	4:JACKNIFE	D	19	0	2798.00	147.26	83.885	50.00	50.00	140.00	395.00	395.00
MI	02	1	EXCHANGE	4:JACKNIFE	U	3	0	325.00	108.33	43.108	70.00	70.00	100.00	155.00	155.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 29
Total Lockage Time from Arrival to Departure
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Lockage Obs	Num Missing Values	Sum Mins Total Time	Avg Mins Total Time	Std Dev Total Time	Smallest Total Time	5th Pctile Total Time	Median Total Time	95th Pctile Total Time	Largest Total Time
MI	02	1	FLY	1:DOUBLE	D	756	0	92602.00	122.489	25.362	74.000	94.000	120.000	161.000	500.00
MI	02	1	FLY	1:DOUBLE	U	676	0	71896.00	106.355	17.197	65.000	80.000	105.000	135.000	205.00
MI	02	1	FLY	3:KNOCKOUT	D	67	0	4598.00	68.627	25.753	40.000	45.000	57.000	110.000	179.00
MI	02	1	FLY	3:KNOCKOUT	U	65	0	4045.00	62.231	20.462	35.000	40.000	57.000	100.000	171.00
MI	02	1	FLY	2:SINGLE	D	366	0	12835.00	35.068	11.610	10.000	18.000	35.000	55.000	80.00
MI	02	1	FLY	2:SINGLE	U	459	0	15839.00	34.508	10.473	10.000	19.000	33.000	54.000	74.00
MI	02	1	FLY	5:OTHER	D	2	0	142.00	71.000	50.912	35.000	35.000	71.000	107.000	107.00
MI	02	1	FLY	5:OTHER	U	4	0	235.00	58.750	33.510	25.000	25.000	60.000	90.000	90.00
MI	02	1	FLY	4:JACKNIFE	D	66	0	6387.00	96.773	71.508	50.000	55.000	85.000	135.000	635.00
MI	02	1	FLY	4:JACKNIFE	U	10	0	759.00	75.900	25.510	45.000	45.000	72.500	118.000	118.00
MI	02	1	TURNBACK	1:DOUBLE	D	315	0	55872.00	177.371	75.848	90.000	107.000	155.000	319.000	632.00
MI	02	1	TURNBACK	1:DOUBLE	U	269	0	47793.00	177.669	286.454	77.000	90.000	131.000	275.000	4452.00
MI	02	1	TURNBACK	5:OTHER	D	1	0	140.00	140.000	.	140.000	140.000	140.000	140.000	140.00
MI	02	1	TURNBACK	3:KNOCKOUT	D	41	0	5030.00	122.683	58.540	50.000	55.000	115.000	205.000	295.00
MI	02	1	TURNBACK	3:KNOCKOUT	U	14	0	1749.00	124.929	68.199	60.000	60.000	102.500	294.000	294.00
MI	02	1	TURNBACK	2:SINGLE	D	85	0	7394.00	86.988	62.161	21.000	28.000	60.000	226.000	336.00
MI	02	1	TURNBACK	2:SINGLE	U	171	0	15339.00	89.702	117.046	15.000	27.000	57.000	210.000	1330.00
MI	02	1	TURNBACK	5:OTHER	U	5	0	1034.00	206.800	106.727	87.000	87.000	208.000	330.000	330.00
MI	02	1	TURNBACK	4:JACKNIFE	D	19	0	2382.00	125.368	56.775	50.000	50.000	104.000	255.000	255.00
MI	02	1	TURNBACK	4:JACKNIFE	U	6	0	770.00	128.333	67.482	80.000	80.000	103.000	260.000	260.00
MI	03	1	EXCHANGE	1:DOUBLE	D	419	0	71091.00	169.668	84.289	70.000	99.000	145.000	306.000	777.00
MI	03	1	EXCHANGE	1:DOUBLE	U	287	0	49236.00	171.554	110.622	78.000	91.000	143.000	311.000	1525.00
MI	03	1	EXCHANGE	5:OTHER	D	1	0	245.00	245.000	.	245.000	245.000	245.000	245.000	245.00
MI	03	1	EXCHANGE	3:KNOCKOUT	D	34	0	3803.00	111.853	67.778	40.000	57.000	87.000	205.000	406.00
MI	03	1	EXCHANGE	3:KNOCKOUT	U	17	0	1979.00	116.412	65.504	48.000	48.000	93.000	254.000	254.00
MI	03	1	EXCHANGE	2:SINGLE	D	148	0	7861.00	53.115	43.909	11.000	18.000	37.000	158.000	244.00
MI	03	1	EXCHANGE	2:SINGLE	U	266	0	15638.00	58.789	48.459	11.000	15.000	42.000	162.000	252.00
MI	03	1	EXCHANGE	4:JACKNIFE	D	21	0	2781.00	132.429	49.793	60.000	85.000	113.000	224.000	247.00
MI	03	1	EXCHANGE	4:JACKNIFE	U	4	0	730.00	182.500	115.188	57.000	57.000	188.500	296.000	296.00
MI	03	1	FLY	1:DOUBLE	D	635	0	71438.00	112.501	21.473	58.000	81.000	111.000	147.000	245.00
MI	03	1	FLY	1:DOUBLE	U	628	0	65460.00	104.236	19.142	54.000	75.000	103.000	136.000	189.00
MI	03	1	FLY	5:OTHER	U	1	0	84.00	84.000	.	84.000	84.000	84.000	84.000	84.00
MI	03	1	FLY	3:KNOCKOUT	D	52	0	3282.00	63.115	23.361	39.000	40.000	54.000	118.000	133.00
MI	03	1	FLY	3:KNOCKOUT	U	49	0	2854.00	58.245	16.564	32.000	35.000	55.000	83.000	116.00
MI	03	1	FLY	2:SINGLE	D	457	0	12982.00	28.407	14.233	8.000	12.000	25.000	55.000	115.00
MI	03	1	FLY	2:SINGLE	U	799	0	21066.00	26.365	12.811	8.000	12.000	23.000	50.000	139.00
MI	03	1	FLY	5:OTHER	D	1	0	98.00	98.000	.	98.000	98.000	98.000	98.000	98.00
MI	03	1	FLY	4:JACKNIFE	D	50	0	3990.00	79.800	17.890	49.000	55.000	78.000	114.000	128.00
MI	03	1	FLY	4:JACKNIFE	U	12	0	948.00	79.000	16.404	56.000	56.000	78.500	104.000	104.00
MI	03	1	TURNBACK	1:DOUBLE	D	344	0	55240.00	160.581	65.000	80.000	101.000	139.000	304.000	500.00
MI	03	1	TURNBACK	1:DOUBLE	U	331	0	50900.00	153.776	75.502	72.000	87.000	129.000	290.000	814.00
MI	03	1	TURNBACK	3:KNOCKOUT	D	41	0	5998.00	146.293	114.987	34.000	47.000	106.000	448.000	476.00
MI	03	1	TURNBACK	3:KNOCKOUT	U	22	0	3070.00	139.545	80.985	49.000	65.000	120.500	295.000	348.00
MI	03	1	TURNBACK	2:SINGLE	D	133	0	10010.00	75.263	53.878	14.000	20.000	61.000	191.000	256.00
MI	03	1	TURNBACK	2:SINGLE	U	202	0	12773.00	63.233	67.573	13.000	18.000	44.000	163.000	615.00
MI	03	1	TURNBACK	4:JACKNIFE	D	31	0	5354.00	172.710	135.361	76.000	78.000	130.000	339.000	810.00
MI	03	1	TURNBACK	4:JACKNIFE	U	2	0	258.00	129.000	59.397	87.000	87.000	129.000	171.000	171.00
MI	04	1	EXCHANGE	1:DOUBLE	D	321	0	50975.00	158.801	61.399	80.000	100.000	140.000	270.000	545.00
MI	04	1	EXCHANGE	1:DOUBLE	U	341	0	52899.00	155.129	99.828	75.000	86.000	125.000	275.000	1560.00
MI	04	1	EXCHANGE	3:KNOCKOUT	D	24	0	2408.00	100.333	42.855	55.000	60.000	90.000	165.000	240.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 30
Total Lockage Time from Arrival to Departure
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Lockage Obs	Num Missing Values	Sum Mins Total Time	Avg Mins Total Time	Std Dev Total Time	Smallest Total Time	5th Pctile Total Time	Median Total Time	95th Pctile Total Time	Largest Total Time
MI	04	1	EXCHANGE	3:KNOCKOUT	U	17	0	2267.00	133.353	70.911	34.000	34.000	125.000	280.000	280.00
MI	04	1	EXCHANGE	2:SINGLE	D	87	0	6161.00	70.816	44.424	15.000	22.000	60.000	165.000	195.00
MI	04	1	EXCHANGE	2:SINGLE	U	151	0	11372.00	75.311	55.256	19.000	22.000	50.000	195.000	310.00
MI	04	1	EXCHANGE	4:JACKNIFE	D	16	0	2465.00	154.062	78.660	65.000	65.000	145.000	350.000	350.00
MI	04	1	EXCHANGE	4:JACKNIFE	U	4	0	985.00	246.250	192.932	80.000	80.000	200.000	505.000	505.00
MI	04	1	FLY	1:DOUBLE	D	926	0	106641.00	115.163	20.281	70.000	90.000	110.000	155.000	220.00
MI	04	1	FLY	1:DOUBLE	U	768	0	80791.00	105.197	18.866	65.000	80.000	105.000	140.000	205.00
MI	04	1	FLY	3:KNOCKOUT	D	74	0	4743.00	64.095	25.497	30.000	45.000	57.000	115.000	195.00
MI	04	1	FLY	3:KNOCKOUT	U	46	0	2936.00	63.826	15.938	35.000	40.000	64.000	95.000	96.00
MI	04	1	FLY	2:SINGLE	D	323	0	10416.00	32.248	14.325	10.000	15.000	30.000	60.000	100.00
MI	04	1	FLY	2:SINGLE	U	493	0	16307.00	33.077	12.196	10.000	15.000	32.000	55.000	90.00
MI	04	1	FLY	4:JACKNIFE	D	62	0	5840.00	94.194	31.467	60.000	65.000	85.000	170.000	230.00
MI	04	1	FLY	4:JACKNIFE	U	6	0	515.00	85.833	18.819	60.000	60.000	82.500	110.000	110.00
MI	04	1	TURNBACK	1:DOUBLE	D	286	0	46613.00	162.983	60.302	85.000	100.000	145.000	295.000	408.00
MI	04	1	TURNBACK	1:DOUBLE	U	263	0	38289.00	145.586	56.883	75.000	90.000	130.000	265.000	470.00
MI	04	1	TURNBACK	3:KNOCKOUT	D	35	0	4442.00	126.914	56.724	45.000	50.000	130.000	242.000	320.00
MI	04	1	TURNBACK	3:KNOCKOUT	U	16	0	1650.00	103.125	54.677	55.000	55.000	82.500	250.000	250.00
MI	04	1	TURNBACK	2:SINGLE	D	103	0	9057.00	87.932	117.439	20.000	30.000	67.000	150.000	1170.00
MI	04	1	TURNBACK	2:SINGLE	U	149	0	11511.00	77.255	50.763	20.000	33.000	60.000	165.000	290.00
MI	04	1	TURNBACK	5:OTHER	U	1	0	100.00	100.000	.	100.000	100.000	100.000	100.000	100.00
MI	04	1	TURNBACK	4:JACKNIFE	D	19	0	2445.00	128.684	33.285	75.000	75.000	125.000	195.000	195.00
MI	04	1	TURNBACK	4:JACKNIFE	U	4	0	540.00	135.000	38.514	85.000	85.000	142.500	170.000	170.00
MI	05	1	EXCHANGE	1:DOUBLE	D	289	0	47859.00	165.602	72.427	78.000	100.000	147.000	290.000	790.00
MI	05	1	EXCHANGE	1:DOUBLE	U	245	0	43784.00	178.710	71.374	75.000	95.000	170.000	295.000	510.00
MI	05	1	EXCHANGE	3:KNOCKOUT	D	18	0	2735.00	151.944	81.090	65.000	65.000	120.000	322.000	322.00
MI	05	1	EXCHANGE	3:KNOCKOUT	U	19	0	2669.00	140.474	75.028	50.000	50.000	125.000	315.000	315.00
MI	05	1	EXCHANGE	2:SINGLE	D	69	0	5688.00	82.435	41.598	23.000	30.000	75.000	153.000	200.00
MI	05	1	EXCHANGE	2:SINGLE	U	145	0	13691.00	94.421	54.383	25.000	35.000	80.000	207.000	309.00
MI	05	1	EXCHANGE	4:JACKNIFE	D	11	0	1560.00	141.818	59.350	82.000	82.000	122.000	250.000	250.00
MI	05	1	EXCHANGE	4:JACKNIFE	U	6	0	766.00	127.667	62.574	52.000	52.000	125.000	210.000	210.00
MI	05	1	FLY	1:DOUBLE	D	1019	0	111190.00	109.117	18.653	68.000	85.000	107.000	139.000	380.00
MI	05	1	FLY	1:DOUBLE	U	883	0	95335.00	107.967	38.539	55.000	81.000	105.000	135.000	855.00
MI	05	1	FLY	3:KNOCKOUT	D	78	0	4596.00	58.923	14.743	33.000	40.000	56.000	90.000	110.00
MI	05	1	FLY	3:KNOCKOUT	U	47	0	2876.00	61.191	14.754	35.000	44.000	60.000	80.000	123.00
MI	05	1	FLY	2:SINGLE	D	342	0	11087.00	32.418	11.531	12.000	16.000	30.000	55.000	73.00
MI	05	1	FLY	2:SINGLE	U	517	0	18359.00	35.511	10.757	10.000	18.000	35.000	54.000	70.00
MI	05	1	FLY	4:JACKNIFE	D	64	0	5395.00	84.297	18.262	43.000	60.000	84.000	115.000	137.00
MI	05	1	FLY	4:JACKNIFE	U	5	0	407.00	81.400	15.485	60.000	60.000	88.000	98.000	98.00
MI	05	1	TURNBACK	1:DOUBLE	D	230	0	31942.00	138.878	56.350	85.000	95.000	125.000	225.000	502.00
MI	05	1	TURNBACK	1:DOUBLE	U	262	0	38148.00	145.603	55.762	70.000	87.000	130.000	245.000	510.00
MI	05	1	TURNBACK	3:KNOCKOUT	D	37	0	4508.00	121.838	47.793	55.000	55.000	128.000	235.000	265.00
MI	05	1	TURNBACK	3:KNOCKOUT	U	16	0	1519.00	94.938	52.832	44.000	44.000	81.500	270.000	270.00
MI	05	1	TURNBACK	2:SINGLE	D	108	0	8958.00	82.944	47.342	20.000	32.000	70.000	170.000	250.00
MI	05	1	TURNBACK	2:SINGLE	U	142	0	12233.00	86.148	73.358	25.000	35.000	70.000	165.000	755.00
MI	05	1	TURNBACK	4:JACKNIFE	D	21	0	2600.00	123.810	42.334	60.000	80.000	120.000	170.000	260.00
MI	05	1	TURNBACK	4:JACKNIFE	U	4	0	585.00	146.250	83.004	80.000	80.000	120.000	265.000	265.00
MI	06	1	EXCHANGE	1:DOUBLE	D	428	0	87434.00	204.285	118.306	83.000	105.000	179.500	405.000	1230.00
MI	06	1	EXCHANGE	1:DOUBLE	U	406	0	83596.00	205.901	117.167	70.000	88.000	190.000	380.000	1323.00
MI	06	1	EXCHANGE	3:KNOCKOUT	D	42	0	6948.00	165.429	96.299	45.000	66.000	148.500	305.000	600.00
MI	06	1	EXCHANGE	3:KNOCKOUT	U	26	0	4140.00	159.231	76.356	54.000	55.000	159.000	297.000	298.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 31
Total Lockage Time from Arrival to Departure
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Lockage Obs	Num Missing Values	Sum Mins Total Time	Avg Mins Total Time	Std Dev Total Time	Smallest Total Time	5th Pctile Total Time	Median Total Time	95th Pctile Total Time	Largest Total Time
MI	06	1	EXCHANGE	2:SINGLE	D	103	0	7861.00	76.320	49.449	15.000	25.000	65.000	165.000	282.00
MI	06	1	EXCHANGE	2:SINGLE	U	175	0	17586.00	100.491	75.160	14.000	22.000	76.000	246.000	440.00
MI	06	1	EXCHANGE	5:OTHER	U	1	0	81.00	81.000	.	81.000	81.000	81.000	81.000	81.00
MI	06	1	EXCHANGE	4:JACKNIFE	D	12	0	2219.00	184.917	78.743	65.000	65.000	177.500	324.000	324.00
MI	06	1	EXCHANGE	4:JACKNIFE	U	6	0	1188.00	198.000	150.681	57.000	57.000	156.000	470.000	470.00
MI	06	1	FLY	1:DOUBLE	D	1040	0	121729.00	117.047	27.669	66.000	86.500	114.000	156.500	547.00
MI	06	1	FLY	1:DOUBLE	U	921	0	97473.00	105.834	25.365	41.000	75.000	105.000	140.000	505.00
MI	06	1	FLY	3:KNOCKOUT	D	81	0	5747.00	70.951	24.807	35.000	41.000	64.000	120.000	144.00
MI	06	1	FLY	3:KNOCKOUT	U	79	0	5994.00	75.873	22.197	39.000	44.000	75.000	120.000	135.00
MI	06	1	FLY	2:SINGLE	D	351	0	10951.00	31.199	19.080	8.000	13.000	28.000	55.000	285.00
MI	06	1	FLY	2:SINGLE	U	472	0	15917.00	33.722	13.797	7.000	15.000	32.000	55.000	150.00
MI	06	1	FLY	5:OTHER	D	1	0	11.00	11.000	.	11.000	11.000	11.000	11.000	11.00
MI	06	1	FLY	5:OTHER	U	3	0	258.00	86.000	74.545	10.000	10.000	89.000	159.000	159.00
MI	06	1	FLY	4:JACKNIFE	D	56	0	5372.00	95.929	23.583	55.000	61.000	92.500	135.000	179.00
MI	06	1	FLY	4:JACKNIFE	U	12	0	980.00	81.667	16.849	50.000	50.000	85.500	101.000	101.00
MI	06	1	TURNBACK	1:DOUBLE	D	383	0	72002.00	187.995	105.693	87.000	100.000	162.000	362.000	1020.00
MI	06	1	TURNBACK	1:DOUBLE	U	368	0	59102.00	160.603	88.933	64.000	85.000	132.000	345.000	915.00
MI	06	1	TURNBACK	3:KNOCKOUT	D	56	0	8295.00	148.125	69.397	39.000	57.000	135.000	275.000	405.00
MI	06	1	TURNBACK	3:KNOCKOUT	U	33	0	5179.00	156.939	96.273	51.000	53.000	121.000	363.000	475.00
MI	06	1	TURNBACK	2:SINGLE	D	116	0	10460.00	90.172	67.241	20.000	23.000	71.500	215.000	480.00
MI	06	1	TURNBACK	2:SINGLE	U	161	0	17649.00	109.621	175.877	20.000	25.000	75.000	233.000	1754.00
MI	06	1	TURNBACK	4:JACKNIFE	D	29	0	4970.00	171.379	94.768	65.000	77.000	140.000	355.000	519.00
MI	06	1	TURNBACK	4:JACKNIFE	U	8	0	1318.00	164.750	41.317	115.000	115.000	163.000	217.000	217.00
MI	07	1	EXCHANGE	1:DOUBLE	D	487	0	101233.00	207.871	106.056	71.000	107.000	183.000	395.000	1013.00
MI	07	1	EXCHANGE	1:DOUBLE	U	428	0	79470.00	185.678	88.813	70.000	90.000	167.500	351.000	618.00
MI	07	1	EXCHANGE	3:KNOCKOUT	D	57	0	9378.00	164.526	86.830	33.000	52.000	153.000	362.000	370.00
MI	07	1	EXCHANGE	3:KNOCKOUT	U	48	0	7645.00	159.271	100.988	44.000	46.000	136.500	350.000	430.00
MI	07	1	EXCHANGE	2:SINGLE	D	163	0	12143.00	74.497	85.257	17.000	20.000	48.000	225.000	735.00
MI	07	1	EXCHANGE	2:SINGLE	U	312	0	19253.00	61.708	54.805	9.000	15.000	40.000	170.000	315.00
MI	07	1	EXCHANGE	5:OTHER	D	9	0	1291.00	143.444	64.788	106.000	106.000	118.000	310.000	310.00
MI	07	1	EXCHANGE	5:OTHER	U	7	0	912.00	130.286	55.611	97.000	97.000	113.000	254.000	254.00
MI	07	1	EXCHANGE	4:JACKNIFE	D	27	0	4394.00	162.741	72.132	66.000	78.000	155.000	305.000	380.00
MI	07	1	EXCHANGE	4:JACKNIFE	U	6	0	838.00	139.667	55.816	76.000	76.000	131.000	210.000	210.00
MI	07	1	FLY	1:DOUBLE	D	929	0	105021.00	113.047	18.181	32.000	87.000	112.000	144.000	242.00
MI	07	1	FLY	1:DOUBLE	U	834	0	81984.00	98.302	18.531	55.000	72.000	97.000	125.000	224.00
MI	07	1	FLY	3:KNOCKOUT	D	93	0	7428.00	79.871	22.259	36.000	47.000	84.000	121.000	130.00
MI	07	1	FLY	3:KNOCKOUT	U	75	0	5298.00	70.640	18.950	34.000	40.000	71.000	100.000	125.00
MI	07	1	FLY	2:SINGLE	D	587	0	14103.00	24.026	12.931	8.000	11.000	20.000	47.000	122.00
MI	07	1	FLY	2:SINGLE	U	786	0	17820.00	22.672	10.012	6.000	11.000	20.000	41.000	83.00
MI	07	1	FLY	5:OTHER	D	2	0	200.00	100.000	14.142	90.000	90.000	100.000	110.000	110.00
MI	07	1	FLY	5:OTHER	U	10	0	812.00	81.200	26.330	32.000	32.000	82.000	120.000	120.00
MI	07	1	FLY	4:JACKNIFE	D	42	0	3489.00	83.071	12.996	55.000	61.000	85.000	100.000	115.00
MI	07	1	FLY	4:JACKNIFE	U	16	0	1208.00	75.500	21.210	35.000	35.000	78.000	120.000	120.00
MI	07	1	TURNBACK	1:DOUBLE	D	375	0	65205.00	173.880	87.627	76.000	104.000	140.000	378.000	620.00
MI	07	1	TURNBACK	1:DOUBLE	U	385	0	66916.00	173.808	94.613	68.000	85.000	140.000	355.000	745.00
MI	07	1	TURNBACK	5:OTHER	D	1	0	145.00	145.000	.	145.000	145.000	145.000	145.000	145.00
MI	07	1	TURNBACK	3:KNOCKOUT	D	76	0	12478.00	164.184	80.149	50.000	60.000	157.500	284.000	603.00
MI	07	1	TURNBACK	3:KNOCKOUT	U	35	0	4691.00	134.029	70.870	51.000	52.000	115.000	307.000	314.00
MI	07	1	TURNBACK	2:SINGLE	D	165	0	16113.00	97.655	129.976	12.000	18.000	70.000	225.000	1468.00
MI	07	1	TURNBACK	2:SINGLE	U	197	0	14592.00	74.071	80.630	13.000	17.000	45.000	202.000	745.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 32
Total Lockage Time from Arrival to Departure
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Lockage Obs	Num Missing Values	Sum Mins Total Time	Avg Mins Total Time	Std Dev Total Time	Smallest Total Time	5th Pctile Total Time	Median Total Time	95th Pctile Total Time	Largest Total Time
MI	07	1	TURNBACK	5:OTHER	D	3	0	324.00	108.000	7.000	103.000	103.000	105.000	116.00	116.00
MI	07	1	TURNBACK	5:OTHER	U	4	0	387.00	96.750	12.553	85.000	85.000	94.500	113.00	113.00
MI	07	1	TURNBACK	4:JACKNIFE	D	29	0	4960.00	171.034	93.911	42.000	59.000	154.000	330.00	448.00
MI	07	1	TURNBACK	4:JACKNIFE	U	7	0	2740.00	391.429	700.334	84.000	84.000	130.000	1975.00	1975.00
MI	08	1	EXCHANGE	1:DOUBLE	D	434	0	89920.00	207.189	84.221	90.000	110.000	185.000	386.00	560.00
MI	08	1	EXCHANGE	1:DOUBLE	U	425	0	94270.00	221.812	107.397	76.000	96.000	206.000	400.00	840.00
MI	08	1	EXCHANGE	3:KNOCKOUT	D	39	0	6498.00	166.615	97.291	50.000	54.000	150.000	310.00	590.00
MI	08	1	EXCHANGE	3:KNOCKOUT	U	33	0	5433.00	164.636	62.884	77.000	78.000	160.000	270.00	278.00
MI	08	1	EXCHANGE	2:SINGLE	D	90	0	8874.00	98.600	81.487	19.000	24.000	82.000	220.00	640.00
MI	08	1	EXCHANGE	2:SINGLE	U	158	0	15993.00	101.222	67.002	19.000	27.000	85.000	221.00	317.00
MI	08	1	EXCHANGE	4:JACKNIFE	D	19	0	3296.00	173.474	70.433	75.000	75.000	170.000	312.00	312.00
MI	08	1	EXCHANGE	4:JACKNIFE	U	9	0	1383.00	153.667	58.683	86.000	86.000	154.000	274.00	274.00
MI	08	1	FLY	1:DOUBLE	D	1006	0	127415.00	126.655	28.055	78.000	95.000	124.000	165.00	457.00
MI	08	1	FLY	1:DOUBLE	U	910	0	95488.00	104.932	21.646	60.000	75.000	104.000	138.00	323.00
MI	08	1	FLY	3:KNOCKOUT	D	78	0	6407.00	82.141	34.365	38.000	43.000	70.000	134.00	250.00
MI	08	1	FLY	3:KNOCKOUT	U	56	0	3842.00	68.607	20.442	35.000	38.000	65.500	107.00	125.00
MI	08	1	FLY	2:SINGLE	D	368	0	12715.00	34.552	15.644	9.000	15.000	32.000	62.00	135.00
MI	08	1	FLY	2:SINGLE	U	492	0	15751.00	32.014	11.218	10.000	17.000	30.000	53.00	76.00
MI	08	1	FLY	5:OTHER	D	3	0	281.00	93.667	46.918	41.000	41.000	109.000	131.00	131.00
MI	08	1	FLY	5:OTHER	U	1	0	95.00	95.000	.	95.000	95.000	95.000	95.00	95.00
MI	08	1	FLY	4:JACKNIFE	D	46	0	4253.00	92.457	25.000	46.000	58.000	88.500	137.00	166.00
MI	08	1	FLY	4:JACKNIFE	U	24	0	1759.00	73.292	20.781	38.000	40.000	75.000	109.00	126.00
MI	08	1	TURNBACK	1:DOUBLE	D	475	0	96519.00	203.198	83.261	79.000	112.000	176.000	380.00	575.00
MI	08	1	TURNBACK	1:DOUBLE	U	439	0	83704.00	190.670	88.185	80.000	95.000	166.000	375.00	573.00
MI	08	1	TURNBACK	5:OTHER	U	1	0	95.00	95.000	.	95.000	95.000	95.000	95.00	95.00
MI	08	1	TURNBACK	3:KNOCKOUT	D	49	0	8748.00	178.531	84.535	55.000	65.000	151.000	335.00	428.00
MI	08	1	TURNBACK	3:KNOCKOUT	U	26	0	3943.00	151.654	82.181	44.000	45.000	133.500	295.00	353.00
MI	08	1	TURNBACK	2:SINGLE	D	133	0	14685.00	110.414	81.900	16.000	32.000	89.000	272.00	496.00
MI	08	1	TURNBACK	2:SINGLE	U	155	0	14163.00	91.374	59.648	19.000	30.000	73.000	225.00	319.00
MI	08	1	TURNBACK	4:JACKNIFE	D	26	0	5411.00	208.115	97.874	72.000	85.000	183.000	395.00	418.00
MI	08	1	TURNBACK	4:JACKNIFE	U	11	0	1477.00	134.273	88.509	60.000	60.000	120.000	324.00	324.00
MI	09	1	EXCHANGE	1:DOUBLE	D	484	0	100293.00	207.217	87.806	83.000	108.000	195.000	376.00	680.00
MI	09	1	EXCHANGE	1:DOUBLE	U	522	0	99233.00	190.102	83.561	73.000	92.000	176.000	347.00	618.00
MI	09	1	EXCHANGE	3:KNOCKOUT	D	31	0	6000.00	193.548	110.252	55.000	56.000	174.000	484.00	495.00
MI	09	1	EXCHANGE	3:KNOCKOUT	U	35	0	5041.00	144.029	69.321	48.000	70.000	120.000	280.00	386.00
MI	09	1	EXCHANGE	2:SINGLE	D	103	0	8867.00	86.087	70.707	13.000	22.000	62.000	235.00	346.00
MI	09	1	EXCHANGE	2:SINGLE	U	168	0	15390.00	91.607	62.778	20.000	28.000	80.500	182.00	395.00
MI	09	1	EXCHANGE	5:OTHER	D	5	0	732.00	146.400	68.734	95.000	95.000	120.000	267.00	267.00
MI	09	1	EXCHANGE	5:OTHER	U	2	0	265.00	132.500	27.577	113.000	113.000	132.500	152.00	152.00
MI	09	1	EXCHANGE	4:JACKNIFE	D	22	0	3792.00	172.364	92.527	65.000	70.000	182.500	340.00	405.00
MI	09	1	EXCHANGE	4:JACKNIFE	U	11	0	2156.00	196.000	126.475	65.000	65.000	195.000	436.00	436.00
MI	09	1	FLY	1:DOUBLE	D	1133	0	129241.00	114.070	22.726	60.000	90.000	112.000	140.00	468.00
MI	09	1	FLY	1:DOUBLE	U	1013	0	106060.00	104.699	26.000	54.000	75.000	103.000	140.00	632.00
MI	09	1	FLY	3:KNOCKOUT	D	84	0	5834.00	69.452	24.652	38.000	45.000	60.000	110.00	161.00
MI	09	1	FLY	3:KNOCKOUT	U	57	0	4004.00	70.246	22.100	37.000	40.000	65.000	110.00	150.00
MI	09	1	FLY	2:SINGLE	D	347	0	10578.00	30.484	12.307	9.000	15.000	28.000	53.00	92.00
MI	09	1	FLY	2:SINGLE	U	417	0	13263.00	31.806	11.291	10.000	17.000	30.000	50.00	134.00
MI	09	1	FLY	5:OTHER	D	5	0	549.00	109.800	13.953	94.000	94.000	105.000	130.00	130.00
MI	09	1	FLY	5:OTHER	U	3	0	319.00	106.333	24.542	81.000	81.000	108.000	130.00	130.00
MI	09	1	FLY	4:JACKNIFE	D	45	0	3798.00	84.400	14.489	54.000	62.000	85.000	108.00	125.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 33
Total Lockage Time from Arrival to Departure
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Lockage Obs	Num Missing Values	Sum Mins Total Time	Avg Mins Total Time	Std Dev Total Time	Smallest Total Time	5th Pctile Total Time	Median Total Time	95th Pctile Total Time	Largest Total Time
MI	09	1	FLY	4:JACKNIFE	U	21	0	1718.00	81.810	19.871	60.000	60.000	77.000	125.000	142.00
MI	09	1	FLY	5:OTHER	D	1	0	13.00	13.000	.	13.000	13.000	13.000	13.000	13.00
MI	09	1	TURNBACK	1:DOUBLE	D	460	0	82650.00	179.674	89.241	74.000	97.000	153.000	384.000	875.00
MI	09	1	TURNBACK	1:DOUBLE	U	473	0	81901.00	173.152	80.687	65.000	87.000	155.000	330.000	685.00
MI	09	1	TURNBACK	5:OTHER	D	2	0	150.00	75.000	0.000	75.000	75.000	75.000	75.000	75.00
MI	09	1	TURNBACK	3:KNOCKOUT	D	41	0	6892.00	168.098	125.732	45.000	54.000	150.000	328.000	733.00
MI	09	1	TURNBACK	3:KNOCKOUT	U	15	0	2286.00	152.400	79.336	70.000	70.000	130.000	365.000	365.00
MI	09	1	TURNBACK	2:SINGLE	D	142	0	13344.00	93.972	80.628	20.000	25.000	64.000	249.000	590.00
MI	09	1	TURNBACK	2:SINGLE	U	166	0	14740.00	88.795	80.091	16.000	26.000	66.500	218.000	772.00
MI	09	1	TURNBACK	5:OTHER	D	1	0	143.00	143.000	.	143.000	143.000	143.000	143.000	143.00
MI	09	1	TURNBACK	4:JACKNIFE	D	23	0	4472.00	194.435	116.263	75.000	78.000	150.000	399.000	453.00
MI	09	1	TURNBACK	4:JACKNIFE	U	11	0	2035.00	185.000	107.285	70.000	70.000	139.000	375.000	375.00
MI	10	1	EXCHANGE	1:DOUBLE	D	516	0	113838.00	220.616	149.501	75.000	105.000	180.000	445.000	1510.00
MI	10	1	EXCHANGE	1:DOUBLE	U	586	0	118418.00	202.078	93.085	65.000	97.000	180.000	374.000	833.00
MI	10	1	EXCHANGE	3:KNOCKOUT	D	24	0	3902.00	162.583	101.867	80.000	85.000	125.000	405.000	423.00
MI	10	1	EXCHANGE	3:KNOCKOUT	U	22	0	3630.00	165.000	57.111	80.000	110.000	145.000	270.000	305.00
MI	10	1	EXCHANGE	2:SINGLE	D	134	0	12057.00	89.978	66.812	16.000	22.000	69.000	230.000	326.00
MI	10	1	EXCHANGE	2:SINGLE	U	242	0	26905.00	111.178	100.159	13.000	25.000	90.000	265.000	830.00
MI	10	1	EXCHANGE	4:JACKNIFE	D	22	0	3453.00	156.955	50.129	70.000	80.000	155.000	240.000	245.00
MI	10	1	EXCHANGE	4:JACKNIFE	U	15	0	3742.00	249.467	193.472	84.000	84.000	170.000	785.000	785.00
MI	10	1	FLY	1:DOUBLE	D	1441	0	153135.00	106.270	18.887	40.000	80.000	105.000	140.000	250.00
MI	10	1	FLY	1:DOUBLE	U	1283	0	119771.00	93.352	19.798	50.000	66.000	90.000	125.000	332.00
MI	10	1	FLY	3:KNOCKOUT	D	77	0	4852.00	63.013	24.830	25.000	32.000	56.000	100.000	175.00
MI	10	1	FLY	3:KNOCKOUT	U	50	0	2890.00	57.800	18.784	30.000	33.000	53.500	95.000	113.00
MI	10	1	FLY	2:SINGLE	D	488	0	15098.00	30.939	14.091	9.000	12.000	30.000	55.000	90.00
MI	10	1	FLY	2:SINGLE	U	556	0	15101.00	27.160	10.598	7.000	13.000	25.000	45.000	86.00
MI	10	1	FLY	5:OTHER	U	2	0	150.00	75.000	7.071	70.000	70.000	75.000	80.000	80.00
MI	10	1	FLY	4:JACKNIFE	D	43	0	3165.00	73.605	21.426	26.000	40.000	75.000	110.000	115.00
MI	10	1	FLY	4:JACKNIFE	U	24	0	1679.00	69.958	20.382	30.000	35.000	70.000	95.000	115.00
MI	10	1	TURNBACK	1:DOUBLE	D	539	0	111554.00	206.965	103.977	75.000	100.000	175.000	410.000	680.00
MI	10	1	TURNBACK	1:DOUBLE	U	511	0	94645.00	185.215	327.463	60.000	85.000	144.000	335.000	7305.00
MI	10	1	TURNBACK	3:KNOCKOUT	D	34	0	4861.00	142.971	85.584	50.000	52.000	119.000	330.000	400.00
MI	10	1	TURNBACK	3:KNOCKOUT	U	22	0	2359.00	107.227	61.939	44.000	50.000	80.500	235.000	275.00
MI	10	1	TURNBACK	2:SINGLE	D	143	0	13152.00	91.972	74.368	11.000	25.000	65.000	255.000	470.00
MI	10	1	TURNBACK	2:SINGLE	U	190	0	15860.00	83.474	64.675	14.000	21.000	60.000	220.000	330.00
MI	10	1	TURNBACK	5:OTHER	D	1	0	95.00	95.000	.	95.000	95.000	95.000	95.000	95.00
MI	10	1	TURNBACK	4:JACKNIFE	D	30	0	4809.00	160.300	74.826	55.000	75.000	142.500	270.000	398.00
MI	10	1	TURNBACK	4:JACKNIFE	U	10	0	1837.00	183.700	63.351	95.000	95.000	171.500	322.000	322.00
MI	11	1	EXCHANGE	1:DOUBLE	D	717	0	143557.00	200.219	97.680	84.000	105.000	175.000	376.000	820.00
MI	11	1	EXCHANGE	1:DOUBLE	U	716	0	148187.00	206.965	97.023	80.000	100.000	195.000	375.000	1225.00
MI	11	1	EXCHANGE	3:KNOCKOUT	D	35	0	5019.00	143.400	77.180	35.000	45.000	128.000	310.000	319.00
MI	11	1	EXCHANGE	3:KNOCKOUT	U	91	0	11548.00	126.901	73.441	34.000	47.000	110.000	310.000	355.00
MI	11	1	EXCHANGE	2:SINGLE	D	246	0	20225.00	82.215	64.096	15.000	21.000	65.000	220.000	418.00
MI	11	1	EXCHANGE	2:SINGLE	U	339	0	31965.00	94.292	88.517	13.000	23.000	75.000	226.000	960.00
MI	11	1	EXCHANGE	5:OTHER	U	1	0	118.00	118.000	.	118.000	118.000	118.000	118.000	118.00
MI	11	1	EXCHANGE	4:JACKNIFE	D	20	0	3173.00	158.650	57.750	79.000	80.500	159.000	258.500	291.00
MI	11	1	EXCHANGE	4:JACKNIFE	U	18	0	3113.00	172.944	121.609	60.000	60.000	136.500	560.000	560.00
MI	11	1	FLY	1:DOUBLE	D	1178	0	138804.00	117.830	26.777	70.000	90.000	115.000	148.000	503.00
MI	11	1	FLY	1:DOUBLE	U	1066	0	115276.00	108.139	23.678	59.000	80.000	105.000	140.000	435.00
MI	11	1	FLY	5:OTHER	D	1	0	94.00	94.000	.	94.000	94.000	94.000	94.000	94.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 34
Total Lockage Time from Arrival to Departure
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Lockage Obs	Num Missing Values	Sum Mins Total Time	Avg Mins Total Time	Std Dev Total Time	Smallest Total Time	5th Pctile Total Time	Median Total Time	95th Pctile Total Time	Largest Total Time
MI	11	1	FLY	5:OTHER	U	1	0	52.00	52.000	.	52.000	52.000	52.000	52.000	52.00
MI	11	1	FLY	3:KNOCKOUT	D	83	0	5413.00	65.217	31.395	26.000	35.000	55.000	145.000	212.00
MI	11	1	FLY	3:KNOCKOUT	U	130	0	7064.00	54.338	15.578	23.000	32.000	52.000	80.000	117.00
MI	11	1	FLY	2:SINGLE	D	728	0	23033.00	31.639	13.052	9.000	15.000	30.000	58.000	100.00
MI	11	1	FLY	2:SINGLE	U	788	0	24142.00	30.637	10.926	10.000	16.000	29.000	50.000	76.00
MI	11	1	FLY	5:OTHER	D	1	0	100.00	100.000	.	100.000	100.000	100.000	100.000	100.00
MI	11	1	FLY	5:OTHER	U	2	0	120.00	60.000	49.497	25.000	25.000	60.000	95.000	95.00
MI	11	1	FLY	4:JACKNIFE	D	40	0	3559.00	88.975	18.348	60.000	62.000	87.500	120.500	133.00
MI	11	1	FLY	4:JACKNIFE	U	25	0	1685.00	67.400	23.491	32.000	36.000	70.000	107.000	110.00
MI	11	1	FLY	5:OTHER	D	2	0	69.00	34.500	0.707	34.000	34.000	34.500	35.000	35.00
MI	11	1	TURNBACK	1:DOUBLE	D	650	0	130555.00	200.854	101.085	90.000	110.000	170.000	391.000	975.00
MI	11	1	TURNBACK	1:DOUBLE	U	638	0	126937.00	198.961	114.087	84.000	95.000	170.000	380.000	1345.00
MI	11	1	TURNBACK	3:KNOCKOUT	D	63	0	10676.00	169.460	133.341	45.000	55.000	135.000	345.000	860.00
MI	11	1	TURNBACK	3:KNOCKOUT	U	60	0	8643.00	144.050	95.003	42.000	50.000	114.500	354.000	435.00
MI	11	1	TURNBACK	2:SINGLE	D	275	0	28251.00	102.731	89.023	17.000	28.000	81.000	255.000	859.00
MI	11	1	TURNBACK	2:SINGLE	U	307	0	29963.00	97.599	103.043	18.000	27.000	65.000	265.000	965.00
MI	11	1	TURNBACK	4:JACKNIFE	D	21	0	4221.00	201.000	166.222	71.000	80.000	150.000	331.000	825.00
MI	11	1	TURNBACK	4:JACKNIFE	U	12	0	1667.00	138.917	46.627	75.000	75.000	136.500	214.000	214.00
MI	11	1	TURNBACK	5:OTHER	D	1	0	205.00	205.000	.	205.000	205.000	205.000	205.000	205.00
MI	12	1	EXCHANGE	1:DOUBLE	D	765	0	170107.00	222.362	117.573	85.000	108.000	195.000	441.000	1550.00
MI	12	1	EXCHANGE	1:DOUBLE	U	828	0	185360.00	223.865	108.337	75.000	102.000	204.000	422.000	851.00
MI	12	1	EXCHANGE	3:KNOCKOUT	D	50	0	11761.00	235.220	259.542	45.000	57.000	157.000	761.000	1524.00
MI	12	1	EXCHANGE	3:KNOCKOUT	U	35	0	6545.00	187.000	125.426	45.000	48.000	162.000	380.000	730.00
MI	12	1	EXCHANGE	2:SINGLE	D	302	0	25332.00	83.881	66.758	17.000	23.000	63.500	245.000	403.00
MI	12	1	EXCHANGE	2:SINGLE	U	336	0	34953.00	104.027	89.860	16.000	24.000	79.000	256.000	747.00
MI	12	1	EXCHANGE	4:JACKNIFE	D	29	0	5413.00	186.655	115.476	49.000	61.000	160.000	488.000	503.00
MI	12	1	EXCHANGE	4:JACKNIFE	U	18	0	3841.00	213.389	154.451	60.000	60.000	151.500	558.000	558.00
MI	12	1	FLY	1:DOUBLE	D	1274	0	143821.00	112.889	37.127	56.000	86.000	109.000	145.000	1050.00
MI	12	1	FLY	1:DOUBLE	U	1148	0	120638.00	105.085	32.568	62.000	77.000	103.000	132.000	705.00
MI	12	1	FLY	3:KNOCKOUT	D	77	0	5399.00	70.117	22.411	32.000	40.000	70.000	110.000	120.00
MI	12	1	FLY	3:KNOCKOUT	U	64	0	3998.00	62.469	20.137	20.000	39.000	55.500	95.000	118.00
MI	12	1	FLY	2:SINGLE	D	584	0	16627.00	28.471	42.335	9.000	15.000	25.000	49.000	1015.00
MI	12	1	FLY	2:SINGLE	U	672	0	19211.00	28.588	11.799	10.000	15.000	26.000	45.000	155.00
MI	12	1	FLY	5:OTHER	U	2	0	195.00	97.500	17.678	85.000	85.000	97.500	110.000	110.00
MI	12	1	FLY	4:JACKNIFE	D	35	0	2647.00	75.629	18.348	34.000	42.000	75.000	100.000	130.00
MI	12	1	FLY	4:JACKNIFE	U	23	0	1635.00	71.087	15.687	45.000	47.000	68.000	98.000	105.00
MI	12	1	TURNBACK	1:DOUBLE	D	710	0	155736.00	219.346	135.911	81.000	104.000	187.000	428.000	1645.00
MI	12	1	TURNBACK	1:DOUBLE	U	699	0	144462.00	206.670	136.490	65.000	92.000	166.000	452.000	1615.00
MI	12	1	TURNBACK	3:KNOCKOUT	D	50	0	9221.00	184.420	91.495	59.000	70.000	162.500	343.000	515.00
MI	12	1	TURNBACK	3:KNOCKOUT	U	41	0	7777.00	189.683	97.888	55.000	80.000	172.000	387.000	452.00
MI	12	1	TURNBACK	2:SINGLE	D	306	0	28932.00	94.549	81.863	17.000	24.000	73.500	283.000	498.00
MI	12	1	TURNBACK	2:SINGLE	U	317	0	29555.00	93.233	77.462	15.000	26.000	70.000	247.000	600.00
MI	12	1	TURNBACK	5:OTHER	U	1	0	101.00	101.000	.	101.000	101.000	101.000	101.000	101.00
MI	12	1	TURNBACK	4:JACKNIFE	D	29	0	5827.00	200.931	106.278	59.000	74.000	200.000	467.000	523.00
MI	12	1	TURNBACK	4:JACKNIFE	U	15	0	3113.00	207.533	185.945	75.000	75.000	135.000	737.000	737.00
MI	13	1	EXCHANGE	1:DOUBLE	D	740	0	157661.00	213.055	102.265	74.000	105.500	195.000	395.500	1445.00
MI	13	1	EXCHANGE	1:DOUBLE	U	756	0	156245.00	206.673	97.434	77.000	99.000	188.000	387.000	1223.00
MI	13	1	EXCHANGE	3:KNOCKOUT	D	51	0	9722.00	190.627	122.969	52.000	72.000	161.000	397.000	783.00
MI	13	1	EXCHANGE	3:KNOCKOUT	U	47	0	7830.00	166.596	82.109	47.000	66.000	155.000	275.000	513.00
MI	13	1	EXCHANGE	2:SINGLE	D	284	0	24140.00	85.000	76.334	17.000	23.000	60.500	240.000	590.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 35
Total Lockage Time from Arrival to Departure
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Lockage Obs	Num Missing Values	Sum Mins Total Time	Avg Mins Total Time	Std Dev Total Time	Smallest Total Time	5th Pctile Total Time	Median Total Time	95th Pctile Total Time	Largest Total Time
MI	13	1	EXCHANGE	2:SINGLE	U	329	0	29193.00	88.733	89.941	14.000	24.000	70.000	202.000	1166.00
MI	13	1	EXCHANGE	5:OTHER	D	2	0	541.00	270.500	215.668	118.000	118.000	270.500	423.000	423.00
MI	13	1	EXCHANGE	5:OTHER	U	1	0	545.00	545.000	.	545.000	545.000	545.000	545.000	545.00
MI	13	1	EXCHANGE	4:JACKNIFE	D	26	0	4112.00	158.154	103.121	55.000	63.000	109.500	385.000	435.00
MI	13	1	EXCHANGE	4:JACKNIFE	U	16	0	2465.00	154.062	70.744	56.000	56.000	122.000	278.000	278.00
MI	13	1	FLY	1:DOUBLE	D	1297	0	137221.00	105.799	24.289	69.000	84.000	104.000	130.000	740.00
MI	13	1	FLY	1:DOUBLE	U	1240	0	128959.00	103.999	37.177	63.000	78.000	101.000	131.500	1150.00
MI	13	1	FLY	3:KNOCKOUT	D	122	0	8973.00	73.549	24.706	34.000	43.000	74.000	110.000	203.00
MI	13	1	FLY	3:KNOCKOUT	U	88	0	6042.00	68.659	29.135	30.000	38.000	64.500	110.000	227.00
MI	13	1	FLY	2:SINGLE	D	621	0	16090.00	25.910	9.188	6.000	15.000	24.000	41.000	95.00
MI	13	1	FLY	2:SINGLE	U	705	0	18774.00	26.630	7.983	10.000	16.000	25.000	41.000	53.00
MI	13	1	FLY	5:OTHER	D	1	0	104.00	104.000	.	104.000	104.000	104.000	104.000	104.00
MI	13	1	FLY	4:JACKNIFE	D	47	0	3404.00	72.426	16.046	41.000	49.000	75.000	107.000	109.00
MI	13	1	FLY	4:JACKNIFE	U	29	0	1962.00	67.655	12.093	48.000	49.000	67.000	88.000	96.00
MI	13	1	TURNBACK	1:DOUBLE	D	696	0	148448.00	213.287	162.245	80.000	100.000	179.500	410.000	1756.00
MI	13	1	TURNBACK	1:DOUBLE	U	669	0	136491.00	204.022	134.779	75.000	96.000	172.000	379.000	1372.00
MI	13	1	TURNBACK	3:KNOCKOUT	D	62	0	11222.00	181.000	101.521	37.000	46.000	159.000	348.000	535.00
MI	13	1	TURNBACK	3:KNOCKOUT	U	62	0	10608.00	171.097	99.313	50.000	87.000	149.000	375.000	701.00
MI	13	1	TURNBACK	2:SINGLE	D	308	0	30670.00	99.578	98.543	15.000	25.000	77.500	264.000	1265.00
MI	13	1	TURNBACK	2:SINGLE	U	314	0	27626.00	87.981	67.452	16.000	25.000	66.000	225.000	581.00
MI	13	1	TURNBACK	5:OTHER	D	3	0	525.00	175.000	41.146	132.000	132.000	179.000	214.000	214.00
MI	13	1	TURNBACK	5:OTHER	U	1	0	292.00	292.000	.	292.000	292.000	292.000	292.000	292.00
MI	13	1	TURNBACK	4:JACKNIFE	D	28	0	5286.00	188.786	95.042	80.000	85.000	160.000	346.000	420.00
MI	13	1	TURNBACK	4:JACKNIFE	U	15	0	2996.00	199.733	138.878	70.000	70.000	157.000	537.000	537.00
MI	14	1	EXCHANGE	1:DOUBLE	D	1242	0	421326.00	339.232	182.173	99.000	140.000	291.500	680.000	1844.00
MI	14	1	EXCHANGE	1:DOUBLE	U	1202	0	411935.00	342.708	215.491	78.000	135.000	299.500	681.000	3917.00
MI	14	1	EXCHANGE	5:OTHER	D	2	0	1110.00	555.000	18.385	542.000	542.000	555.000	568.000	568.00
MI	14	1	EXCHANGE	3:KNOCKOUT	D	66	0	17233.00	261.106	197.856	49.000	90.000	212.500	543.000	1383.00
MI	14	1	EXCHANGE	3:KNOCKOUT	U	82	0	22467.00	273.988	155.243	57.000	88.000	230.500	516.000	1055.00
MI	14	1	EXCHANGE	2:SINGLE	D	613	0	89773.00	146.449	138.000	14.000	33.000	110.000	396.000	1325.00
MI	14	1	EXCHANGE	2:SINGLE	U	606	0	92379.00	152.441	128.626	20.000	36.000	120.500	352.000	1589.00
MI	14	1	EXCHANGE	5:OTHER	D	1	0	400.00	400.000	.	400.000	400.000	400.000	400.000	400.00
MI	14	1	EXCHANGE	4:JACKNIFE	D	30	0	9586.00	319.533	169.769	75.000	131.000	278.500	726.000	784.00
MI	14	1	EXCHANGE	4:JACKNIFE	U	40	0	10088.00	252.200	135.419	74.000	81.500	223.500	519.500	570.00
MI	14	1	FLY	1:DOUBLE	D	900	0	118203.00	131.337	42.292	50.000	95.000	127.000	172.500	1020.00
MI	14	1	FLY	1:DOUBLE	U	950	0	110637.00	116.460	29.352	57.000	86.000	115.000	149.000	580.00
MI	14	1	FLY	5:OTHER	U	1	0	81.00	81.000	.	81.000	81.000	81.000	81.000	81.00
MI	14	1	FLY	3:KNOCKOUT	D	74	0	5197.00	70.230	26.922	30.000	35.000	65.000	132.000	140.00
MI	14	1	FLY	3:KNOCKOUT	U	69	0	4288.00	62.145	16.669	30.000	40.000	60.000	90.000	125.00
MI	14	1	FLY	2:SINGLE	D	668	0	23220.00	34.760	22.696	10.000	17.000	30.000	60.000	487.00
MI	14	1	FLY	2:SINGLE	U	666	0	21693.00	32.572	23.512	11.000	17.000	30.000	54.000	560.00
MI	14	1	FLY	5:OTHER	U	2	0	155.00	77.500	53.033	40.000	40.000	77.500	115.000	115.00
MI	14	1	FLY	4:JACKNIFE	D	21	0	1975.00	94.048	22.609	61.000	70.000	90.000	126.000	148.00
MI	14	1	FLY	4:JACKNIFE	U	17	0	1425.00	83.824	15.907	59.000	59.000	80.000	110.000	110.00
MI	14	1	TURNBACK	1:DOUBLE	D	1229	0	404201.00	328.886	192.043	68.000	132.000	277.000	689.000	1790.00
MI	14	1	TURNBACK	1:DOUBLE	U	1119	0	333358.00	297.907	185.439	87.000	117.000	245.000	628.000	1570.00
MI	14	1	TURNBACK	3:KNOCKOUT	D	89	0	26332.00	295.865	260.152	51.000	75.000	210.000	719.000	1840.00
MI	14	1	TURNBACK	3:KNOCKOUT	U	104	0	25536.00	245.538	139.653	58.000	75.000	210.500	560.000	675.00
MI	14	1	TURNBACK	2:SINGLE	D	606	0	106589.00	175.889	180.377	17.000	33.000	127.000	483.000	1956.00
MI	14	1	TURNBACK	2:SINGLE	U	715	0	127007.00	177.632	146.918	19.000	35.000	132.000	490.000	1020.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 36
Total Lockage Time from Arrival to Departure
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Lockage Obs	Num Missing Values	Sum Mins Total Time	Avg Mins Total Time	Std Dev Total Time	Smallest Total Time	5th Pctile Total Time	Median Total Time	95th Pctile Total Time	Largest Total Time
MI	14	1	TURNBACK	5:OTHER	U	1	0	31.00	31.000	.	31.000	31.000	31.000	31.000	31.00
MI	14	1	TURNBACK	4:JACKNIFE	D	35	0	12100.00	345.714	262.123	90.000	100.000	255.000	803.000	1324.00
MI	14	1	TURNBACK	4:JACKNIFE	U	25	0	7636.00	305.440	166.252	99.000	99.000	300.000	667.000	680.00
MI	14	4	EXCHANGE	1:DOUBLE	D	1	0	104.00	104.000	.	104.000	104.000	104.000	104.000	104.00
MI	14	4	EXCHANGE	3:KNOCKOUT	U	1	0	134.00	134.000	.	134.000	134.000	134.000	134.000	134.00
MI	14	4	EXCHANGE	2:SINGLE	D	10	0	367.00	36.700	10.520	24.000	24.000	37.500	50.000	50.00
MI	14	4	EXCHANGE	2:SINGLE	U	10	0	398.00	39.800	20.373	12.000	12.000	36.500	87.000	87.00
MI	14	4	FLY	1:DOUBLE	D	4	0	508.00	127.000	74.351	65.000	65.000	104.000	235.000	235.00
MI	14	4	FLY	1:DOUBLE	U	11	0	1445.00	131.364	93.041	61.000	61.000	125.000	390.000	390.00
MI	14	4	FLY	3:KNOCKOUT	D	9	0	508.00	56.444	26.283	25.000	25.000	63.000	95.000	95.00
MI	14	4	FLY	3:KNOCKOUT	U	9	0	448.00	49.778	29.672	27.000	27.000	38.000	120.000	120.00
MI	14	4	FLY	2:SINGLE	D	79	0	2567.00	32.494	21.846	10.000	12.000	28.000	77.000	133.00
MI	14	4	FLY	2:SINGLE	U	71	0	1818.00	25.606	12.483	10.000	13.000	23.000	45.000	77.00
MI	14	4	FLY	5:OTHER	D	1	0	89.00	89.000	.	89.000	89.000	89.000	89.000	89.00
MI	14	4	FLY	5:OTHER	U	1	0	98.00	98.000	.	98.000	98.000	98.000	98.000	98.00
MI	14	4	FLY	4:JACKNIFE	D	1	0	30.00	30.000	.	30.000	30.000	30.000	30.000	30.00
MI	14	4	TURNBACK	1:DOUBLE	U	3	0	230.00	76.667	15.948	59.000	59.000	81.000	90.000	90.00
MI	14	4	TURNBACK	3:KNOCKOUT	D	1	0	80.00	80.000	.	80.000	80.000	80.000	80.000	80.00
MI	14	4	TURNBACK	3:KNOCKOUT	U	2	0	147.00	73.500	37.477	47.000	47.000	73.500	100.000	100.00
MI	14	4	TURNBACK	2:SINGLE	D	13	0	671.00	51.615	38.826	18.000	18.000	46.000	171.000	171.00
MI	14	4	TURNBACK	2:SINGLE	U	14	0	928.00	66.286	59.357	13.000	13.000	59.000	240.000	240.00
MI	14	4	TURNBACK	5:OTHER	U	2	0	168.00	84.000	49.497	49.000	49.000	84.000	119.000	119.00
MI	14	4	TURNBACK	4:JACKNIFE	D	1	0	24.00	24.000	.	24.000	24.000	24.000	24.000	24.00
MI	15	1	EXCHANGE	1:DOUBLE	D	1331	0	437197.00	328.473	278.832	100.000	140.000	273.000	669.000	4095.00
MI	15	1	EXCHANGE	1:DOUBLE	U	1155	0	413077.00	357.642	416.673	90.000	135.000	295.000	670.000	7804.00
MI	15	1	EXCHANGE	5:OTHER	U	1	0	170.00	170.000	.	170.000	170.000	170.000	170.000	170.00
MI	15	1	EXCHANGE	3:KNOCKOUT	D	70	0	20892.00	298.457	296.252	51.000	80.000	236.500	665.000	2334.00
MI	15	1	EXCHANGE	3:KNOCKOUT	U	93	0	20018.00	215.247	151.826	50.000	70.000	168.000	470.000	807.00
MI	15	1	EXCHANGE	2:SINGLE	D	463	0	56264.00	121.521	110.446	10.000	27.000	90.000	316.000	1105.00
MI	15	1	EXCHANGE	2:SINGLE	U	620	0	72915.00	117.605	92.982	16.000	25.000	93.500	275.000	760.00
MI	15	1	EXCHANGE	5:OTHER	U	3	0	376.00	125.333	136.617	31.000	31.000	63.000	282.000	282.00
MI	15	1	EXCHANGE	4:JACKNIFE	D	29	0	7896.00	272.276	155.020	80.000	90.000	255.000	620.000	635.00
MI	15	1	EXCHANGE	4:JACKNIFE	U	34	0	10558.00	310.529	198.222	93.000	98.000	247.500	660.000	1120.00
MI	15	1	FLY	1:DOUBLE	D	969	0	120748.00	124.611	25.185	70.000	91.000	121.000	165.000	410.00
MI	15	1	FLY	1:DOUBLE	U	878	0	107098.00	121.979	32.305	45.000	87.000	117.000	170.000	630.00
MI	15	1	FLY	5:OTHER	D	2	0	126.00	63.000	57.983	22.000	22.000	63.000	104.000	104.00
MI	15	1	FLY	3:KNOCKOUT	D	57	0	3780.00	66.316	39.477	24.000	28.000	55.000	140.000	270.00
MI	15	1	FLY	3:KNOCKOUT	U	67	0	3609.00	53.866	20.582	16.000	30.000	50.000	95.000	117.00
MI	15	1	FLY	2:SINGLE	D	1112	0	31667.00	28.478	15.425	10.000	15.000	25.000	50.000	275.00
MI	15	1	FLY	2:SINGLE	U	1089	0	30521.00	28.027	18.575	12.000	15.000	25.000	50.000	490.00
MI	15	1	FLY	5:OTHER	D	1	0	60.00	60.000	.	60.000	60.000	60.000	60.000	60.00
MI	15	1	FLY	5:OTHER	U	1	0	85.00	85.000	.	85.000	85.000	85.000	85.000	85.00
MI	15	1	FLY	4:JACKNIFE	D	24	0	2297.00	95.708	28.991	54.000	62.000	87.500	145.000	145.00
MI	15	1	FLY	4:JACKNIFE	U	31	0	2606.00	84.065	24.491	54.000	59.000	84.000	125.000	175.00
MI	15	1	TURNBACK	1:DOUBLE	D	1051	0	325598.00	309.798	284.297	87.000	131.000	246.000	620.000	4040.00
MI	15	1	TURNBACK	1:DOUBLE	U	1211	0	439961.00	363.304	484.644	92.000	130.000	270.000	688.000	7140.00
MI	15	1	TURNBACK	5:OTHER	U	1	0	166.00	166.000	.	166.000	166.000	166.000	166.000	166.00
MI	15	1	TURNBACK	3:KNOCKOUT	D	99	0	21631.00	218.495	131.932	43.000	64.000	195.000	510.000	707.00
MI	15	1	TURNBACK	3:KNOCKOUT	U	100	0	29176.00	291.760	214.824	40.000	71.500	255.000	709.500	1152.00
MI	15	1	TURNBACK	2:SINGLE	D	545	0	85316.00	156.543	139.878	15.000	35.000	119.000	426.000	1092.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 37
Total Lockage Time from Arrival to Departure
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Lockage Obs	Num Missing Values	Sum Mins Total Time	Avg Mins Total Time	Std Dev Total Time	Smallest Total Time	5th Pctile Total Time	Median Total Time	95th Pctile Total Time	Largest Total Time
MI	15	1	TURNBACK	2:SINGLE	U	543	0	78607.00	144.76	233.43	20.00	31.00	100.00	401.00	4740.00
MI	15	1	TURNBACK	5:OTHER	U	1	0	65.00	65.00	.	65.00	65.00	65.00	65.00	65.00
MI	15	1	TURNBACK	4:JACKNIFE	D	31	0	7218.00	232.84	97.98	100.00	108.00	239.00	455.00	523.00
MI	15	1	TURNBACK	4:JACKNIFE	U	27	0	6236.00	230.96	175.22	75.00	80.00	175.00	610.00	832.00
MI	15	1	TURNBACK	5:OTHER	D	1	0	55.00	55.00	.	55.00	55.00	55.00	55.00	55.00
MI	15	4	EXCHANGE	1:DOUBLE	D	12	0	33628.00	2802.33	1317.66	985.00	985.00	3295.50	5020.00	5020.00
MI	15	4	EXCHANGE	1:DOUBLE	U	11	0	34785.00	3162.27	1124.28	1962.00	1962.00	3594.00	4753.00	4753.00
MI	15	4	EXCHANGE	3:KNOCKOUT	U	1	0	448.00	448.00	.	448.00	448.00	448.00	448.00	448.00
MI	15	4	EXCHANGE	2:SINGLE	D	149	0	6698.00	44.95	54.93	20.00	23.00	34.00	80.00	624.00
MI	15	4	EXCHANGE	2:SINGLE	U	156	0	7298.00	46.78	75.36	18.00	22.00	30.00	71.00	735.00
MI	15	4	FLY	1:DOUBLE	D	1	0	195.00	195.00	.	195.00	195.00	195.00	195.00	195.00
MI	15	4	FLY	5:OTHER	D	2	0	60.00	30.00	14.14	20.00	20.00	30.00	40.00	40.00
MI	15	4	FLY	5:OTHER	U	2	0	44.00	22.00	4.24	19.00	19.00	22.00	25.00	25.00
MI	15	4	FLY	3:KNOCKOUT	D	1	0	14.00	14.00	.	14.00	14.00	14.00	14.00	14.00
MI	15	4	FLY	3:KNOCKOUT	U	4	0	151.00	37.75	18.71	25.00	25.00	30.50	65.00	65.00
MI	15	4	FLY	2:SINGLE	D	1182	0	30300.00	25.63	9.18	11.00	15.00	25.00	40.00	90.00
MI	15	4	FLY	2:SINGLE	U	1153	0	29721.00	25.78	10.12	9.00	15.00	25.00	42.00	110.00
MI	15	4	FLY	5:OTHER	D	2	0	41.00	20.50	6.36	16.00	16.00	20.50	25.00	25.00
MI	15	4	FLY	5:OTHER	U	3	0	75.00	25.00	5.00	20.00	20.00	25.00	30.00	30.00
MI	15	4	FLY	4:JACKNIFE	U	3	0	121.00	40.33	13.80	30.00	30.00	35.00	56.00	56.00
MI	15	4	FLY	5:OTHER	D	1	0	20.00	20.00	.	20.00	20.00	20.00	20.00	20.00
MI	15	4	TURNBACK	1:DOUBLE	D	7	0	23628.00	3375.43	1176.76	1125.00	1125.00	3455.00	5135.00	5135.00
MI	15	4	TURNBACK	1:DOUBLE	U	11	0	27418.00	2492.55	1627.20	193.00	193.00	2245.00	4588.00	4588.00
MI	15	4	TURNBACK	2:SINGLE	D	98	0	7057.00	72.01	163.79	20.00	23.00	37.00	255.00	1488.00
MI	15	4	TURNBACK	2:SINGLE	U	145	0	7163.00	49.40	58.33	17.00	23.00	36.00	111.00	505.00
MI	15	4	TURNBACK	5:OTHER	D	2	0	49.00	24.50	7.78	19.00	19.00	24.50	30.00	30.00
MI	16	1	EXCHANGE	1:DOUBLE	D	1267	0	310107.00	244.76	147.90	90.00	120.00	205.00	495.00	1690.00
MI	16	1	EXCHANGE	1:DOUBLE	U	1202	0	297175.00	247.23	138.73	80.00	110.00	215.00	485.00	1234.00
MI	16	1	EXCHANGE	3:KNOCKOUT	D	117	0	28148.00	240.58	172.08	63.00	85.00	190.00	575.00	1195.00
MI	16	1	EXCHANGE	3:KNOCKOUT	U	131	0	25615.00	195.53	115.01	55.00	65.00	170.00	395.00	860.00
MI	16	1	EXCHANGE	2:SINGLE	D	560	0	64717.00	115.57	91.58	15.00	29.00	95.00	289.50	802.00
MI	16	1	EXCHANGE	2:SINGLE	U	648	0	70056.00	108.11	84.74	15.00	30.00	86.00	270.00	965.00
MI	16	1	EXCHANGE	5:OTHER	D	2	0	489.00	244.50	41.72	215.00	215.00	244.50	274.00	274.00
MI	16	1	EXCHANGE	5:OTHER	U	1	0	549.00	549.00	.	549.00	549.00	549.00	549.00	549.00
MI	16	1	EXCHANGE	4:JACKNIFE	D	29	0	6484.00	223.59	135.69	75.00	95.00	190.00	540.00	600.00
MI	16	1	EXCHANGE	4:JACKNIFE	U	41	0	8596.00	209.66	110.73	75.00	85.00	190.00	425.00	525.00
MI	16	1	FLY	1:DOUBLE	D	1095	0	140295.00	128.12	27.29	70.00	96.00	125.00	168.00	603.00
MI	16	1	FLY	1:DOUBLE	U	1063	0	120216.00	113.09	40.02	65.00	82.00	110.00	145.00	1065.00
MI	16	1	FLY	3:KNOCKOUT	D	111	0	9458.00	85.21	30.77	28.00	41.00	82.00	135.00	170.00
MI	16	1	FLY	3:KNOCKOUT	U	91	0	6342.00	69.69	23.45	30.00	40.00	62.00	114.00	135.00
MI	16	1	FLY	2:SINGLE	D	879	0	30175.00	34.33	32.14	10.00	17.00	30.00	60.00	715.00
MI	16	1	FLY	2:SINGLE	U	931	0	30493.00	32.75	13.48	10.00	18.00	30.00	55.00	250.00
MI	16	1	FLY	4:JACKNIFE	D	17	0	1444.00	84.94	26.88	21.00	21.00	85.00	140.00	140.00
MI	16	1	FLY	4:JACKNIFE	U	35	0	2835.00	81.00	18.74	35.00	40.00	85.00	115.00	117.00
MI	16	1	TURNBACK	1:DOUBLE	D	1170	0	292566.00	250.06	155.01	68.00	120.00	210.00	512.00	1844.00
MI	16	1	TURNBACK	1:DOUBLE	U	1194	0	269449.00	225.67	138.42	75.00	105.00	187.00	475.00	1580.00
MI	16	1	TURNBACK	5:OTHER	D	1	0	340.00	340.00	.	340.00	340.00	340.00	340.00	340.00
MI	16	1	TURNBACK	3:KNOCKOUT	D	135	0	26613.00	197.13	119.62	40.00	65.00	168.00	415.00	795.00
MI	16	1	TURNBACK	3:KNOCKOUT	U	116	0	21600.00	186.21	125.79	45.00	62.00	155.00	470.00	770.00
MI	16	1	TURNBACK	2:SINGLE	D	537	0	68820.00	128.16	100.86	14.00	34.00	102.00	315.00	759.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 38
Total Lockage Time from Arrival to Departure
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Lockage Obs	Num Missing Values	Sum Mins Total Time	Avg Mins Total Time	Std Dev Total Time	Smallest Total Time	5th Pctile Total Time	Median Total Time	95th Pctile Total Time	Largest Total Time
MI	16	1	TURNBACK	2:SINGLE	U	612	0	72236.00	118.033	96.627	18.000	31.000	90.000	305.00	820.00
MI	16	1	TURNBACK	5:OTHER	D	3	0	412.00	137.333	162.562	40.000	40.000	47.000	325.00	325.00
MI	16	1	TURNBACK	4:JACKNIFE	D	35	0	9718.00	277.657	164.714	80.000	95.000	210.000	539.00	817.00
MI	16	1	TURNBACK	4:JACKNIFE	U	31	0	5878.00	189.613	96.625	75.000	90.000	147.000	365.00	453.00
MI	17	1	EXCHANGE	1:DOUBLE	D	1479	0	425286.00	287.550	136.589	90.000	140.000	253.000	587.00	940.00
MI	17	1	EXCHANGE	1:DOUBLE	U	1462	0	405343.00	277.252	141.230	88.000	117.000	245.000	560.00	1067.00
MI	17	1	EXCHANGE	3:KNOCKOUT	D	81	0	18032.00	222.617	136.095	55.000	70.000	186.000	465.00	691.00
MI	17	1	EXCHANGE	3:KNOCKOUT	U	95	0	23337.00	245.653	158.511	60.000	72.000	200.000	535.00	895.00
MI	17	1	EXCHANGE	2:SINGLE	D	438	0	64670.00	147.648	116.356	18.000	35.000	110.000	379.00	835.00
MI	17	1	EXCHANGE	2:SINGLE	U	492	0	72909.00	148.189	116.874	20.000	40.000	115.000	390.00	720.00
MI	17	1	EXCHANGE	5:OTHER	U	1	0	205.00	205.000	.	205.000	205.000	205.000	205.00	205.00
MI	17	1	EXCHANGE	4:JACKNIFE	D	24	0	7152.00	298.000	169.575	105.000	110.000	242.500	635.00	690.00
MI	17	1	EXCHANGE	4:JACKNIFE	U	41	0	10503.00	256.171	150.820	78.000	95.000	223.000	473.00	815.00
MI	17	1	FLY	1:DOUBLE	D	1170	0	165722.00	141.643	25.062	80.000	107.000	140.000	180.00	345.00
MI	17	1	FLY	1:DOUBLE	U	1061	0	123948.00	116.822	23.429	70.000	85.000	115.000	150.00	390.00
MI	17	1	FLY	3:KNOCKOUT	D	63	0	5441.00	86.365	35.819	35.000	45.000	76.000	140.00	215.00
MI	17	1	FLY	3:KNOCKOUT	U	68	0	4519.00	66.456	17.198	38.000	45.000	65.000	100.00	130.00
MI	17	1	FLY	2:SINGLE	D	407	0	19263.00	47.329	30.536	12.000	25.000	45.000	75.00	558.00
MI	17	1	FLY	2:SINGLE	U	432	0	17551.00	40.627	13.568	15.000	25.000	40.000	62.00	155.00
MI	17	1	FLY	5:OTHER	D	1	0	160.00	160.000	.	160.000	160.000	160.000	160.00	160.00
MI	17	1	FLY	4:JACKNIFE	D	18	0	1898.00	105.444	37.819	50.000	50.000	95.500	205.00	205.00
MI	17	1	FLY	4:JACKNIFE	U	25	0	2309.00	92.360	18.764	50.000	50.000	90.000	115.00	125.00
MI	17	1	TURNBACK	1:DOUBLE	D	1143	0	317410.00	277.699	140.511	105.000	135.000	235.000	577.00	1039.00
MI	17	1	TURNBACK	1:DOUBLE	U	1193	0	284904.00	238.813	130.492	83.000	110.000	198.000	504.00	1020.00
MI	17	1	TURNBACK	3:KNOCKOUT	D	104	0	25230.00	242.596	162.291	55.000	84.000	195.000	615.00	896.00
MI	17	1	TURNBACK	3:KNOCKOUT	U	108	0	22436.00	207.741	133.326	60.000	70.000	164.500	471.00	842.00
MI	17	1	TURNBACK	2:SINGLE	D	450	0	71072.00	157.938	121.362	20.000	42.000	120.000	420.00	776.00
MI	17	1	TURNBACK	2:SINGLE	U	391	0	56707.00	145.031	116.306	19.000	40.000	115.000	382.00	760.00
MI	17	1	TURNBACK	5:OTHER	D	1	0	633.00	633.000	.	633.000	633.000	633.000	633.00	633.00
MI	17	1	TURNBACK	4:JACKNIFE	D	39	0	10518.00	269.692	161.427	70.000	100.000	205.000	640.00	818.00
MI	17	1	TURNBACK	4:JACKNIFE	U	42	0	9655.00	229.881	124.516	75.000	85.000	202.000	420.00	645.00
MI	18	1	EXCHANGE	1:DOUBLE	D	1519	0	406140.00	267.373	168.032	95.000	127.000	225.000	528.00	2437.00
MI	18	1	EXCHANGE	1:DOUBLE	U	1437	0	388509.00	270.361	142.958	71.000	120.000	238.000	521.00	1566.00
MI	18	1	EXCHANGE	5:OTHER	D	1	0	84.00	84.000	.	84.000	84.000	84.000	84.00	84.00
MI	18	1	EXCHANGE	3:KNOCKOUT	D	67	0	15549.00	232.075	144.038	59.000	90.000	191.000	601.00	690.00
MI	18	1	EXCHANGE	3:KNOCKOUT	U	88	0	17968.00	204.182	120.344	40.000	65.000	175.000	460.00	580.00
MI	18	1	EXCHANGE	2:SINGLE	D	405	0	48912.00	120.770	118.335	12.000	29.000	87.000	318.00	1332.00
MI	18	1	EXCHANGE	2:SINGLE	U	436	0	53782.00	123.353	102.107	11.000	30.000	94.000	301.00	852.00
MI	18	1	EXCHANGE	5:OTHER	D	2	0	1539.00	769.500	709.228	268.000	268.000	769.500	1271.00	1271.00
MI	18	1	EXCHANGE	4:JACKNIFE	D	31	0	7941.00	256.161	105.955	79.000	87.000	236.000	488.00	556.00
MI	18	1	EXCHANGE	4:JACKNIFE	U	48	0	10073.00	209.854	124.421	70.000	80.000	188.500	362.00	858.00
MI	18	1	FLY	1:DOUBLE	D	1239	0	163235.00	131.747	35.971	61.000	99.000	128.000	166.00	677.00
MI	18	1	FLY	1:DOUBLE	U	1081	0	121085.00	112.012	41.615	66.000	80.000	108.000	145.00	850.00
MI	18	1	FLY	3:KNOCKOUT	D	51	0	3808.00	74.667	23.863	40.000	45.000	70.000	120.00	136.00
MI	18	1	FLY	3:KNOCKOUT	U	64	0	3950.00	61.719	16.169	40.000	44.000	60.000	90.00	120.00
MI	18	1	FLY	2:SINGLE	D	536	0	18743.00	34.968	17.105	9.000	14.000	32.000	65.00	190.00
MI	18	1	FLY	2:SINGLE	U	590	0	18006.00	30.519	12.868	8.000	13.000	30.000	51.00	112.00
MI	18	1	FLY	4:JACKNIFE	D	12	0	986.00	82.167	14.128	57.000	57.000	82.500	105.00	105.00
MI	18	1	FLY	4:JACKNIFE	U	33	0	2873.00	87.061	26.774	40.000	45.000	85.000	130.00	185.00
MI	18	1	TURNBACK	1:DOUBLE	D	1231	0	337010.00	273.769	192.285	85.000	124.000	227.000	525.00	2265.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 39
Total Lockage Time from Arrival to Departure
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Lockage Obs	Num Missing Values	Sum Mins Total Time	Avg Mins Total Time	Std Dev Total Time	Smallest Total Time	5th Pctile Total Time	Median Total Time	95th Pctile Total Time	Largest Total Time
MI	18	1	TURNBACK	1:DOUBLE	U	1357	0	341614.00	251.742	149.001	75.000	107.000	210.000	530.000	1615.00
MI	18	1	TURNBACK	3:KNOCKOUT	D	117	0	25505.00	217.991	133.214	55.000	74.000	185.000	514.000	676.00
MI	18	1	TURNBACK	3:KNOCKOUT	U	107	0	19844.00	185.458	104.500	45.000	58.000	160.000	400.000	520.00
MI	18	1	TURNBACK	2:SINGLE	D	452	0	63632.00	140.779	135.446	12.000	30.000	104.000	420.000	1361.00
MI	18	1	TURNBACK	2:SINGLE	U	422	0	50239.00	119.050	101.024	13.000	32.000	90.500	342.000	732.00
MI	18	1	TURNBACK	4:JACKNIFE	D	41	0	11425.00	278.659	208.713	85.000	98.000	211.000	574.000	1140.00
MI	18	1	TURNBACK	4:JACKNIFE	U	39	0	10554.00	270.615	144.750	98.000	105.000	255.000	550.000	647.00
MI	18	1	TURNBACK	5:OTHER	U	1	0	133.00	133.000	.	133.000	133.000	133.000	133.000	133.00
MI	19	1	EXCHANGE	2:SINGLE	D	1782	0	253380.00	142.189	68.654	21.000	67.000	126.000	266.000	736.00
MI	19	1	EXCHANGE	2:SINGLE	U	1654	0	265991.00	160.817	77.691	32.000	67.000	149.000	293.000	762.00
MI	19	1	EXCHANGE	4:JACKNIFE	U	1	0	125.00	125.000	.	125.000	125.000	125.000	125.000	125.00
MI	19	1	FLY	5:OTHER	D	1	0	84.00	84.000	.	84.000	84.000	84.000	84.000	84.00
MI	19	1	FLY	3:KNOCKOUT	D	1	0	94.00	94.000	.	94.000	94.000	94.000	94.000	94.00
MI	19	1	FLY	2:SINGLE	D	2245	0	142698.00	63.563	25.162	14.000	28.000	64.000	91.000	511.00
MI	19	1	FLY	2:SINGLE	U	2481	0	156382.00	63.032	18.926	18.000	33.000	63.000	91.000	247.00
MI	19	1	FLY	5:OTHER	U	1	0	90.00	90.000	.	90.000	90.000	90.000	90.000	90.00
MI	19	1	TURNBACK	2:SINGLE	D	1491	0	223691.00	150.027	72.963	35.000	73.000	135.000	273.000	1309.00
MI	19	1	TURNBACK	2:SINGLE	U	1433	0	191258.00	133.467	73.997	32.000	63.000	112.000	265.000	845.00
MI	20	1	EXCHANGE	1:DOUBLE	D	1718	0	524773.00	305.456	287.491	95.000	133.000	242.000	621.000	5531.00
MI	20	1	EXCHANGE	1:DOUBLE	U	1641	0	491042.00	299.233	169.249	93.000	130.000	258.000	599.000	2320.00
MI	20	1	EXCHANGE	3:KNOCKOUT	D	46	0	13117.00	285.152	297.199	70.000	79.000	250.500	464.000	2069.00
MI	20	1	EXCHANGE	3:KNOCKOUT	U	27	0	7194.00	266.444	158.266	78.000	85.000	225.000	625.000	688.00
MI	20	1	EXCHANGE	2:SINGLE	D	418	0	61491.00	147.108	320.285	14.000	25.000	90.000	376.000	6060.00
MI	20	1	EXCHANGE	2:SINGLE	U	529	0	63331.00	119.718	123.053	12.000	25.000	82.000	344.000	1510.00
MI	20	1	EXCHANGE	5:OTHER	D	1	0	339.00	339.000	.	339.000	339.000	339.000	339.000	339.00
MI	20	1	EXCHANGE	4:JACKNIFE	D	28	0	8416.00	300.571	160.095	90.000	98.000	290.000	469.000	930.00
MI	20	1	EXCHANGE	4:JACKNIFE	U	39	0	10762.00	275.949	139.322	120.000	126.000	243.000	653.000	655.00
MI	20	1	FLY	1:DOUBLE	D	1207	0	144633.00	119.829	34.355	45.000	90.000	115.000	152.000	684.00
MI	20	1	FLY	1:DOUBLE	U	1109	0	127402.00	114.880	35.364	51.000	85.000	111.000	150.000	709.00
MI	20	1	FLY	3:KNOCKOUT	D	26	0	1767.00	67.962	28.298	38.000	39.000	59.000	135.000	135.00
MI	20	1	FLY	3:KNOCKOUT	U	22	0	1314.00	59.727	10.929	44.000	45.000	59.500	80.000	80.00
MI	20	1	FLY	2:SINGLE	D	496	0	14934.00	30.109	32.116	7.000	13.000	25.000	52.000	617.00
MI	20	1	FLY	2:SINGLE	U	600	0	18409.00	30.682	32.695	7.000	13.000	27.000	53.000	764.00
MI	20	1	FLY	4:JACKNIFE	D	18	0	1465.00	81.389	15.458	55.000	55.000	82.500	110.000	110.00
MI	20	1	FLY	4:JACKNIFE	U	28	0	2373.00	84.750	17.388	47.000	60.000	84.000	115.000	115.00
MI	20	1	TURNBACK	1:DOUBLE	D	1433	0	467824.00	326.465	458.491	66.000	130.000	247.000	626.000	6298.00
MI	20	1	TURNBACK	1:DOUBLE	U	1412	0	401376.00	284.261	198.811	80.000	115.000	231.000	615.000	2324.00
MI	20	1	TURNBACK	3:KNOCKOUT	D	54	0	14898.00	275.889	161.375	62.000	70.000	231.000	591.000	866.00
MI	20	1	TURNBACK	3:KNOCKOUT	U	43	0	9538.00	221.814	111.170	68.000	82.000	200.000	429.000	536.00
MI	20	1	TURNBACK	2:SINGLE	D	399	0	61449.00	154.008	136.664	12.000	28.000	109.000	450.000	926.00
MI	20	1	TURNBACK	2:SINGLE	U	424	0	54779.00	129.196	126.961	11.000	27.000	89.500	378.000	1124.00
MI	20	1	TURNBACK	5:OTHER	D	3	0	836.00	278.667	317.500	29.000	29.000	171.000	636.000	636.00
MI	20	1	TURNBACK	4:JACKNIFE	D	40	0	9725.00	243.125	153.917	99.000	101.000	208.000	596.500	837.00
MI	20	1	TURNBACK	4:JACKNIFE	U	49	0	13061.00	266.551	185.858	71.000	100.000	213.000	621.000	1105.00
MI	21	1	EXCHANGE	1:DOUBLE	D	1775	0	505230.00	284.637	285.599	92.000	135.000	235.000	535.000	6278.00
MI	21	1	EXCHANGE	1:DOUBLE	U	1776	0	507929.00	285.996	265.432	82.000	125.000	240.000	520.000	5526.00
MI	21	1	EXCHANGE	3:KNOCKOUT	D	40	0	11609.00	290.225	366.461	65.000	76.000	211.000	607.000	2384.00
MI	21	1	EXCHANGE	3:KNOCKOUT	U	36	0	8834.00	245.389	145.830	55.000	62.000	214.500	558.000	818.00
MI	21	1	EXCHANGE	2:SINGLE	D	422	0	56358.00	133.550	121.135	18.000	25.000	97.000	350.000	965.00
MI	21	1	EXCHANGE	2:SINGLE	U	534	0	61753.00	115.642	156.441	14.000	26.000	82.000	312.000	2892.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 40
Total Lockage Time from Arrival to Departure
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Lockage Obs	Num Missing Values	Sum Mins Total Time	Avg Mins Total Time	Std Dev Total Time	Smallest Total Time	5th Pctile Total Time	Median Total Time	95th Pctile Total Time	Largest Total Time
MI	21	1	EXCHANGE	5:OTHER	D	3	0	661.00	220.333	182.402	55.000	55.000	190.000	416.00	416.00
MI	21	1	EXCHANGE	5:OTHER	U	4	0	902.00	225.500	137.687	100.000	100.000	197.500	407.00	407.00
MI	21	1	EXCHANGE	4:JACKNIFE	D	21	0	4833.00	230.143	110.529	99.000	102.000	190.000	411.00	501.00
MI	21	1	EXCHANGE	4:JACKNIFE	U	51	0	12390.00	242.941	112.835	85.000	105.000	237.000	455.00	531.00
MI	21	1	FLY	1:DOUBLE	D	1288	0	173911.00	135.024	25.278	82.000	105.000	133.000	167.00	653.00
MI	21	1	FLY	1:DOUBLE	U	1153	0	139044.00	120.593	36.744	66.000	87.000	117.000	155.00	780.00
MI	21	1	FLY	3:KNOCKOUT	D	31	0	2354.00	75.935	25.882	42.000	50.000	66.000	117.00	175.00
MI	21	1	FLY	3:KNOCKOUT	U	22	0	1560.00	70.909	23.594	40.000	45.000	67.000	110.00	125.00
MI	21	1	FLY	2:SINGLE	D	417	0	14003.00	33.580	17.141	10.000	15.000	30.000	62.00	164.00
MI	21	1	FLY	2:SINGLE	U	494	0	16679.00	33.763	16.779	10.000	15.000	30.000	59.00	235.00
MI	21	1	FLY	4:JACKNIFE	D	17	0	1700.00	100.000	25.385	61.000	61.000	91.000	155.00	155.00
MI	21	1	FLY	4:JACKNIFE	U	36	0	3468.00	96.333	14.732	67.000	68.000	99.500	120.00	120.00
MI	21	1	FLY	5:OTHER	D	1	0	15.00	15.000	.	15.000	15.000	15.000	15.00	15.00
MI	21	1	TURNBACK	1:DOUBLE	D	1470	0	409136.00	278.324	234.663	100.000	130.000	229.000	544.00	5122.00
MI	21	1	TURNBACK	1:DOUBLE	U	1364	0	384973.00	282.238	379.392	81.000	110.000	217.000	515.00	5075.00
MI	21	1	TURNBACK	3:KNOCKOUT	D	55	0	14366.00	261.200	157.329	45.000	69.000	212.000	563.00	666.00
MI	21	1	TURNBACK	3:KNOCKOUT	U	51	0	10255.00	201.078	99.834	50.000	65.000	183.000	399.00	520.00
MI	21	1	TURNBACK	2:SINGLE	D	449	0	64675.00	144.042	171.209	19.000	30.000	110.000	397.00	2837.00
MI	21	1	TURNBACK	2:SINGLE	U	438	0	49091.00	112.080	96.706	11.000	29.000	80.500	327.00	627.00
MI	21	1	TURNBACK	5:OTHER	U	4	0	755.00	188.750	163.169	48.000	48.000	144.000	419.00	419.00
MI	21	1	TURNBACK	4:JACKNIFE	D	40	0	14198.00	354.950	624.650	91.000	120.500	200.000	760.00	4090.00
MI	21	1	TURNBACK	4:JACKNIFE	U	38	0	8620.00	226.842	100.793	93.000	95.000	210.500	452.00	485.00
MI	22	1	EXCHANGE	1:DOUBLE	D	1972	0	782857.00	396.986	236.357	118.000	160.000	328.000	892.00	1634.00
MI	22	1	EXCHANGE	1:DOUBLE	U	1901	0	755880.00	397.622	269.767	83.000	157.000	322.000	874.00	3900.00
MI	22	1	EXCHANGE	5:OTHER	U	1	0	151.00	151.000	.	151.000	151.000	151.000	151.00	151.00
MI	22	1	EXCHANGE	3:KNOCKOUT	D	54	0	21885.00	405.278	268.899	85.000	94.000	331.000	947.00	1235.00
MI	22	1	EXCHANGE	3:KNOCKOUT	U	35	0	11892.00	339.771	173.617	101.000	106.000	312.000	643.00	905.00
MI	22	1	EXCHANGE	2:SINGLE	D	373	0	69676.00	186.799	178.519	17.000	39.000	124.000	558.00	1081.00
MI	22	1	EXCHANGE	2:SINGLE	U	492	0	80012.00	162.626	156.503	13.000	34.000	111.500	464.00	1120.00
MI	22	1	EXCHANGE	5:OTHER	D	1	0	325.00	325.000	.	325.000	325.000	325.000	325.00	325.00
MI	22	1	EXCHANGE	4:JACKNIFE	D	34	0	13745.00	404.265	229.313	76.000	114.000	376.500	858.00	983.00
MI	22	1	EXCHANGE	4:JACKNIFE	U	59	0	23165.00	392.627	242.392	96.000	145.000	343.000	893.00	1511.00
MI	22	1	FLY	1:DOUBLE	D	934	0	141277.00	151.260	51.359	45.000	116.000	145.000	190.00	1087.00
MI	22	1	FLY	1:DOUBLE	U	775	0	106033.00	136.817	37.073	78.000	102.000	132.000	180.00	752.00
MI	22	1	FLY	5:OTHER	D	1	0	127.00	127.000	.	127.000	127.000	127.000	127.00	127.00
MI	22	1	FLY	3:KNOCKOUT	D	25	0	2280.00	91.200	30.745	46.000	46.000	86.000	135.00	145.00
MI	22	1	FLY	3:KNOCKOUT	U	16	0	1138.00	71.125	23.386	45.000	45.000	67.000	130.00	130.00
MI	22	1	FLY	2:SINGLE	D	246	0	14392.00	58.504	125.528	10.000	21.000	44.000	81.00	1823.00
MI	22	1	FLY	2:SINGLE	U	297	0	14849.00	49.997	70.380	14.000	24.000	39.000	74.00	887.00
MI	22	1	FLY	4:JACKNIFE	D	12	0	1210.00	100.833	17.012	75.000	75.000	97.500	132.00	132.00
MI	22	1	FLY	4:JACKNIFE	U	24	0	2530.00	105.417	21.387	73.000	81.000	102.500	137.00	142.00
MI	22	1	TURNBACK	1:DOUBLE	D	1640	0	603643.00	368.075	239.527	116.000	146.000	293.500	901.00	1591.00
MI	22	1	TURNBACK	1:DOUBLE	U	1651	0	672699.00	407.449	333.204	87.000	135.000	312.000	1052.00	3530.00
MI	22	1	TURNBACK	5:OTHER	D	1	0	77.00	77.000	.	77.000	77.000	77.000	77.00	77.00
MI	22	1	TURNBACK	3:KNOCKOUT	D	68	0	26630.00	391.618	316.752	70.000	84.000	291.500	1023.00	1499.00
MI	22	1	TURNBACK	3:KNOCKOUT	U	63	0	23182.00	367.968	290.799	70.000	113.000	309.000	1076.00	1455.00
MI	22	1	TURNBACK	2:SINGLE	D	411	0	89604.00	218.015	233.111	21.000	35.000	131.000	715.00	1502.00
MI	22	1	TURNBACK	2:SINGLE	U	390	0	69926.00	179.297	205.605	18.000	39.000	118.500	535.00	2229.00
MI	22	1	TURNBACK	5:OTHER	D	2	0	381.00	190.500	167.584	72.000	72.000	190.500	309.00	309.00
MI	22	1	TURNBACK	5:OTHER	U	2	0	245.00	122.500	36.062	97.000	97.000	122.500	148.00	148.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 41
Total Lockage Time from Arrival to Departure
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Lockage Obs	Num Missing Values	Sum Mins Total Time	Avg Mins Total Time	Std Dev Total Time	Smallest Total Time	5th Pctile Total Time	Median Total Time	95th Pctile Total Time	Largest Total Time
MI	22	1	TURNBACK	4:JACKNIFE	D	32	0	11382.00	355.69	292.925	87.00	95.00	265.00	1211.00	1486.00
MI	22	1	TURNBACK	4:JACKNIFE	U	53	0	17799.00	335.83	176.492	92.00	127.00	285.00	670.00	944.00
MI	24	1	EXCHANGE	1:DOUBLE	D	1982	0	787691.00	397.42	260.650	109.00	150.00	318.00	960.00	1942.00
MI	24	1	EXCHANGE	1:DOUBLE	U	1946	0	750205.00	385.51	422.505	100.00	135.00	300.00	870.00	14775.00
MI	24	1	EXCHANGE	3:KNOCKOUT	D	68	0	21574.00	317.26	207.160	65.00	100.00	261.00	744.00	965.00
MI	24	1	EXCHANGE	3:KNOCKOUT	U	48	0	15535.00	323.65	213.366	90.00	105.00	295.50	865.00	1056.00
MI	24	1	EXCHANGE	2:SINGLE	D	378	0	52720.00	139.47	145.674	13.00	26.00	95.00	460.00	1100.00
MI	24	1	EXCHANGE	2:SINGLE	U	495	0	65721.00	132.77	116.009	13.00	30.00	101.00	375.00	903.00
MI	24	1	EXCHANGE	5:OTHER	D	2	0	539.00	269.50	161.927	155.00	155.00	269.50	384.00	384.00
MI	24	1	EXCHANGE	5:OTHER	U	1	0	45.00	45.00	.	45.00	45.00	45.00	45.00	45.00
MI	24	1	EXCHANGE	4:JACKNIFE	D	31	0	11460.00	369.68	208.998	105.00	113.00	327.00	841.00	845.00
MI	24	1	EXCHANGE	4:JACKNIFE	U	56	0	21623.00	386.12	244.690	88.00	120.00	337.50	780.00	1637.00
MI	24	1	FLY	1:DOUBLE	D	909	0	118670.00	130.55	41.757	77.00	98.00	125.00	165.00	765.00
MI	24	1	FLY	1:DOUBLE	U	848	0	98495.00	116.15	21.625	65.00	85.00	115.00	150.00	265.00
MI	24	1	FLY	3:KNOCKOUT	D	35	0	2040.00	58.29	13.804	30.00	34.00	58.00	82.00	90.00
MI	24	1	FLY	3:KNOCKOUT	U	22	0	1738.00	79.00	24.739	45.00	55.00	74.00	110.00	157.00
MI	24	1	FLY	2:SINGLE	D	313	0	10771.00	34.41	17.522	10.00	15.00	33.00	60.00	160.00
MI	24	1	FLY	2:SINGLE	U	347	0	11630.00	33.52	12.482	11.00	17.00	32.00	52.00	92.00
MI	24	1	FLY	5:OTHER	D	1	0	135.00	135.00	.	135.00	135.00	135.00	135.00	135.00
MI	24	1	FLY	5:OTHER	U	1	0	27.00	27.00	.	27.00	27.00	27.00	27.00	27.00
MI	24	1	FLY	4:JACKNIFE	D	10	0	792.00	79.20	13.406	64.00	64.00	75.00	106.00	106.00
MI	24	1	FLY	4:JACKNIFE	U	26	0	2417.00	92.96	19.109	65.00	70.00	89.00	120.00	145.00
MI	24	1	TURNBACK	1:DOUBLE	D	1826	0	717927.00	393.17	282.272	78.00	139.00	303.00	1065.00	2149.00
MI	24	1	TURNBACK	1:DOUBLE	U	1663	0	701801.00	422.01	656.193	83.00	124.00	285.00	1135.00	16498.00
MI	24	1	TURNBACK	3:KNOCKOUT	D	85	0	30242.00	355.79	254.356	58.00	75.00	286.00	867.00	1135.00
MI	24	1	TURNBACK	3:KNOCKOUT	U	54	0	16510.00	305.74	249.185	80.00	90.00	221.50	861.00	1133.00
MI	24	1	TURNBACK	2:SINGLE	D	370	0	64247.00	173.64	175.561	17.00	33.00	120.50	500.00	1553.00
MI	24	1	TURNBACK	2:SINGLE	U	428	0	68650.00	160.40	260.704	17.00	32.00	102.50	451.00	3248.00
MI	24	1	TURNBACK	5:OTHER	U	1	0	1029.00	1029.00	.	1029.00	1029.00	1029.00	1029.00	1029.00
MI	24	1	TURNBACK	4:JACKNIFE	D	36	0	12322.00	342.28	196.909	91.00	142.00	303.00	896.00	995.00
MI	24	1	TURNBACK	4:JACKNIFE	U	54	0	20018.00	370.70	287.472	66.00	115.00	286.00	1034.00	1432.00
MI	25	1	EXCHANGE	1:DOUBLE	D	2313	0	752679.00	325.41	232.912	80.00	130.00	260.00	730.00	2580.00
MI	25	1	EXCHANGE	1:DOUBLE	U	1784	0	666986.00	373.87	413.004	75.00	130.00	291.50	843.00	12491.00
MI	25	1	EXCHANGE	3:KNOCKOUT	D	74	0	19370.00	261.76	193.510	41.00	63.00	188.00	660.00	863.00
MI	25	1	EXCHANGE	3:KNOCKOUT	U	56	0	21024.00	375.43	394.701	59.00	70.00	299.50	888.00	2578.00
MI	25	1	EXCHANGE	2:SINGLE	D	437	0	59033.00	135.09	169.995	10.00	20.00	84.00	412.00	2003.00
MI	25	1	EXCHANGE	2:SINGLE	U	717	0	76504.00	106.70	126.358	11.00	17.00	65.00	345.00	1530.00
MI	25	1	EXCHANGE	4:JACKNIFE	D	28	0	7541.00	269.32	206.630	77.00	90.00	182.50	716.00	854.00
MI	25	1	EXCHANGE	4:JACKNIFE	U	60	0	19029.00	317.15	214.615	80.00	115.50	236.50	787.50	1054.00
MI	25	1	FLY	1:DOUBLE	D	697	0	98167.00	140.84	41.825	48.00	100.00	135.00	190.00	592.00
MI	25	1	FLY	1:DOUBLE	U	809	0	99290.00	122.73	45.226	46.00	85.00	119.00	162.00	722.00
MI	25	1	FLY	5:OTHER	D	1	0	105.00	105.00	.	105.00	105.00	105.00	105.00	105.00
MI	25	1	FLY	3:KNOCKOUT	D	24	0	1493.00	62.21	16.803	39.00	41.00	59.00	90.00	96.00
MI	25	1	FLY	3:KNOCKOUT	U	25	0	1788.00	71.52	23.573	43.00	46.00	67.00	125.00	130.00
MI	25	1	FLY	2:SINGLE	D	401	0	11827.00	29.49	18.437	9.00	11.00	25.00	57.00	217.00
MI	25	1	FLY	2:SINGLE	U	804	0	19569.00	24.34	13.820	6.00	11.00	21.00	46.00	151.00
MI	25	1	FLY	4:JACKNIFE	D	11	0	1037.00	94.27	12.523	80.00	80.00	89.00	115.00	115.00
MI	25	1	FLY	4:JACKNIFE	U	22	0	2634.00	119.73	98.077	56.00	75.00	94.00	273.00	517.00
MI	25	1	TURNBACK	1:DOUBLE	D	1728	0	590127.00	341.51	261.616	65.00	137.00	267.00	770.00	2502.00
MI	25	1	TURNBACK	1:DOUBLE	U	1881	0	891795.00	474.11	944.667	73.00	129.00	284.00	1149.00	13609.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 42
Total Lockage Time from Arrival to Departure
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Lockage Obs	Num Missing Values	Sum Mins Total Time	Avg Mins Total Time	Std Dev Total Time	Smallest Total Time	5th Pctile Total Time	Median Total Time	95th Pctile Total Time	Largest Total Time
MI	25	1	TURNBACK	3:KNOCKOUT	D	95	0	34081.00	358.75	368.64	47.000	70.000	291.00	870.00	2605.00
MI	25	1	TURNBACK	3:KNOCKOUT	U	50	0	14570.00	291.40	213.73	58.000	60.000	239.00	735.00	1182.00
MI	25	1	TURNBACK	2:SINGLE	D	430	0	67921.00	157.96	151.80	13.000	25.000	100.00	502.00	860.00
MI	25	1	TURNBACK	2:SINGLE	U	516	0	66707.00	129.28	171.25	11.000	21.000	82.00	395.00	2453.00
MI	25	1	TURNBACK	4:JACKNIFE	D	39	0	13157.00	337.36	236.79	110.000	121.000	266.00	732.00	1315.00
MI	25	1	TURNBACK	4:JACKNIFE	U	57	0	22698.00	398.21	461.48	87.000	105.000	259.00	1569.00	2780.00
MI	26	1	EXCHANGE	1:DOUBLE	D	1	0	200.00	200.00	.	200.000	200.000	200.00	200.00	200.00
MI	26	1	EXCHANGE	2:SINGLE	D	2588	0	352058.00	136.03	158.12	22.000	58.000	105.00	257.00	2778.00
MI	26	1	EXCHANGE	2:SINGLE	U	3431	0	459954.00	134.06	139.76	14.000	54.000	108.00	266.00	2916.00
MI	26	1	EXCHANGE	5:OTHER	U	1	0	240.00	240.00	.	240.000	240.000	240.00	240.00	240.00
MI	26	1	FLY	1:DOUBLE	D	1	0	341.00	341.00	.	341.000	341.000	341.00	341.00	341.00
MI	26	1	FLY	3:KNOCKOUT	D	1	0	44.00	44.00	.	44.000	44.000	44.00	44.00	44.00
MI	26	1	FLY	2:SINGLE	D	4511	0	258924.00	57.40	18.03	12.000	36.000	57.00	75.00	485.00
MI	26	1	FLY	2:SINGLE	U	3778	0	195985.00	51.88	22.24	5.000	31.000	51.00	70.00	833.00
MI	26	1	FLY	5:OTHER	D	3	0	190.00	63.33	7.64	55.000	55.000	65.00	70.00	70.00
MI	26	1	FLY	5:OTHER	U	1	0	65.00	65.00	.	65.000	65.000	65.00	65.00	65.00
MI	26	1	TURNBACK	3:KNOCKOUT	U	1	0	118.00	118.00	.	118.000	118.000	118.00	118.00	118.00
MI	26	1	TURNBACK	2:SINGLE	D	3186	0	428614.00	134.53	186.02	29.000	58.000	103.00	266.00	3901.00
MI	26	1	TURNBACK	2:SINGLE	U	3089	0	381416.00	123.48	139.76	26.000	52.000	95.00	252.00	3198.00
MI	26	1	TURNBACK	5:OTHER	D	1	0	127.00	127.00	.	127.000	127.000	127.00	127.00	127.00
MI	26	1	TURNBACK	5:OTHER	U	1	0	41.00	41.00	.	41.000	41.000	41.00	41.00	41.00
MI	26	4	EXCHANGE	1:DOUBLE	D	318	0	375626.00	1181.21	787.45	87.000	196.000	1007.50	2735.00	3983.00
MI	26	4	EXCHANGE	1:DOUBLE	U	316	0	377154.00	1193.53	781.68	90.000	192.000	1042.00	2593.00	4268.00
MI	26	4	EXCHANGE	3:KNOCKOUT	D	34	0	24880.00	731.76	838.71	60.000	70.000	509.00	3006.00	3070.00
MI	26	4	EXCHANGE	3:KNOCKOUT	U	42	0	20173.00	480.31	626.99	32.000	45.000	96.00	1820.00	2069.00
MI	26	4	EXCHANGE	2:SINGLE	D	273	0	36276.00	132.88	264.51	10.000	20.000	45.00	635.00	2229.00
MI	26	4	EXCHANGE	2:SINGLE	U	329	0	43801.00	133.13	288.15	13.000	21.000	44.00	525.00	2428.00
MI	26	4	EXCHANGE	4:JACKNIFE	D	9	0	6932.00	770.22	662.08	127.000	127.000	410.00	1879.00	1879.00
MI	26	4	EXCHANGE	4:JACKNIFE	U	22	0	19492.00	886.00	686.07	92.000	110.000	678.00	2251.00	2415.00
MI	26	4	EXCHANGE	5:OTHER	D	1	0	77.00	77.00	.	77.000	77.000	77.00	77.00	77.00
MI	26	4	FLY	1:DOUBLE	D	30	0	3692.00	123.07	64.17	53.000	54.000	103.00	290.00	300.00
MI	26	4	FLY	1:DOUBLE	U	14	0	1423.00	101.64	38.81	43.000	43.000	114.00	175.00	175.00
MI	26	4	FLY	5:OTHER	U	1	0	205.00	205.00	.	205.000	205.000	205.00	205.00	205.00
MI	26	4	FLY	3:KNOCKOUT	D	120	0	7029.00	58.58	13.50	38.000	41.000	57.50	81.00	116.00
MI	26	4	FLY	3:KNOCKOUT	U	138	0	7785.00	56.41	10.96	30.000	38.000	55.00	77.00	94.00
MI	26	4	FLY	2:SINGLE	D	2491	0	79036.00	31.73	10.57	8.000	17.000	30.00	50.00	119.00
MI	26	4	FLY	2:SINGLE	U	2350	0	70128.00	29.84	12.60	6.000	16.000	29.00	47.00	410.00
MI	26	4	FLY	5:OTHER	D	2	0	30.00	15.00	4.24	12.000	12.000	15.00	18.00	18.00
MI	26	4	FLY	5:OTHER	U	4	0	89.00	22.25	12.04	11.000	11.000	20.00	38.00	38.00
MI	26	4	FLY	4:JACKNIFE	D	11	0	880.00	80.00	25.15	34.000	34.000	80.00	129.00	129.00
MI	26	4	FLY	4:JACKNIFE	U	21	0	1632.00	77.71	16.76	48.000	55.000	78.00	107.00	115.00
MI	26	4	FLY	5:OTHER	U	3	0	113.00	37.67	12.66	28.000	28.000	33.00	52.00	52.00
MI	26	4	TURNBACK	1:DOUBLE	D	366	0	444874.00	1215.50	944.85	77.000	162.000	932.50	3241.00	4073.00
MI	26	4	TURNBACK	1:DOUBLE	U	418	0	457760.00	1095.12	833.03	53.000	116.000	897.50	2688.00	4268.00
MI	26	4	TURNBACK	3:KNOCKOUT	D	58	0	36452.00	628.48	791.55	40.000	45.000	280.00	2997.00	3218.00
MI	26	4	TURNBACK	3:KNOCKOUT	U	40	0	21114.00	527.85	572.17	46.000	56.500	320.00	1796.50	2311.00
MI	26	4	TURNBACK	2:SINGLE	D	345	0	63413.00	183.81	431.81	11.000	25.000	51.00	868.00	3182.00
MI	26	4	TURNBACK	2:SINGLE	U	265	0	43833.00	165.41	358.84	10.000	23.000	48.00	738.00	2642.00
MI	26	4	TURNBACK	5:OTHER	D	2	0	69.00	34.50	7.78	29.000	29.000	34.50	40.00	40.00
MI	26	4	TURNBACK	5:OTHER	U	1	0	40.00	40.00	.	40.000	40.000	40.00	40.00	40.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 43
Total Lockage Time from Arrival to Departure
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Lockage Obs	Num Missing Values	Sum Mins Total Time	Avg Mins Total Time	Std Dev Total Time	Smallest Total Time	5th Pctile Total Time	Median Total Time	95th Pctile Total Time	Largest Total Time
MI	26	4	TURNBACK	4:JACKNIFE	D	11	0	12003.00	1091.18	1128.63	74.000	74.000	898.00	3320.00	3320.00
MI	26	4	TURNBACK	4:JACKNIFE	U	27	0	25517.00	945.07	826.36	64.000	84.000	726.00	2692.00	2801.00
MI	26	4	TURNBACK	5:OTHER	U	1	0	336.00	336.00	.	336.000	336.000	336.00	336.00	336.00
MI	27	1	EXCHANGE	3:KNOCKOUT	D	1	0	94.00	94.00	.	94.000	94.000	94.00	94.00	94.00
MI	27	1	EXCHANGE	3:KNOCKOUT	U	2	0	209.00	104.50	17.68	92.000	92.000	104.50	117.00	117.00
MI	27	1	EXCHANGE	2:SINGLE	D	3979	0	532465.00	133.82	102.28	15.000	47.000	108.00	290.00	1682.00
MI	27	1	EXCHANGE	2:SINGLE	U	4318	0	520355.00	120.51	92.51	19.000	42.000	97.00	273.00	2176.00
MI	27	1	EXCHANGE	5:OTHER	D	2	0	262.00	131.00	73.54	79.000	79.000	131.00	183.00	183.00
MI	27	1	FLY	3:KNOCKOUT	U	4	0	242.00	60.50	6.76	53.000	53.000	60.50	68.00	68.00
MI	27	1	FLY	2:SINGLE	D	4742	0	221211.00	46.65	17.90	13.000	22.000	46.00	71.00	404.00
MI	27	1	FLY	2:SINGLE	U	4689	0	204901.00	43.70	14.24	12.000	22.000	43.00	67.00	221.00
MI	27	1	FLY	5:OTHER	D	4	0	177.00	44.25	14.50	27.000	27.000	45.50	59.00	59.00
MI	27	1	FLY	5:OTHER	U	3	0	97.00	32.33	10.97	20.000	20.000	36.00	41.00	41.00
MI	27	1	TURNBACK	5:OTHER	U	1	0	82.00	82.00	.	82.000	82.000	82.00	82.00	82.00
MI	27	1	TURNBACK	3:KNOCKOUT	U	6	0	1004.00	167.33	110.38	75.000	75.000	136.00	373.00	373.00
MI	27	1	TURNBACK	2:SINGLE	D	4811	0	669073.00	139.07	102.70	18.000	51.000	108.00	332.00	1491.00
MI	27	1	TURNBACK	2:SINGLE	U	4794	0	587418.00	122.53	103.46	17.000	46.000	94.00	285.00	2221.00
MI	27	1	TURNBACK	5:OTHER	D	1	0	114.00	114.00	.	114.000	114.000	114.00	114.00	114.00
MI	27	1	TURNBACK	5:OTHER	U	2	0	302.00	151.00	87.68	89.000	89.000	151.00	213.00	213.00
MI	27	4	EXCHANGE	1:DOUBLE	D	41	0	35148.00	857.27	497.48	132.000	152.000	939.00	1789.00	1925.00
MI	27	4	EXCHANGE	1:DOUBLE	U	45	0	38878.00	863.96	594.07	142.000	157.000	801.00	1946.00	2176.00
MI	27	4	EXCHANGE	3:KNOCKOUT	D	36	0	9289.00	258.03	435.28	32.000	53.000	86.00	1472.00	1720.00
MI	27	4	EXCHANGE	3:KNOCKOUT	U	27	0	6822.00	252.67	404.68	35.000	38.000	86.00	1492.00	1570.00
MI	27	4	EXCHANGE	2:SINGLE	D	332	0	23621.00	71.15	145.89	17.000	24.000	45.00	138.00	1588.00
MI	27	4	EXCHANGE	2:SINGLE	U	338	0	24942.00	73.79	187.64	15.000	23.000	41.50	120.00	1935.00
MI	27	4	EXCHANGE	5:OTHER	D	2	0	131.00	65.50	6.36	61.000	61.000	65.50	70.00	70.00
MI	27	4	EXCHANGE	4:JACKNIFE	D	4	0	3352.00	838.00	1100.19	83.000	83.000	398.00	2473.00	2473.00
MI	27	4	EXCHANGE	4:JACKNIFE	U	5	0	1150.00	230.00	173.47	116.000	116.000	180.00	536.00	536.00
MI	27	4	FLY	1:DOUBLE	D	9	0	1151.00	127.89	29.68	77.000	77.000	126.00	190.00	190.00
MI	27	4	FLY	1:DOUBLE	U	13	0	1454.00	111.85	26.75	81.000	81.000	110.00	181.00	181.00
MI	27	4	FLY	5:OTHER	U	1	0	18.00	18.00	.	18.000	18.000	18.00	18.00	18.00
MI	27	4	FLY	3:KNOCKOUT	D	143	0	7376.00	51.58	12.42	32.000	35.000	51.00	75.00	117.00
MI	27	4	FLY	3:KNOCKOUT	U	153	0	7777.00	50.83	11.55	27.000	32.000	50.00	72.00	78.00
MI	27	4	FLY	2:SINGLE	D	2374	0	71978.00	30.32	10.39	7.000	17.000	29.00	48.00	101.00
MI	27	4	FLY	2:SINGLE	U	2146	0	63228.00	29.46	10.21	4.000	17.000	27.00	48.00	113.00
MI	27	4	FLY	5:OTHER	D	1	0	27.00	27.00	.	27.000	27.000	27.00	27.00	27.00
MI	27	4	FLY	5:OTHER	U	2	0	50.00	25.00	4.24	22.000	22.000	25.00	28.00	28.00
MI	27	4	FLY	4:JACKNIFE	D	15	0	981.00	65.40	16.88	39.000	39.000	71.00	92.00	92.00
MI	27	4	FLY	4:JACKNIFE	U	9	0	668.00	74.22	26.04	32.000	32.000	76.00	116.00	116.00
MI	27	4	TURNBACK	1:DOUBLE	D	58	0	48058.00	828.59	594.53	116.000	210.000	629.00	2103.00	2588.00
MI	27	4	TURNBACK	1:DOUBLE	U	37	0	28780.00	777.84	650.64	114.000	115.000	601.00	1949.00	2208.00
MI	27	4	TURNBACK	3:KNOCKOUT	D	33	0	10152.00	307.64	565.52	50.000	54.000	106.00	2172.00	2391.00
MI	27	4	TURNBACK	3:KNOCKOUT	U	47	0	7741.00	164.70	225.40	53.000	61.000	98.00	471.00	1171.00
MI	27	4	TURNBACK	2:SINGLE	D	307	0	22870.00	74.50	141.75	17.000	28.000	50.00	137.00	1560.00
MI	27	4	TURNBACK	2:SINGLE	U	233	0	15683.00	67.31	103.31	16.000	25.000	47.00	170.00	1432.00
MI	27	4	TURNBACK	4:JACKNIFE	D	3	0	3681.00	1227.00	245.71	944.000	944.000	1351.00	1386.00	1386.00
MI	27	4	TURNBACK	4:JACKNIFE	U	9	0	2513.00	279.22	301.18	103.000	103.000	187.00	1054.00	1054.00
MI	51	1	EXCHANGE	3:KNOCKOUT	D	249	0	8448.00	33.93	13.26	16.000	22.000	31.00	55.00	150.00
MI	51	1	EXCHANGE	3:KNOCKOUT	U	139	0	5587.00	40.19	52.89	19.000	23.000	34.00	57.00	633.00
MI	51	1	EXCHANGE	2:SINGLE	D	245	0	15523.00	63.36	551.02	13.000	17.000	27.00	45.00	8652.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 44
Total Lockage Time from Arrival to Departure
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Lockage Obs	Num Missing Values	Sum Mins Total Time	Avg Mins Total Time	Std Dev Total Time	Smallest Total Time	5th Pctile Total Time	Median Total Time	95th Pctile Total Time	Largest Total Time
MI	51	1	EXCHANGE	2:SINGLE	U	91	0	11271.00	123.857	906.322	12.0000	13.0000	21.000	49.000	8667.00
MI	51	1	FLY	5:OTHER	D	8	0	199.00	24.875	3.137	21.0000	21.0000	24.000	30.000	30.00
MI	51	1	FLY	5:OTHER	U	7	0	165.00	23.571	2.299	20.0000	20.0000	23.000	27.000	27.00
MI	51	1	FLY	3:KNOCKOUT	D	1773	0	48168.00	27.168	6.575	13.0000	20.0000	26.000	39.000	87.00
MI	51	1	FLY	3:KNOCKOUT	U	1995	0	51961.00	26.046	6.962	13.0000	20.0000	25.000	34.000	144.00
MI	51	1	FLY	2:SINGLE	D	1954	0	40377.00	20.664	5.676	11.0000	14.0000	20.000	30.000	81.00
MI	51	1	FLY	2:SINGLE	U	2176	0	37007.00	17.007	3.600	6.0000	13.0000	16.000	23.000	78.00
MI	51	1	FLY	5:OTHER	U	1	0	27.00	27.000	.	27.0000	27.0000	27.000	27.000	27.00
MI	51	1	TURNBACK	3:KNOCKOUT	D	95	0	4000.00	42.105	10.478	20.0000	27.0000	40.000	60.000	73.00
MI	51	1	TURNBACK	3:KNOCKOUT	U	52	0	2318.00	44.577	76.193	19.0000	22.0000	30.000	78.000	577.00
MI	51	1	TURNBACK	2:SINGLE	D	149	0	4864.00	32.644	23.040	14.0000	17.0000	29.000	49.000	275.00
MI	51	1	TURNBACK	2:SINGLE	U	44	0	1250.00	28.409	8.644	12.0000	17.0000	28.000	45.000	51.00
MI	51	1	TURNBACK	5:OTHER	D	1	0	45.00	45.000	.	45.0000	45.0000	45.000	45.000	45.00
MI	52	1	EXCHANGE	3:KNOCKOUT	D	96	0	3270.00	34.062	8.242	23.0000	24.0000	32.000	50.000	62.00
MI	52	1	EXCHANGE	3:KNOCKOUT	U	196	0	8962.00	45.724	61.920	26.0000	28.0000	37.500	57.000	713.00
MI	52	1	EXCHANGE	2:SINGLE	D	121	0	3682.00	30.430	16.750	16.0000	18.0000	26.000	48.000	145.00
MI	52	1	EXCHANGE	2:SINGLE	U	216	0	7610.00	35.231	73.694	18.0000	20.0000	29.000	42.000	1107.00
MI	52	1	FLY	5:OTHER	D	1	0	31.00	31.000	.	31.0000	31.0000	31.000	31.000	31.00
MI	52	1	FLY	3:KNOCKOUT	D	1999	0	53196.00	26.611	5.226	17.0000	21.0000	25.000	35.000	88.00
MI	52	1	FLY	3:KNOCKOUT	U	1851	0	65208.00	35.229	7.168	17.0000	24.0000	35.000	47.000	142.00
MI	52	1	FLY	2:SINGLE	D	1075	0	22767.00	21.179	5.636	12.0000	16.0000	20.000	28.000	86.00
MI	52	1	FLY	2:SINGLE	U	874	0	22264.00	25.474	6.787	8.0000	17.0000	25.000	36.000	83.00
MI	52	1	FLY	5:OTHER	D	2	0	46.00	23.000	7.071	18.0000	18.0000	23.000	28.000	28.00
MI	52	1	FLY	5:OTHER	U	4	0	108.00	27.000	5.944	22.0000	22.0000	25.500	35.000	35.00
MI	52	1	TURNBACK	3:KNOCKOUT	D	54	0	3212.00	59.481	112.904	24.0000	25.0000	37.000	67.000	633.00
MI	52	1	TURNBACK	3:KNOCKOUT	U	144	0	7058.00	49.014	56.487	27.0000	30.0000	41.000	68.000	641.00
MI	52	1	TURNBACK	2:SINGLE	D	57	0	2253.00	39.526	35.943	20.0000	22.0000	34.000	62.000	280.00
MI	52	1	TURNBACK	2:SINGLE	U	122	0	4324.00	35.443	9.958	19.0000	25.0000	34.000	47.000	112.00
MI	55	1	EXCHANGE	1:DOUBLE	D	406	0	60032.00	147.862	60.405	77.0000	89.0000	128.000	265.000	573.00
MI	55	1	EXCHANGE	1:DOUBLE	U	304	0	50697.00	166.766	67.154	65.0000	80.0000	159.000	265.000	555.00
MI	55	1	EXCHANGE	3:KNOCKOUT	D	21	0	2210.00	105.238	72.526	39.0000	46.0000	71.000	238.000	285.00
MI	55	1	EXCHANGE	3:KNOCKOUT	U	12	0	1171.00	97.583	51.567	43.0000	43.0000	80.500	210.000	210.00
MI	55	1	EXCHANGE	2:SINGLE	D	85	0	5284.00	62.165	48.557	12.0000	20.0000	43.000	149.000	307.00
MI	55	1	EXCHANGE	2:SINGLE	U	196	0	13414.00	68.439	59.702	11.0000	16.0000	47.500	160.000	544.00
MI	55	1	EXCHANGE	5:OTHER	U	2	0	268.00	134.000	128.693	43.0000	43.0000	134.000	225.000	225.00
MI	55	1	EXCHANGE	4:JACKNIFE	D	16	0	2124.00	132.750	59.969	80.0000	80.0000	116.500	313.000	313.00
MI	55	1	EXCHANGE	4:JACKNIFE	U	3	0	341.00	113.667	36.116	73.0000	73.0000	126.000	142.000	142.00
MI	55	1	FLY	1:DOUBLE	D	834	0	87714.00	105.173	17.049	66.0000	80.0000	102.000	137.000	168.00
MI	55	1	FLY	1:DOUBLE	U	790	0	75866.00	96.033	17.318	55.0000	71.0000	94.000	126.000	175.00
MI	55	1	FLY	3:KNOCKOUT	D	66	0	3623.00	54.894	15.668	34.0000	38.0000	50.000	85.000	110.00
MI	55	1	FLY	3:KNOCKOUT	U	51	0	2811.00	55.118	13.972	29.0000	34.0000	53.000	78.000	95.00
MI	55	1	FLY	2:SINGLE	D	358	0	9561.00	26.707	11.713	8.0000	12.0000	25.000	50.000	85.00
MI	55	1	FLY	2:SINGLE	U	633	0	16306.00	25.760	10.637	8.0000	11.0000	25.000	45.000	70.00
MI	55	1	FLY	5:OTHER	D	1	0	92.00	92.000	.	92.0000	92.0000	92.000	92.000	92.00
MI	55	1	FLY	4:JACKNIFE	D	61	0	4669.00	76.541	14.986	28.0000	53.0000	77.000	95.000	112.00
MI	55	1	FLY	4:JACKNIFE	U	8	0	577.00	72.125	15.028	45.0000	45.0000	76.000	90.000	90.00
MI	55	1	FLY	5:OTHER	D	1	0	16.00	16.000	.	16.0000	16.0000	16.000	16.000	16.00
MI	55	1	TURNBACK	1:DOUBLE	D	298	0	40559.00	136.104	52.580	76.0000	90.0000	120.000	255.000	420.00
MI	55	1	TURNBACK	1:DOUBLE	U	290	0	42339.00	145.997	61.006	68.0000	80.0000	127.500	276.000	441.00
MI	55	1	TURNBACK	3:KNOCKOUT	D	44	0	5651.00	128.432	55.851	36.0000	51.0000	126.000	251.000	310.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 45
Total Lockage Time from Arrival to Departure
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Lockage Obs	Num Missing Values	Sum Mins Total Time	Avg Mins Total Time	Std Dev Total Time	Smallest Total Time	5th Pctile Total Time	Median Total Time	95th Pctile Total Time	Largest Total Time
MI	55	1	TURNBACK	3:KNOCKOUT	U	19	0	1935.00	101.842	38.3410	46.000	46.000	110.000	198.000	198.000
MI	55	1	TURNBACK	2:SINGLE	D	114	0	9231.00	80.974	54.7685	14.000	25.000	70.000	175.000	403.000
MI	55	1	TURNBACK	2:SINGLE	U	139	0	9535.00	68.597	53.1940	15.000	22.000	45.000	183.000	289.000
MI	55	1	TURNBACK	5:OTHER	D	1	0	301.00	301.000	.	301.000	301.000	301.000	301.000	301.000
MI	55	1	TURNBACK	4:JACKNIFE	D	20	0	2584.00	129.200	53.2507	59.000	62.000	128.000	237.000	274.000
MI	55	1	TURNBACK	4:JACKNIFE	U	6	0	727.00	121.167	46.9869	62.000	62.000	134.000	167.000	167.000

Summary Transit Statistics for Locks in Simulation Model 12:49 Friday, June 24, 2005 46
Wait Times (minutes from arrival to start of loackage) at Current Lockage by lockage type
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Wait Obs	Num Missing Values	Sum Mins Wait to Lock	Avg Mins Wait to Lock	Std Dev Wait to Lock	Smallest Wait Time to Lock	5th Pctile Wait to Lock	Median Wait to Lock	95th Pctile Wait to Lock	Largest Wait to Lock
CH	01	1	EXCHANGE	3:KNOCKOUT	D	1	0	4.00	4.000	.	4.000	4.000	4.000	4.000	4.00
CH	01	1	EXCHANGE	2:SINGLE	D	12941	0	55863.00	4.317	11.385	1.000	4.000	4.000	4.000	664.00
CH	01	1	EXCHANGE	2:SINGLE	U	12750	0	51862.00	4.068	2.498	2.000	4.000	4.000	4.000	184.00
CH	01	1	EXCHANGE	5:OTHER	U	1	0	4.00	4.000	.	4.000	4.000	4.000	4.000	4.00
CH	01	1	FLY	2:SINGLE	D	59	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
CH	01	1	FLY	2:SINGLE	U	73	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
CH	01	1	TURNBACK	2:SINGLE	D	11346	0	47993.00	4.230	7.039	1.000	4.000	4.000	4.000	553.00
CH	01	1	TURNBACK	2:SINGLE	U	11833	0	48947.00	4.136	4.444	1.000	4.000	4.000	4.000	304.00
CH	01	1	TURNBACK	5:OTHER	U	1	0	4.00	4.000	.	4.000	4.000	4.000	4.000	4.00
IL	01	1	EXCHANGE	2:SINGLE	D	474	0	7280.00	15.359	30.207	1.000	4.000	10.000	40.000	467.00
IL	01	1	EXCHANGE	2:SINGLE	U	365	0	6186.00	16.948	34.861	1.000	4.000	10.000	40.000	420.00
IL	01	1	FLY	2:SINGLE	D	4093	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	01	1	FLY	2:SINGLE	U	4126	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	01	1	FLY	5:OTHER	D	1	0	0.00	0.000	.	0.000	0.000	0.000	0.000	0.00
IL	01	1	FLY	5:OTHER	U	1	0	0.00	0.000	.	0.000	0.000	0.000	0.000	0.00
IL	01	1	FLY	5:OTHER	D	3	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	01	1	TURNBACK	2:SINGLE	D	434	0	7271.00	16.753	13.417	1.000	5.000	15.000	33.000	140.00
IL	01	1	TURNBACK	2:SINGLE	U	494	0	11085.00	22.439	40.346	1.000	5.000	15.000	55.000	600.00
IL	01	1	TURNBACK	5:OTHER	D	1	0	21.00	21.000	.	21.000	21.000	21.000	21.000	21.00
IL	02	1	EXCHANGE	1:DOUBLE	D	466	0	76353.00	163.848	140.427	2.000	24.000	125.000	441.000	1020.00
IL	02	1	EXCHANGE	1:DOUBLE	U	517	0	64347.00	124.462	143.593	1.000	10.000	74.000	385.000	1207.00
IL	02	1	EXCHANGE	5:OTHER	D	4	0	969.00	242.250	258.013	40.000	40.000	165.000	599.000	599.00
IL	02	1	EXCHANGE	3:KNOCKOUT	D	601	0	88758.00	147.684	141.961	1.000	16.000	108.000	430.000	1147.00
IL	02	1	EXCHANGE	3:KNOCKOUT	U	571	0	79374.00	139.009	136.597	1.000	10.000	96.000	416.000	1015.00
IL	02	1	EXCHANGE	2:SINGLE	D	613	0	76165.00	124.250	120.656	1.000	11.000	84.000	356.000	759.00
IL	02	1	EXCHANGE	2:SINGLE	U	589	0	69400.00	117.827	143.359	1.000	9.000	65.000	405.000	1053.00
IL	02	1	EXCHANGE	5:OTHER	U	1	0	60.00	60.000	.	60.000	60.000	60.000	60.000	60.00
IL	02	1	EXCHANGE	4:JACKNIFE	D	81	0	14739.00	181.963	167.540	6.000	22.000	115.000	499.000	759.00
IL	02	1	EXCHANGE	4:JACKNIFE	U	130	0	18439.00	141.838	142.337	2.000	10.000	100.500	390.000	871.00
IL	02	1	EXCHANGE	5:OTHER	D	1	0	50.00	50.000	.	50.000	50.000	50.000	50.000	50.00
IL	02	1	FLY	1:DOUBLE	D	558	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	02	1	FLY	1:DOUBLE	U	645	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	02	1	FLY	5:OTHER	D	3	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	02	1	FLY	5:OTHER	U	5	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	02	1	FLY	3:KNOCKOUT	D	810	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	02	1	FLY	3:KNOCKOUT	U	751	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	02	1	FLY	2:SINGLE	D	1017	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	02	1	FLY	2:SINGLE	U	870	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	02	1	FLY	5:OTHER	D	2	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	02	1	FLY	4:JACKNIFE	D	99	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	02	1	FLY	4:JACKNIFE	U	120	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	02	1	FLY	5:OTHER	U	1	0	0.00	0.000	.	0.000	0.000	0.000	0.000	0.00
IL	02	1	TURNBACK	1:DOUBLE	D	417	0	83883.00	201.158	186.385	5.000	20.000	147.000	580.000	1380.00
IL	02	1	TURNBACK	1:DOUBLE	U	359	0	56973.00	158.699	155.353	1.000	15.000	104.000	490.000	880.00
IL	02	1	TURNBACK	5:OTHER	D	1	0	230.00	230.000	.	230.000	230.000	230.000	230.000	230.00
IL	02	1	TURNBACK	5:OTHER	U	3	0	208.00	69.333	19.732	56.000	56.000	60.000	92.000	92.00
IL	02	1	TURNBACK	3:KNOCKOUT	D	567	0	111196.00	196.113	183.636	2.000	19.000	133.000	590.000	1068.00
IL	02	1	TURNBACK	3:KNOCKOUT	U	621	0	110159.00	177.390	159.551	1.000	23.000	130.000	498.000	1295.00
IL	02	1	TURNBACK	2:SINGLE	D	614	0	101146.00	164.733	174.829	1.000	11.000	101.500	511.000	1658.00
IL	02	1	TURNBACK	2:SINGLE	U	607	0	99028.00	163.143	171.403	1.000	15.000	107.000	491.000	1431.00

Summary Transit Statistics for Locks in Simulation Model 12:49 Friday, June 24, 2005 47
Wait Times (minutes from arrival to start of loackage) at Current Lockage by lockage type
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Wait Obs	Num Missing Values	Sum Mins Wait to Lock	Avg Mins Wait to Lock	Std Dev Wait to Lock	Smallest Wait Time to Lock	5th Pctile Wait to Lock	Median Wait to Lock	95th Pctile Wait to Lock	Largest Wait to Lock
IL	02	1	TURNBACK	5:OTHER	D	1	0	55.00	55.000	.	55.000	55.000	55.000	55.000	55.00
IL	02	1	TURNBACK	5:OTHER	U	1	0	398.00	398.000	.	398.000	398.000	398.000	398.000	398.00
IL	02	1	TURNBACK	4:JACKNIFE	D	79	0	15009.00	189.987	169.627	2.000	13.000	140.000	565.000	714.00
IL	02	1	TURNBACK	4:JACKNIFE	U	134	0	24116.00	179.970	154.800	7.000	18.000	131.000	515.000	689.00
IL	03	1	EXCHANGE	1:DOUBLE	D	553	0	59811.00	108.157	122.549	2.000	8.000	75.000	275.000	1585.00
IL	03	1	EXCHANGE	1:DOUBLE	U	526	0	80083.00	152.249	250.076	1.000	12.000	92.500	412.000	3105.00
IL	03	1	EXCHANGE	5:OTHER	D	1	0	182.00	182.000	.	182.000	182.000	182.000	182.000	182.00
IL	03	1	EXCHANGE	5:OTHER	U	2	0	309.00	154.500	78.489	99.000	99.000	154.500	210.000	210.00
IL	03	1	EXCHANGE	3:KNOCKOUT	D	536	0	65205.00	121.651	125.681	1.000	6.000	85.000	386.000	1001.00
IL	03	1	EXCHANGE	3:KNOCKOUT	U	501	0	70520.00	140.758	177.202	1.000	10.000	88.000	423.000	1620.00
IL	03	1	EXCHANGE	2:SINGLE	D	716	0	71277.00	99.549	113.805	1.000	5.000	63.500	305.000	1093.00
IL	03	1	EXCHANGE	2:SINGLE	U	629	0	73671.00	117.124	187.497	1.000	6.000	65.000	385.000	3340.00
IL	03	1	EXCHANGE	4:JACKNIFE	D	85	0	9724.00	114.400	113.055	2.000	9.000	89.000	340.000	665.00
IL	03	1	EXCHANGE	4:JACKNIFE	U	113	0	24692.00	218.513	224.966	3.000	20.000	154.000	688.000	1525.00
IL	03	1	FLY	1:DOUBLE	D	707	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	03	1	FLY	1:DOUBLE	U	671	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	03	1	FLY	5:OTHER	D	2	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	03	1	FLY	5:OTHER	U	6	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	03	1	FLY	3:KNOCKOUT	D	729	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	03	1	FLY	3:KNOCKOUT	U	630	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	03	1	FLY	2:SINGLE	D	971	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	03	1	FLY	2:SINGLE	U	927	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	03	1	FLY	5:OTHER	D	1	0	0.00	0.000	.	0.000	0.000	0.000	0.000	0.00
IL	03	1	FLY	4:JACKNIFE	D	95	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	03	1	FLY	4:JACKNIFE	U	125	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	03	1	TURNBACK	1:DOUBLE	D	303	0	36751.00	121.290	133.322	1.000	13.000	73.000	367.000	970.00
IL	03	1	TURNBACK	1:DOUBLE	U	482	0	94514.00	196.087	263.130	5.000	23.000	130.000	500.000	2645.00
IL	03	1	TURNBACK	5:OTHER	D	2	0	632.00	316.000	55.154	277.000	277.000	316.000	355.000	355.00
IL	03	1	TURNBACK	5:OTHER	U	1	0	365.00	365.000	.	365.000	365.000	365.000	365.000	365.00
IL	03	1	TURNBACK	3:KNOCKOUT	D	503	0	76553.00	152.193	152.594	1.000	18.000	106.000	404.000	1270.00
IL	03	1	TURNBACK	3:KNOCKOUT	U	623	0	126347.00	202.804	215.120	4.000	23.000	155.000	536.000	2860.00
IL	03	1	TURNBACK	2:SINGLE	D	691	0	91089.00	131.822	127.159	1.000	12.000	90.000	373.000	905.00
IL	03	1	TURNBACK	2:SINGLE	U	587	0	90756.00	154.610	159.227	1.000	12.000	105.000	450.000	1612.00
IL	03	1	TURNBACK	5:OTHER	U	1	0	61.00	61.000	.	61.000	61.000	61.000	61.000	61.00
IL	03	1	TURNBACK	4:JACKNIFE	D	61	0	9687.00	158.803	155.960	10.000	17.000	107.000	469.000	822.00
IL	03	1	TURNBACK	4:JACKNIFE	U	143	0	39921.00	279.168	317.311	10.000	21.000	222.000	787.000	2805.00
IL	04	1	EXCHANGE	1:DOUBLE	D	552	0	57789.00	104.690	172.919	1.000	9.000	70.000	276.000	2880.00
IL	04	1	EXCHANGE	1:DOUBLE	U	550	0	57382.00	104.331	114.374	2.000	10.000	72.000	305.000	1285.00
IL	04	1	EXCHANGE	5:OTHER	D	2	0	361.00	180.500	248.194	5.000	5.000	180.500	356.000	356.00
IL	04	1	EXCHANGE	5:OTHER	U	1	0	5.00	5.000	.	5.000	5.000	5.000	5.000	5.00
IL	04	1	EXCHANGE	3:KNOCKOUT	D	420	0	45691.00	108.788	113.072	2.000	8.000	78.500	317.500	832.00
IL	04	1	EXCHANGE	3:KNOCKOUT	U	449	0	47957.00	106.808	106.833	1.000	9.000	77.000	315.000	748.00
IL	04	1	EXCHANGE	2:SINGLE	D	463	0	44087.00	95.220	94.532	1.000	5.000	70.000	255.000	841.00
IL	04	1	EXCHANGE	2:SINGLE	U	385	0	32513.00	84.449	98.825	1.000	5.000	54.000	265.000	687.00
IL	04	1	EXCHANGE	5:OTHER	D	1	0	45.00	45.000	.	45.000	45.000	45.000	45.000	45.00
IL	04	1	EXCHANGE	4:JACKNIFE	D	105	0	9439.00	89.895	79.758	1.000	6.000	67.000	230.000	445.00
IL	04	1	EXCHANGE	4:JACKNIFE	U	118	0	16649.00	141.093	143.245	5.000	15.000	100.500	435.000	855.00
IL	04	1	FLY	1:DOUBLE	D	953	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	04	1	FLY	1:DOUBLE	U	1000	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
IL	04	1	FLY	5:OTHER	D	1	0	0.00	0.000	.	0.000	0.000	0.000	0.000	0.00

Summary Transit Statistics for Locks in Simulation Model 12:49 Friday, June 24, 2005 48
Wait Times (minutes from arrival to start of loackage) at Current Lockage by lockage type
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Wait Obs	Num Missing Values	Sum Mins Wait to Lock	Avg Mins Wait to Lock	Std Dev Wait to Lock	Smallest Wait Time to Lock	5th Pctile Wait to Lock	Median Wait to Lock	95th Pctile Wait to Lock	Largest Wait to Lock
IL	04	1	FLY	5:OTHER	U	2	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	04	1	FLY	3:KNOCKOUT	D	659	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	04	1	FLY	3:KNOCKOUT	U	686	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	04	1	FLY	2:SINGLE	D	855	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	04	1	FLY	2:SINGLE	U	818	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	04	1	FLY	4:JACKNIFE	D	142	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	04	1	FLY	4:JACKNIFE	U	178	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	04	1	FLY	5:OTHER	D	1	0	0.00	0.000	.	0.000	0.000	0.000	0.00	0.00
IL	04	1	TURNBACK	1:DOUBLE	D	485	0	56953.00	117.429	143.98	3.000	14.000	75.000	350.00	1475.00
IL	04	1	TURNBACK	1:DOUBLE	U	498	0	65415.00	131.355	137.72	4.000	16.000	90.000	370.00	1440.00
IL	04	1	TURNBACK	5:OTHER	D	1	0	16.00	16.000	.	16.000	16.000	16.000	16.00	16.00
IL	04	1	TURNBACK	5:OTHER	U	3	0	676.00	225.333	104.62	113.000	113.000	243.000	320.00	320.00
IL	04	1	TURNBACK	3:KNOCKOUT	D	474	0	62571.00	132.006	154.13	1.000	13.000	93.000	369.00	1596.00
IL	04	1	TURNBACK	3:KNOCKOUT	U	448	0	69680.00	155.536	133.64	3.000	13.000	127.500	430.00	672.00
IL	04	1	TURNBACK	2:SINGLE	D	506	0	59932.00	118.443	120.77	1.000	10.000	74.500	392.00	705.00
IL	04	1	TURNBACK	2:SINGLE	U	423	0	57828.00	136.709	153.45	2.000	13.000	94.000	393.00	1490.00
IL	04	1	TURNBACK	4:JACKNIFE	D	109	0	16967.00	155.661	345.74	5.000	18.000	90.000	375.00	3540.00
IL	04	1	TURNBACK	4:JACKNIFE	U	155	0	29323.00	189.181	195.42	2.000	18.000	155.000	504.00	1628.00
IL	05	1	EXCHANGE	1:DOUBLE	D	656	0	103825.00	158.270	204.10	1.000	12.000	111.500	435.00	2707.00
IL	05	1	EXCHANGE	1:DOUBLE	U	783	0	116399.00	148.658	171.41	1.000	13.000	109.000	410.00	1823.00
IL	05	1	EXCHANGE	5:OTHER	D	3	0	2092.00	697.333	1069.15	22.000	22.000	140.000	1930.00	1930.00
IL	05	1	EXCHANGE	5:OTHER	U	1	0	290.00	290.000	.	290.000	290.000	290.000	290.00	290.00
IL	05	1	EXCHANGE	3:KNOCKOUT	D	350	0	53556.00	153.017	178.41	1.000	12.000	105.000	472.00	1795.00
IL	05	1	EXCHANGE	3:KNOCKOUT	U	388	0	57152.00	147.299	146.34	2.000	14.000	110.000	392.00	1177.00
IL	05	1	EXCHANGE	2:SINGLE	D	468	0	59581.00	127.310	132.80	1.000	10.000	88.500	380.00	1129.00
IL	05	1	EXCHANGE	2:SINGLE	U	468	0	59771.00	127.716	149.07	1.000	7.000	90.500	375.00	1615.00
IL	05	1	EXCHANGE	5:OTHER	D	2	0	188.00	94.000	60.81	51.000	51.000	94.000	137.00	137.00
IL	05	1	EXCHANGE	4:JACKNIFE	D	128	0	22615.00	176.680	276.01	5.000	10.000	119.000	535.00	2703.00
IL	05	1	EXCHANGE	4:JACKNIFE	U	172	0	26871.00	156.227	178.00	1.000	10.000	105.500	513.00	1156.00
IL	05	1	FLY	1:DOUBLE	D	950	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	05	1	FLY	1:DOUBLE	U	873	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	05	1	FLY	5:OTHER	D	1	0	0.00	0.000	.	0.000	0.000	0.000	0.00	0.00
IL	05	1	FLY	3:KNOCKOUT	D	458	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	05	1	FLY	3:KNOCKOUT	U	391	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	05	1	FLY	2:SINGLE	D	715	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	05	1	FLY	2:SINGLE	U	617	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	05	1	FLY	4:JACKNIFE	D	122	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	05	1	FLY	4:JACKNIFE	U	138	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	05	1	TURNBACK	1:DOUBLE	D	620	0	97133.00	156.666	166.46	1.000	19.000	101.000	482.50	1186.00
IL	05	1	TURNBACK	1:DOUBLE	U	602	0	101716.00	168.963	180.91	2.000	17.000	113.000	510.00	1515.00
IL	05	1	TURNBACK	5:OTHER	U	1	0	40.00	40.000	.	40.000	40.000	40.000	40.00	40.00
IL	05	1	TURNBACK	3:KNOCKOUT	D	394	0	67197.00	170.551	171.39	2.000	17.000	133.000	478.00	1602.00
IL	05	1	TURNBACK	3:KNOCKOUT	U	393	0	66764.00	169.883	166.84	3.000	17.000	122.000	477.00	1197.00
IL	05	1	TURNBACK	2:SINGLE	D	508	0	67035.00	131.959	140.46	1.000	10.000	91.500	435.00	1135.00
IL	05	1	TURNBACK	2:SINGLE	U	469	0	73013.00	155.678	172.78	1.000	11.000	101.000	480.00	1495.00
IL	05	1	TURNBACK	5:OTHER	D	1	0	230.00	230.000	.	230.000	230.000	230.000	230.00	230.00
IL	05	1	TURNBACK	5:OTHER	U	1	0	18.00	18.000	.	18.000	18.000	18.000	18.00	18.00
IL	05	1	TURNBACK	4:JACKNIFE	D	102	0	21678.00	212.529	357.08	12.000	20.000	100.000	626.00	2087.00
IL	05	1	TURNBACK	4:JACKNIFE	U	169	0	33663.00	199.189	172.70	3.000	21.000	159.000	550.00	798.00
IL	06	1	EXCHANGE	1:DOUBLE	D	722	0	91203.00	126.320	135.68	1.000	12.000	95.000	341.00	1790.00

Summary Transit Statistics for Locks in Simulation Model 12:49 Friday, June 24, 2005 49
Wait Times (minutes from arrival to start of loackage) at Current Lockage by lockage type
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Wait Obs	Num Missing Values	Sum Mins Wait to Lock	Avg Mins Wait to Lock	Std Dev Wait to Lock	Smallest Wait Time to Lock	5th Pctile Wait to Lock	Median Wait to Lock	95th Pctile Wait to Lock	Largest Wait to Lock
IL	06	1	EXCHANGE	1:DOUBLE	U	693	0	94659.00	136.593	135.607	1.0000	14.0000	100.000	401.000	1373.00
IL	06	1	EXCHANGE	3:KNOCKOUT	D	297	0	37649.00	126.764	114.121	1.0000	12.0000	94.000	350.000	645.00
IL	06	1	EXCHANGE	3:KNOCKOUT	U	333	0	45582.00	136.883	158.314	3.0000	10.0000	90.000	430.000	1310.00
IL	06	1	EXCHANGE	2:SINGLE	D	524	0	56355.00	107.548	125.586	1.0000	5.0000	65.500	344.000	786.00
IL	06	1	EXCHANGE	2:SINGLE	U	491	0	54122.00	110.228	145.704	1.0000	5.0000	68.000	384.000	1780.00
IL	06	1	EXCHANGE	4:JACKNIFE	D	97	0	14540.00	149.897	120.813	4.0000	16.0000	115.000	416.000	478.00
IL	06	1	EXCHANGE	4:JACKNIFE	U	141	0	20578.00	145.943	168.349	7.0000	13.0000	100.000	426.000	1327.00
IL	06	1	FLY	1:DOUBLE	D	1207	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
IL	06	1	FLY	1:DOUBLE	U	1117	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
IL	06	1	FLY	5:OTHER	D	1	0	0.00	0.000	.	0.0000	0.0000	0.000	0.000	0.00
IL	06	1	FLY	5:OTHER	U	3	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
IL	06	1	FLY	3:KNOCKOUT	D	483	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
IL	06	1	FLY	3:KNOCKOUT	U	472	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
IL	06	1	FLY	2:SINGLE	D	995	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
IL	06	1	FLY	2:SINGLE	U	1009	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
IL	06	1	FLY	5:OTHER	D	2	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
IL	06	1	FLY	5:OTHER	U	1	0	0.00	0.000	.	0.0000	0.0000	0.000	0.000	0.00
IL	06	1	FLY	4:JACKNIFE	D	146	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
IL	06	1	FLY	4:JACKNIFE	U	167	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
IL	06	1	FLY	5:OTHER	D	1	0	0.00	0.000	.	0.0000	0.0000	0.000	0.000	0.00
IL	06	1	TURNBACK	1:DOUBLE	D	606	0	83187.00	137.272	144.942	1.0000	17.0000	86.500	446.000	1055.00
IL	06	1	TURNBACK	1:DOUBLE	U	701	0	117168.00	167.144	153.167	1.0000	18.0000	125.000	456.000	1448.00
IL	06	1	TURNBACK	5:OTHER	U	1	0	73.00	73.000	.	73.0000	73.0000	73.000	73.000	73.00
IL	06	1	TURNBACK	3:KNOCKOUT	D	382	0	57245.00	149.856	140.869	1.0000	13.0000	110.000	420.000	896.00
IL	06	1	TURNBACK	3:KNOCKOUT	U	344	0	59536.00	173.070	180.978	1.0000	15.0000	119.500	527.000	1414.00
IL	06	1	TURNBACK	2:SINGLE	D	582	0	75701.00	130.070	129.655	1.0000	9.0000	89.500	391.000	787.00
IL	06	1	TURNBACK	2:SINGLE	U	481	0	67487.00	140.306	146.534	1.0000	6.0000	94.000	426.000	996.00
IL	06	1	TURNBACK	5:OTHER	U	2	0	346.00	173.000	156.978	62.0000	62.0000	173.000	284.000	284.00
IL	06	1	TURNBACK	4:JACKNIFE	D	91	0	11924.00	131.033	122.658	5.0000	12.0000	89.000	389.000	631.00
IL	06	1	TURNBACK	4:JACKNIFE	U	168	0	36348.00	216.357	219.424	1.0000	16.0000	146.000	683.000	1083.00
IL	06	1	TURNBACK	5:OTHER	U	1	0	42.00	42.000	.	42.0000	42.0000	42.000	42.000	42.00
IL	07	1	EXCHANGE	1:DOUBLE	D	953	0	193592.00	203.140	183.427	2.0000	15.0000	145.000	590.000	1178.00
IL	07	1	EXCHANGE	1:DOUBLE	U	936	0	179852.00	192.150	175.338	4.0000	20.0000	145.000	545.000	1089.00
IL	07	1	EXCHANGE	3:KNOCKOUT	D	154	0	26586.00	172.636	179.867	5.0000	13.0000	112.500	575.000	953.00
IL	07	1	EXCHANGE	3:KNOCKOUT	U	272	0	44386.00	163.184	139.558	1.0000	13.0000	119.500	450.000	689.00
IL	07	1	EXCHANGE	5:OTHER	D	12	0	908.00	75.667	147.154	1.0000	1.0000	16.000	440.000	440.00
IL	07	1	EXCHANGE	5:OTHER	U	12	0	789.00	65.750	113.210	1.0000	1.0000	19.000	380.000	380.00
IL	07	1	EXCHANGE	5:OTHER	D	2	0	9.00	4.500	2.121	3.0000	3.0000	4.500	6.000	6.00
IL	07	1	EXCHANGE	5:OTHER	U	2	0	26.00	13.000	11.314	5.0000	5.0000	13.000	21.000	21.00
IL	07	1	EXCHANGE	2:SINGLE	D	522	0	77295.00	148.075	148.717	1.0000	10.0000	108.500	421.000	1095.00
IL	07	1	EXCHANGE	2:SINGLE	U	480	0	53338.00	111.121	132.643	1.0000	8.5000	70.000	338.500	856.00
IL	07	1	EXCHANGE	5:OTHER	U	3	0	303.00	101.000	100.732	24.0000	24.0000	64.000	215.000	215.00
IL	07	1	EXCHANGE	4:JACKNIFE	D	58	0	12627.00	217.707	185.005	8.0000	17.0000	187.500	646.000	775.00
IL	07	1	EXCHANGE	4:JACKNIFE	U	117	0	20231.00	172.915	151.050	5.0000	12.0000	145.000	489.000	790.00
IL	07	1	FLY	1:DOUBLE	D	753	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
IL	07	1	FLY	1:DOUBLE	U	752	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
IL	07	1	FLY	5:OTHER	D	1	0	0.00	0.000	.	0.0000	0.0000	0.000	0.000	0.00
IL	07	1	FLY	3:KNOCKOUT	D	156	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
IL	07	1	FLY	3:KNOCKOUT	U	234	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
IL	07	1	FLY	5:OTHER	D	2352	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00

Summary Transit Statistics for Locks in Simulation Model 12:49 Friday, June 24, 2005 50
Wait Times (minutes from arrival to start of loackage) at Current Lockage by lockage type
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Wait Obs	Num Missing Values	Sum Mins Wait to Lock	Avg Mins Wait to Lock	Std Dev Wait to Lock	Smallest Wait Time to Lock	5th Pctile Wait to Lock	Median Wait to Lock	95th Pctile Wait to Lock	Largest Wait to Lock
IL	07	1	FLY	5:OTHER	U	2397	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	07	1	FLY	5:OTHER	D	27	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	07	1	FLY	5:OTHER	U	33	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	07	1	FLY	2:SINGLE	D	694	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	07	1	FLY	2:SINGLE	U	548	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	07	1	FLY	4:JACKNIFE	D	60	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	07	1	FLY	4:JACKNIFE	U	86	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	07	1	TURNBACK	1:DOUBLE	D	968	0	199088.00	205.669	189.12	2.000	18.000	150.500	587.00	1236.00
IL	07	1	TURNBACK	1:DOUBLE	U	867	0	181143.00	208.931	203.94	4.000	19.000	144.000	638.00	1240.00
IL	07	1	TURNBACK	5:OTHER	D	1	0	694.00	694.000	.	694.000	694.000	694.000	694.00	694.00
IL	07	1	TURNBACK	3:KNOCKOUT	D	248	0	46049.00	185.681	183.30	7.000	15.000	124.500	596.00	1080.00
IL	07	1	TURNBACK	3:KNOCKOUT	U	285	0	54059.00	189.681	183.76	1.000	20.000	136.000	544.00	1164.00
IL	07	1	TURNBACK	5:OTHER	D	10	0	127.00	12.700	18.69	1.000	1.000	4.000	60.00	60.00
IL	07	1	TURNBACK	5:OTHER	U	10	0	405.00	40.500	62.84	1.000	1.000	18.500	205.00	205.00
IL	07	1	TURNBACK	2:SINGLE	D	543	0	96272.00	177.297	190.30	1.000	10.000	111.000	617.00	1007.00
IL	07	1	TURNBACK	2:SINGLE	U	438	0	57879.00	132.144	149.32	1.000	11.000	90.500	402.00	997.00
IL	07	1	TURNBACK	5:OTHER	U	2	0	500.00	250.000	158.39	138.000	138.000	250.000	362.00	362.00
IL	07	1	TURNBACK	4:JACKNIFE	D	91	0	14703.00	161.571	135.44	12.000	17.000	127.000	376.00	718.00
IL	07	1	TURNBACK	4:JACKNIFE	U	120	0	23011.00	191.758	171.91	3.000	17.000	149.000	508.00	996.00
IL	07	1	TURNBACK	5:OTHER	D	1	0	73.00	73.000	.	73.000	73.000	73.000	73.00	73.00
IL	08	1	EXCHANGE	1:DOUBLE	D	1182	0	440853.00	372.972	561.52	1.000	10.000	180.000	1389.00	8840.00
IL	08	1	EXCHANGE	1:DOUBLE	U	1160	0	423447.00	365.041	488.03	1.000	7.000	180.000	1447.50	3120.00
IL	08	1	EXCHANGE	3:KNOCKOUT	D	177	0	58736.00	331.842	442.92	1.000	5.000	165.000	1449.00	2370.00
IL	08	1	EXCHANGE	3:KNOCKOUT	U	204	0	77358.00	379.206	801.34	1.000	6.000	157.500	1487.00	8247.00
IL	08	1	EXCHANGE	5:OTHER	D	117	0	4319.00	36.915	155.94	1.000	1.000	4.000	188.00	1190.00
IL	08	1	EXCHANGE	5:OTHER	U	86	0	4832.00	56.186	236.84	1.000	1.000	3.000	63.00	1440.00
IL	08	1	EXCHANGE	5:OTHER	D	9	0	59.00	6.556	9.94	1.000	1.000	1.000	25.00	25.00
IL	08	1	EXCHANGE	5:OTHER	U	67	0	1454.00	21.701	83.39	1.000	1.000	5.000	35.00	627.00
IL	08	1	EXCHANGE	2:SINGLE	D	317	0	69088.00	217.943	339.46	1.000	5.000	105.000	950.00	2827.00
IL	08	1	EXCHANGE	2:SINGLE	U	343	0	77812.00	226.857	592.21	1.000	5.000	93.000	732.00	7423.00
IL	08	1	EXCHANGE	5:OTHER	D	1	0	15.00	15.000	.	15.000	15.000	15.000	15.00	15.00
IL	08	1	EXCHANGE	4:JACKNIFE	D	62	0	30378.00	489.968	1197.40	3.000	6.000	182.000	1420.00	9192.00
IL	08	1	EXCHANGE	4:JACKNIFE	U	144	0	35858.00	249.014	367.35	5.000	5.000	129.500	1091.00	2519.00
IL	08	1	EXCHANGE	5:OTHER	D	1	0	10.00	10.000	.	10.000	10.000	10.000	10.00	10.00
IL	08	1	FLY	1:DOUBLE	D	383	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	08	1	FLY	1:DOUBLE	U	380	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	08	1	FLY	3:KNOCKOUT	D	91	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	08	1	FLY	3:KNOCKOUT	U	99	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	08	1	FLY	5:OTHER	D	2082	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	08	1	FLY	5:OTHER	U	1887	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	08	1	FLY	5:OTHER	D	54	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	08	1	FLY	5:OTHER	U	241	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	08	1	FLY	2:SINGLE	D	177	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	08	1	FLY	2:SINGLE	U	149	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	08	1	FLY	5:OTHER	U	1	0	0.00	0.000	.	0.000	0.000	0.000	0.00	0.00
IL	08	1	FLY	4:JACKNIFE	D	32	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	08	1	FLY	4:JACKNIFE	U	66	0	0.00	0.000	0.00	0.000	0.000	0.000	0.00	0.00
IL	08	1	TURNBACK	1:DOUBLE	D	1332	0	591995.00	444.441	719.22	3.000	10.000	210.000	1662.00	8933.00
IL	08	1	TURNBACK	1:DOUBLE	U	1279	0	613971.00	480.040	709.26	3.000	10.000	203.000	1930.00	10978.00
IL	08	1	TURNBACK	5:OTHER	D	1	0	155.00	155.000	.	155.000	155.000	155.000	155.00	155.00

Summary Transit Statistics for Locks in Simulation Model 12:49 Friday, June 24, 2005 51
Wait Times (minutes from arrival to start of loackage) at Current Lockage by lockage type
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Wait Obs	Num Missing Values	Sum Mins Wait to Lock	Avg Mins Wait to Lock	Std Dev Wait to Lock	Smallest Wait Time to Lock	5th Pctile Wait to Lock	Median Wait to Lock	95th Pctile Wait to Lock	Largest Wait to Lock
IL	08	1	TURNBACK	3:KNOCKOUT	D	239	0	73619.00	308.029	405.211	1.000	5.000	175.000	1219.00	2230.00
IL	08	1	TURNBACK	3:KNOCKOUT	U	245	0	86963.00	354.951	548.112	1.000	7.000	173.000	1540.00	3900.00
IL	08	1	TURNBACK	5:OTHER	D	133	0	10530.00	79.173	318.845	1.000	1.000	4.000	530.00	1890.00
IL	08	1	TURNBACK	5:OTHER	U	87	0	2879.00	33.092	158.017	1.000	1.000	2.000	15.00	1195.00
IL	08	1	TURNBACK	5:OTHER	D	6	0	82.00	13.667	13.186	1.000	1.000	12.000	35.00	35.00
IL	08	1	TURNBACK	5:OTHER	U	64	0	2459.00	38.422	153.809	1.000	1.000	5.000	35.00	1100.00
IL	08	1	TURNBACK	2:SINGLE	D	416	0	89695.00	215.613	359.417	2.000	5.000	101.000	962.00	4032.00
IL	08	1	TURNBACK	2:SINGLE	U	343	0	62278.00	181.569	258.846	1.000	6.000	98.000	688.00	1876.00
IL	08	1	TURNBACK	5:OTHER	D	1	0	914.00	914.000	.	914.000	914.000	914.000	914.00	914.00
IL	08	1	TURNBACK	5:OTHER	U	2	0	692.00	346.000	164.049	230.000	230.000	346.000	462.00	462.00
IL	08	1	TURNBACK	4:JACKNIFE	D	101	0	30370.00	300.693	376.742	4.000	13.000	185.000	1106.00	1885.00
IL	08	1	TURNBACK	4:JACKNIFE	U	124	0	32203.00	259.702	300.102	5.000	10.000	164.500	790.00	1556.00
KS	01	1	EXCHANGE	2:SINGLE	D	16	0	124.00	7.750	3.642	1.000	1.000	9.000	15.00	15.00
KS	01	1	EXCHANGE	2:SINGLE	U	15	0	728.00	48.533	152.733	1.000	1.000	8.000	600.00	600.00
KS	01	1	FLY	3:KNOCKOUT	D	4	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
KS	01	1	FLY	2:SINGLE	D	1160	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
KS	01	1	FLY	2:SINGLE	U	1157	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
KS	01	1	FLY	5:OTHER	U	1	0	0.00	0.000	.	0.000	0.000	0.000	0.00	0.00
KS	01	1	TURNBACK	2:SINGLE	D	11	0	118.00	10.727	4.452	5.000	5.000	11.000	20.00	20.00
KS	01	1	TURNBACK	2:SINGLE	U	9	0	97.00	10.778	5.472	3.000	3.000	11.000	18.00	18.00
MI	01	1	EXCHANGE	5:OTHER	D	1	0	10.00	10.000	.	10.000	10.000	10.000	10.00	10.00
MI	01	1	EXCHANGE	5:OTHER	U	2	0	16.00	8.000	1.414	7.000	7.000	8.000	9.00	9.00
MI	01	1	EXCHANGE	3:KNOCKOUT	D	110	0	1747.00	15.882	56.985	1.000	2.000	10.000	32.00	600.00
MI	01	1	EXCHANGE	3:KNOCKOUT	U	120	0	3160.00	26.333	141.029	1.000	2.000	8.500	25.50	1440.00
MI	01	1	EXCHANGE	2:SINGLE	D	28	0	302.00	10.786	10.347	1.000	1.000	7.500	40.00	43.00
MI	01	1	EXCHANGE	2:SINGLE	U	41	0	1097.00	26.756	92.672	1.000	3.000	10.000	35.00	600.00
MI	01	1	FLY	1:DOUBLE	U	1	0	0.00	0.000	.	0.000	0.000	0.000	0.00	0.00
MI	01	1	FLY	5:OTHER	D	1	0	0.00	0.000	.	0.000	0.000	0.000	0.00	0.00
MI	01	1	FLY	5:OTHER	U	2	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	01	1	FLY	3:KNOCKOUT	D	1983	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	01	1	FLY	3:KNOCKOUT	U	1970	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	01	1	FLY	2:SINGLE	D	573	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	01	1	FLY	2:SINGLE	U	523	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	01	1	FLY	5:OTHER	D	2	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	01	1	TURNBACK	1:DOUBLE	D	1	0	27.00	27.000	.	27.000	27.000	27.000	27.00	27.00
MI	01	1	TURNBACK	5:OTHER	D	1	0	17.00	17.000	.	17.000	17.000	17.000	17.00	17.00
MI	01	1	TURNBACK	3:KNOCKOUT	D	81	0	1660.00	20.494	68.418	1.000	2.000	10.000	30.00	600.00
MI	01	1	TURNBACK	3:KNOCKOUT	U	113	0	2709.00	23.973	59.321	1.000	2.000	15.000	46.00	600.00
MI	01	1	TURNBACK	2:SINGLE	D	21	0	299.00	14.238	9.148	2.000	3.000	13.000	30.00	35.00
MI	01	1	TURNBACK	2:SINGLE	U	23	0	415.00	18.043	12.865	2.000	5.000	15.000	40.00	55.00
MI	02	1	EXCHANGE	1:DOUBLE	D	303	0	16670.00	55.017	60.060	1.000	5.000	30.000	178.00	414.00
MI	02	1	EXCHANGE	1:DOUBLE	U	290	0	20479.00	70.617	85.682	1.000	5.000	36.500	225.00	661.00
MI	02	1	EXCHANGE	5:OTHER	U	1	0	155.00	155.000	.	155.000	155.000	155.000	155.00	155.00
MI	02	1	EXCHANGE	3:KNOCKOUT	D	26	0	1667.00	64.115	70.104	5.000	5.000	28.500	190.00	267.00
MI	02	1	EXCHANGE	3:KNOCKOUT	U	8	0	645.00	80.625	65.196	5.000	5.000	100.500	165.00	165.00
MI	02	1	EXCHANGE	2:SINGLE	D	101	0	5695.00	56.386	60.656	4.000	5.000	39.000	170.00	340.00
MI	02	1	EXCHANGE	2:SINGLE	U	179	0	10335.00	57.737	72.256	1.000	5.000	32.000	185.00	550.00
MI	02	1	EXCHANGE	5:OTHER	U	2	0	49.00	24.500	20.506	10.000	10.000	24.500	39.00	39.00
MI	02	1	EXCHANGE	4:JACKNIFE	D	19	0	1278.00	67.263	78.616	2.000	2.000	48.000	340.00	340.00
MI	02	1	EXCHANGE	4:JACKNIFE	U	3	0	102.00	34.000	24.249	12.000	12.000	30.000	60.00	60.00

Summary Transit Statistics for Locks in Simulation Model 12:49 Friday, June 24, 2005 52
Wait Times (minutes from arrival to start of loackage) at Current Lockage by lockage type
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Wait Obs	Num Missing Values	Sum Mins Wait to Lock	Avg Mins Wait to Lock	Std Dev Wait to Lock	Smallest Wait Time to Lock	5th Pctile Wait to Lock	Median Wait to Lock	95th Pctile Wait to Lock	Largest Wait to Lock
MI	02	1	FLY	1:DOUBLE	D	756	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	02	1	FLY	1:DOUBLE	U	676	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	02	1	FLY	3:KNOCKOUT	D	67	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	02	1	FLY	3:KNOCKOUT	U	65	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	02	1	FLY	2:SINGLE	D	366	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	02	1	FLY	2:SINGLE	U	459	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	02	1	FLY	5:OTHER	D	2	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	02	1	FLY	5:OTHER	U	4	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	02	1	FLY	4:JACKNIFE	D	66	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	02	1	FLY	4:JACKNIFE	U	10	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	02	1	TURNBACK	1:DOUBLE	D	315	0	21274.00	67.537	72.714	1.000	10.000	45.000	191.000	527.00
MI	02	1	TURNBACK	1:DOUBLE	U	269	0	22944.00	85.294	287.409	2.000	10.000	31.000	195.000	4370.00
MI	02	1	TURNBACK	5:OTHER	D	1	0	55.00	55.000	.	55.000	55.000	55.000	55.000	55.00
MI	02	1	TURNBACK	3:KNOCKOUT	D	41	0	2606.00	63.561	52.855	10.000	10.000	41.000	160.000	175.00
MI	02	1	TURNBACK	3:KNOCKOUT	U	14	0	1057.00	75.500	70.664	10.000	10.000	40.500	256.000	256.00
MI	02	1	TURNBACK	2:SINGLE	D	85	0	4887.00	57.494	57.145	4.000	5.000	30.000	180.000	231.00
MI	02	1	TURNBACK	2:SINGLE	U	171	0	10436.00	61.029	116.967	2.000	5.000	27.000	179.000	1302.00
MI	02	1	TURNBACK	5:OTHER	U	5	0	364.00	72.800	92.861	5.000	5.000	23.000	223.000	223.00
MI	02	1	TURNBACK	4:JACKNIFE	D	19	0	1103.00	58.053	55.410	5.000	5.000	27.000	195.000	195.00
MI	02	1	TURNBACK	4:JACKNIFE	U	6	0	444.00	74.000	74.380	20.000	20.000	42.500	220.000	220.00
MI	03	1	EXCHANGE	1:DOUBLE	D	419	0	25987.00	62.021	80.077	1.000	5.000	33.000	193.000	703.00
MI	03	1	EXCHANGE	1:DOUBLE	U	287	0	20241.00	70.526	103.594	1.000	2.000	39.000	200.000	1440.00
MI	03	1	EXCHANGE	5:OTHER	D	1	0	160.00	160.000	.	160.000	160.000	160.000	160.000	160.00
MI	03	1	EXCHANGE	3:KNOCKOUT	D	34	0	2013.00	59.206	66.742	2.000	10.000	37.000	162.000	346.00
MI	03	1	EXCHANGE	3:KNOCKOUT	U	17	0	1028.00	60.471	58.811	5.000	5.000	40.000	209.000	209.00
MI	03	1	EXCHANGE	2:SINGLE	D	148	0	3948.00	26.676	39.093	1.000	1.000	11.000	124.000	205.00
MI	03	1	EXCHANGE	2:SINGLE	U	266	0	8683.00	32.643	42.187	1.000	1.000	13.000	126.000	227.00
MI	03	1	EXCHANGE	4:JACKNIFE	D	21	0	1141.00	54.333	53.195	2.000	2.000	35.000	130.000	193.00
MI	03	1	EXCHANGE	4:JACKNIFE	U	4	0	492.00	123.000	106.814	8.000	8.000	127.000	230.000	230.00
MI	03	1	FLY	1:DOUBLE	D	635	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	03	1	FLY	1:DOUBLE	U	628	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	03	1	FLY	5:OTHER	U	1	0	0.00	0.000	.	0.000	0.000	0.000	0.000	0.00
MI	03	1	FLY	3:KNOCKOUT	D	52	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	03	1	FLY	3:KNOCKOUT	U	49	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	03	1	FLY	2:SINGLE	D	457	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	03	1	FLY	2:SINGLE	U	799	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	03	1	FLY	5:OTHER	D	1	0	0.00	0.000	.	0.000	0.000	0.000	0.000	0.00
MI	03	1	FLY	4:JACKNIFE	D	50	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	03	1	FLY	4:JACKNIFE	U	12	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	03	1	TURNBACK	1:DOUBLE	D	344	0	19752.00	57.419	64.283	1.000	7.000	30.000	200.000	392.00
MI	03	1	TURNBACK	1:DOUBLE	U	331	0	20189.00	60.994	75.514	1.000	2.000	30.000	196.000	720.00
MI	03	1	TURNBACK	3:KNOCKOUT	D	41	0	3869.00	94.366	117.589	6.000	10.000	45.000	410.000	437.00
MI	03	1	TURNBACK	3:KNOCKOUT	U	22	0	1886.00	85.727	83.787	1.000	8.000	62.500	238.000	298.00
MI	03	1	TURNBACK	2:SINGLE	D	133	0	6215.00	46.729	48.914	1.000	2.000	27.000	158.000	217.00
MI	03	1	TURNBACK	2:SINGLE	U	202	0	8024.00	39.723	66.388	1.000	2.000	15.500	137.000	580.00
MI	03	1	TURNBACK	4:JACKNIFE	D	31	0	3034.00	97.871	135.910	8.000	11.000	44.000	272.000	720.00
MI	03	1	TURNBACK	4:JACKNIFE	U	2	0	121.00	60.500	43.134	30.000	30.000	60.500	91.000	91.00
MI	04	1	EXCHANGE	1:DOUBLE	D	321	0	15423.00	48.047	55.839	2.000	5.000	30.000	150.000	458.00
MI	04	1	EXCHANGE	1:DOUBLE	U	341	0	19349.00	56.742	97.784	2.000	5.000	30.000	175.000	1445.00
MI	04	1	EXCHANGE	3:KNOCKOUT	D	24	0	948.00	39.500	40.073	5.000	5.000	22.500	100.000	170.00

Summary Transit Statistics for Locks in Simulation Model 12:49 Friday, June 24, 2005 53
Wait Times (minutes from arrival to start of loackage) at Current Lockage by lockage type
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Wait Obs	Num Missing Values	Sum Mins Wait to Lock	Avg Mins Wait to Lock	Std Dev Wait to Lock	Smallest Wait Time to Lock	5th Pctile Wait to Lock	Median Wait to Lock	95th Pctile Wait to Lock	Largest Wait to Lock
MI	04	1	EXCHANGE	3:KNOCKOUT	U	17	0	1352.00	79.529	67.984	5.0000	5.0000	55.000	240.000	240.00
MI	04	1	EXCHANGE	2:SINGLE	D	87	0	3140.00	36.092	38.439	1.0000	5.0000	20.000	125.000	160.00
MI	04	1	EXCHANGE	2:SINGLE	U	151	0	6825.00	45.199	51.034	1.0000	5.0000	25.000	150.000	250.00
MI	04	1	EXCHANGE	4:JACKNIFE	D	16	0	1220.00	76.250	74.151	5.0000	5.0000	67.500	260.000	260.00
MI	04	1	EXCHANGE	4:JACKNIFE	U	4	0	780.00	195.000	196.766	40.0000	40.0000	142.500	455.000	455.00
MI	04	1	FLY	1:DOUBLE	D	926	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	04	1	FLY	1:DOUBLE	U	768	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	04	1	FLY	3:KNOCKOUT	D	74	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	04	1	FLY	3:KNOCKOUT	U	46	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	04	1	FLY	2:SINGLE	D	323	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	04	1	FLY	2:SINGLE	U	493	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	04	1	FLY	4:JACKNIFE	D	62	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	04	1	FLY	4:JACKNIFE	U	6	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	04	1	TURNBACK	1:DOUBLE	D	286	0	15647.00	54.710	55.152	1.0000	7.0000	35.000	150.000	330.00
MI	04	1	TURNBACK	1:DOUBLE	U	263	0	14934.00	56.783	56.909	1.0000	10.0000	37.000	185.000	390.00
MI	04	1	TURNBACK	3:KNOCKOUT	D	35	0	2692.00	76.914	60.641	6.0000	10.0000	75.000	205.000	306.00
MI	04	1	TURNBACK	3:KNOCKOUT	U	16	0	919.00	57.438	58.754	5.0000	5.0000	38.000	220.000	220.00
MI	04	1	TURNBACK	2:SINGLE	D	103	0	6185.00	60.049	116.773	3.0000	5.0000	40.000	115.000	1140.00
MI	04	1	TURNBACK	2:SINGLE	U	149	0	7638.00	51.262	50.667	5.0000	6.0000	33.000	144.000	265.00
MI	04	1	TURNBACK	5:OTHER	U	1	0	11.00	11.000	.	11.0000	11.0000	11.000	11.000	11.00
MI	04	1	TURNBACK	4:JACKNIFE	D	19	0	1058.00	55.684	30.813	10.0000	10.0000	48.000	113.000	113.00
MI	04	1	TURNBACK	4:JACKNIFE	U	4	0	260.00	65.000	34.919	15.0000	15.0000	77.500	90.000	90.00
MI	05	1	EXCHANGE	1:DOUBLE	D	289	0	19822.00	68.588	71.175	3.0000	6.0000	48.000	195.000	705.00
MI	05	1	EXCHANGE	1:DOUBLE	U	245	0	18570.00	75.796	68.845	5.0000	8.0000	60.000	205.000	432.00
MI	05	1	EXCHANGE	3:KNOCKOUT	D	18	0	1748.00	97.111	85.326	10.0000	10.0000	62.500	290.000	290.00
MI	05	1	EXCHANGE	3:KNOCKOUT	U	19	0	1424.00	74.947	70.115	5.0000	5.0000	55.000	270.000	270.00
MI	05	1	EXCHANGE	2:SINGLE	D	69	0	3557.00	51.551	40.376	5.0000	5.0000	43.000	122.000	170.00
MI	05	1	EXCHANGE	2:SINGLE	U	145	0	8653.00	59.676	50.295	1.0000	6.0000	48.000	165.000	282.00
MI	05	1	EXCHANGE	4:JACKNIFE	D	11	0	775.00	70.455	68.958	5.0000	5.0000	50.000	210.000	210.00
MI	05	1	EXCHANGE	4:JACKNIFE	U	6	0	330.00	55.000	43.030	20.0000	20.0000	36.000	125.000	125.00
MI	05	1	FLY	1:DOUBLE	D	1019	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	05	1	FLY	1:DOUBLE	U	883	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	05	1	FLY	3:KNOCKOUT	D	78	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	05	1	FLY	3:KNOCKOUT	U	47	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	05	1	FLY	2:SINGLE	D	342	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	05	1	FLY	2:SINGLE	U	517	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	05	1	FLY	4:JACKNIFE	D	64	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	05	1	FLY	4:JACKNIFE	U	5	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	05	1	TURNBACK	1:DOUBLE	D	230	0	10167.00	44.204	52.342	3.0000	8.0000	23.000	123.000	420.00
MI	05	1	TURNBACK	1:DOUBLE	U	262	0	14792.00	56.458	51.178	3.0000	10.0000	38.000	167.000	320.00
MI	05	1	TURNBACK	3:KNOCKOUT	D	37	0	2833.00	76.568	49.714	5.0000	8.0000	80.000	195.000	220.00
MI	05	1	TURNBACK	3:KNOCKOUT	U	16	0	797.00	49.813	44.631	7.0000	7.0000	38.000	183.000	183.00
MI	05	1	TURNBACK	2:SINGLE	D	108	0	6203.00	57.435	46.326	2.0000	11.0000	45.000	140.000	225.00
MI	05	1	TURNBACK	2:SINGLE	U	142	0	8707.00	61.317	73.258	4.0000	10.0000	47.500	138.000	720.00
MI	05	1	TURNBACK	4:JACKNIFE	D	21	0	1274.00	60.667	41.331	10.0000	10.0000	55.000	105.000	190.00
MI	05	1	TURNBACK	4:JACKNIFE	U	4	0	313.00	78.250	83.116	8.0000	8.0000	54.000	197.000	197.00
MI	06	1	EXCHANGE	1:DOUBLE	D	428	0	39176.00	91.533	113.764	1.0000	5.0000	64.500	278.000	1133.00
MI	06	1	EXCHANGE	1:DOUBLE	U	406	0	41391.00	101.948	114.111	1.0000	5.0000	84.500	276.000	1225.00
MI	06	1	EXCHANGE	3:KNOCKOUT	D	42	0	4052.00	96.476	85.411	5.0000	5.0000	85.500	239.000	480.00
MI	06	1	EXCHANGE	3:KNOCKOUT	U	26	0	2257.00	86.808	68.019	4.0000	10.0000	73.000	226.000	227.00

Summary Transit Statistics for Locks in Simulation Model 12:49 Friday, June 24, 2005 54
Wait Times (minutes from arrival to start of loackage) at Current Lockage by lockage type
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Wait Obs	Num Missing Values	Sum Mins Wait to Lock	Avg Mins Wait to Lock	Std Dev Wait to Lock	Smallest Wait Time to Lock	5th Pctile Wait to Lock	Median Wait to Lock	95th Pctile Wait to Lock	Largest Wait to Lock
MI	06	1	EXCHANGE	2:SINGLE	D	103	0	4962.00	48.175	46.945	1.0000	3.0000	37.000	145.000	255.00
MI	06	1	EXCHANGE	2:SINGLE	U	175	0	12193.00	69.674	69.280	1.0000	3.0000	51.000	200.000	400.00
MI	06	1	EXCHANGE	5:OTHER	U	1	0	26.00	26.000	.	26.0000	26.0000	26.000	26.000	26.00
MI	06	1	EXCHANGE	4:JACKNIFE	D	12	0	1139.00	94.917	65.861	8.0000	8.0000	82.000	200.000	200.00
MI	06	1	EXCHANGE	4:JACKNIFE	U	6	0	631.00	105.167	117.902	14.0000	14.0000	55.000	312.000	312.00
MI	06	1	FLY	1:DOUBLE	D	1040	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	06	1	FLY	1:DOUBLE	U	921	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	06	1	FLY	3:KNOCKOUT	D	81	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	06	1	FLY	3:KNOCKOUT	U	79	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	06	1	FLY	2:SINGLE	D	351	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	06	1	FLY	2:SINGLE	U	472	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	06	1	FLY	5:OTHER	D	1	0	0.00	0.000	.	0.0000	0.0000	0.000	0.000	0.00
MI	06	1	FLY	5:OTHER	U	3	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	06	1	FLY	4:JACKNIFE	D	56	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	06	1	FLY	4:JACKNIFE	U	12	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	06	1	TURNBACK	1:DOUBLE	D	383	0	31058.00	81.091	101.274	2.0000	8.0000	54.000	227.000	905.00
MI	06	1	TURNBACK	1:DOUBLE	U	368	0	27265.00	74.090	85.016	1.0000	8.0000	45.000	245.000	835.00
MI	06	1	TURNBACK	3:KNOCKOUT	D	56	0	4667.00	83.339	70.223	4.0000	9.0000	76.000	210.000	345.00
MI	06	1	TURNBACK	3:KNOCKOUT	U	33	0	3310.00	100.303	95.633	1.0000	7.0000	70.000	301.000	405.00
MI	06	1	TURNBACK	2:SINGLE	D	116	0	7319.00	63.095	62.159	1.0000	5.0000	47.500	174.000	415.00
MI	06	1	TURNBACK	2:SINGLE	U	161	0	13639.00	84.714	174.241	1.0000	5.0000	49.000	195.000	1722.00
MI	06	1	TURNBACK	4:JACKNIFE	D	29	0	2901.00	100.034	84.097	1.0000	11.0000	82.000	270.000	380.00
MI	06	1	TURNBACK	4:JACKNIFE	U	8	0	794.00	99.250	46.928	40.0000	40.0000	99.000	152.000	152.00
MI	07	1	EXCHANGE	1:DOUBLE	D	487	0	43965.00	90.277	102.322	1.0000	5.0000	58.000	278.000	915.00
MI	07	1	EXCHANGE	1:DOUBLE	U	428	0	38948.00	91.000	87.502	1.0000	5.0000	71.000	272.000	535.00
MI	07	1	EXCHANGE	3:KNOCKOUT	D	57	0	4778.00	83.825	82.531	2.0000	6.0000	69.000	280.000	309.00
MI	07	1	EXCHANGE	3:KNOCKOUT	U	48	0	4474.00	93.208	95.523	1.0000	5.0000	61.500	285.000	400.00
MI	07	1	EXCHANGE	2:SINGLE	D	163	0	7434.00	45.607	78.896	1.0000	1.0000	20.000	163.000	720.00
MI	07	1	EXCHANGE	2:SINGLE	U	312	0	12151.00	38.946	51.087	1.0000	1.0000	15.000	145.000	295.00
MI	07	1	EXCHANGE	5:OTHER	D	9	0	348.00	38.667	65.943	2.0000	2.0000	9.000	210.000	210.00
MI	07	1	EXCHANGE	5:OTHER	U	7	0	267.00	38.143	58.525	1.0000	1.0000	25.000	168.000	168.00
MI	07	1	EXCHANGE	4:JACKNIFE	D	27	0	2012.00	74.519	62.581	1.0000	10.0000	82.000	146.000	290.00
MI	07	1	EXCHANGE	4:JACKNIFE	U	6	0	404.00	67.333	44.320	18.0000	18.0000	54.500	127.000	127.00
MI	07	1	FLY	1:DOUBLE	D	929	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	07	1	FLY	1:DOUBLE	U	834	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	07	1	FLY	3:KNOCKOUT	D	93	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	07	1	FLY	3:KNOCKOUT	U	75	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	07	1	FLY	2:SINGLE	D	587	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	07	1	FLY	2:SINGLE	U	786	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	07	1	FLY	5:OTHER	D	2	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	07	1	FLY	5:OTHER	U	10	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	07	1	FLY	4:JACKNIFE	D	42	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	07	1	FLY	4:JACKNIFE	U	16	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	07	1	TURNBACK	1:DOUBLE	D	375	0	26157.00	69.752	81.970	1.0000	6.0000	36.000	241.000	526.00
MI	07	1	TURNBACK	1:DOUBLE	U	385	0	33060.00	85.870	93.332	1.0000	7.0000	51.000	271.000	650.00
MI	07	1	TURNBACK	5:OTHER	D	1	0	75.00	75.000	.	75.0000	75.0000	75.000	75.000	75.00
MI	07	1	TURNBACK	3:KNOCKOUT	D	76	0	7770.00	102.237	76.887	6.0000	14.0000	100.000	228.000	513.00
MI	07	1	TURNBACK	3:KNOCKOUT	U	35	0	2291.00	65.457	67.207	1.0000	10.0000	40.000	230.000	246.00
MI	07	1	TURNBACK	2:SINGLE	D	165	0	11892.00	72.073	126.810	1.0000	2.0000	41.000	191.000	1440.00
MI	07	1	TURNBACK	2:SINGLE	U	197	0	10254.00	52.051	79.187	1.0000	1.0000	22.000	164.000	720.00

Summary Transit Statistics for Locks in Simulation Model 12:49 Friday, June 24, 2005 55
Wait Times (minutes from arrival to start of loackage) at Current Lockage by lockage type
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Wait Obs	Num Missing Values	Sum Mins Wait to Lock	Avg Mins Wait to Lock	Std Dev Wait to Lock	Smallest Wait Time to Lock	5th Pctile Wait to Lock	Median Wait to Lock	95th Pctile Wait to Lock	Largest Wait to Lock
MI	07	1	TURNBACK	5:OTHER	D	3	0	17.00	5.667	4.163	1.0000	1.0000	7.000	9.00	9.00
MI	07	1	TURNBACK	5:OTHER	U	4	0	28.00	7.000	6.377	1.0000	1.0000	7.000	13.00	13.00
MI	07	1	TURNBACK	4:JACKNIFE	D	29	0	2801.00	96.586	89.899	1.0000	4.0000	86.000	220.00	388.00
MI	07	1	TURNBACK	4:JACKNIFE	U	7	0	2305.00	329.286	696.735	20.0000	20.0000	65.000	1905.00	1905.00
MI	08	1	EXCHANGE	1:DOUBLE	D	434	0	38967.00	89.786	83.242	1.0000	5.0000	65.000	265.00	468.00
MI	08	1	EXCHANGE	1:DOUBLE	U	425	0	49995.00	117.635	105.617	2.0000	9.0000	103.000	303.00	720.00
MI	08	1	EXCHANGE	3:KNOCKOUT	D	39	0	3617.00	92.744	95.866	1.0000	5.0000	76.000	235.00	545.00
MI	08	1	EXCHANGE	3:KNOCKOUT	U	33	0	2975.00	90.152	66.067	8.0000	11.0000	80.000	217.00	222.00
MI	08	1	EXCHANGE	2:SINGLE	D	90	0	5959.00	66.211	78.602	1.0000	2.0000	45.000	170.00	600.00
MI	08	1	EXCHANGE	2:SINGLE	U	158	0	10832.00	68.557	62.979	1.0000	4.0000	49.000	197.00	282.00
MI	08	1	EXCHANGE	4:JACKNIFE	D	19	0	1586.00	83.474	67.481	5.0000	5.0000	75.000	240.00	240.00
MI	08	1	EXCHANGE	4:JACKNIFE	U	9	0	691.00	76.778	41.018	19.0000	19.0000	80.000	140.00	140.00
MI	08	1	FLY	1:DOUBLE	D	1006	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.00	0.00
MI	08	1	FLY	1:DOUBLE	U	910	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.00	0.00
MI	08	1	FLY	3:KNOCKOUT	D	78	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.00	0.00
MI	08	1	FLY	3:KNOCKOUT	U	56	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.00	0.00
MI	08	1	FLY	2:SINGLE	D	368	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.00	0.00
MI	08	1	FLY	2:SINGLE	U	492	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.00	0.00
MI	08	1	FLY	5:OTHER	D	3	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.00	0.00
MI	08	1	FLY	5:OTHER	U	1	0	0.00	0.000	.	0.0000	0.0000	0.000	0.00	0.00
MI	08	1	FLY	4:JACKNIFE	D	46	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.00	0.00
MI	08	1	FLY	4:JACKNIFE	U	24	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.00	0.00
MI	08	1	TURNBACK	1:DOUBLE	D	475	0	42240.00	88.926	79.096	1.0000	10.0000	65.000	262.00	480.00
MI	08	1	TURNBACK	1:DOUBLE	U	439	0	44017.00	100.267	87.881	1.0000	10.0000	77.000	282.00	504.00
MI	08	1	TURNBACK	5:OTHER	U	1	0	10.00	10.000	.	10.0000	10.0000	10.000	10.00	10.00
MI	08	1	TURNBACK	3:KNOCKOUT	D	49	0	5354.00	109.265	85.812	9.0000	15.0000	92.000	280.00	358.00
MI	08	1	TURNBACK	3:KNOCKOUT	U	26	0	2311.00	88.885	69.627	1.0000	2.0000	82.000	196.00	277.00
MI	08	1	TURNBACK	2:SINGLE	D	133	0	10842.00	81.519	77.623	5.0000	7.0000	60.000	240.00	444.00
MI	08	1	TURNBACK	2:SINGLE	U	155	0	10207.00	65.852	57.971	1.0000	6.0000	46.000	199.00	284.00
MI	08	1	TURNBACK	4:JACKNIFE	D	26	0	3396.00	130.615	98.914	16.0000	25.0000	116.000	337.00	360.00
MI	08	1	TURNBACK	4:JACKNIFE	U	11	0	718.00	65.273	75.879	5.0000	5.0000	41.000	250.00	250.00
MI	09	1	EXCHANGE	1:DOUBLE	D	484	0	41699.00	86.155	79.573	1.0000	6.0000	66.500	245.00	577.00
MI	09	1	EXCHANGE	1:DOUBLE	U	522	0	45724.00	87.594	75.333	1.0000	8.0000	73.000	235.00	465.00
MI	09	1	EXCHANGE	3:KNOCKOUT	D	31	0	3698.00	119.290	101.987	10.0000	10.0000	102.000	365.00	415.00
MI	09	1	EXCHANGE	3:KNOCKOUT	U	35	0	2840.00	81.143	65.993	5.0000	15.0000	69.000	218.00	310.00
MI	09	1	EXCHANGE	2:SINGLE	D	103	0	5881.00	57.097	64.689	2.0000	3.0000	37.000	208.00	305.00
MI	09	1	EXCHANGE	2:SINGLE	U	168	0	10512.00	62.571	59.593	1.0000	5.0000	51.000	157.00	345.00
MI	09	1	EXCHANGE	5:OTHER	D	5	0	166.00	33.200	53.233	5.0000	5.0000	8.000	128.00	128.00
MI	09	1	EXCHANGE	5:OTHER	U	2	0	58.00	29.000	29.698	8.0000	8.0000	29.000	50.00	50.00
MI	09	1	EXCHANGE	4:JACKNIFE	D	22	0	1683.00	76.500	64.412	1.0000	5.0000	81.500	185.00	208.00
MI	09	1	EXCHANGE	4:JACKNIFE	U	11	0	1240.00	112.727	104.584	1.0000	1.0000	115.000	310.00	310.00
MI	09	1	FLY	1:DOUBLE	D	1133	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.00	0.00
MI	09	1	FLY	1:DOUBLE	U	1013	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.00	0.00
MI	09	1	FLY	3:KNOCKOUT	D	84	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.00	0.00
MI	09	1	FLY	3:KNOCKOUT	U	57	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.00	0.00
MI	09	1	FLY	2:SINGLE	D	347	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.00	0.00
MI	09	1	FLY	2:SINGLE	U	417	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.00	0.00
MI	09	1	FLY	5:OTHER	D	5	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.00	0.00
MI	09	1	FLY	5:OTHER	U	3	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.00	0.00
MI	09	1	FLY	4:JACKNIFE	D	45	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.00	0.00

Summary Transit Statistics for Locks in Simulation Model 12:49 Friday, June 24, 2005 56
Wait Times (minutes from arrival to start of loackage) at Current Lockage by lockage type
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Wait Obs	Num Missing Values	Sum Mins Wait to Lock	Avg Mins Wait to Lock	Std Dev Wait to Lock	Smallest Wait Time to Lock	5th Pctile Wait to Lock	Median Wait to Lock	95th Pctile Wait to Lock	Largest Wait to Lock
MI	09	1	FLY	4:JACKNIFE	U	21	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	09	1	FLY	5:OTHER	D	1	0	0.00	0.000	.	0.0000	0.0000	0.000	0.000	0.00
MI	09	1	TURNBACK	1:DOUBLE	D	460	0	33945.00	73.793	84.429	1.0000	7.0000	44.000	243.000	692.00
MI	09	1	TURNBACK	1:DOUBLE	U	473	0	38640.00	81.691	76.832	1.0000	9.0000	61.000	221.000	555.00
MI	09	1	TURNBACK	5:OTHER	D	2	0	25.00	12.500	3.536	10.0000	10.0000	12.500	15.000	15.00
MI	09	1	TURNBACK	3:KNOCKOUT	D	41	0	4443.00	108.366	123.032	1.0000	10.0000	75.000	212.000	675.00
MI	09	1	TURNBACK	3:KNOCKOUT	U	15	0	1281.00	85.400	69.149	12.0000	12.0000	65.000	243.000	243.00
MI	09	1	TURNBACK	2:SINGLE	D	142	0	9572.00	67.408	73.948	1.0000	6.0000	42.500	204.000	475.00
MI	09	1	TURNBACK	2:SINGLE	U	166	0	10691.00	64.404	76.684	2.0000	7.0000	45.500	197.000	720.00
MI	09	1	TURNBACK	5:OTHER	D	1	0	31.00	31.000	.	31.0000	31.0000	31.000	31.000	31.00
MI	09	1	TURNBACK	4:JACKNIFE	D	23	0	2574.00	111.913	103.262	10.0000	10.0000	89.000	343.000	346.00
MI	09	1	TURNBACK	4:JACKNIFE	U	11	0	1268.00	115.273	102.576	15.0000	15.0000	72.000	289.000	289.00
MI	10	1	EXCHANGE	1:DOUBLE	D	516	0	55422.00	107.407	140.776	2.0000	10.0000	64.000	315.000	1440.00
MI	10	1	EXCHANGE	1:DOUBLE	U	586	0	59257.00	101.121	89.688	1.0000	11.0000	80.000	262.000	713.00
MI	10	1	EXCHANGE	3:KNOCKOUT	D	24	0	2293.00	95.542	96.505	5.0000	10.0000	60.500	310.000	360.00
MI	10	1	EXCHANGE	3:KNOCKOUT	U	22	0	2109.00	95.864	61.458	30.0000	30.0000	74.500	185.000	260.00
MI	10	1	EXCHANGE	2:SINGLE	D	134	0	7814.00	58.313	59.245	2.0000	5.0000	31.000	176.000	290.00
MI	10	1	EXCHANGE	2:SINGLE	U	242	0	19525.00	80.682	97.210	2.0000	5.0000	55.000	237.000	780.00
MI	10	1	EXCHANGE	4:JACKNIFE	D	22	0	1427.00	64.864	40.046	5.0000	15.0000	60.500	115.000	186.00
MI	10	1	EXCHANGE	4:JACKNIFE	U	15	0	2409.00	160.600	183.143	1.0000	1.0000	94.000	685.000	685.00
MI	10	1	FLY	1:DOUBLE	D	1441	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	10	1	FLY	1:DOUBLE	U	1283	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	10	1	FLY	3:KNOCKOUT	D	77	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	10	1	FLY	3:KNOCKOUT	U	50	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	10	1	FLY	2:SINGLE	D	488	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	10	1	FLY	2:SINGLE	U	556	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	10	1	FLY	5:OTHER	U	2	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	10	1	FLY	4:JACKNIFE	D	43	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	10	1	FLY	4:JACKNIFE	U	24	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	10	1	TURNBACK	1:DOUBLE	D	539	0	55841.00	103.601	99.495	5.0000	10.0000	71.000	300.000	600.00
MI	10	1	TURNBACK	1:DOUBLE	U	511	0	51577.00	100.933	327.628	2.0000	9.0000	58.000	251.000	7242.00
MI	10	1	TURNBACK	3:KNOCKOUT	D	34	0	3192.00	93.882	82.019	4.0000	16.0000	76.000	305.000	310.00
MI	10	1	TURNBACK	3:KNOCKOUT	U	22	0	1056.00	48.000	44.075	2.0000	5.0000	35.000	150.000	154.00
MI	10	1	TURNBACK	2:SINGLE	D	143	0	9383.00	65.615	71.610	2.0000	6.0000	40.000	215.000	449.00
MI	10	1	TURNBACK	2:SINGLE	U	190	0	11419.00	60.100	63.184	1.0000	5.0000	35.000	195.000	305.00
MI	10	1	TURNBACK	5:OTHER	D	1	0	57.00	57.000	.	57.0000	57.0000	57.000	57.000	57.00
MI	10	1	TURNBACK	4:JACKNIFE	D	30	0	2735.00	91.167	71.631	10.0000	13.0000	75.500	203.000	323.00
MI	10	1	TURNBACK	4:JACKNIFE	U	10	0	1107.00	110.700	67.912	26.0000	26.0000	109.500	261.000	261.00
MI	11	1	EXCHANGE	1:DOUBLE	D	717	0	66209.00	92.342	95.694	1.0000	5.0000	70.000	265.000	720.00
MI	11	1	EXCHANGE	1:DOUBLE	U	716	0	75048.00	104.816	94.047	1.0000	7.0000	88.000	275.000	1120.00
MI	11	1	EXCHANGE	3:KNOCKOUT	D	35	0	3270.00	93.429	76.237	4.0000	6.0000	83.000	245.000	280.00
MI	11	1	EXCHANGE	3:KNOCKOUT	U	91	0	7062.00	77.604	70.010	3.0000	5.0000	60.000	237.000	317.00
MI	11	1	EXCHANGE	2:SINGLE	D	246	0	13554.00	55.098	62.500	1.0000	2.0000	35.000	195.000	393.00
MI	11	1	EXCHANGE	2:SINGLE	U	339	0	22598.00	66.661	85.721	1.0000	4.0000	40.000	190.000	925.00
MI	11	1	EXCHANGE	5:OTHER	U	1	0	7.00	7.000	.	7.0000	7.0000	7.000	7.000	7.00
MI	11	1	EXCHANGE	4:JACKNIFE	D	20	0	1807.00	90.350	61.534	3.0000	5.0000	95.500	200.500	226.00
MI	11	1	EXCHANGE	4:JACKNIFE	U	18	0	1830.00	101.667	106.571	5.0000	5.0000	74.000	425.000	425.00
MI	11	1	FLY	1:DOUBLE	D	1178	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	11	1	FLY	1:DOUBLE	U	1066	0	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00
MI	11	1	FLY	5:OTHER	D	1	0	0.00	0.000	.	0.0000	0.0000	0.000	0.000	0.00

Summary Transit Statistics for Locks in Simulation Model 12:49 Friday, June 24, 2005 57
Wait Times (minutes from arrival to start of loackage) at Current Lockage by lockage type
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Wait Obs	Num Missing Values	Sum Mins Wait to Lock	Avg Mins Wait to Lock	Std Dev Wait to Lock	Smallest Wait Time to Lock	5th Pctile Wait to Lock	Median Wait to Lock	95th Pctile Wait to Lock	Largest Wait to Lock
MI	11	1	FLY	5:OTHER	U	1	0	0.00	0.000	.	0.000	0.000	0.000	0.000	0.00
MI	11	1	FLY	3:KNOCKOUT	D	83	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	11	1	FLY	3:KNOCKOUT	U	130	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	11	1	FLY	2:SINGLE	D	728	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	11	1	FLY	2:SINGLE	U	788	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	11	1	FLY	5:OTHER	D	1	0	0.00	0.000	.	0.000	0.000	0.000	0.000	0.00
MI	11	1	FLY	5:OTHER	U	2	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	11	1	FLY	4:JACKNIFE	D	40	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	11	1	FLY	4:JACKNIFE	U	25	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	11	1	FLY	5:OTHER	D	2	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	11	1	TURNBACK	1:DOUBLE	D	650	0	63995.00	98.454	99.443	2.000	12.000	67.500	285.000	882.00
MI	11	1	TURNBACK	1:DOUBLE	U	638	0	68293.00	107.042	110.755	2.000	11.000	80.000	281.000	1223.00
MI	11	1	TURNBACK	3:KNOCKOUT	D	63	0	7707.00	122.333	132.199	13.000	15.000	83.000	314.000	818.00
MI	11	1	TURNBACK	3:KNOCKOUT	U	60	0	6020.00	100.333	92.701	5.000	7.500	70.500	301.500	395.00
MI	11	1	TURNBACK	2:SINGLE	D	275	0	20895.00	75.982	87.595	2.000	6.000	55.000	224.000	831.00
MI	11	1	TURNBACK	2:SINGLE	U	307	0	22303.00	72.648	101.514	3.000	7.000	40.000	232.000	941.00
MI	11	1	TURNBACK	4:JACKNIFE	D	21	0	2740.00	130.476	154.174	5.000	9.000	80.000	256.000	720.00
MI	11	1	TURNBACK	4:JACKNIFE	U	12	0	958.00	79.833	47.045	20.000	20.000	79.500	168.000	168.00
MI	11	1	TURNBACK	5:OTHER	D	1	0	85.00	85.000	.	85.000	85.000	85.000	85.000	85.00
MI	12	1	EXCHANGE	1:DOUBLE	D	765	0	86183.00	112.658	113.874	1.000	7.000	82.000	317.000	1440.00
MI	12	1	EXCHANGE	1:DOUBLE	U	828	0	99319.00	119.950	106.268	1.000	11.000	100.000	326.000	749.00
MI	12	1	EXCHANGE	3:KNOCKOUT	D	50	0	8574.00	171.480	259.915	5.000	10.000	90.500	703.000	1477.00
MI	12	1	EXCHANGE	3:KNOCKOUT	U	35	0	4284.00	122.400	113.018	10.000	10.000	95.000	335.000	602.00
MI	12	1	EXCHANGE	2:SINGLE	D	302	0	17805.00	58.957	62.642	1.000	5.000	39.500	195.000	380.00
MI	12	1	EXCHANGE	2:SINGLE	U	336	0	26457.00	78.741	86.351	2.000	5.000	56.500	233.000	698.00
MI	12	1	EXCHANGE	4:JACKNIFE	D	29	0	3359.00	115.828	113.966	1.000	2.000	83.000	377.000	424.00
MI	12	1	EXCHANGE	4:JACKNIFE	U	18	0	2544.00	141.333	145.147	7.000	7.000	75.000	485.000	485.00
MI	12	1	FLY	1:DOUBLE	D	1274	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	12	1	FLY	1:DOUBLE	U	1148	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	12	1	FLY	3:KNOCKOUT	D	77	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	12	1	FLY	3:KNOCKOUT	U	64	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	12	1	FLY	2:SINGLE	D	584	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	12	1	FLY	2:SINGLE	U	672	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	12	1	FLY	5:OTHER	U	2	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	12	1	FLY	4:JACKNIFE	D	35	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	12	1	FLY	4:JACKNIFE	U	23	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	12	1	TURNBACK	1:DOUBLE	D	710	0	79730.00	112.296	131.477	1.000	10.000	79.000	327.000	1527.00
MI	12	1	TURNBACK	1:DOUBLE	U	699	0	81991.00	117.298	133.951	3.000	10.000	79.000	366.000	1440.00
MI	12	1	TURNBACK	3:KNOCKOUT	D	50	0	5981.00	119.620	91.858	5.000	15.000	91.500	282.000	450.00
MI	12	1	TURNBACK	3:KNOCKOUT	U	41	0	5675.00	138.415	107.858	3.000	10.000	124.000	359.000	415.00
MI	12	1	TURNBACK	2:SINGLE	D	306	0	21449.00	70.095	79.412	1.000	5.000	47.500	256.000	465.00
MI	12	1	TURNBACK	2:SINGLE	U	317	0	22670.00	71.514	75.824	2.000	8.000	48.000	221.000	560.00
MI	12	1	TURNBACK	5:OTHER	U	1	0	75.00	75.000	.	75.000	75.000	75.000	75.000	75.00
MI	12	1	TURNBACK	4:JACKNIFE	D	29	0	3691.00	127.276	101.866	6.000	9.000	123.000	343.000	450.00
MI	12	1	TURNBACK	4:JACKNIFE	U	15	0	2219.00	147.933	185.505	9.000	9.000	68.000	682.000	682.00
MI	13	1	EXCHANGE	1:DOUBLE	D	740	0	77968.00	105.362	97.801	1.000	7.000	85.000	283.500	1330.00
MI	13	1	EXCHANGE	1:DOUBLE	U	756	0	79045.00	104.557	94.800	1.000	6.000	83.500	285.000	1029.00
MI	13	1	EXCHANGE	3:KNOCKOUT	D	51	0	6179.00	121.157	122.244	2.000	11.000	99.000	305.000	729.00
MI	13	1	EXCHANGE	3:KNOCKOUT	U	47	0	4180.00	88.936	80.473	4.000	5.000	77.000	213.000	458.00
MI	13	1	EXCHANGE	2:SINGLE	D	284	0	16939.00	59.644	71.229	1.000	4.000	35.000	203.000	530.00

Summary Transit Statistics for Locks in Simulation Model 12:49 Friday, June 24, 2005 58
Wait Times (minutes from arrival to start of loackage) at Current Lockage by lockage type
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Wait Obs	Num Missing Values	Sum Mins Wait to Lock	Avg Mins Wait to Lock	Std Dev Wait to Lock	Smallest Wait Time to Lock	5th Pctile Wait to Lock	Median Wait to Lock	95th Pctile Wait to Lock	Largest Wait to Lock
MI	13	1	EXCHANGE	2:SINGLE	U	329	0	20455.00	62.173	87.068	1.000	3.000	42.000	172.000	1136.00
MI	13	1	EXCHANGE	5:OTHER	D	2	0	315.00	157.500	191.626	22.000	22.000	157.500	293.000	293.00
MI	13	1	EXCHANGE	5:OTHER	U	1	0	445.00	445.000	.	445.000	445.000	445.000	445.000	445.00
MI	13	1	EXCHANGE	4:JACKNIFE	D	26	0	2251.00	86.577	99.220	7.000	10.000	38.000	295.000	360.00
MI	13	1	EXCHANGE	4:JACKNIFE	U	16	0	1308.00	81.750	69.628	5.000	5.000	42.500	210.000	210.00
MI	13	1	FLY	1:DOUBLE	D	1297	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	13	1	FLY	1:DOUBLE	U	1240	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	13	1	FLY	3:KNOCKOUT	D	122	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	13	1	FLY	3:KNOCKOUT	U	88	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	13	1	FLY	2:SINGLE	D	621	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	13	1	FLY	2:SINGLE	U	705	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	13	1	FLY	5:OTHER	D	1	0	0.00	0.000	.	0.000	0.000	0.000	0.000	0.00
MI	13	1	FLY	4:JACKNIFE	D	47	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	13	1	FLY	4:JACKNIFE	U	29	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	13	1	TURNBACK	1:DOUBLE	D	696	0	77822.00	111.813	156.707	1.000	10.000	76.500	306.000	1647.00
MI	13	1	TURNBACK	1:DOUBLE	U	669	0	73951.00	110.540	134.803	2.000	12.000	77.000	291.000	1269.00
MI	13	1	TURNBACK	3:KNOCKOUT	D	62	0	7167.00	115.597	100.769	5.000	10.000	88.500	314.000	482.00
MI	13	1	TURNBACK	3:KNOCKOUT	U	62	0	6645.00	107.177	100.042	7.000	14.000	84.000	330.000	626.00
MI	13	1	TURNBACK	2:SINGLE	D	308	0	23273.00	75.562	92.749	2.000	5.000	56.000	232.000	1140.00
MI	13	1	TURNBACK	2:SINGLE	U	314	0	20254.00	64.503	66.401	1.000	5.000	42.000	203.000	550.00
MI	13	1	TURNBACK	5:OTHER	D	3	0	191.00	63.667	51.598	5.000	5.000	84.000	102.000	102.00
MI	13	1	TURNBACK	5:OTHER	U	1	0	213.00	213.000	.	213.000	213.000	213.000	213.000	213.00
MI	13	1	TURNBACK	4:JACKNIFE	D	28	0	3309.00	118.179	101.435	2.000	8.000	77.000	285.000	365.00
MI	13	1	TURNBACK	4:JACKNIFE	U	15	0	2037.00	135.800	144.112	6.000	6.000	80.000	499.000	499.00
MI	14	1	EXCHANGE	1:DOUBLE	D	1242	0	265304.00	213.610	177.219	3.000	23.000	163.000	550.000	1738.00
MI	14	1	EXCHANGE	1:DOUBLE	U	1202	0	270499.00	225.041	215.476	2.000	23.000	175.000	560.000	3777.00
MI	14	1	EXCHANGE	5:OTHER	D	2	0	953.00	476.500	2.121	475.000	475.000	476.500	478.000	478.00
MI	14	1	EXCHANGE	3:KNOCKOUT	D	66	0	13432.00	203.515	195.797	9.000	22.000	167.000	507.000	1315.00
MI	14	1	EXCHANGE	3:KNOCKOUT	U	82	0	17196.00	209.707	160.882	10.000	50.000	159.500	486.000	1035.00
MI	14	1	EXCHANGE	2:SINGLE	D	613	0	70374.00	114.803	135.439	1.000	9.000	79.000	365.000	1275.00
MI	14	1	EXCHANGE	2:SINGLE	U	606	0	71852.00	118.568	126.516	1.000	10.000	86.000	316.000	1564.00
MI	14	1	EXCHANGE	5:OTHER	D	1	0	245.00	245.000	.	245.000	245.000	245.000	245.000	245.00
MI	14	1	EXCHANGE	4:JACKNIFE	D	30	0	7123.00	237.433	168.551	4.000	35.000	193.500	630.000	690.00
MI	14	1	EXCHANGE	4:JACKNIFE	U	40	0	6531.00	163.275	136.322	11.000	14.000	122.500	428.000	505.00
MI	14	1	FLY	1:DOUBLE	D	900	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	14	1	FLY	1:DOUBLE	U	950	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	14	1	FLY	5:OTHER	U	1	0	0.00	0.000	.	0.000	0.000	0.000	0.000	0.00
MI	14	1	FLY	3:KNOCKOUT	D	74	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	14	1	FLY	3:KNOCKOUT	U	69	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	14	1	FLY	2:SINGLE	D	668	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	14	1	FLY	2:SINGLE	U	666	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	14	1	FLY	5:OTHER	U	2	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	14	1	FLY	4:JACKNIFE	D	21	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	14	1	FLY	4:JACKNIFE	U	17	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	14	1	TURNBACK	1:DOUBLE	D	1229	0	261853.00	213.062	191.134	2.000	23.000	155.000	570.000	1695.00
MI	14	1	TURNBACK	1:DOUBLE	U	1119	0	216442.00	193.424	182.959	2.000	20.000	140.000	533.000	1482.00
MI	14	1	TURNBACK	3:KNOCKOUT	D	89	0	20792.00	233.618	228.439	10.000	17.000	156.000	686.000	1235.00
MI	14	1	TURNBACK	3:KNOCKOUT	U	104	0	20266.00	194.865	139.081	14.000	31.000	154.500	504.000	605.00
MI	14	1	TURNBACK	2:SINGLE	D	606	0	88001.00	145.216	178.219	1.000	10.000	97.000	432.000	1921.00
MI	14	1	TURNBACK	2:SINGLE	U	715	0	106712.00	149.248	144.851	2.000	12.000	105.000	465.000	1005.00

Summary Transit Statistics for Locks in Simulation Model 12:49 Friday, June 24, 2005 59
Wait Times (minutes from arrival to start of loackage) at Current Lockage by lockage type
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Wait Obs	Num Missing Values	Sum Mins Wait to Lock	Avg Mins Wait to Lock	Std Dev Wait to Lock	Smallest Wait Time to Lock	5th Pctile Wait to Lock	Median Wait to Lock	95th Pctile Wait to Lock	Largest Wait to Lock
MI	14	1	TURNBACK	5:OTHER	U	1	0	15.00	15.000	.	15.000	15.000	15.000	15.000	15.00
MI	14	1	TURNBACK	4:JACKNIFE	D	35	0	9145.00	261.286	254.337	35.000	49.000	160.000	700.000	1218.00
MI	14	1	TURNBACK	4:JACKNIFE	U	25	0	5747.00	229.880	159.630	17.000	25.000	210.000	580.000	615.00
MI	14	4	EXCHANGE	1:DOUBLE	D	1	0	18.00	18.000	.	18.000	18.000	18.000	18.000	18.00
MI	14	4	EXCHANGE	3:KNOCKOUT	U	1	0	24.00	24.000	.	24.000	24.000	24.000	24.000	24.00
MI	14	4	EXCHANGE	2:SINGLE	D	10	0	67.00	6.700	8.056	1.000	1.000	2.500	26.000	26.00
MI	14	4	EXCHANGE	2:SINGLE	U	10	0	150.00	15.000	14.071	2.000	2.000	9.000	40.000	40.00
MI	14	4	FLY	1:DOUBLE	D	4	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	14	4	FLY	1:DOUBLE	U	11	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	14	4	FLY	3:KNOCKOUT	D	9	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	14	4	FLY	3:KNOCKOUT	U	9	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	14	4	FLY	2:SINGLE	D	79	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	14	4	FLY	2:SINGLE	U	71	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	14	4	FLY	5:OTHER	D	1	0	0.00	0.000	.	0.000	0.000	0.000	0.000	0.00
MI	14	4	FLY	5:OTHER	U	1	0	0.00	0.000	.	0.000	0.000	0.000	0.000	0.00
MI	14	4	FLY	4:JACKNIFE	D	1	0	0.00	0.000	.	0.000	0.000	0.000	0.000	0.00
MI	14	4	TURNBACK	1:DOUBLE	U	3	0	49.00	16.333	12.897	2.000	2.000	20.000	27.000	27.00
MI	14	4	TURNBACK	3:KNOCKOUT	D	1	0	16.00	16.000	.	16.000	16.000	16.000	16.000	16.00
MI	14	4	TURNBACK	3:KNOCKOUT	U	2	0	55.00	27.500	37.477	1.000	1.000	27.500	54.000	54.00
MI	14	4	TURNBACK	2:SINGLE	D	13	0	351.00	27.000	37.088	1.000	1.000	19.000	140.000	140.00
MI	14	4	TURNBACK	2:SINGLE	U	14	0	530.00	37.857	51.989	1.000	1.000	22.500	195.000	195.00
MI	14	4	TURNBACK	5:OTHER	U	2	0	15.00	7.500	9.192	1.000	1.000	7.500	14.000	14.00
MI	14	4	TURNBACK	4:JACKNIFE	D	1	0	1.00	1.000	.	1.000	1.000	1.000	1.000	1.00
MI	15	1	EXCHANGE	1:DOUBLE	D	1331	0	265558.00	199.518	279.742	1.000	15.000	143.000	530.000	3956.00
MI	15	1	EXCHANGE	1:DOUBLE	U	1155	0	254611.00	220.442	383.040	5.000	15.000	152.000	550.000	6075.00
MI	15	1	EXCHANGE	5:OTHER	U	1	0	95.00	95.000	.	95.000	95.000	95.000	95.000	95.00
MI	15	1	EXCHANGE	3:KNOCKOUT	D	70	0	16681.00	238.300	299.186	5.000	20.000	175.000	579.000	2295.00
MI	15	1	EXCHANGE	3:KNOCKOUT	U	93	0	14169.00	152.355	156.595	5.000	10.000	110.000	425.000	767.00
MI	15	1	EXCHANGE	2:SINGLE	D	463	0	40843.00	88.214	105.886	1.000	5.000	59.000	285.000	1050.00
MI	15	1	EXCHANGE	2:SINGLE	U	620	0	50979.00	82.224	87.050	1.000	5.000	59.000	235.000	739.00
MI	15	1	EXCHANGE	5:OTHER	U	3	0	150.00	50.000	52.202	15.000	15.000	25.000	110.000	110.00
MI	15	1	EXCHANGE	4:JACKNIFE	D	29	0	5263.00	181.483	149.452	10.000	13.000	148.000	549.000	561.00
MI	15	1	EXCHANGE	4:JACKNIFE	U	34	0	7106.00	209.000	185.967	5.000	25.000	144.500	588.000	881.00
MI	15	1	FLY	1:DOUBLE	D	969	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	15	1	FLY	1:DOUBLE	U	878	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	15	1	FLY	5:OTHER	D	2	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	15	1	FLY	3:KNOCKOUT	D	57	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	15	1	FLY	3:KNOCKOUT	U	67	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	15	1	FLY	2:SINGLE	D	1112	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	15	1	FLY	2:SINGLE	U	1089	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	15	1	FLY	5:OTHER	D	1	0	0.00	0.000	.	0.000	0.000	0.000	0.000	0.00
MI	15	1	FLY	5:OTHER	U	1	0	0.00	0.000	.	0.000	0.000	0.000	0.000	0.00
MI	15	1	FLY	4:JACKNIFE	D	24	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	15	1	FLY	4:JACKNIFE	U	31	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	15	1	TURNBACK	1:DOUBLE	D	1051	0	198997.00	189.341	283.960	3.000	15.000	121.000	495.000	3939.00
MI	15	1	TURNBACK	1:DOUBLE	U	1211	0	299733.00	247.509	475.488	2.000	18.000	150.000	594.000	7060.00
MI	15	1	TURNBACK	5:OTHER	U	1	0	124.00	124.000	.	124.000	124.000	124.000	124.000	124.00
MI	15	1	TURNBACK	3:KNOCKOUT	D	99	0	16679.00	168.475	130.889	2.000	14.000	142.000	460.000	657.00
MI	15	1	TURNBACK	3:KNOCKOUT	U	100	0	23257.00	232.570	201.193	5.000	15.000	195.000	590.500	1115.00
MI	15	1	TURNBACK	2:SINGLE	D	545	0	67879.00	124.549	132.285	1.000	10.000	88.000	390.000	1043.00

Summary Transit Statistics for Locks in Simulation Model 12:49 Friday, June 24, 2005 60
Wait Times (minutes from arrival to start of loackage) at Current Lockage by lockage type
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Wait Obs	Num Missing Values	Sum Mins Wait to Lock	Avg Mins Wait to Lock	Std Dev Wait to Lock	Smallest Wait Time to Lock	5th Pctile Wait to Lock	Median Wait to Lock	95th Pctile Wait to Lock	Largest Wait to Lock
MI	15	1	TURNBACK	2:SINGLE	U	543	0	61733.00	113.69	233.43	1.00	6.00	69.00	357.00	4718.00
MI	15	1	TURNBACK	5:OTHER	U	1	0	20.00	20.00	.	20.00	20.00	20.00	20.00	20.00
MI	15	1	TURNBACK	4:JACKNIFE	D	31	0	4551.00	146.81	96.67	10.00	25.00	125.00	343.00	449.00
MI	15	1	TURNBACK	4:JACKNIFE	U	27	0	4121.00	152.63	155.38	8.00	15.00	91.00	495.00	645.00
MI	15	1	TURNBACK	5:OTHER	D	1	0	25.00	25.00	.	25.00	25.00	25.00	25.00	25.00
MI	15	4	EXCHANGE	1:DOUBLE	D	12	0	30679.00	2556.58	1390.24	494.00	494.00	3049.00	4945.00	4945.00
MI	15	4	EXCHANGE	1:DOUBLE	U	11	0	32851.00	2986.45	1152.36	1758.00	1758.00	3315.00	4661.00	4661.00
MI	15	4	EXCHANGE	3:KNOCKOUT	U	1	0	413.00	413.00	.	413.00	413.00	413.00	413.00	413.00
MI	15	4	EXCHANGE	2:SINGLE	D	149	0	2752.00	18.47	53.02	1.00	2.00	10.00	45.00	600.00
MI	15	4	EXCHANGE	2:SINGLE	U	156	0	3396.00	21.77	72.80	1.00	1.00	5.00	45.00	690.00
MI	15	4	FLY	1:DOUBLE	D	1	0	0.00	0.00	.	0.00	0.00	0.00	0.00	0.00
MI	15	4	FLY	5:OTHER	D	2	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI	15	4	FLY	5:OTHER	U	2	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI	15	4	FLY	3:KNOCKOUT	D	1	0	0.00	0.00	.	0.00	0.00	0.00	0.00	0.00
MI	15	4	FLY	3:KNOCKOUT	U	4	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI	15	4	FLY	2:SINGLE	D	1182	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI	15	4	FLY	2:SINGLE	U	1153	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI	15	4	FLY	5:OTHER	D	2	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI	15	4	FLY	5:OTHER	U	3	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI	15	4	FLY	4:JACKNIFE	U	3	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI	15	4	FLY	5:OTHER	D	1	0	0.00	0.00	.	0.00	0.00	0.00	0.00	0.00
MI	15	4	TURNBACK	1:DOUBLE	D	7	0	22171.00	3167.29	1161.52	975.00	975.00	3220.00	4945.00	4945.00
MI	15	4	TURNBACK	1:DOUBLE	U	11	0	25407.00	2309.73	1647.39	108.00	108.00	1988.00	4428.00	4428.00
MI	15	4	TURNBACK	2:SINGLE	D	98	0	4379.00	44.68	163.86	1.00	2.00	12.00	160.00	1470.00
MI	15	4	TURNBACK	2:SINGLE	U	145	0	3280.00	22.62	55.97	1.00	1.00	10.00	80.00	445.00
MI	15	4	TURNBACK	5:OTHER	D	2	0	15.00	7.50	6.36	3.00	3.00	7.50	12.00	12.00
MI	16	1	EXCHANGE	1:DOUBLE	D	1267	0	165262.00	130.44	144.09	1.00	10.00	92.00	365.00	1575.00
MI	16	1	EXCHANGE	1:DOUBLE	U	1202	0	171428.00	142.62	136.83	1.00	12.00	110.00	384.00	1110.00
MI	16	1	EXCHANGE	3:KNOCKOUT	D	117	0	19018.00	162.55	173.41	5.00	17.00	110.00	472.00	1148.00
MI	16	1	EXCHANGE	3:KNOCKOUT	U	131	0	17441.00	133.14	113.86	5.00	15.00	108.00	322.00	825.00
MI	16	1	EXCHANGE	2:SINGLE	D	560	0	49452.00	88.31	89.97	1.00	5.00	65.00	261.50	760.00
MI	16	1	EXCHANGE	2:SINGLE	U	648	0	51738.00	79.84	83.30	1.00	5.00	60.00	235.00	940.00
MI	16	1	EXCHANGE	5:OTHER	D	2	0	241.00	120.50	54.45	82.00	82.00	120.50	159.00	159.00
MI	16	1	EXCHANGE	5:OTHER	U	1	0	440.00	440.00	.	440.00	440.00	440.00	440.00	440.00
MI	16	1	EXCHANGE	4:JACKNIFE	D	29	0	4066.00	140.21	132.71	5.00	10.00	118.00	430.00	513.00
MI	16	1	EXCHANGE	4:JACKNIFE	U	41	0	5462.00	133.22	107.85	5.00	11.00	110.00	318.00	456.00
MI	16	1	FLY	1:DOUBLE	D	1095	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI	16	1	FLY	1:DOUBLE	U	1063	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI	16	1	FLY	3:KNOCKOUT	D	111	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI	16	1	FLY	3:KNOCKOUT	U	91	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI	16	1	FLY	2:SINGLE	D	879	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI	16	1	FLY	2:SINGLE	U	931	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI	16	1	FLY	4:JACKNIFE	D	17	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI	16	1	FLY	4:JACKNIFE	U	35	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI	16	1	TURNBACK	1:DOUBLE	D	1170	0	164315.00	140.44	153.90	1.00	15.00	100.00	404.00	1724.00
MI	16	1	TURNBACK	1:DOUBLE	U	1194	0	156669.00	131.21	137.35	3.00	14.00	95.00	378.00	1471.00
MI	16	1	TURNBACK	5:OTHER	D	1	0	240.00	240.00	.	240.00	240.00	240.00	240.00	240.00
MI	16	1	TURNBACK	3:KNOCKOUT	D	135	0	17363.00	128.61	117.63	4.00	11.00	87.00	364.00	710.00
MI	16	1	TURNBACK	3:KNOCKOUT	U	116	0	15583.00	134.34	122.27	10.00	10.00	105.50	382.00	736.00
MI	16	1	TURNBACK	2:SINGLE	D	537	0	54423.00	101.35	99.32	1.00	10.00	75.00	280.00	715.00

Summary Transit Statistics for Locks in Simulation Model 12:49 Friday, June 24, 2005 61
Wait Times (minutes from arrival to start of loackage) at Current Lockage by lockage type
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Wait Obs	Num Missing Values	Sum Mins Wait to Lock	Avg Mins Wait to Lock	Std Dev Wait to Lock	Smallest Wait Time to Lock	5th Pctile Wait to Lock	Median Wait to Lock	95th Pctile Wait to Lock	Largest Wait to Lock
MI	16	1	TURNBACK	2:SINGLE	U	612	0	57038.00	93.199	93.233	2.000	10.000	65.000	276.00	790.00
MI	16	1	TURNBACK	5:OTHER	D	3	0	259.00	86.333	128.753	11.000	11.000	13.000	235.00	235.00
MI	16	1	TURNBACK	4:JACKNIFE	D	35	0	7366.00	210.457	167.859	30.000	33.000	134.000	475.00	776.00
MI	16	1	TURNBACK	4:JACKNIFE	U	31	0	3616.00	116.645	96.721	5.000	10.000	81.000	294.00	370.00
MI	17	1	EXCHANGE	1:DOUBLE	D	1479	0	234319.00	158.431	133.721	1.000	18.000	120.000	440.00	820.00
MI	17	1	EXCHANGE	1:DOUBLE	U	1462	0	248507.00	169.977	140.528	1.000	15.000	135.000	445.00	980.00
MI	17	1	EXCHANGE	3:KNOCKOUT	D	81	0	12028.00	148.494	133.760	5.000	17.000	115.000	383.00	635.00
MI	17	1	EXCHANGE	3:KNOCKOUT	U	95	0	17870.00	188.105	157.676	3.000	20.000	134.000	478.00	825.00
MI	17	1	EXCHANGE	2:SINGLE	D	438	0	49648.00	113.352	113.063	1.000	10.000	80.000	350.00	817.00
MI	17	1	EXCHANGE	2:SINGLE	U	492	0	57106.00	116.069	113.289	1.000	10.000	84.500	359.00	683.00
MI	17	1	EXCHANGE	5:OTHER	U	1	0	90.00	90.000	.	90.000	90.000	90.000	90.00	90.00
MI	17	1	EXCHANGE	4:JACKNIFE	D	24	0	4778.00	199.083	166.790	7.000	12.000	154.000	555.00	575.00
MI	17	1	EXCHANGE	4:JACKNIFE	U	41	0	7028.00	171.415	147.869	10.000	20.000	136.000	358.00	753.00
MI	17	1	FLY	1:DOUBLE	D	1170	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	17	1	FLY	1:DOUBLE	U	1061	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	17	1	FLY	3:KNOCKOUT	D	63	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	17	1	FLY	3:KNOCKOUT	U	68	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	17	1	FLY	2:SINGLE	D	407	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	17	1	FLY	2:SINGLE	U	432	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	17	1	FLY	5:OTHER	D	1	0	0.00	0.000	.	0.000	0.000	0.000	0.00	0.00
MI	17	1	FLY	4:JACKNIFE	D	18	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	17	1	FLY	4:JACKNIFE	U	25	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	17	1	TURNBACK	1:DOUBLE	D	1143	0	178730.00	156.369	137.784	1.000	16.000	116.000	452.00	921.00
MI	17	1	TURNBACK	1:DOUBLE	U	1193	0	172149.00	144.299	128.990	2.000	15.000	107.000	410.00	927.00
MI	17	1	TURNBACK	3:KNOCKOUT	D	104	0	18391.00	176.837	154.515	5.000	28.000	123.500	564.00	801.00
MI	17	1	TURNBACK	3:KNOCKOUT	U	108	0	17414.00	161.241	134.195	10.000	20.000	113.000	427.00	812.00
MI	17	1	TURNBACK	2:SINGLE	D	450	0	57273.00	127.273	119.099	1.000	12.000	94.000	390.00	751.00
MI	17	1	TURNBACK	2:SINGLE	U	391	0	46702.00	119.442	116.261	5.000	15.000	85.000	356.00	738.00
MI	17	1	TURNBACK	5:OTHER	D	1	0	500.00	500.000	.	500.000	500.000	500.000	500.00	500.00
MI	17	1	TURNBACK	4:JACKNIFE	D	39	0	7456.00	191.179	164.413	20.000	30.000	132.000	545.00	765.00
MI	17	1	TURNBACK	4:JACKNIFE	U	42	0	6746.00	160.619	121.815	25.000	27.000	131.500	355.00	547.00
MI	18	1	EXCHANGE	1:DOUBLE	D	1519	0	234989.00	154.700	169.454	1.000	15.000	113.000	415.00	2348.00
MI	18	1	EXCHANGE	1:DOUBLE	U	1437	0	236476.00	164.562	141.803	1.000	17.000	130.000	425.00	1459.00
MI	18	1	EXCHANGE	5:OTHER	D	1	0	49.00	49.000	.	49.000	49.000	49.000	49.00	49.00
MI	18	1	EXCHANGE	3:KNOCKOUT	D	67	0	11683.00	174.373	147.793	9.000	27.000	130.000	560.00	621.00
MI	18	1	EXCHANGE	3:KNOCKOUT	U	88	0	12827.00	145.761	116.889	4.000	10.000	117.500	380.00	531.00
MI	18	1	EXCHANGE	2:SINGLE	D	405	0	37725.00	93.148	117.455	1.000	5.000	60.000	281.00	1313.00
MI	18	1	EXCHANGE	2:SINGLE	U	436	0	42026.00	96.390	99.326	1.000	6.000	69.500	267.00	829.00
MI	18	1	EXCHANGE	5:OTHER	D	2	0	1325.00	662.500	733.270	144.000	144.000	662.500	1181.00	1181.00
MI	18	1	EXCHANGE	4:JACKNIFE	D	31	0	5278.00	170.258	102.913	4.000	13.000	166.000	404.00	448.00
MI	18	1	EXCHANGE	4:JACKNIFE	U	48	0	6024.00	125.500	125.275	2.000	15.000	100.500	287.00	785.00
MI	18	1	FLY	1:DOUBLE	D	1239	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	18	1	FLY	1:DOUBLE	U	1081	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	18	1	FLY	3:KNOCKOUT	D	51	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	18	1	FLY	3:KNOCKOUT	U	64	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	18	1	FLY	2:SINGLE	D	536	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	18	1	FLY	2:SINGLE	U	590	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	18	1	FLY	4:JACKNIFE	D	12	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	18	1	FLY	4:JACKNIFE	U	33	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	18	1	TURNBACK	1:DOUBLE	D	1231	0	201529.00	163.712	191.224	1.000	14.000	117.000	419.00	2160.00

Summary Transit Statistics for Locks in Simulation Model 12:49 Friday, June 24, 2005 62
Wait Times (minutes from arrival to start of loackage) at Current Lockage by lockage type
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for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Wait Obs	Num Missing Values	Sum Mins Wait to Lock	Avg Mins Wait to Lock	Std Dev Wait to Lock	Smallest Wait Time to Lock	5th Pctile Wait to Lock	Median Wait to Lock	95th Pctile Wait to Lock	Largest Wait to Lock
MI	18	1	TURNBACK	1:DOUBLE	U	1357	0	218204.00	160.799	148.430	2.000	15.000	120.000	441.000	1543.00
MI	18	1	TURNBACK	3:KNOCKOUT	D	117	0	19108.00	163.316	132.368	11.000	20.000	126.000	435.000	626.00
MI	18	1	TURNBACK	3:KNOCKOUT	U	107	0	15312.00	143.103	104.635	5.000	18.000	119.000	360.000	475.00
MI	18	1	TURNBACK	2:SINGLE	D	452	0	51309.00	113.515	132.382	1.000	9.000	76.500	380.000	1331.00
MI	18	1	TURNBACK	2:SINGLE	U	422	0	40473.00	95.908	100.734	1.000	10.000	70.000	319.000	702.00
MI	18	1	TURNBACK	4:JACKNIFE	D	41	0	8484.00	206.927	205.800	12.000	38.000	140.000	524.000	1067.00
MI	18	1	TURNBACK	4:JACKNIFE	U	39	0	8089.00	207.410	142.124	15.000	30.000	190.000	470.000	569.00
MI	18	1	TURNBACK	5:OTHER	U	1	0	113.00	113.000	.	113.000	113.000	113.000	113.000	113.00
MI	19	1	EXCHANGE	2:SINGLE	D	1782	0	137327.00	77.063	65.420	1.000	12.000	60.000	198.000	656.00
MI	19	1	EXCHANGE	2:SINGLE	U	1654	0	132596.00	80.167	69.042	1.000	12.000	63.000	203.000	690.00
MI	19	1	EXCHANGE	4:JACKNIFE	U	1	0	30.00	30.000	.	30.000	30.000	30.000	30.000	30.00
MI	19	1	FLY	5:OTHER	D	1	0	0.00	0.000	.	0.000	0.000	0.000	0.000	0.00
MI	19	1	FLY	3:KNOCKOUT	D	1	0	0.00	0.000	.	0.000	0.000	0.000	0.000	0.00
MI	19	1	FLY	2:SINGLE	D	2245	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	19	1	FLY	2:SINGLE	U	2481	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	19	1	FLY	5:OTHER	U	1	0	0.00	0.000	.	0.000	0.000	0.000	0.000	0.00
MI	19	1	TURNBACK	2:SINGLE	D	1491	0	131008.00	87.866	68.835	1.000	23.000	72.000	203.000	1245.00
MI	19	1	TURNBACK	2:SINGLE	U	1433	0	116244.00	81.119	71.701	1.000	20.000	60.000	214.000	796.00
MI	20	1	EXCHANGE	1:DOUBLE	D	1718	0	330417.00	192.327	285.028	1.000	21.000	132.000	507.000	5435.00
MI	20	1	EXCHANGE	1:DOUBLE	U	1641	0	302839.00	184.545	169.170	1.000	20.000	140.000	485.000	2175.00
MI	20	1	EXCHANGE	3:KNOCKOUT	D	46	0	10105.00	219.674	304.169	17.000	20.000	171.000	422.000	2039.00
MI	20	1	EXCHANGE	3:KNOCKOUT	U	27	0	5456.00	202.074	152.679	15.000	20.000	144.000	498.000	628.00
MI	20	1	EXCHANGE	2:SINGLE	D	418	0	50225.00	120.156	318.732	1.000	6.000	65.000	345.000	6035.00
MI	20	1	EXCHANGE	2:SINGLE	U	529	0	48366.00	91.429	116.250	1.000	5.000	54.000	292.000	1482.00
MI	20	1	EXCHANGE	5:OTHER	D	1	0	209.00	209.000	.	209.000	209.000	209.000	209.000	209.00
MI	20	1	EXCHANGE	4:JACKNIFE	D	28	0	6432.00	229.714	157.536	15.000	28.000	228.500	382.000	850.00
MI	20	1	EXCHANGE	4:JACKNIFE	U	39	0	6958.00	178.410	137.732	10.000	16.000	138.000	545.000	547.00
MI	20	1	FLY	1:DOUBLE	D	1207	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	20	1	FLY	1:DOUBLE	U	1109	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	20	1	FLY	3:KNOCKOUT	D	26	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	20	1	FLY	3:KNOCKOUT	U	22	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	20	1	FLY	2:SINGLE	D	496	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	20	1	FLY	2:SINGLE	U	600	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	20	1	FLY	4:JACKNIFE	D	18	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	20	1	FLY	4:JACKNIFE	U	28	0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00
MI	20	1	TURNBACK	1:DOUBLE	D	1433	0	311456.00	217.345	459.179	3.000	22.000	137.000	494.000	6195.00
MI	20	1	TURNBACK	1:DOUBLE	U	1412	0	264815.00	187.546	199.430	1.000	20.000	134.000	532.000	2239.00
MI	20	1	TURNBACK	3:KNOCKOUT	D	54	0	11824.00	218.963	161.589	15.000	18.000	168.000	542.000	812.00
MI	20	1	TURNBACK	3:KNOCKOUT	U	43	0	7332.00	170.512	108.878	24.000	30.000	149.000	371.000	485.00
MI	20	1	TURNBACK	2:SINGLE	D	399	0	51524.00	129.133	133.921	1.000	11.000	85.000	422.000	907.00
MI	20	1	TURNBACK	2:SINGLE	U	424	0	44759.00	105.564	126.032	2.000	10.000	66.000	343.000	1106.00
MI	20	1	TURNBACK	5:OTHER	D	3	0	703.00	234.333	339.753	19.000	19.000	58.000	626.000	626.00
MI	20	1	TURNBACK	4:JACKNIFE	D	40	0	6766.00	169.150	161.387	10.000	13.500	134.500	538.500	787.00
MI	20	1	TURNBACK	4:JACKNIFE	U	49	0	9462.00	193.102	184.197	16.000	25.000	137.000	546.000	1042.00
MI	21	1	EXCHANGE	1:DOUBLE	D	1775	0	300255.00	169.158	286.492	1.000	15.000	120.000	413.000	6206.00
MI	21	1	EXCHANGE	1:DOUBLE	U	1776	0	304304.00	171.342	266.851	1.000	15.000	125.000	403.000	5414.00
MI	21	1	EXCHANGE	3:KNOCKOUT	D	40	0	9123.00	228.075	369.869	6.000	13.000	157.000	554.500	2345.00
MI	21	1	EXCHANGE	3:KNOCKOUT	U	36	0	6447.00	179.083	146.817	2.000	7.000	138.500	507.000	748.00
MI	21	1	EXCHANGE	2:SINGLE	D	422	0	45289.00	107.320	118.509	1.000	7.000	71.000	320.000	946.00
MI	21	1	EXCHANGE	2:SINGLE	U	534	0	47892.00	89.685	153.722	1.000	5.000	60.000	270.000	2871.00

Summary Transit Statistics for Locks in Simulation Model 12:49 Friday, June 24, 2005 63
Wait Times (minutes from arrival to start of loackage) at Current Lockage by lockage type
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Wait Obs	Num Missing Values	Sum Mins Wait to Lock	Avg Mins Wait to Lock	Std Dev Wait to Lock	Smallest Wait Time to Lock	5th Pctile Wait to Lock	Median Wait to Lock	95th Pctile Wait to Lock	Largest Wait to Lock
MI	21	1	EXCHANGE	5:OTHER	D	3	0	434.00	144.667	135.537	45.000	45.000	90.000	299.00	299.00
MI	21	1	EXCHANGE	5:OTHER	U	4	0	490.00	122.500	107.742	35.000	35.000	90.000	275.00	275.00
MI	21	1	EXCHANGE	4:JACKNIFE	D	21	0	3204.00	152.571	110.552	11.000	33.000	112.000	343.00	417.00
MI	21	1	EXCHANGE	4:JACKNIFE	U	51	0	7681.00	150.608	114.385	5.000	14.000	140.000	385.00	430.00
MI	21	1	FLY	1:DOUBLE	D	1288	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	21	1	FLY	1:DOUBLE	U	1153	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	21	1	FLY	3:KNOCKOUT	D	31	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	21	1	FLY	3:KNOCKOUT	U	22	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	21	1	FLY	2:SINGLE	D	417	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	21	1	FLY	2:SINGLE	U	494	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	21	1	FLY	4:JACKNIFE	D	17	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	21	1	FLY	4:JACKNIFE	U	36	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	21	1	FLY	5:OTHER	D	1	0	0.00	0.000	.	0.000	0.000	0.000	0.00	0.00
MI	21	1	TURNBACK	1:DOUBLE	D	1470	0	247110.00	168.102	234.365	1.000	15.000	120.000	425.00	5005.00
MI	21	1	TURNBACK	1:DOUBLE	U	1364	0	254421.00	186.526	380.560	1.000	15.000	121.000	414.00	4995.00
MI	21	1	TURNBACK	3:KNOCKOUT	D	55	0	11633.00	211.509	159.095	10.000	16.000	160.000	512.00	636.00
MI	21	1	TURNBACK	3:KNOCKOUT	U	51	0	7698.00	150.941	98.908	1.000	18.000	130.000	348.00	472.00
MI	21	1	TURNBACK	2:SINGLE	D	449	0	53581.00	119.334	170.146	1.000	8.000	87.000	377.00	2817.00
MI	21	1	TURNBACK	2:SINGLE	U	438	0	39296.00	89.717	95.445	1.000	8.000	60.000	304.00	610.00
MI	21	1	TURNBACK	5:OTHER	U	4	0	527.00	131.750	138.394	29.000	29.000	81.000	336.00	336.00
MI	21	1	TURNBACK	4:JACKNIFE	D	40	0	11384.00	284.600	626.201	12.000	44.500	128.000	705.00	4025.00
MI	21	1	TURNBACK	4:JACKNIFE	U	38	0	5839.00	153.658	103.665	10.000	15.000	127.500	377.00	422.00
MI	22	1	EXCHANGE	1:DOUBLE	D	1972	0	530481.00	269.007	236.860	1.000	34.000	195.500	765.00	1518.00
MI	22	1	EXCHANGE	1:DOUBLE	U	1901	0	517098.00	272.014	272.569	1.000	32.000	193.000	763.00	3805.00
MI	22	1	EXCHANGE	5:OTHER	U	1	0	81.00	81.000	.	81.000	81.000	81.000	81.00	81.00
MI	22	1	EXCHANGE	3:KNOCKOUT	D	54	0	16816.00	311.407	268.340	25.000	30.000	249.000	858.00	1147.00
MI	22	1	EXCHANGE	3:KNOCKOUT	U	35	0	8883.00	253.800	152.133	2.000	25.000	216.000	557.00	576.00
MI	22	1	EXCHANGE	2:SINGLE	D	373	0	58067.00	155.676	176.624	1.000	12.000	92.000	516.00	1057.00
MI	22	1	EXCHANGE	2:SINGLE	U	492	0	65483.00	133.096	152.723	1.000	10.000	87.000	434.00	1101.00
MI	22	1	EXCHANGE	5:OTHER	D	1	0	213.00	213.000	.	213.000	213.000	213.000	213.00	213.00
MI	22	1	EXCHANGE	4:JACKNIFE	D	34	0	10926.00	321.353	233.801	5.000	34.000	268.000	782.00	937.00
MI	22	1	EXCHANGE	4:JACKNIFE	U	59	0	16772.00	284.271	246.769	16.000	25.000	227.000	807.00	1418.00
MI	22	1	FLY	1:DOUBLE	D	934	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	22	1	FLY	1:DOUBLE	U	775	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	22	1	FLY	5:OTHER	D	1	0	0.00	0.000	.	0.000	0.000	0.000	0.00	0.00
MI	22	1	FLY	3:KNOCKOUT	D	25	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	22	1	FLY	3:KNOCKOUT	U	16	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	22	1	FLY	2:SINGLE	D	246	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	22	1	FLY	2:SINGLE	U	297	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	22	1	FLY	4:JACKNIFE	D	12	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	22	1	FLY	4:JACKNIFE	U	24	0	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	22	1	TURNBACK	1:DOUBLE	D	1640	0	407202.00	248.294	240.342	1.000	22.500	169.000	788.00	1482.00
MI	22	1	TURNBACK	1:DOUBLE	U	1651	0	495138.00	299.902	334.471	1.000	23.000	201.000	940.00	3427.00
MI	22	1	TURNBACK	5:OTHER	D	1	0	37.00	37.000	.	37.000	37.000	37.000	37.00	37.00
MI	22	1	TURNBACK	3:KNOCKOUT	D	68	0	21982.00	323.265	310.600	4.000	20.000	208.000	940.00	1445.00
MI	22	1	TURNBACK	3:KNOCKOUT	U	63	0	19313.00	306.556	294.676	1.000	57.000	240.000	1027.00	1408.00
MI	22	1	TURNBACK	2:SINGLE	D	411	0	75940.00	184.769	225.256	1.000	7.000	103.000	677.00	1477.00
MI	22	1	TURNBACK	2:SINGLE	U	390	0	59712.00	153.108	205.307	1.000	8.000	96.000	484.00	2215.00
MI	22	1	TURNBACK	5:OTHER	D	2	0	261.00	130.500	102.530	58.000	58.000	130.500	203.00	203.00
MI	22	1	TURNBACK	5:OTHER	U	2	0	129.00	64.500	6.364	60.000	60.000	64.500	69.00	69.00

Summary Transit Statistics for Locks in Simulation Model 12:49 Friday, June 24, 2005 64
Wait Times (minutes from arrival to start of loackage) at Current Lockage by lockage type
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Wait Obs	Num Missing Values	Sum Mins Wait to Lock	Avg Mins Wait to Lock	Std Dev Wait to Lock	Smallest Wait Time to Lock	5th Pctile Wait to Lock	Median Wait to Lock	95th Pctile Wait to Lock	Largest Wait to Lock
MI	22	1	TURNBACK	4:JACKNIFE	D	32	0	8887	277.719	294.589	11.000	28.000	200.000	1129.00	1425.00
MI	22	1	TURNBACK	4:JACKNIFE	U	53	0	13154	248.189	179.484	1.000	35.000	204.000	567.00	868.00
MI	24	1	EXCHANGE	1:DOUBLE	D	1982	0	533120	268.981	261.741	2.000	25.000	185.000	843.00	1830.00
MI	24	1	EXCHANGE	1:DOUBLE	U	1946	0	531621	273.187	423.043	2.000	30.000	185.500	755.00	14650.00
MI	24	1	EXCHANGE	3:KNOCKOUT	D	68	0	17652	259.588	205.049	20.000	55.000	201.500	686.00	898.00
MI	24	1	EXCHANGE	3:KNOCKOUT	U	48	0	12520	260.833	217.238	40.000	50.000	225.000	808.00	1020.00
MI	24	1	EXCHANGE	2:SINGLE	D	378	0	41164	108.899	138.003	2.000	5.000	68.000	422.00	1052.00
MI	24	1	EXCHANGE	2:SINGLE	U	495	0	51736	104.517	113.686	1.000	7.000	76.000	340.00	862.00
MI	24	1	EXCHANGE	5:OTHER	D	2	0	286	143.000	148.492	38.000	38.000	143.000	248.00	248.00
MI	24	1	EXCHANGE	5:OTHER	U	1	0	25	25.000	.	25.000	25.000	25.000	25.00	25.00
MI	24	1	EXCHANGE	4:JACKNIFE	D	31	0	9053	292.032	202.185	40.000	40.000	265.000	738.00	738.00
MI	24	1	EXCHANGE	4:JACKNIFE	U	56	0	16728	298.714	244.862	10.000	10.000	257.000	703.00	1530.00
MI	24	1	FLY	1:DOUBLE	D	909	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	24	1	FLY	1:DOUBLE	U	848	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	24	1	FLY	3:KNOCKOUT	D	35	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	24	1	FLY	3:KNOCKOUT	U	22	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	24	1	FLY	2:SINGLE	D	313	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	24	1	FLY	2:SINGLE	U	347	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	24	1	FLY	5:OTHER	D	1	0	0	0.000	.	0.000	0.000	0.000	0.00	0.00
MI	24	1	FLY	5:OTHER	U	1	0	0	0.000	.	0.000	0.000	0.000	0.00	0.00
MI	24	1	FLY	4:JACKNIFE	D	10	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	24	1	FLY	4:JACKNIFE	U	26	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	24	1	TURNBACK	1:DOUBLE	D	1826	0	496550	271.933	280.618	1.000	20.000	180.000	950.00	2022.00
MI	24	1	TURNBACK	1:DOUBLE	U	1663	0	532731	320.343	655.769	2.000	20.000	185.000	1035.00	16396.00
MI	24	1	TURNBACK	3:KNOCKOUT	D	85	0	25496	299.953	252.705	10.000	31.000	215.000	800.00	1083.00
MI	24	1	TURNBACK	3:KNOCKOUT	U	54	0	13453	249.130	238.652	9.000	25.000	179.500	795.00	1095.00
MI	24	1	TURNBACK	2:SINGLE	D	370	0	52191	141.057	168.160	2.000	9.000	96.500	457.00	1524.00
MI	24	1	TURNBACK	2:SINGLE	U	428	0	57625	134.638	259.083	2.000	10.000	79.500	410.00	3205.00
MI	24	1	TURNBACK	5:OTHER	U	1	0	938	938.000	.	938.000	938.000	938.000	938.00	938.00
MI	24	1	TURNBACK	4:JACKNIFE	D	36	0	9608	266.889	200.548	25.000	69.000	218.500	831.00	939.00
MI	24	1	TURNBACK	4:JACKNIFE	U	54	0	15579	288.500	286.413	20.000	22.000	194.000	959.00	1355.00
MI	25	1	EXCHANGE	1:DOUBLE	D	2313	0	475076	205.394	234.558	1.000	11.000	139.000	611.00	2483.00
MI	25	1	EXCHANGE	1:DOUBLE	U	1784	0	463626	259.880	413.815	1.000	20.000	178.000	720.00	12360.00
MI	25	1	EXCHANGE	3:KNOCKOUT	D	74	0	14760	199.459	198.298	1.000	5.000	117.000	607.00	837.00
MI	25	1	EXCHANGE	3:KNOCKOUT	U	56	0	17286	308.679	399.565	6.000	10.000	225.500	848.00	2524.00
MI	25	1	EXCHANGE	2:SINGLE	D	437	0	48602	111.217	166.575	1.000	5.000	61.000	387.00	1950.00
MI	25	1	EXCHANGE	2:SINGLE	U	717	0	60945	85.000	121.879	1.000	4.000	45.000	316.00	1490.00
MI	25	1	EXCHANGE	4:JACKNIFE	D	28	0	5027	179.536	183.930	3.000	25.000	101.000	535.00	767.00
MI	25	1	EXCHANGE	4:JACKNIFE	U	60	0	13107	218.450	216.285	5.000	18.000	137.000	692.00	990.00
MI	25	1	FLY	1:DOUBLE	D	697	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	25	1	FLY	1:DOUBLE	U	809	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	25	1	FLY	5:OTHER	D	1	0	0	0.000	.	0.000	0.000	0.000	0.00	0.00
MI	25	1	FLY	3:KNOCKOUT	D	24	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	25	1	FLY	3:KNOCKOUT	U	25	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	25	1	FLY	2:SINGLE	D	401	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	25	1	FLY	2:SINGLE	U	804	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	25	1	FLY	4:JACKNIFE	D	11	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	25	1	FLY	4:JACKNIFE	U	22	0	0	0.000	0.000	0.000	0.000	0.000	0.00	0.00
MI	25	1	TURNBACK	1:DOUBLE	D	1728	0	389758	225.554	260.004	1.000	19.000	153.000	650.00	2429.00
MI	25	1	TURNBACK	1:DOUBLE	U	1881	0	703950	374.242	946.105	1.000	25.000	183.000	1046.00	13477.00

Summary Transit Statistics for Locks in Simulation Model 12:49 Friday, June 24, 2005 65
Wait Times (minutes from arrival to start of loackage) at Current Lockage by lockage type
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Wait Obs	Num Missing Values	Sum Mins Wait to Lock	Avg Mins Wait to Lock	Std Dev Wait to Lock	Smallest Wait Time to Lock	5th Pctile Wait to Lock	Median Wait to Lock	95th Pctile Wait to Lock	Largest Wait to Lock
MI	25	1	TURNBACK	3:KNOCKOUT	D	95	0	29257.00	307.97	368.92	9.000	21.000	244.000	832.00	2562.00
MI	25	1	TURNBACK	3:KNOCKOUT	U	50	0	12179.00	243.58	212.64	9.000	14.000	183.000	696.00	1132.00
MI	25	1	TURNBACK	2:SINGLE	D	430	0	57918.00	134.69	148.77	1.000	8.000	79.500	475.00	830.00
MI	25	1	TURNBACK	2:SINGLE	U	516	0	55824.00	108.19	170.20	1.000	8.000	61.000	367.00	2437.00
MI	25	1	TURNBACK	4:JACKNIFE	D	39	0	10379.00	266.13	236.15	15.000	38.000	185.000	669.00	1230.00
MI	25	1	TURNBACK	4:JACKNIFE	U	57	0	18121.00	317.91	459.60	15.000	18.000	181.000	1530.00	2665.00
MI	26	1	EXCHANGE	1:DOUBLE	D	1	0	30.00	30.00	.	30.000	30.000	30.000	30.00	30.00
MI	26	1	EXCHANGE	2:SINGLE	D	2588	0	222783.00	86.08	157.24	1.000	15.000	55.000	205.00	2747.00
MI	26	1	EXCHANGE	2:SINGLE	U	3431	0	304897.00	88.87	139.59	1.000	15.000	60.000	222.00	2882.00
MI	26	1	EXCHANGE	5:OTHER	U	1	0	202.00	202.00	.	202.000	202.000	202.000	202.00	202.00
MI	26	1	FLY	1:DOUBLE	D	1	0	0.00	0.00	.	0.000	0.000	0.000	0.00	0.00
MI	26	1	FLY	3:KNOCKOUT	D	1	0	0.00	0.00	.	0.000	0.000	0.000	0.00	0.00
MI	26	1	FLY	2:SINGLE	D	4511	0	0.00	0.00	0.00	0.000	0.000	0.000	0.00	0.00
MI	26	1	FLY	2:SINGLE	U	3778	0	0.00	0.00	0.00	0.000	0.000	0.000	0.00	0.00
MI	26	1	FLY	5:OTHER	D	3	0	0.00	0.00	0.00	0.000	0.000	0.000	0.00	0.00
MI	26	1	FLY	5:OTHER	U	1	0	0.00	0.00	.	0.000	0.000	0.000	0.00	0.00
MI	26	1	TURNBACK	3:KNOCKOUT	U	1	0	73.00	73.00	.	73.000	73.000	73.000	73.00	73.00
MI	26	1	TURNBACK	2:SINGLE	D	3186	0	290361.00	91.14	185.28	1.000	16.000	59.000	219.00	3849.00
MI	26	1	TURNBACK	2:SINGLE	U	3089	0	265498.00	85.95	138.52	1.000	15.000	58.000	210.00	3145.00
MI	26	1	TURNBACK	5:OTHER	D	1	0	75.00	75.00	.	75.000	75.000	75.000	75.00	75.00
MI	26	1	TURNBACK	5:OTHER	U	1	0	16.00	16.00	.	16.000	16.000	16.000	16.00	16.00
MI	26	4	EXCHANGE	1:DOUBLE	D	318	0	343987.00	1081.72	779.92	10.000	114.000	908.000	2661.00	3889.00
MI	26	4	EXCHANGE	1:DOUBLE	U	316	0	348634.00	1103.27	781.71	20.000	98.000	945.500	2509.00	4165.00
MI	26	4	EXCHANGE	3:KNOCKOUT	D	34	0	23162.00	681.24	840.64	10.000	23.000	455.500	2973.00	3011.00
MI	26	4	EXCHANGE	3:KNOCKOUT	U	42	0	18264.00	434.86	627.33	1.000	5.000	46.500	1773.00	2051.00
MI	26	4	EXCHANGE	2:SINGLE	D	273	0	29165.00	106.83	261.99	1.000	5.000	20.000	590.00	2201.00
MI	26	4	EXCHANGE	2:SINGLE	U	329	0	35766.00	108.71	286.65	1.000	3.000	18.000	499.00	2385.00
MI	26	4	EXCHANGE	4:JACKNIFE	D	9	0	6338.00	704.22	676.80	27.000	27.000	355.000	1837.00	1837.00
MI	26	4	EXCHANGE	4:JACKNIFE	U	22	0	18190.00	826.82	691.42	20.000	30.000	626.000	2200.00	2362.00
MI	26	4	EXCHANGE	5:OTHER	D	1	0	42.00	42.00	.	42.000	42.000	42.000	42.00	42.00
MI	26	4	FLY	1:DOUBLE	D	30	0	0.00	0.00	0.00	0.000	0.000	0.000	0.00	0.00
MI	26	4	FLY	1:DOUBLE	U	14	0	0.00	0.00	0.00	0.000	0.000	0.000	0.00	0.00
MI	26	4	FLY	5:OTHER	U	1	0	0.00	0.00	.	0.000	0.000	0.000	0.00	0.00
MI	26	4	FLY	3:KNOCKOUT	D	120	0	0.00	0.00	0.00	0.000	0.000	0.000	0.00	0.00
MI	26	4	FLY	3:KNOCKOUT	U	138	0	0.00	0.00	0.00	0.000	0.000	0.000	0.00	0.00
MI	26	4	FLY	2:SINGLE	D	2491	0	0.00	0.00	0.00	0.000	0.000	0.000	0.00	0.00
MI	26	4	FLY	2:SINGLE	U	2350	0	0.00	0.00	0.00	0.000	0.000	0.000	0.00	0.00
MI	26	4	FLY	5:OTHER	D	2	0	0.00	0.00	0.00	0.000	0.000	0.000	0.00	0.00
MI	26	4	FLY	5:OTHER	U	4	0	0.00	0.00	0.00	0.000	0.000	0.000	0.00	0.00
MI	26	4	FLY	4:JACKNIFE	D	11	0	0.00	0.00	0.00	0.000	0.000	0.000	0.00	0.00
MI	26	4	FLY	4:JACKNIFE	U	21	0	0.00	0.00	0.00	0.000	0.000	0.000	0.00	0.00
MI	26	4	FLY	5:OTHER	U	3	0	0.00	0.00	0.00	0.000	0.000	0.000	0.00	0.00
MI	26	4	TURNBACK	1:DOUBLE	D	366	0	410693.00	1122.11	936.46	8.000	82.000	845.500	3153.00	3979.00
MI	26	4	TURNBACK	1:DOUBLE	U	418	0	424448.00	1015.43	828.53	6.000	56.000	831.500	2611.00	4168.00
MI	26	4	TURNBACK	3:KNOCKOUT	D	58	0	33169.00	571.88	794.18	5.000	9.000	215.000	2949.00	3170.00
MI	26	4	TURNBACK	3:KNOCKOUT	U	40	0	18981.00	474.53	576.95	10.000	18.000	260.500	1760.50	2275.00
MI	26	4	TURNBACK	2:SINGLE	D	345	0	54537.00	158.08	429.68	1.000	5.000	26.000	853.00	3164.00
MI	26	4	TURNBACK	2:SINGLE	U	265	0	38070.00	143.66	357.22	1.000	5.000	27.000	710.00	2616.00
MI	26	4	TURNBACK	5:OTHER	D	2	0	36.00	18.00	8.49	12.000	12.000	18.000	24.00	24.00
MI	26	4	TURNBACK	5:OTHER	U	1	0	12.00	12.00	.	12.000	12.000	12.000	12.00	12.00

Summary Transit Statistics for Locks in Simulation Model 12:49 Friday, June 24, 2005 66
Wait Times (minutes from arrival to start of loackage) at Current Lockage by lockage type
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Wait Obs	Num Missing Values	Sum Mins Wait to Lock	Avg Mins Wait to Lock	Std Dev Wait to Lock	Smallest Wait Time to Lock	5th Pctile Wait to Lock	Median Wait to Lock	95th Pctile Wait to Lock	Largest Wait to Lock
MI	26	4	TURNBACK	4:JACKNIFE	D	11	0	11386.00	1035.09	1134.67	24.000	24.000	818.00	3283.00	3283.00
MI	26	4	TURNBACK	4:JACKNIFE	U	27	0	23726.00	878.74	828.19	9.000	18.000	607.00	2636.00	2726.00
MI	26	4	TURNBACK	5:OTHER	U	1	0	290.00	290.00	.	290.000	290.000	290.00	290.00	290.00
MI	27	1	EXCHANGE	3:KNOCKOUT	D	1	0	70.00	70.00	.	70.000	70.000	70.00	70.00	70.00
MI	27	1	EXCHANGE	3:KNOCKOUT	U	2	0	61.00	30.50	3.54	28.000	28.000	30.50	33.00	33.00
MI	27	1	EXCHANGE	2:SINGLE	D	3979	0	339953.00	85.44	100.80	1.000	10.000	57.00	240.00	1632.00
MI	27	1	EXCHANGE	2:SINGLE	U	4318	0	328389.00	76.05	90.84	1.000	8.000	50.00	224.00	2144.00
MI	27	1	EXCHANGE	5:OTHER	D	2	0	152.00	76.00	62.23	32.000	32.000	76.00	120.00	120.00
MI	27	1	FLY	3:KNOCKOUT	U	4	0	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.00
MI	27	1	FLY	2:SINGLE	D	4742	0	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.00
MI	27	1	FLY	2:SINGLE	U	4689	0	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.00
MI	27	1	FLY	5:OTHER	D	4	0	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.00
MI	27	1	FLY	5:OTHER	U	3	0	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.00
MI	27	1	TURNBACK	5:OTHER	U	1	0	54.00	54.00	.	54.000	54.000	54.00	54.00	54.00
MI	27	1	TURNBACK	3:KNOCKOUT	U	6	0	757.00	126.17	107.22	42.000	42.000	92.00	320.00	320.00
MI	27	1	TURNBACK	2:SINGLE	D	4811	0	478489.00	99.46	100.95	1.000	15.000	69.00	284.00	1467.00
MI	27	1	TURNBACK	2:SINGLE	U	4794	0	405249.00	84.53	101.93	1.000	13.000	57.00	244.00	2177.00
MI	27	1	TURNBACK	5:OTHER	D	1	0	88.00	88.00	.	88.000	88.000	88.00	88.00	88.00
MI	27	1	TURNBACK	5:OTHER	U	2	0	239.00	119.50	96.87	51.000	51.000	119.50	188.00	188.00
MI	27	4	EXCHANGE	1:DOUBLE	D	41	0	30956.00	755.02	495.01	11.000	48.000	831.00	1673.00	1816.00
MI	27	4	EXCHANGE	1:DOUBLE	U	45	0	34463.00	765.84	588.50	40.000	70.000	688.00	1847.00	2047.00
MI	27	4	EXCHANGE	3:KNOCKOUT	D	36	0	7578.00	210.50	434.88	2.000	2.000	40.50	1428.00	1669.00
MI	27	4	EXCHANGE	3:KNOCKOUT	U	27	0	5383.00	199.37	400.95	1.000	2.000	17.00	1412.00	1502.00
MI	27	4	EXCHANGE	2:SINGLE	D	332	0	14424.00	43.45	144.16	1.000	2.000	19.00	97.00	1553.00
MI	27	4	EXCHANGE	2:SINGLE	U	338	0	16514.00	48.86	186.54	1.000	2.000	17.00	99.00	1913.00
MI	27	4	EXCHANGE	5:OTHER	D	2	0	67.00	33.50	21.92	18.000	18.000	33.50	49.00	49.00
MI	27	4	EXCHANGE	4:JACKNIFE	D	4	0	3074.00	768.50	1105.33	12.000	12.000	325.50	2411.00	2411.00
MI	27	4	EXCHANGE	4:JACKNIFE	U	5	0	768.00	153.60	171.05	61.000	61.000	82.00	458.00	458.00
MI	27	4	FLY	1:DOUBLE	D	9	0	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.00
MI	27	4	FLY	1:DOUBLE	U	13	0	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.00
MI	27	4	FLY	5:OTHER	U	1	0	0.00	0.00	.	0.000	0.000	0.00	0.00	0.00
MI	27	4	FLY	3:KNOCKOUT	D	143	0	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.00
MI	27	4	FLY	3:KNOCKOUT	U	153	0	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.00
MI	27	4	FLY	2:SINGLE	D	2374	0	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.00
MI	27	4	FLY	2:SINGLE	U	2146	0	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.00
MI	27	4	FLY	5:OTHER	D	1	0	0.00	0.00	.	0.000	0.000	0.00	0.00	0.00
MI	27	4	FLY	5:OTHER	U	2	0	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.00
MI	27	4	FLY	4:JACKNIFE	D	15	0	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.00
MI	27	4	FLY	4:JACKNIFE	U	9	0	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.00
MI	27	4	TURNBACK	1:DOUBLE	D	58	0	42383.00	730.74	591.80	49.000	81.000	529.50	2001.00	2520.00
MI	27	4	TURNBACK	1:DOUBLE	U	37	0	25072.00	677.62	640.11	35.000	37.000	498.00	1764.00	2104.00
MI	27	4	TURNBACK	3:KNOCKOUT	D	33	0	8410.00	254.85	550.79	6.000	7.000	60.00	2140.00	2214.00
MI	27	4	TURNBACK	3:KNOCKOUT	U	47	0	5455.00	116.06	226.68	12.000	15.000	39.00	417.00	1129.00
MI	27	4	TURNBACK	2:SINGLE	D	307	0	14756.00	48.07	139.83	1.000	2.000	23.00	109.00	1523.00
MI	27	4	TURNBACK	2:SINGLE	U	233	0	9869.00	42.36	101.98	1.000	3.000	21.00	146.00	1390.00
MI	27	4	TURNBACK	4:JACKNIFE	D	3	0	3487.00	1162.33	235.75	891.000	891.000	1279.00	1317.00	1317.00
MI	27	4	TURNBACK	4:JACKNIFE	U	9	0	1709.00	189.89	299.83	12.000	12.000	73.00	958.00	958.00
MI	51	1	EXCHANGE	3:KNOCKOUT	D	249	0	2447.00	9.83	10.89	1.000	2.000	8.00	24.00	120.00
MI	51	1	EXCHANGE	3:KNOCKOUT	U	139	0	1961.00	14.11	52.50	1.000	2.000	6.00	30.00	610.00
MI	51	1	EXCHANGE	2:SINGLE	D	245	0	10981.00	44.82	551.42	1.000	2.000	8.00	23.00	8640.00

Summary Transit Statistics for Locks in Simulation Model 12:49 Friday, June 24, 2005 67
Wait Times (minutes from arrival to start of loackage) at Current Lockage by lockage type
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Wait Obs	Num Missing Values	Sum Mins Wait to Lock	Avg Mins Wait to Lock	Std Dev Wait to Lock	Smallest Wait Time to Lock	5th Pctile Wait to Lock	Median Wait to Lock	95th Pctile Wait to Lock	Largest Wait to Lock
MI	51	1	EXCHANGE	2:SINGLE	U	91	0	9756.00	107.209	905.201	1.0000	1.0000	4.0000	34.000	8640.00
MI	51	1	FLY	5:OTHER	D	8	0	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.000	0.00
MI	51	1	FLY	5:OTHER	U	7	0	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.000	0.00
MI	51	1	FLY	3:KNOCKOUT	D	1773	0	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.000	0.00
MI	51	1	FLY	3:KNOCKOUT	U	1995	0	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.000	0.00
MI	51	1	FLY	2:SINGLE	D	1954	0	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.000	0.00
MI	51	1	FLY	2:SINGLE	U	2176	0	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.000	0.00
MI	51	1	FLY	5:OTHER	U	1	0	0.00	0.000	.	0.0000	0.0000	0.0000	0.000	0.00
MI	51	1	TURNBACK	3:KNOCKOUT	D	95	0	1610.00	16.947	9.336	1.0000	3.0000	16.0000	33.000	50.00
MI	51	1	TURNBACK	3:KNOCKOUT	U	52	0	1057.00	20.327	76.270	1.0000	2.0000	6.5000	46.000	555.00
MI	51	1	TURNBACK	2:SINGLE	D	149	0	2070.00	13.893	21.344	1.0000	1.0000	10.0000	28.000	243.00
MI	51	1	TURNBACK	2:SINGLE	U	44	0	502.00	11.409	8.128	1.0000	1.0000	11.0000	29.000	35.00
MI	51	1	TURNBACK	5:OTHER	D	1	0	30.00	30.000	.	30.0000	30.0000	30.0000	30.000	30.00
MI	52	1	EXCHANGE	3:KNOCKOUT	D	96	0	759.00	7.906	6.182	1.0000	1.0000	6.0000	21.000	30.00
MI	52	1	EXCHANGE	3:KNOCKOUT	U	196	0	3504.00	17.878	61.082	1.0000	3.0000	10.0000	31.000	680.00
MI	52	1	EXCHANGE	2:SINGLE	D	121	0	1228.00	10.149	15.989	1.0000	1.0000	7.0000	25.000	120.00
MI	52	1	EXCHANGE	2:SINGLE	U	216	0	3210.00	14.861	73.139	1.0000	2.0000	9.0000	21.000	1080.00
MI	52	1	FLY	5:OTHER	D	1	0	0.00	0.000	.	0.0000	0.0000	0.0000	0.000	0.00
MI	52	1	FLY	3:KNOCKOUT	D	1999	0	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.000	0.00
MI	52	1	FLY	3:KNOCKOUT	U	1851	0	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.000	0.00
MI	52	1	FLY	2:SINGLE	D	1075	0	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.000	0.00
MI	52	1	FLY	2:SINGLE	U	874	0	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.000	0.00
MI	52	1	FLY	5:OTHER	D	2	0	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.000	0.00
MI	52	1	FLY	5:OTHER	U	4	0	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.000	0.00
MI	52	1	TURNBACK	3:KNOCKOUT	D	54	0	1878.00	34.778	112.029	1.0000	3.0000	14.0000	40.000	600.00
MI	52	1	TURNBACK	3:KNOCKOUT	U	144	0	3145.00	21.840	55.966	2.0000	5.0000	14.0000	37.000	609.00
MI	52	1	TURNBACK	2:SINGLE	D	57	0	1109.00	19.456	31.750	2.0000	3.0000	14.0000	40.000	225.00
MI	52	1	TURNBACK	2:SINGLE	U	122	0	1845.00	15.123	9.221	1.0000	5.0000	14.0000	27.000	83.00
MI	55	1	EXCHANGE	1:DOUBLE	D	406	0	18855.00	46.441	55.902	1.0000	2.0000	25.0000	137.000	460.00
MI	55	1	EXCHANGE	1:DOUBLE	U	304	0	20470.00	67.336	63.177	1.0000	4.0000	55.0000	171.000	438.00
MI	55	1	EXCHANGE	3:KNOCKOUT	D	21	0	1108.00	52.762	71.203	3.0000	4.0000	15.0000	193.000	230.00
MI	55	1	EXCHANGE	3:KNOCKOUT	U	12	0	536.00	44.667	36.837	5.0000	5.0000	32.5000	107.000	107.00
MI	55	1	EXCHANGE	2:SINGLE	D	85	0	2937.00	34.553	43.578	1.0000	1.0000	17.0000	107.000	270.00
MI	55	1	EXCHANGE	2:SINGLE	U	196	0	8469.00	43.209	56.520	1.0000	2.0000	20.0000	130.000	524.00
MI	55	1	EXCHANGE	5:OTHER	U	2	0	132.00	66.000	86.267	5.0000	5.0000	66.0000	127.000	127.00
MI	55	1	EXCHANGE	4:JACKNIFE	D	16	0	754.00	47.125	61.421	4.0000	4.0000	23.0000	247.000	247.00
MI	55	1	EXCHANGE	4:JACKNIFE	U	3	0	142.00	47.333	35.019	7.0000	7.0000	65.0000	70.000	70.00
MI	55	1	FLY	1:DOUBLE	D	834	0	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.000	0.00
MI	55	1	FLY	1:DOUBLE	U	790	0	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.000	0.00
MI	55	1	FLY	3:KNOCKOUT	D	66	0	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.000	0.00
MI	55	1	FLY	3:KNOCKOUT	U	51	0	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.000	0.00
MI	55	1	FLY	2:SINGLE	D	358	0	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.000	0.00
MI	55	1	FLY	2:SINGLE	U	633	0	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.000	0.00
MI	55	1	FLY	5:OTHER	D	1	0	0.00	0.000	.	0.0000	0.0000	0.0000	0.000	0.00
MI	55	1	FLY	4:JACKNIFE	D	61	0	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.000	0.00
MI	55	1	FLY	4:JACKNIFE	U	8	0	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.000	0.00
MI	55	1	FLY	5:OTHER	D	1	0	0.00	0.000	.	0.0000	0.0000	0.0000	0.000	0.00
MI	55	1	TURNBACK	1:DOUBLE	D	298	0	12105.00	40.621	50.901	1.0000	5.0000	21.0000	160.000	342.00
MI	55	1	TURNBACK	1:DOUBLE	U	290	0	17817.00	61.438	59.702	1.0000	8.0000	40.0000	195.000	336.00
MI	55	1	TURNBACK	3:KNOCKOUT	D	44	0	3486.00	79.227	52.545	5.0000	12.0000	75.0000	203.000	247.00

Summary Transit Statistics for Locks in Simulation Model 12:49 Friday, June 24, 2005 68
Wait Times (minutes from arrival to start of loackage) at Current Lockage by lockage type
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Wait Obs	Num Missing Values	Sum Mins Wait to Lock	Avg Mins Wait to Lock	Std Dev Wait to Lock	Smallest Wait Time to Lock	5th Pctile Wait to Lock	Median Wait to Lock	95th Pctile Wait to Lock	Largest Wait to Lock
MI	55	1	TURNBACK	3:KNOCKOUT	U	19	0	1029.00	54.158	40.9678	6.000	6.000	60.000	160.000	160.000
MI	55	1	TURNBACK	2:SINGLE	D	114	0	6295.00	55.219	52.2197	2.000	5.000	41.500	145.000	361.000
MI	55	1	TURNBACK	2:SINGLE	U	139	0	6532.00	46.993	51.3377	2.000	6.000	22.000	155.000	264.000
MI	55	1	TURNBACK	5:OTHER	D	1	0	208.00	208.000	.	208.000	208.000	208.000	208.000	208.000
MI	55	1	TURNBACK	4:JACKNIFE	D	20	0	1318.00	65.900	51.0881	4.000	5.500	63.000	172.000	201.000
MI	55	1	TURNBACK	4:JACKNIFE	U	6	0	356.00	59.333	31.2197	20.000	20.000	71.000	99.000	99.000

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 69
Total Lockage Time in Lock
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Total Time Obs	Num Missing Values	Sum Mins Lock Time	Avg Mins Lock Time	Std Dev Lock Time	Smallest Lock Time	5th Pctile Lock Time	Median Lock Time	95th Pctile Lock Time	Largest Lock Time
CH	01	1	EXCHANGE	3:KNOCKOUT	D	1	0	10.00	10.000	.	10.000	10.000	10.000	10.000	10.000
CH	01	1	EXCHANGE	2:SINGLE	D	12941	0	130637.00	10.095	2.863	4.000	8.000	10.000	15.000	70.000
CH	01	1	EXCHANGE	2:SINGLE	U	12750	0	129196.00	10.133	2.967	4.000	8.000	10.000	16.000	70.000
CH	01	1	EXCHANGE	5:OTHER	U	1	0	9.00	9.000	.	9.000	9.000	9.000	9.000	9.000
CH	01	1	FLY	2:SINGLE	D	59	0	638.00	10.814	3.076	4.000	8.000	10.000	17.000	20.000
CH	01	1	FLY	2:SINGLE	U	73	0	776.00	10.630	3.151	8.000	8.000	10.000	19.000	23.000
CH	01	1	TURNBACK	2:SINGLE	D	11346	0	119183.00	10.504	3.392	4.000	8.000	10.000	17.000	48.000
CH	01	1	TURNBACK	2:SINGLE	U	11833	0	123728.00	10.456	3.346	4.000	8.000	10.000	18.000	41.000
CH	01	1	TURNBACK	5:OTHER	U	1	0	9.00	9.000	.	9.000	9.000	9.000	9.000	9.000
IL	01	1	EXCHANGE	2:SINGLE	D	474	0	13370.00	28.207	9.169	4.000	17.000	25.000	45.000	70.000
IL	01	1	EXCHANGE	2:SINGLE	U	365	0	11791.00	32.304	13.860	5.000	18.000	30.000	57.000	140.000
IL	01	1	FLY	2:SINGLE	D	4093	0	130019.00	31.766	10.491	4.000	16.000	30.000	50.000	145.000
IL	01	1	FLY	2:SINGLE	U	4126	0	150771.00	36.542	13.681	4.000	17.000	35.000	60.000	135.000
IL	01	1	FLY	5:OTHER	D	1	0	47.00	47.000	.	47.000	47.000	47.000	47.000	47.000
IL	01	1	FLY	5:OTHER	U	1	0	41.00	41.000	.	41.000	41.000	41.000	41.000	41.000
IL	01	1	FLY	5:OTHER	D	3	0	24.00	8.000	6.928	4.000	4.000	4.000	16.000	16.000
IL	01	1	TURNBACK	2:SINGLE	D	434	0	11934.00	27.498	8.112	4.000	18.000	25.000	43.000	60.000
IL	01	1	TURNBACK	2:SINGLE	U	494	0	15293.00	30.957	10.223	5.000	20.000	30.000	49.000	83.000
IL	01	1	TURNBACK	5:OTHER	D	1	0	26.00	26.000	.	26.000	26.000	26.000	26.000	26.000
IL	02	1	EXCHANGE	1:DOUBLE	D	466	0	81604.00	175.116	31.972	101.000	125.000	175.000	230.000	300.000
IL	02	1	EXCHANGE	1:DOUBLE	U	517	0	103243.00	199.696	44.209	109.000	140.000	196.000	260.000	754.000
IL	02	1	EXCHANGE	5:OTHER	D	4	0	321.00	80.250	26.986	57.000	57.000	74.000	116.000	116.000
IL	02	1	EXCHANGE	3:KNOCKOUT	D	601	0	40805.00	67.895	18.115	35.000	44.000	65.000	100.000	175.000
IL	02	1	EXCHANGE	3:KNOCKOUT	U	571	0	43772.00	76.658	18.457	31.000	53.000	74.000	109.000	162.000
IL	02	1	EXCHANGE	2:SINGLE	D	613	0	30647.00	49.995	16.126	20.000	28.000	48.000	80.000	127.000
IL	02	1	EXCHANGE	2:SINGLE	U	589	0	32608.00	55.362	21.167	15.000	28.000	52.000	92.000	217.000
IL	02	1	EXCHANGE	5:OTHER	U	1	0	170.00	170.000	.	170.000	170.000	170.000	170.000	170.000
IL	02	1	EXCHANGE	4:JACKNIFE	D	81	0	8288.00	102.321	24.541	50.000	65.000	100.000	143.000	156.000
IL	02	1	EXCHANGE	4:JACKNIFE	U	130	0	14722.00	113.246	25.563	62.000	77.000	109.500	155.000	201.000
IL	02	1	EXCHANGE	5:OTHER	D	1	0	19.00	19.000	.	19.000	19.000	19.000	19.000	19.000
IL	02	1	FLY	1:DOUBLE	D	558	0	95653.00	171.421	50.407	85.000	120.000	168.000	230.000	970.000
IL	02	1	FLY	1:DOUBLE	U	645	0	122407.00	189.778	37.486	113.000	135.000	186.000	255.000	450.000
IL	02	1	FLY	5:OTHER	D	3	0	227.00	75.667	18.148	59.000	59.000	73.000	95.000	95.000
IL	02	1	FLY	5:OTHER	U	5	0	527.00	105.400	38.063	66.000	66.000	97.000	150.000	150.000
IL	02	1	FLY	3:KNOCKOUT	D	810	0	51372.00	63.422	15.937	25.000	42.000	60.000	94.000	158.000
IL	02	1	FLY	3:KNOCKOUT	U	751	0	53679.00	71.477	16.426	31.000	50.000	69.000	103.000	200.000
IL	02	1	FLY	2:SINGLE	D	1017	0	45667.00	44.904	15.169	17.000	26.000	42.000	71.000	150.000
IL	02	1	FLY	2:SINGLE	U	870	0	44090.00	50.678	23.680	22.000	29.000	48.000	75.000	530.000
IL	02	1	FLY	5:OTHER	D	2	0	314.00	157.000	130.108	65.000	65.000	157.000	249.000	249.000
IL	02	1	FLY	4:JACKNIFE	D	99	0	9692.00	97.899	23.669	53.000	64.000	96.000	148.000	160.000
IL	02	1	FLY	4:JACKNIFE	U	120	0	12653.00	105.442	21.911	50.000	76.000	103.000	150.500	175.000
IL	02	1	FLY	5:OTHER	U	1	0	180.00	180.000	.	180.000	180.000	180.000	180.000	180.000
IL	02	1	TURNBACK	1:DOUBLE	D	417	0	69954.00	167.755	34.202	85.000	118.000	165.000	226.000	360.000
IL	02	1	TURNBACK	1:DOUBLE	U	359	0	67484.00	187.978	35.611	109.000	137.000	183.000	252.000	309.000
IL	02	1	TURNBACK	5:OTHER	D	1	0	180.00	180.000	.	180.000	180.000	180.000	180.000	180.000
IL	02	1	TURNBACK	5:OTHER	U	3	0	300.00	100.000	34.771	63.000	63.000	105.000	132.000	132.000
IL	02	1	TURNBACK	3:KNOCKOUT	D	567	0	34962.00	61.661	16.690	29.000	40.000	60.000	92.000	138.000
IL	02	1	TURNBACK	3:KNOCKOUT	U	621	0	45141.00	72.691	18.099	26.000	52.000	70.000	106.000	247.000
IL	02	1	TURNBACK	2:SINGLE	D	614	0	28792.00	46.893	22.588	22.000	28.000	43.000	70.000	473.000
IL	02	1	TURNBACK	2:SINGLE	U	607	0	33279.00	54.825	17.451	20.000	33.000	51.000	86.000	172.000

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 70
Total Lockage Time in Lock
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Total Time Obs	Num Missing Values	Sum Mins Lock Time	Avg Mins Lock Time	Std Dev Lock Time	Smallest Lock Time	5th Pctile Lock Time	Median Lock Time	95th Pctile Lock Time	Largest Lock Time
IL	02	1	TURNBACK	5:OTHER	D	1	0	142.00	142.000	.	142.000	142.000	142.000	142.000	142.00
IL	02	1	TURNBACK	5:OTHER	U	1	0	71.00	71.000	.	71.000	71.000	71.000	71.000	71.00
IL	02	1	TURNBACK	4:JACKNIFE	D	79	0	7785.00	98.544	25.266	36.000	62.000	95.000	134.000	176.00
IL	02	1	TURNBACK	4:JACKNIFE	U	134	0	14347.00	107.067	24.184	65.000	75.000	103.500	159.000	205.00
IL	03	1	EXCHANGE	1:DOUBLE	D	553	0	90561.00	163.763	32.121	93.000	117.000	163.000	210.000	517.00
IL	03	1	EXCHANGE	1:DOUBLE	U	526	0	100895.00	191.816	31.682	83.000	143.000	190.000	245.000	312.00
IL	03	1	EXCHANGE	5:OTHER	D	1	0	85.00	85.000	.	85.000	85.000	85.000	85.000	85.00
IL	03	1	EXCHANGE	5:OTHER	U	2	0	223.00	111.500	28.991	91.000	91.000	111.500	132.000	132.00
IL	03	1	EXCHANGE	3:KNOCKOUT	D	536	0	32895.00	61.371	16.885	25.000	40.000	58.500	94.000	145.00
IL	03	1	EXCHANGE	3:KNOCKOUT	U	501	0	37738.00	75.325	16.702	38.000	54.000	73.000	105.000	180.00
IL	03	1	EXCHANGE	2:SINGLE	D	716	0	31088.00	43.419	14.168	17.000	26.000	41.000	68.000	145.00
IL	03	1	EXCHANGE	2:SINGLE	U	629	0	33525.00	53.299	17.893	19.000	29.000	51.000	83.000	206.00
IL	03	1	EXCHANGE	4:JACKNIFE	D	85	0	8440.00	99.294	20.698	55.000	68.000	99.000	140.000	161.00
IL	03	1	EXCHANGE	4:JACKNIFE	U	113	0	13346.00	118.106	45.993	64.000	84.000	110.000	152.000	556.00
IL	03	1	FLY	1:DOUBLE	D	707	0	111778.00	158.102	29.261	88.000	114.000	156.000	205.000	315.00
IL	03	1	FLY	1:DOUBLE	U	671	0	122418.00	182.441	34.609	106.000	137.000	180.000	227.000	572.00
IL	03	1	FLY	5:OTHER	D	2	0	152.00	76.000	26.870	57.000	57.000	76.000	95.000	95.00
IL	03	1	FLY	5:OTHER	U	6	0	632.00	105.333	37.147	70.000	70.000	99.000	175.000	175.00
IL	03	1	FLY	3:KNOCKOUT	D	729	0	41225.00	56.550	17.483	28.000	39.000	53.000	85.000	301.00
IL	03	1	FLY	3:KNOCKOUT	U	630	0	42671.00	67.732	20.093	32.000	45.000	65.500	91.000	387.00
IL	03	1	FLY	2:SINGLE	D	971	0	37607.00	38.730	12.790	19.000	25.000	36.000	58.000	225.00
IL	03	1	FLY	2:SINGLE	U	927	0	43250.00	46.656	13.911	18.000	30.000	45.000	72.000	157.00
IL	03	1	FLY	5:OTHER	D	1	0	24.00	24.000	.	24.000	24.000	24.000	24.000	24.00
IL	03	1	FLY	4:JACKNIFE	D	95	0	9039.00	95.147	23.029	54.000	58.000	94.000	127.000	203.00
IL	03	1	FLY	4:JACKNIFE	U	125	0	12494.00	99.952	18.362	65.000	75.000	97.000	133.000	150.00
IL	03	1	TURNBACK	1:DOUBLE	D	303	0	47302.00	156.112	30.485	95.000	107.000	155.000	201.000	340.00
IL	03	1	TURNBACK	1:DOUBLE	U	482	0	87328.00	181.178	30.647	49.000	136.000	180.000	232.000	310.00
IL	03	1	TURNBACK	5:OTHER	D	2	0	156.00	78.000	7.071	73.000	73.000	78.000	83.000	83.00
IL	03	1	TURNBACK	5:OTHER	U	1	0	163.00	163.000	.	163.000	163.000	163.000	163.000	163.00
IL	03	1	TURNBACK	3:KNOCKOUT	D	503	0	27946.00	55.559	14.701	27.000	37.000	53.000	82.000	154.00
IL	03	1	TURNBACK	3:KNOCKOUT	U	623	0	43892.00	70.453	19.713	33.000	50.000	67.000	100.000	266.00
IL	03	1	TURNBACK	2:SINGLE	D	691	0	29121.00	42.143	14.676	8.000	26.000	39.000	67.000	220.00
IL	03	1	TURNBACK	2:SINGLE	U	587	0	30513.00	51.981	15.502	21.000	30.000	50.000	80.000	171.00
IL	03	1	TURNBACK	5:OTHER	U	1	0	44.00	44.000	.	44.000	44.000	44.000	44.000	44.00
IL	03	1	TURNBACK	4:JACKNIFE	D	61	0	5496.00	90.098	20.927	43.000	59.000	89.000	120.000	142.00
IL	03	1	TURNBACK	4:JACKNIFE	U	143	0	15557.00	108.790	21.565	61.000	80.000	105.000	150.000	180.00
IL	04	1	EXCHANGE	1:DOUBLE	D	552	0	77157.00	139.777	27.560	71.000	100.000	138.000	189.000	290.00
IL	04	1	EXCHANGE	1:DOUBLE	U	550	0	85956.00	156.284	27.613	60.000	114.000	155.000	202.000	237.00
IL	04	1	EXCHANGE	5:OTHER	D	2	0	182.00	91.000	29.698	70.000	70.000	91.000	112.000	112.00
IL	04	1	EXCHANGE	5:OTHER	U	1	0	105.00	105.000	.	105.000	105.000	105.000	105.000	105.00
IL	04	1	EXCHANGE	3:KNOCKOUT	D	420	0	23197.00	55.231	15.165	25.000	36.000	53.000	82.000	152.00
IL	04	1	EXCHANGE	3:KNOCKOUT	U	449	0	27741.00	61.784	15.124	30.000	42.000	60.000	85.000	211.00
IL	04	1	EXCHANGE	2:SINGLE	D	463	0	17103.00	36.940	13.254	10.000	21.000	35.000	56.000	149.00
IL	04	1	EXCHANGE	2:SINGLE	U	385	0	17731.00	46.055	125.822	10.000	23.000	38.000	60.000	2492.00
IL	04	1	EXCHANGE	5:OTHER	D	1	0	95.00	95.000	.	95.000	95.000	95.000	95.000	95.00
IL	04	1	EXCHANGE	4:JACKNIFE	D	105	0	9378.00	89.314	16.854	39.000	65.000	88.000	119.000	146.00
IL	04	1	EXCHANGE	4:JACKNIFE	U	118	0	11134.00	94.356	16.688	51.000	70.000	93.000	125.000	170.00
IL	04	1	FLY	1:DOUBLE	D	953	0	131839.00	138.341	42.200	75.000	95.000	135.000	185.000	1085.00
IL	04	1	FLY	1:DOUBLE	U	1000	0	150726.00	150.726	25.675	57.000	110.000	151.000	190.500	308.00
IL	04	1	FLY	5:OTHER	D	1	0	45.00	45.000	.	45.000	45.000	45.000	45.000	45.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 71
Total Lockage Time in Lock
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Total Time Obs	Num Missing Values	Sum Mins Lock Time	Avg Mins Lock Time	Std Dev Lock Time	Smallest Lock Time	5th Pctile Lock Time	Median Lock Time	95th Pctile Lock Time	Largest Lock Time
IL	04	1	FLY	5:OTHER	U	2	0	169.00	84.500	55.8614	45.000	45.000	84.500	124.000	124.00
IL	04	1	FLY	3:KNOCKOUT	D	659	0	34875.00	52.921	13.7725	25.000	35.000	52.000	76.000	120.00
IL	04	1	FLY	3:KNOCKOUT	U	686	0	39801.00	58.019	12.4719	30.000	40.000	56.000	80.000	145.00
IL	04	1	FLY	2:SINGLE	D	855	0	29546.00	34.557	10.7078	8.000	20.000	34.000	50.000	125.00
IL	04	1	FLY	2:SINGLE	U	818	0	30458.00	37.235	10.4435	15.000	21.000	35.000	55.000	116.00
IL	04	1	FLY	4:JACKNIFE	D	142	0	13282.00	93.535	23.1813	45.000	62.000	92.000	130.000	243.00
IL	04	1	FLY	4:JACKNIFE	U	178	0	16769.00	94.208	35.0371	45.000	65.000	90.000	124.000	376.00
IL	04	1	FLY	5:OTHER	D	1	0	30.00	30.000	.	30.000	30.000	30.000	30.000	30.00
IL	04	1	TURNBACK	1:DOUBLE	D	485	0	64182.00	132.334	29.8818	34.000	86.000	132.000	175.000	282.00
IL	04	1	TURNBACK	1:DOUBLE	U	498	0	74466.00	149.530	29.9429	75.000	105.000	148.000	200.000	403.00
IL	04	1	TURNBACK	5:OTHER	D	1	0	70.00	70.000	.	70.000	70.000	70.000	70.000	70.00
IL	04	1	TURNBACK	5:OTHER	U	3	0	317.00	105.667	27.0617	84.000	84.000	97.000	136.000	136.00
IL	04	1	TURNBACK	3:KNOCKOUT	D	474	0	23302.00	49.160	13.2651	24.000	34.000	46.000	76.000	110.00
IL	04	1	TURNBACK	3:KNOCKOUT	U	448	0	24746.00	55.237	11.6886	28.000	40.000	54.000	75.000	145.00
IL	04	1	TURNBACK	2:SINGLE	D	506	0	17520.00	34.625	11.5738	16.000	21.000	32.000	55.000	125.00
IL	04	1	TURNBACK	2:SINGLE	U	423	0	16828.00	39.783	15.8010	13.000	25.000	37.000	60.000	200.00
IL	04	1	TURNBACK	4:JACKNIFE	D	109	0	9621.00	88.266	21.9185	45.000	58.000	87.000	117.000	207.00
IL	04	1	TURNBACK	4:JACKNIFE	U	155	0	13947.00	89.981	17.3985	53.000	65.000	89.000	125.000	143.00
IL	05	1	EXCHANGE	1:DOUBLE	D	656	0	101936.00	155.390	36.0373	73.000	106.000	153.000	205.000	530.00
IL	05	1	EXCHANGE	1:DOUBLE	U	783	0	135777.00	173.406	34.3597	82.000	125.000	172.000	223.000	590.00
IL	05	1	EXCHANGE	5:OTHER	D	3	0	351.00	117.000	13.7477	102.000	102.000	120.000	129.000	129.00
IL	05	1	EXCHANGE	5:OTHER	U	1	0	105.00	105.000	.	105.000	105.000	105.000	105.000	105.00
IL	05	1	EXCHANGE	3:KNOCKOUT	D	350	0	21689.00	61.969	15.8395	32.000	40.000	60.000	90.000	154.00
IL	05	1	EXCHANGE	3:KNOCKOUT	U	388	0	29035.00	74.832	17.6252	39.000	49.000	75.000	105.000	130.00
IL	05	1	EXCHANGE	2:SINGLE	D	468	0	21155.00	45.203	23.1144	17.000	25.000	43.000	69.000	422.00
IL	05	1	EXCHANGE	2:SINGLE	U	468	0	25503.00	54.494	69.7422	20.000	28.000	50.000	80.000	1520.00
IL	05	1	EXCHANGE	5:OTHER	D	2	0	277.00	138.500	26.1630	120.000	120.000	138.500	157.000	157.00
IL	05	1	EXCHANGE	4:JACKNIFE	D	128	0	12914.00	100.891	26.4713	52.000	68.000	99.000	137.000	270.00
IL	05	1	EXCHANGE	4:JACKNIFE	U	172	0	18899.00	109.878	22.9595	60.000	77.000	109.000	147.000	187.00
IL	05	1	FLY	1:DOUBLE	D	950	0	150702.00	158.634	31.8116	82.000	115.000	159.000	200.000	697.00
IL	05	1	FLY	1:DOUBLE	U	873	0	146687.00	168.026	27.8203	97.000	130.000	165.000	210.000	389.00
IL	05	1	FLY	5:OTHER	D	1	0	117.00	117.000	.	117.000	117.000	117.000	117.000	117.00
IL	05	1	FLY	3:KNOCKOUT	D	458	0	31241.00	68.212	17.9808	35.000	45.000	65.000	100.000	208.00
IL	05	1	FLY	3:KNOCKOUT	U	391	0	28815.00	73.696	17.6745	40.000	51.000	72.000	97.000	205.00
IL	05	1	FLY	2:SINGLE	D	715	0	32867.00	45.968	21.9108	19.000	25.000	45.000	70.000	495.00
IL	05	1	FLY	2:SINGLE	U	617	0	31763.00	51.480	16.5715	10.000	30.000	50.000	79.000	240.00
IL	05	1	FLY	4:JACKNIFE	D	122	0	12205.00	100.041	22.6939	60.000	71.000	97.000	135.000	241.00
IL	05	1	FLY	4:JACKNIFE	U	138	0	14620.00	105.942	19.9348	55.000	75.000	107.000	140.000	195.00
IL	05	1	TURNBACK	1:DOUBLE	D	620	0	91881.00	148.195	39.7956	73.000	103.500	145.000	193.500	565.00
IL	05	1	TURNBACK	1:DOUBLE	U	602	0	93730.00	155.698	28.3774	62.000	117.000	153.000	201.000	389.00
IL	05	1	TURNBACK	5:OTHER	U	1	0	105.00	105.000	.	105.000	105.000	105.000	105.000	105.00
IL	05	1	TURNBACK	3:KNOCKOUT	D	394	0	22022.00	55.893	14.1983	27.000	36.000	55.000	81.000	148.00
IL	05	1	TURNBACK	3:KNOCKOUT	U	393	0	24803.00	63.112	14.9006	33.000	45.000	60.000	94.000	130.00
IL	05	1	TURNBACK	2:SINGLE	D	508	0	20478.00	40.311	15.0581	18.000	23.000	38.000	65.000	185.00
IL	05	1	TURNBACK	2:SINGLE	U	469	0	22124.00	47.173	14.8482	17.000	30.000	45.000	74.000	155.00
IL	05	1	TURNBACK	5:OTHER	D	1	0	90.00	90.000	.	90.000	90.000	90.000	90.000	90.00
IL	05	1	TURNBACK	5:OTHER	U	1	0	112.00	112.000	.	112.000	112.000	112.000	112.000	112.00
IL	05	1	TURNBACK	4:JACKNIFE	D	102	0	9330.00	91.471	17.7550	51.000	64.000	90.000	120.000	145.00
IL	05	1	TURNBACK	4:JACKNIFE	U	169	0	16278.00	96.320	21.5275	55.000	67.000	92.000	140.000	176.00
IL	06	1	EXCHANGE	1:DOUBLE	D	722	0	103255.00	143.012	28.0308	45.000	99.000	141.000	190.000	330.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 72
Total Lockage Time in Lock
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Total Time Obs	Num Missing Values	Sum Mins Lock Time	Avg Mins Lock Time	Std Dev Lock Time	Smallest Lock Time	5th Pctile Lock Time	Median Lock Time	95th Pctile Lock Time	Largest Lock Time
IL	06	1	EXCHANGE	1:DOUBLE	U	693	0	106257.00	153.329	30.0262	73.000	108.000	152.000	202.000	371.000
IL	06	1	EXCHANGE	3:KNOCKOUT	D	297	0	17569.00	59.155	19.5067	25.000	38.000	55.000	89.000	222.000
IL	06	1	EXCHANGE	3:KNOCKOUT	U	333	0	21007.00	63.084	15.7633	31.000	42.000	62.000	92.000	148.000
IL	06	1	EXCHANGE	2:SINGLE	D	524	0	20209.00	38.567	17.9434	8.000	19.000	37.000	65.000	235.000
IL	06	1	EXCHANGE	2:SINGLE	U	491	0	21083.00	42.939	24.7003	9.000	20.000	40.000	66.000	230.000
IL	06	1	EXCHANGE	4:JACKNIFE	D	97	0	9207.00	94.918	21.2312	50.000	67.000	93.000	128.000	212.000
IL	06	1	EXCHANGE	4:JACKNIFE	U	141	0	13571.00	96.248	17.5162	50.000	71.000	96.000	122.000	163.000
IL	06	1	FLY	1:DOUBLE	D	1207	0	164720.00	136.471	29.2609	74.000	96.000	134.000	185.000	405.000
IL	06	1	FLY	1:DOUBLE	U	1117	0	160526.00	143.712	28.3990	84.000	104.000	141.000	190.000	347.000
IL	06	1	FLY	5:OTHER	D	1	0	93.00	93.000	.	93.000	93.000	93.000	93.000	93.000
IL	06	1	FLY	5:OTHER	U	3	0	264.00	88.000	37.6431	45.000	45.000	104.000	115.000	115.000
IL	06	1	FLY	3:KNOCKOUT	D	483	0	26625.00	55.124	20.9737	26.000	36.000	53.000	82.000	381.000
IL	06	1	FLY	3:KNOCKOUT	U	472	0	27237.00	57.706	14.5386	34.000	40.000	55.000	81.000	150.000
IL	06	1	FLY	2:SINGLE	D	995	0	33804.00	33.974	16.1228	12.000	18.000	31.000	57.000	240.000
IL	06	1	FLY	2:SINGLE	U	1009	0	36083.00	35.761	20.5818	12.000	19.000	32.000	58.000	377.000
IL	06	1	FLY	5:OTHER	D	2	0	128.00	64.000	48.0833	30.000	30.000	64.000	98.000	98.000
IL	06	1	FLY	5:OTHER	U	1	0	167.00	167.000	.	167.000	167.000	167.000	167.000	167.000
IL	06	1	FLY	4:JACKNIFE	D	146	0	13553.00	92.829	39.5042	51.000	60.000	88.000	123.000	447.000
IL	06	1	FLY	4:JACKNIFE	U	167	0	15423.00	92.353	16.2648	49.000	67.000	92.000	124.000	147.000
IL	06	1	FLY	5:OTHER	D	1	0	92.00	92.000	.	92.000	92.000	92.000	92.000	92.000
IL	06	1	TURNBACK	1:DOUBLE	D	606	0	79743.00	131.589	27.6224	55.000	91.000	129.500	181.000	255.000
IL	06	1	TURNBACK	1:DOUBLE	U	701	0	96548.00	137.729	28.2815	70.000	98.000	135.000	187.000	346.000
IL	06	1	TURNBACK	5:OTHER	U	1	0	95.00	95.000	.	95.000	95.000	95.000	95.000	95.000
IL	06	1	TURNBACK	3:KNOCKOUT	D	382	0	19855.00	51.976	13.7990	24.000	35.000	50.000	77.000	146.000
IL	06	1	TURNBACK	3:KNOCKOUT	U	344	0	19254.00	55.971	15.8840	32.000	38.000	53.000	84.000	160.000
IL	06	1	TURNBACK	2:SINGLE	D	582	0	21484.00	36.914	23.1088	14.000	21.000	31.500	61.000	266.000
IL	06	1	TURNBACK	2:SINGLE	U	481	0	19900.00	41.372	28.5533	15.000	22.000	35.000	65.000	306.000
IL	06	1	TURNBACK	5:OTHER	U	2	0	104.00	52.000	36.7696	26.000	26.000	52.000	78.000	78.000
IL	06	1	TURNBACK	4:JACKNIFE	D	91	0	7953.00	87.396	41.7984	43.000	60.000	83.000	115.000	448.000
IL	06	1	TURNBACK	4:JACKNIFE	U	168	0	14900.00	88.690	16.7511	40.000	68.000	85.500	120.000	149.000
IL	06	1	TURNBACK	5:OTHER	U	1	0	86.00	86.000	.	86.000	86.000	86.000	86.000	86.000
IL	07	1	EXCHANGE	1:DOUBLE	D	953	0	119632.00	125.532	42.6385	61.000	88.000	120.000	173.000	717.000
IL	07	1	EXCHANGE	1:DOUBLE	U	936	0	116477.00	124.441	37.1792	58.000	79.000	120.000	177.000	701.000
IL	07	1	EXCHANGE	3:KNOCKOUT	D	154	0	9115.00	59.188	37.0664	29.000	32.000	55.000	85.000	475.000
IL	07	1	EXCHANGE	3:KNOCKOUT	U	272	0	16238.00	59.699	19.4715	27.000	37.000	58.000	92.000	235.000
IL	07	1	EXCHANGE	5:OTHER	D	12	0	80.00	6.667	6.9326	2.000	2.000	4.000	25.000	25.000
IL	07	1	EXCHANGE	5:OTHER	U	12	0	61.00	5.083	3.1467	4.000	4.000	4.000	15.000	15.000
IL	07	1	EXCHANGE	5:OTHER	D	2	0	8.00	4.000	0.0000	4.000	4.000	4.000	4.000	4.000
IL	07	1	EXCHANGE	5:OTHER	U	2	0	8.00	4.000	0.0000	4.000	4.000	4.000	4.000	4.000
IL	07	1	EXCHANGE	2:SINGLE	D	522	0	16467.00	31.546	13.4321	10.000	15.000	29.000	55.000	99.000
IL	07	1	EXCHANGE	2:SINGLE	U	480	0	14738.00	30.704	16.1798	10.000	14.000	27.000	57.000	163.000
IL	07	1	EXCHANGE	5:OTHER	U	3	0	224.00	74.667	49.3390	19.000	19.000	92.000	113.000	113.000
IL	07	1	EXCHANGE	4:JACKNIFE	D	58	0	5327.00	91.845	22.7101	52.000	62.000	90.500	130.000	146.000
IL	07	1	EXCHANGE	4:JACKNIFE	U	117	0	11069.00	94.607	44.3081	42.000	58.000	87.000	151.000	476.000
IL	07	1	FLY	1:DOUBLE	D	753	0	97933.00	130.057	48.0645	52.000	91.000	124.000	177.000	784.000
IL	07	1	FLY	1:DOUBLE	U	752	0	98253.00	130.656	33.6295	65.000	90.000	130.000	175.000	540.000
IL	07	1	FLY	5:OTHER	D	1	0	4.00	4.000	.	4.000	4.000	4.000	4.000	4.000
IL	07	1	FLY	3:KNOCKOUT	D	156	0	8718.00	55.885	21.6628	4.000	30.000	54.000	90.000	170.000
IL	07	1	FLY	3:KNOCKOUT	U	234	0	14339.00	61.278	16.0060	4.000	37.000	60.000	90.000	120.000
IL	07	1	FLY	5:OTHER	D	2352	0	9762.00	4.151	1.5856	1.000	4.000	4.000	5.000	44.000

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 73
Total Lockage Time in Lock
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Total Time Obs	Num Missing Values	Sum Mins Lock Time	Avg Mins Lock Time	Std Dev Lock Time	Smallest Lock Time	5th Pctile Lock Time	Median Lock Time	95th Pctile Lock Time	Largest Lock Time
IL	07	1	FLY	5:OTHER	U	2397	0	9908.00	4.134	2.560	1.000	4.000	4.000	5.000	123.00
IL	07	1	FLY	5:OTHER	D	27	0	110.00	4.074	0.267	4.000	4.000	4.000	5.000	5.00
IL	07	1	FLY	5:OTHER	U	33	0	157.00	4.758	3.093	4.000	4.000	4.000	14.000	19.00
IL	07	1	FLY	2:SINGLE	D	694	0	21440.00	30.893	24.027	4.000	14.000	28.000	50.000	374.00
IL	07	1	FLY	2:SINGLE	U	548	0	17636.00	32.182	14.066	4.000	13.000	30.000	58.000	90.00
IL	07	1	FLY	4:JACKNIFE	D	60	0	5428.00	90.467	16.418	56.000	64.500	91.000	115.500	125.00
IL	07	1	FLY	4:JACKNIFE	U	86	0	8083.00	93.988	21.812	55.000	65.000	90.000	140.000	163.00
IL	07	1	TURNBACK	1:DOUBLE	D	968	0	115670.00	119.494	45.665	57.000	82.000	113.000	163.000	787.00
IL	07	1	TURNBACK	1:DOUBLE	U	867	0	94747.00	109.281	36.030	54.000	70.000	106.000	155.000	657.00
IL	07	1	TURNBACK	5:OTHER	D	1	0	60.00	60.000	.	60.000	60.000	60.000	60.000	60.00
IL	07	1	TURNBACK	3:KNOCKOUT	D	248	0	12798.00	51.605	16.882	25.000	33.000	47.000	84.000	169.00
IL	07	1	TURNBACK	3:KNOCKOUT	U	285	0	14154.00	49.663	28.609	21.000	32.000	45.000	74.000	473.00
IL	07	1	TURNBACK	5:OTHER	D	10	0	39.00	3.900	0.876	2.000	2.000	4.000	5.000	5.00
IL	07	1	TURNBACK	5:OTHER	U	10	0	49.00	4.900	1.287	4.000	4.000	4.500	8.000	8.00
IL	07	1	TURNBACK	2:SINGLE	D	543	0	16077.00	29.608	29.790	7.000	15.000	26.000	48.000	634.00
IL	07	1	TURNBACK	2:SINGLE	U	438	0	11392.00	26.009	11.141	6.000	12.000	24.000	49.000	114.00
IL	07	1	TURNBACK	5:OTHER	U	2	0	206.00	103.000	24.042	86.000	86.000	103.000	120.000	120.00
IL	07	1	TURNBACK	4:JACKNIFE	D	91	0	7218.00	79.319	16.124	45.000	51.000	80.000	103.000	127.00
IL	07	1	TURNBACK	4:JACKNIFE	U	120	0	9886.00	82.383	20.016	32.000	52.000	80.000	127.000	137.00
IL	07	1	TURNBACK	5:OTHER	D	1	0	12.00	12.000	.	12.000	12.000	12.000	12.000	12.00
IL	08	1	EXCHANGE	1:DOUBLE	D	1182	0	161946.00	137.010	55.608	25.000	87.000	130.000	200.000	978.00
IL	08	1	EXCHANGE	1:DOUBLE	U	1160	0	146173.00	126.011	42.036	19.000	77.000	123.500	175.000	645.00
IL	08	1	EXCHANGE	3:KNOCKOUT	D	177	0	12553.00	70.921	46.320	4.000	38.000	63.000	120.000	503.00
IL	08	1	EXCHANGE	3:KNOCKOUT	U	204	0	12498.00	61.265	23.171	4.000	30.000	60.000	110.000	145.00
IL	08	1	EXCHANGE	5:OTHER	D	117	0	553.00	4.726	2.635	4.000	4.000	4.000	6.000	28.00
IL	08	1	EXCHANGE	5:OTHER	U	86	0	372.00	4.326	1.111	4.000	4.000	4.000	5.000	12.00
IL	08	1	EXCHANGE	5:OTHER	D	9	0	47.00	5.222	2.587	4.000	4.000	4.000	12.000	12.00
IL	08	1	EXCHANGE	5:OTHER	U	67	0	546.00	8.149	8.652	4.000	4.000	5.000	25.000	65.00
IL	08	1	EXCHANGE	2:SINGLE	D	317	0	12993.00	40.987	45.915	4.000	16.000	35.000	73.000	694.00
IL	08	1	EXCHANGE	2:SINGLE	U	343	0	12082.00	35.224	22.178	7.000	14.000	32.000	65.000	310.00
IL	08	1	EXCHANGE	5:OTHER	D	1	0	107.00	107.000	.	107.000	107.000	107.000	107.000	107.00
IL	08	1	EXCHANGE	4:JACKNIFE	D	62	0	6323.00	101.984	31.031	45.000	60.000	99.000	153.000	218.00
IL	08	1	EXCHANGE	4:JACKNIFE	U	144	0	14044.00	97.528	30.035	26.000	56.000	95.000	145.000	245.00
IL	08	1	EXCHANGE	5:OTHER	D	1	0	19.00	19.000	.	19.000	19.000	19.000	19.000	19.00
IL	08	1	FLY	1:DOUBLE	D	383	0	52970.00	138.303	34.166	59.000	100.000	135.000	180.000	405.00
IL	08	1	FLY	1:DOUBLE	U	380	0	49005.00	128.961	27.442	65.000	90.500	128.000	175.000	248.00
IL	08	1	FLY	3:KNOCKOUT	D	91	0	5630.00	61.868	26.816	4.000	5.000	60.000	118.000	135.00
IL	08	1	FLY	3:KNOCKOUT	U	99	0	5865.00	59.242	20.314	4.000	32.000	55.000	100.000	119.00
IL	08	1	FLY	5:OTHER	D	2082	0	10191.00	4.895	2.317	1.000	4.000	5.000	6.000	55.00
IL	08	1	FLY	5:OTHER	U	1887	0	9328.00	4.943	3.128	1.000	4.000	5.000	7.000	65.00
IL	08	1	FLY	5:OTHER	D	54	0	241.00	4.463	1.526	4.000	4.000	4.000	5.000	15.00
IL	08	1	FLY	5:OTHER	U	241	0	1884.00	7.817	6.259	4.000	4.000	5.000	20.000	35.00
IL	08	1	FLY	2:SINGLE	D	177	0	6677.00	37.723	17.045	4.000	16.000	36.000	65.000	130.00
IL	08	1	FLY	2:SINGLE	U	149	0	5293.00	35.523	15.006	4.000	15.000	35.000	67.000	85.00
IL	08	1	FLY	5:OTHER	U	1	0	111.00	111.000	.	111.000	111.000	111.000	111.000	111.00
IL	08	1	FLY	4:JACKNIFE	D	32	0	3023.00	94.469	21.868	64.000	65.000	93.000	150.000	150.00
IL	08	1	FLY	4:JACKNIFE	U	66	0	6668.00	101.030	19.435	62.000	72.000	98.500	135.000	150.00
IL	08	1	TURNBACK	1:DOUBLE	D	1332	0	170155.00	127.744	54.048	14.000	75.000	122.000	188.000	1222.00
IL	08	1	TURNBACK	1:DOUBLE	U	1279	0	146829.00	114.800	214.741	21.000	64.000	105.000	164.000	7660.00
IL	08	1	TURNBACK	5:OTHER	D	1	0	87.00	87.000	.	87.000	87.000	87.000	87.000	87.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 74
Total Lockage Time in Lock
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Total Time Obs	Num Missing Values	Sum Mins Lock Time	Avg Mins Lock Time	Std Dev Lock Time	Smallest Lock Time	5th Pctile Lock Time	Median Lock Time	95th Pctile Lock Time	Largest Lock Time
IL	08	1	TURNBACK	3:KNOCKOUT	D	239	0	15210.00	63.640	97.3902	4.000	31.000	53.000	103.000	1487.00
IL	08	1	TURNBACK	3:KNOCKOUT	U	245	0	13198.00	53.869	21.5925	15.000	29.000	50.000	97.000	154.00
IL	08	1	TURNBACK	5:OTHER	D	133	0	615.00	4.624	3.2951	4.000	4.000	4.000	5.000	41.00
IL	08	1	TURNBACK	5:OTHER	U	87	0	434.00	4.989	6.4547	4.000	4.000	4.000	5.000	64.00
IL	08	1	TURNBACK	5:OTHER	D	6	0	25.00	4.167	0.4082	4.000	4.000	4.000	5.000	5.00
IL	08	1	TURNBACK	5:OTHER	U	64	0	437.00	6.828	3.9221	4.000	4.000	5.000	14.000	24.00
IL	08	1	TURNBACK	2:SINGLE	D	416	0	14998.00	36.053	28.5403	5.000	14.000	32.000	61.000	480.00
IL	08	1	TURNBACK	2:SINGLE	U	343	0	11142.00	32.484	41.7595	7.000	13.000	25.000	60.000	687.00
IL	08	1	TURNBACK	5:OTHER	D	1	0	275.00	275.000	.	275.000	275.000	275.000	275.000	275.00
IL	08	1	TURNBACK	5:OTHER	U	2	0	245.00	122.500	17.6777	110.000	110.000	122.500	135.000	135.00
IL	08	1	TURNBACK	4:JACKNIFE	D	101	0	8432.00	83.485	22.5857	24.000	55.000	80.000	122.000	171.00
IL	08	1	TURNBACK	4:JACKNIFE	U	124	0	10284.00	82.935	24.2989	31.000	45.000	80.000	130.000	165.00
KS	01	1	EXCHANGE	2:SINGLE	D	16	0	326.00	20.375	4.1453	15.000	15.000	20.500	30.000	30.00
KS	01	1	EXCHANGE	2:SINGLE	U	15	0	293.00	19.533	4.2740	14.000	14.000	20.000	29.000	29.00
KS	01	1	FLY	3:KNOCKOUT	D	4	0	88.00	22.000	6.6833	16.000	16.000	21.000	30.000	30.00
KS	01	1	FLY	2:SINGLE	D	1160	0	23755.00	20.478	5.2561	10.000	14.000	20.000	30.000	84.00
KS	01	1	FLY	2:SINGLE	U	1157	0	21839.00	18.876	4.5414	9.000	14.000	18.000	26.000	76.00
KS	01	1	FLY	5:OTHER	U	1	0	20.00	20.000	.	20.000	20.000	20.000	20.000	20.00
KS	01	1	TURNBACK	2:SINGLE	D	11	0	200.00	18.182	4.4681	14.000	14.000	18.000	30.000	30.00
KS	01	1	TURNBACK	2:SINGLE	U	9	0	138.00	15.333	3.9686	11.000	11.000	15.000	21.000	21.00
MI	01	1	EXCHANGE	5:OTHER	D	1	0	41.00	41.000	.	41.000	41.000	41.000	41.000	41.00
MI	01	1	EXCHANGE	5:OTHER	U	2	0	58.00	29.000	1.4142	28.000	28.000	29.000	30.000	30.00
MI	01	1	EXCHANGE	3:KNOCKOUT	D	110	0	3168.00	28.800	4.9969	12.000	20.000	29.500	38.000	42.00
MI	01	1	EXCHANGE	3:KNOCKOUT	U	120	0	3683.00	30.692	6.1382	17.000	20.000	30.000	42.500	50.00
MI	01	1	EXCHANGE	2:SINGLE	D	28	0	820.00	29.286	10.9370	14.000	16.000	29.000	41.000	75.00
MI	01	1	EXCHANGE	2:SINGLE	U	41	0	1106.00	26.976	7.9796	15.000	17.000	28.000	40.000	58.00
MI	01	1	FLY	1:DOUBLE	U	1	0	84.00	84.000	.	84.000	84.000	84.000	84.000	84.00
MI	01	1	FLY	5:OTHER	D	1	0	25.00	25.000	.	25.000	25.000	25.000	25.000	25.00
MI	01	1	FLY	5:OTHER	U	2	0	66.00	33.000	5.6569	29.000	29.000	33.000	37.000	37.00
MI	01	1	FLY	3:KNOCKOUT	D	1983	0	59765.00	30.139	5.2487	15.000	23.000	30.000	40.000	90.00
MI	01	1	FLY	3:KNOCKOUT	U	1970	0	61046.00	30.988	5.7060	14.000	25.000	30.000	40.000	90.00
MI	01	1	FLY	2:SINGLE	D	573	0	14597.00	25.475	6.7049	10.000	16.000	25.000	36.000	60.00
MI	01	1	FLY	2:SINGLE	U	523	0	13546.00	25.901	6.9848	9.000	18.000	25.000	35.000	87.00
MI	01	1	FLY	5:OTHER	D	2	0	50.00	25.000	0.0000	25.000	25.000	25.000	25.000	25.00
MI	01	1	TURNBACK	1:DOUBLE	D	1	0	89.00	89.000	.	89.000	89.000	89.000	89.000	89.00
MI	01	1	TURNBACK	5:OTHER	D	1	0	29.00	29.000	.	29.000	29.000	29.000	29.000	29.00
MI	01	1	TURNBACK	3:KNOCKOUT	D	81	0	2371.00	29.272	8.4009	14.000	20.000	30.000	37.000	92.00
MI	01	1	TURNBACK	3:KNOCKOUT	U	113	0	3466.00	30.673	5.3141	15.000	23.000	30.000	40.000	45.00
MI	01	1	TURNBACK	2:SINGLE	D	21	0	554.00	26.381	6.8006	10.000	20.000	26.000	38.000	40.00
MI	01	1	TURNBACK	2:SINGLE	U	23	0	575.00	25.000	5.1610	15.000	17.000	25.000	31.000	33.00
MI	02	1	EXCHANGE	1:DOUBLE	D	303	0	35268.00	116.396	23.0373	70.000	87.000	113.000	155.000	262.00
MI	02	1	EXCHANGE	1:DOUBLE	U	290	0	28869.00	99.548	17.5804	60.000	75.000	98.000	130.000	173.00
MI	02	1	EXCHANGE	5:OTHER	U	1	0	75.00	75.000	.	75.000	75.000	75.000	75.000	75.00
MI	02	1	EXCHANGE	3:KNOCKOUT	D	26	0	1823.00	70.115	32.8796	35.000	37.000	60.000	115.000	193.00
MI	02	1	EXCHANGE	3:KNOCKOUT	U	8	0	460.00	57.500	20.0428	35.000	35.000	53.000	95.000	95.00
MI	02	1	EXCHANGE	2:SINGLE	D	101	0	3166.00	31.347	11.6888	12.000	15.000	30.000	55.000	65.00
MI	02	1	EXCHANGE	2:SINGLE	U	179	0	6044.00	33.765	11.6262	10.000	18.000	31.000	55.000	65.00
MI	02	1	EXCHANGE	5:OTHER	U	2	0	190.00	95.000	25.4558	77.000	77.000	95.000	113.000	113.00
MI	02	1	EXCHANGE	4:JACKNIFE	D	19	0	1520.00	80.000	31.8015	35.000	35.000	87.000	150.000	150.00
MI	02	1	EXCHANGE	4:JACKNIFE	U	3	0	223.00	74.333	18.8768	58.000	58.000	70.000	95.000	95.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 75
Total Lockage Time in Lock
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Total Time Obs	Num Missing Values	Sum Mins Lock Time	Avg Mins Lock Time	Std Dev Lock Time	Smallest Lock Time	5th Pctile Lock Time	Median Lock Time	95th Pctile Lock Time	Largest Lock Time
MI	02	1	FLY	1:DOUBLE	D	756	0	92602.00	122.489	25.362	74.0000	94.0000	120.000	161.000	500.000
MI	02	1	FLY	1:DOUBLE	U	676	0	71896.00	106.355	17.197	65.0000	80.0000	105.000	135.000	205.000
MI	02	1	FLY	3:KNOCKOUT	D	67	0	4598.00	68.627	25.753	40.0000	45.0000	57.000	110.000	179.000
MI	02	1	FLY	3:KNOCKOUT	U	65	0	4045.00	62.231	20.462	35.0000	40.0000	57.000	100.000	171.000
MI	02	1	FLY	2:SINGLE	D	366	0	12835.00	35.068	11.610	10.0000	18.0000	35.000	55.000	80.000
MI	02	1	FLY	2:SINGLE	U	459	0	15839.00	34.508	10.473	10.0000	19.0000	33.000	54.000	74.000
MI	02	1	FLY	5:OTHER	D	2	0	142.00	71.000	50.912	35.0000	35.0000	71.000	107.000	107.000
MI	02	1	FLY	5:OTHER	U	4	0	235.00	58.750	33.510	25.0000	25.0000	60.000	90.000	90.000
MI	02	1	FLY	4:JACKNIFE	D	66	0	6387.00	96.773	71.508	50.0000	55.0000	85.000	135.000	635.000
MI	02	1	FLY	4:JACKNIFE	U	10	0	759.00	75.900	25.510	45.0000	45.0000	72.500	118.000	118.000
MI	02	1	TURNBACK	1:DOUBLE	D	315	0	34598.00	109.835	18.895	73.0000	82.0000	108.000	145.000	211.000
MI	02	1	TURNBACK	1:DOUBLE	U	269	0	24849.00	92.375	15.174	70.0000	70.0000	90.000	117.000	156.000
MI	02	1	TURNBACK	5:OTHER	D	1	0	85.00	85.000	.	85.0000	85.0000	85.000	85.000	85.000
MI	02	1	TURNBACK	3:KNOCKOUT	D	41	0	2424.00	59.122	31.547	25.0000	34.0000	50.000	120.000	165.000
MI	02	1	TURNBACK	3:KNOCKOUT	U	14	0	692.00	49.429	10.338	31.0000	31.0000	50.000	69.000	69.000
MI	02	1	TURNBACK	2:SINGLE	D	85	0	2507.00	29.494	12.230	12.0000	17.0000	29.000	53.000	105.000
MI	02	1	TURNBACK	2:SINGLE	U	171	0	4903.00	28.673	9.175	10.0000	17.0000	27.000	45.000	74.000
MI	02	1	TURNBACK	5:OTHER	U	5	0	670.00	134.000	107.592	71.0000	71.0000	92.000	325.000	325.000
MI	02	1	TURNBACK	4:JACKNIFE	D	19	0	1279.00	67.316	17.292	40.0000	40.0000	64.000	105.000	105.000
MI	02	1	TURNBACK	4:JACKNIFE	U	6	0	326.00	54.333	14.166	40.0000	40.0000	52.000	74.000	74.000
MI	03	1	EXCHANGE	1:DOUBLE	D	419	0	45104.00	107.647	31.677	31.0000	79.0000	106.000	139.000	616.000
MI	03	1	EXCHANGE	1:DOUBLE	U	287	0	28995.00	101.028	34.807	49.0000	68.0000	97.000	140.000	560.000
MI	03	1	EXCHANGE	5:OTHER	D	1	0	85.00	85.000	.	85.0000	85.0000	85.000	85.000	85.000
MI	03	1	EXCHANGE	3:KNOCKOUT	D	34	0	1790.00	52.647	12.468	33.0000	38.0000	48.500	77.000	95.000
MI	03	1	EXCHANGE	3:KNOCKOUT	U	17	0	951.00	55.941	19.334	31.0000	31.0000	46.000	102.000	102.000
MI	03	1	EXCHANGE	2:SINGLE	D	148	0	3913.00	26.439	13.737	9.0000	12.0000	22.000	55.000	80.000
MI	03	1	EXCHANGE	2:SINGLE	U	266	0	6955.00	26.147	14.477	9.0000	11.0000	23.000	55.000	88.000
MI	03	1	EXCHANGE	4:JACKNIFE	D	21	0	1640.00	78.095	16.198	52.0000	54.0000	78.000	100.000	111.000
MI	03	1	EXCHANGE	4:JACKNIFE	U	4	0	238.00	59.500	8.583	49.0000	49.0000	61.000	67.000	67.000
MI	03	1	FLY	1:DOUBLE	D	635	0	71438.00	112.501	21.473	58.0000	81.0000	111.000	147.000	245.000
MI	03	1	FLY	1:DOUBLE	U	628	0	65460.00	104.236	19.142	54.0000	75.0000	103.000	136.000	189.000
MI	03	1	FLY	5:OTHER	U	1	0	84.00	84.000	.	84.0000	84.0000	84.000	84.000	84.000
MI	03	1	FLY	3:KNOCKOUT	D	52	0	3282.00	63.115	23.361	39.0000	40.0000	54.000	118.000	133.000
MI	03	1	FLY	3:KNOCKOUT	U	49	0	2854.00	58.245	16.564	32.0000	35.0000	55.000	83.000	116.000
MI	03	1	FLY	2:SINGLE	D	457	0	12982.00	28.407	14.233	8.0000	12.0000	25.000	55.000	115.000
MI	03	1	FLY	2:SINGLE	U	799	0	21066.00	26.365	12.811	8.0000	12.0000	23.000	50.000	139.000
MI	03	1	FLY	5:OTHER	D	1	0	98.00	98.000	.	98.0000	98.0000	98.000	98.000	98.000
MI	03	1	FLY	4:JACKNIFE	D	50	0	3990.00	79.800	17.890	49.0000	55.0000	78.000	114.000	128.000
MI	03	1	FLY	4:JACKNIFE	U	12	0	948.00	79.000	16.404	56.0000	56.0000	78.500	104.000	104.000
MI	03	1	TURNBACK	1:DOUBLE	D	344	0	35488.00	103.163	21.525	24.0000	71.0000	103.000	134.000	202.000
MI	03	1	TURNBACK	1:DOUBLE	U	331	0	30711.00	92.782	17.946	57.0000	67.0000	91.000	125.000	161.000
MI	03	1	TURNBACK	3:KNOCKOUT	D	41	0	2129.00	51.927	18.662	19.0000	34.0000	48.000	85.000	119.000
MI	03	1	TURNBACK	3:KNOCKOUT	U	22	0	1184.00	53.818	18.733	37.0000	41.0000	51.500	68.000	132.000
MI	03	1	TURNBACK	2:SINGLE	D	133	0	3795.00	28.534	13.686	8.0000	11.0000	26.000	55.000	83.000
MI	03	1	TURNBACK	2:SINGLE	U	202	0	4749.00	23.510	10.027	8.0000	11.0000	23.000	44.000	65.000
MI	03	1	TURNBACK	4:JACKNIFE	D	31	0	2320.00	74.839	17.980	35.0000	47.0000	75.000	107.000	117.000
MI	03	1	TURNBACK	4:JACKNIFE	U	2	0	137.00	68.500	16.263	57.0000	57.0000	68.500	80.000	80.000
MI	04	1	EXCHANGE	1:DOUBLE	D	321	0	35552.00	110.754	20.748	70.0000	85.0000	109.000	140.000	235.000
MI	04	1	EXCHANGE	1:DOUBLE	U	341	0	33550.00	98.387	20.902	55.0000	70.0000	95.000	135.000	225.000
MI	04	1	EXCHANGE	3:KNOCKOUT	D	24	0	1460.00	60.833	16.121	35.0000	40.0000	55.000	95.000	95.000

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 76
Total Lockage Time in Lock
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Total Time Obs	Num Missing Values	Sum Mins Lock Time	Avg Mins Lock Time	Std Dev Lock Time	Smallest Lock Time	5th Pctile Lock Time	Median Lock Time	95th Pctile Lock Time	Largest Lock Time
MI	04	1	EXCHANGE	3:KNOCKOUT	U	17	0	915.00	53.824	15.4525	24.0000	24.0000	55.000	75.000	75.000
MI	04	1	EXCHANGE	2:SINGLE	D	87	0	3021.00	34.724	17.5736	14.0000	15.0000	30.000	65.000	110.000
MI	04	1	EXCHANGE	2:SINGLE	U	151	0	4547.00	30.113	12.4630	12.0000	15.0000	29.000	60.000	85.000
MI	04	1	EXCHANGE	4:JACKNIFE	D	16	0	1245.00	77.813	20.4099	40.0000	40.0000	75.000	125.000	125.000
MI	04	1	EXCHANGE	4:JACKNIFE	U	4	0	205.00	51.250	16.5202	40.0000	40.0000	45.000	75.000	75.000
MI	04	1	FLY	1:DOUBLE	D	926	0	106641.00	115.163	20.2805	70.0000	90.0000	110.000	155.000	220.000
MI	04	1	FLY	1:DOUBLE	U	768	0	80791.00	105.197	18.8659	65.0000	80.0000	105.000	140.000	205.000
MI	04	1	FLY	3:KNOCKOUT	D	74	0	4743.00	64.095	25.4968	30.0000	45.0000	57.000	115.000	195.000
MI	04	1	FLY	3:KNOCKOUT	U	46	0	2936.00	63.826	15.9378	35.0000	40.0000	64.000	95.000	96.000
MI	04	1	FLY	2:SINGLE	D	323	0	10416.00	32.248	14.3246	10.0000	15.0000	30.000	60.000	100.000
MI	04	1	FLY	2:SINGLE	U	493	0	16307.00	33.077	12.1963	10.0000	15.0000	32.000	55.000	90.000
MI	04	1	FLY	4:JACKNIFE	D	62	0	5840.00	94.194	31.4668	60.0000	65.0000	85.000	170.000	230.000
MI	04	1	FLY	4:JACKNIFE	U	6	0	515.00	85.833	18.8193	60.0000	60.0000	82.500	110.000	110.000
MI	04	1	TURNBACK	1:DOUBLE	D	286	0	30966.00	108.273	23.7264	65.0000	80.0000	105.000	143.000	284.000
MI	04	1	TURNBACK	1:DOUBLE	U	263	0	23355.00	88.802	15.7247	55.0000	65.0000	86.000	115.000	140.000
MI	04	1	TURNBACK	3:KNOCKOUT	D	35	0	1750.00	50.000	13.4032	14.0000	35.0000	49.000	78.000	80.000
MI	04	1	TURNBACK	3:KNOCKOUT	U	16	0	731.00	45.687	10.6064	30.0000	30.0000	45.000	70.000	70.000
MI	04	1	TURNBACK	2:SINGLE	D	103	0	2872.00	27.883	11.0279	10.0000	14.0000	25.000	50.000	65.000
MI	04	1	TURNBACK	2:SINGLE	U	149	0	3873.00	25.993	10.3926	10.0000	14.0000	25.000	45.000	70.000
MI	04	1	TURNBACK	5:OTHER	U	1	0	89.00	89.000	.	89.0000	89.0000	89.000	89.000	89.000
MI	04	1	TURNBACK	4:JACKNIFE	D	19	0	1387.00	73.000	12.8409	53.0000	53.0000	73.000	100.000	100.000
MI	04	1	TURNBACK	4:JACKNIFE	U	4	0	280.00	70.000	9.7980	58.0000	58.0000	70.000	82.000	82.000
MI	05	1	EXCHANGE	1:DOUBLE	D	289	0	28037.00	97.014	13.5239	68.0000	75.0000	95.000	118.000	150.000
MI	05	1	EXCHANGE	1:DOUBLE	U	245	0	25214.00	102.914	22.9593	60.0000	70.0000	100.000	150.000	174.000
MI	05	1	EXCHANGE	3:KNOCKOUT	D	18	0	987.00	54.833	18.8594	32.0000	32.0000	51.000	105.000	105.000
MI	05	1	EXCHANGE	3:KNOCKOUT	U	19	0	1245.00	65.526	24.4776	33.0000	33.0000	60.000	125.000	125.000
MI	05	1	EXCHANGE	2:SINGLE	D	69	0	2131.00	30.884	10.0828	12.0000	16.0000	30.000	50.000	60.000
MI	05	1	EXCHANGE	2:SINGLE	U	145	0	5038.00	34.745	16.4155	13.0000	17.0000	30.000	70.000	90.000
MI	05	1	EXCHANGE	4:JACKNIFE	D	11	0	785.00	71.364	16.2621	40.0000	40.0000	72.000	95.000	95.000
MI	05	1	EXCHANGE	4:JACKNIFE	U	6	0	436.00	72.667	33.0797	32.0000	32.0000	66.500	130.000	130.000
MI	05	1	FLY	1:DOUBLE	D	1019	0	111190.00	109.117	18.6529	68.0000	85.0000	107.000	139.000	380.000
MI	05	1	FLY	1:DOUBLE	U	883	0	95335.00	107.967	38.5386	55.0000	81.0000	105.000	135.000	855.000
MI	05	1	FLY	3:KNOCKOUT	D	78	0	4596.00	58.923	14.7426	33.0000	40.0000	56.000	90.000	110.000
MI	05	1	FLY	3:KNOCKOUT	U	47	0	2876.00	61.191	14.7540	35.0000	44.0000	60.000	80.000	123.000
MI	05	1	FLY	2:SINGLE	D	342	0	11087.00	32.418	11.5306	12.0000	16.0000	30.000	55.000	73.000
MI	05	1	FLY	2:SINGLE	U	517	0	18359.00	35.511	10.7568	10.0000	18.0000	35.000	54.000	70.000
MI	05	1	FLY	4:JACKNIFE	D	64	0	5395.00	84.297	18.2624	43.0000	60.0000	84.000	115.000	137.000
MI	05	1	FLY	4:JACKNIFE	U	5	0	407.00	81.400	15.4855	60.0000	60.0000	88.000	98.000	98.000
MI	05	1	TURNBACK	1:DOUBLE	D	230	0	21775.00	94.674	23.4221	60.0000	72.0000	92.000	118.000	372.000
MI	05	1	TURNBACK	1:DOUBLE	U	262	0	23356.00	89.145	23.2824	60.0000	65.0000	85.000	123.000	297.000
MI	05	1	TURNBACK	3:KNOCKOUT	D	37	0	1675.00	45.270	11.1944	33.0000	33.0000	42.000	75.000	77.000
MI	05	1	TURNBACK	3:KNOCKOUT	U	16	0	722.00	45.125	14.6509	28.0000	28.0000	41.500	87.000	87.000
MI	05	1	TURNBACK	2:SINGLE	D	108	0	2755.00	25.509	7.7514	12.0000	15.0000	25.000	41.000	50.000
MI	05	1	TURNBACK	2:SINGLE	U	142	0	3526.00	24.831	7.8550	10.0000	14.0000	24.000	36.000	68.000
MI	05	1	TURNBACK	4:JACKNIFE	D	21	0	1326.00	63.143	10.0662	42.0000	50.0000	65.000	80.000	80.000
MI	05	1	TURNBACK	4:JACKNIFE	U	4	0	272.00	68.000	4.3205	62.0000	62.0000	69.000	72.000	72.000
MI	06	1	EXCHANGE	1:DOUBLE	D	428	0	48258.00	112.752	24.9723	64.0000	80.0000	108.000	155.000	275.000
MI	06	1	EXCHANGE	1:DOUBLE	U	406	0	42205.00	103.953	25.9676	48.0000	65.0000	101.000	151.000	200.000
MI	06	1	EXCHANGE	3:KNOCKOUT	D	42	0	2896.00	68.952	23.2662	30.0000	40.0000	61.000	115.000	124.000
MI	06	1	EXCHANGE	3:KNOCKOUT	U	26	0	1883.00	72.423	25.6580	39.0000	45.0000	66.000	123.000	140.000

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 77
Total Lockage Time in Lock
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Total Time Obs	Num Missing Values	Sum Mins Lock Time	Avg Mins Lock Time	Std Dev Lock Time	Smallest Lock Time	5th Pctile Lock Time	Median Lock Time	95th Pctile Lock Time	Largest Lock Time
MI	06	1	EXCHANGE	2:SINGLE	D	103	0	2899.00	28.146	11.8325	10.0000	15.0000	27.000	54.000	60.000
MI	06	1	EXCHANGE	2:SINGLE	U	175	0	5393.00	30.817	15.1073	7.0000	12.0000	27.000	59.000	72.000
MI	06	1	EXCHANGE	5:OTHER	U	1	0	55.00	55.000	.	55.0000	55.0000	55.000	55.000	55.000
MI	06	1	EXCHANGE	4:JACKNIFE	D	12	0	1080.00	90.000	36.8511	52.0000	52.0000	76.500	166.000	166.000
MI	06	1	EXCHANGE	4:JACKNIFE	U	6	0	557.00	92.833	41.6385	43.0000	43.0000	80.000	158.000	158.000
MI	06	1	FLY	1:DOUBLE	D	1040	0	121729.00	117.047	27.6688	66.0000	86.5000	114.000	156.500	547.000
MI	06	1	FLY	1:DOUBLE	U	921	0	97473.00	105.834	25.3646	41.0000	75.0000	105.000	140.000	505.000
MI	06	1	FLY	3:KNOCKOUT	D	81	0	5747.00	70.951	24.8072	35.0000	41.0000	64.000	120.000	144.000
MI	06	1	FLY	3:KNOCKOUT	U	79	0	5994.00	75.873	22.1975	39.0000	44.0000	75.000	120.000	135.000
MI	06	1	FLY	2:SINGLE	D	351	0	10951.00	31.199	19.0803	8.0000	13.0000	28.000	55.000	285.000
MI	06	1	FLY	2:SINGLE	U	472	0	15917.00	33.722	13.7966	7.0000	15.0000	32.000	55.000	150.000
MI	06	1	FLY	5:OTHER	D	1	0	11.00	11.000	.	11.0000	11.0000	11.000	11.000	11.000
MI	06	1	FLY	5:OTHER	U	3	0	258.00	86.000	74.5453	10.0000	10.0000	89.000	159.000	159.000
MI	06	1	FLY	4:JACKNIFE	D	56	0	5372.00	95.929	23.5834	55.0000	61.0000	92.500	135.000	179.000
MI	06	1	FLY	4:JACKNIFE	U	12	0	980.00	81.667	16.8487	50.0000	50.0000	85.500	101.000	101.000
MI	06	1	TURNBACK	1:DOUBLE	D	383	0	40944.00	106.903	26.4632	63.0000	79.0000	102.000	146.000	397.000
MI	06	1	TURNBACK	1:DOUBLE	U	368	0	31837.00	86.514	23.6468	38.0000	61.0000	82.000	121.000	344.000
MI	06	1	TURNBACK	3:KNOCKOUT	D	56	0	3628.00	64.786	28.7122	25.0000	33.0000	55.000	126.000	151.000
MI	06	1	TURNBACK	3:KNOCKOUT	U	33	0	1869.00	56.636	21.6388	20.0000	30.0000	55.000	92.000	115.000
MI	06	1	TURNBACK	2:SINGLE	D	116	0	3141.00	27.078	14.4343	10.0000	12.0000	24.000	63.000	101.000
MI	06	1	TURNBACK	2:SINGLE	U	161	0	4010.00	24.907	9.8462	9.0000	12.0000	23.000	42.000	61.000
MI	06	1	TURNBACK	4:JACKNIFE	D	29	0	2069.00	71.345	16.4540	50.0000	51.0000	69.000	85.000	139.000
MI	06	1	TURNBACK	4:JACKNIFE	U	8	0	524.00	65.500	9.8125	54.0000	54.0000	63.500	85.000	85.000
MI	07	1	EXCHANGE	1:DOUBLE	D	487	0	57268.00	117.593	25.3805	42.0000	80.0000	115.000	160.000	229.000
MI	07	1	EXCHANGE	1:DOUBLE	U	428	0	40522.00	94.678	20.5319	56.0000	68.0000	91.500	130.000	199.000
MI	07	1	EXCHANGE	3:KNOCKOUT	D	57	0	4600.00	80.702	32.9518	27.0000	38.0000	79.000	140.000	162.000
MI	07	1	EXCHANGE	3:KNOCKOUT	U	48	0	3171.00	66.062	24.9863	30.0000	30.0000	65.000	115.000	140.000
MI	07	1	EXCHANGE	2:SINGLE	D	163	0	4709.00	28.890	19.4492	8.0000	11.0000	23.000	70.000	119.000
MI	07	1	EXCHANGE	2:SINGLE	U	312	0	7102.00	22.763	11.2870	7.0000	10.0000	20.000	46.000	69.000
MI	07	1	EXCHANGE	5:OTHER	D	9	0	943.00	104.778	19.7660	76.0000	76.0000	102.000	143.000	143.000
MI	07	1	EXCHANGE	5:OTHER	U	7	0	645.00	92.143	12.7727	75.0000	75.0000	90.000	114.000	114.000
MI	07	1	EXCHANGE	4:JACKNIFE	D	27	0	2382.00	88.222	23.7816	57.0000	58.0000	83.000	137.000	162.000
MI	07	1	EXCHANGE	4:JACKNIFE	U	6	0	434.00	72.333	17.8624	58.0000	58.0000	64.000	95.000	95.000
MI	07	1	FLY	1:DOUBLE	D	929	0	105021.00	113.047	18.1806	32.0000	87.0000	112.000	144.000	242.000
MI	07	1	FLY	1:DOUBLE	U	834	0	81984.00	98.302	18.5306	55.0000	72.0000	97.000	125.000	224.000
MI	07	1	FLY	3:KNOCKOUT	D	93	0	7428.00	79.871	22.2590	36.0000	47.0000	84.000	121.000	130.000
MI	07	1	FLY	3:KNOCKOUT	U	75	0	5298.00	70.640	18.9499	34.0000	40.0000	71.000	100.000	125.000
MI	07	1	FLY	2:SINGLE	D	587	0	14103.00	24.026	12.9311	8.0000	11.0000	20.000	47.000	122.000
MI	07	1	FLY	2:SINGLE	U	786	0	17820.00	22.672	10.0119	6.0000	11.0000	20.000	41.000	83.000
MI	07	1	FLY	5:OTHER	D	2	0	200.00	100.000	14.1421	90.0000	90.0000	100.000	110.000	110.000
MI	07	1	FLY	5:OTHER	U	10	0	812.00	81.200	26.3304	32.0000	32.0000	82.000	120.000	120.000
MI	07	1	FLY	4:JACKNIFE	D	42	0	3489.00	83.071	12.9960	55.0000	61.0000	85.000	100.000	115.000
MI	07	1	FLY	4:JACKNIFE	U	16	0	1208.00	75.500	21.2101	35.0000	35.0000	78.000	120.000	120.000
MI	07	1	TURNBACK	1:DOUBLE	D	375	0	39048.00	104.128	21.9025	38.0000	77.0000	102.000	144.000	210.000
MI	07	1	TURNBACK	1:DOUBLE	U	385	0	33856.00	87.938	15.7385	56.0000	67.0000	85.000	115.000	160.000
MI	07	1	TURNBACK	5:OTHER	D	1	0	70.00	70.000	.	70.0000	70.0000	70.000	70.000	70.000
MI	07	1	TURNBACK	3:KNOCKOUT	D	76	0	4708.00	61.947	23.9927	25.0000	34.0000	55.500	100.000	138.000
MI	07	1	TURNBACK	3:KNOCKOUT	U	35	0	2400.00	68.571	18.7934	30.0000	35.0000	70.000	94.000	94.000
MI	07	1	TURNBACK	2:SINGLE	D	165	0	4221.00	25.582	12.8827	9.0000	11.0000	23.000	47.000	85.000
MI	07	1	TURNBACK	2:SINGLE	U	197	0	4338.00	22.020	8.2245	7.0000	12.0000	20.000	35.000	59.000

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 78
Total Lockage Time in Lock
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Total Time Obs	Num Missing Values	Sum Mins Lock Time	Avg Mins Lock Time	Std Dev Lock Time	Smallest Lock Time	5th Pctile Lock Time	Median Lock Time	95th Pctile Lock Time	Largest Lock Time
MI	07	1	TURNBACK	5:OTHER	D	3	0	307.00	102.333	10.9697	96.000	96.000	96.000	115.000	115.000
MI	07	1	TURNBACK	5:OTHER	U	4	0	359.00	89.750	7.2284	83.000	83.000	88.000	100.000	100.000
MI	07	1	TURNBACK	4:JACKNIFE	D	29	0	2159.00	74.448	19.7531	36.000	52.000	71.000	110.000	137.000
MI	07	1	TURNBACK	4:JACKNIFE	U	7	0	435.00	62.143	12.2533	40.000	40.000	70.000	73.000	73.000
MI	08	1	EXCHANGE	1:DOUBLE	D	434	0	50953.00	117.403	21.9156	65.000	89.000	115.000	160.000	199.000
MI	08	1	EXCHANGE	1:DOUBLE	U	425	0	44275.00	104.176	24.6528	54.000	71.000	100.000	145.000	193.000
MI	08	1	EXCHANGE	3:KNOCKOUT	D	39	0	2881.00	73.872	28.2183	35.000	38.000	69.000	135.000	152.000
MI	08	1	EXCHANGE	3:KNOCKOUT	U	33	0	2458.00	74.485	17.8047	36.000	39.000	76.000	106.000	107.000
MI	08	1	EXCHANGE	2:SINGLE	D	90	0	2915.00	32.389	13.0640	13.000	16.000	30.000	60.000	71.000
MI	08	1	EXCHANGE	2:SINGLE	U	158	0	5161.00	32.665	15.3447	12.000	15.000	28.500	65.000	85.000
MI	08	1	EXCHANGE	4:JACKNIFE	D	19	0	1710.00	90.000	37.9854	39.000	39.000	85.000	226.000	226.000
MI	08	1	EXCHANGE	4:JACKNIFE	U	9	0	692.00	76.889	28.6943	45.000	45.000	67.000	134.000	134.000
MI	08	1	FLY	1:DOUBLE	D	1006	0	127415.00	126.655	28.0552	78.000	95.000	124.000	165.000	457.000
MI	08	1	FLY	1:DOUBLE	U	910	0	95488.00	104.932	21.6457	60.000	75.000	104.000	138.000	323.000
MI	08	1	FLY	3:KNOCKOUT	D	78	0	6407.00	82.141	34.3646	38.000	43.000	70.000	134.000	250.000
MI	08	1	FLY	3:KNOCKOUT	U	56	0	3842.00	68.607	20.4421	35.000	38.000	65.500	107.000	125.000
MI	08	1	FLY	2:SINGLE	D	368	0	12715.00	34.552	15.6439	9.000	15.000	32.000	62.000	135.000
MI	08	1	FLY	2:SINGLE	U	492	0	15751.00	32.014	11.2178	10.000	17.000	30.000	53.000	76.000
MI	08	1	FLY	5:OTHER	D	3	0	281.00	93.667	46.9184	41.000	41.000	109.000	131.000	131.000
MI	08	1	FLY	5:OTHER	U	1	0	95.00	95.000	.	95.000	95.000	95.000	95.000	95.000
MI	08	1	FLY	4:JACKNIFE	D	46	0	4253.00	92.457	25.0002	46.000	58.000	88.500	137.000	166.000
MI	08	1	FLY	4:JACKNIFE	U	24	0	1759.00	73.292	20.7814	38.000	40.000	75.000	109.000	126.000
MI	08	1	TURNBACK	1:DOUBLE	D	475	0	54279.00	114.272	24.7880	64.000	85.000	110.000	151.000	325.000
MI	08	1	TURNBACK	1:DOUBLE	U	439	0	39687.00	90.403	18.7249	52.000	66.000	89.000	125.000	215.000
MI	08	1	TURNBACK	5:OTHER	U	1	0	85.00	85.000	.	85.000	85.000	85.000	85.000	85.000
MI	08	1	TURNBACK	3:KNOCKOUT	D	49	0	3394.00	69.265	21.1224	38.000	43.000	65.000	108.000	114.000
MI	08	1	TURNBACK	3:KNOCKOUT	U	26	0	1632.00	62.769	25.1274	24.000	36.000	65.500	100.000	100.000
MI	08	1	TURNBACK	2:SINGLE	D	133	0	3843.00	28.895	13.0147	6.000	14.000	26.000	52.000	76.000
MI	08	1	TURNBACK	2:SINGLE	U	155	0	3956.00	25.523	8.5791	11.000	15.000	24.000	40.000	74.000
MI	08	1	TURNBACK	4:JACKNIFE	D	26	0	2015.00	77.500	21.5801	35.000	47.000	73.500	124.000	140.000
MI	08	1	TURNBACK	4:JACKNIFE	U	11	0	759.00	69.000	20.0898	48.000	48.000	66.000	120.000	120.000
MI	09	1	EXCHANGE	1:DOUBLE	D	484	0	58594.00	121.062	30.0426	61.000	85.000	120.000	160.000	476.000
MI	09	1	EXCHANGE	1:DOUBLE	U	522	0	53509.00	102.508	34.0311	58.000	68.000	98.000	142.000	582.000
MI	09	1	EXCHANGE	3:KNOCKOUT	D	31	0	2302.00	74.258	26.3312	18.000	35.000	74.000	120.000	121.000
MI	09	1	EXCHANGE	3:KNOCKOUT	U	35	0	2201.00	62.886	18.8692	27.000	28.000	66.000	94.000	107.000
MI	09	1	EXCHANGE	2:SINGLE	D	103	0	2986.00	28.990	14.5282	10.000	12.000	25.000	60.000	78.000
MI	09	1	EXCHANGE	2:SINGLE	U	168	0	4878.00	29.036	11.8073	10.000	14.000	26.500	55.000	66.000
MI	09	1	EXCHANGE	5:OTHER	D	5	0	566.00	113.200	20.4255	87.000	87.000	115.000	139.000	139.000
MI	09	1	EXCHANGE	5:OTHER	U	2	0	207.00	103.500	2.1213	102.000	102.000	103.500	105.000	105.000
MI	09	1	EXCHANGE	4:JACKNIFE	D	22	0	2109.00	95.864	57.3679	53.000	55.000	88.500	132.000	335.000
MI	09	1	EXCHANGE	4:JACKNIFE	U	11	0	916.00	83.273	32.1064	36.000	36.000	76.000	150.000	150.000
MI	09	1	FLY	1:DOUBLE	D	1133	0	129241.00	114.070	22.7257	60.000	90.000	112.000	140.000	468.000
MI	09	1	FLY	1:DOUBLE	U	1013	0	106060.00	104.699	26.0004	54.000	75.000	103.000	140.000	632.000
MI	09	1	FLY	3:KNOCKOUT	D	84	0	5834.00	69.452	24.6525	38.000	45.000	60.000	110.000	161.000
MI	09	1	FLY	3:KNOCKOUT	U	57	0	4004.00	70.246	22.0998	37.000	40.000	65.000	110.000	150.000
MI	09	1	FLY	2:SINGLE	D	347	0	10578.00	30.484	12.3071	9.000	15.000	28.000	53.000	92.000
MI	09	1	FLY	2:SINGLE	U	417	0	13263.00	31.806	11.2913	10.000	17.000	30.000	50.000	134.000
MI	09	1	FLY	5:OTHER	D	5	0	549.00	109.800	13.9535	94.000	94.000	105.000	130.000	130.000
MI	09	1	FLY	5:OTHER	U	3	0	319.00	106.333	24.5425	81.000	81.000	108.000	130.000	130.000
MI	09	1	FLY	4:JACKNIFE	D	45	0	3798.00	84.400	14.4889	54.000	62.000	85.000	108.000	125.000

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 79
Total Lockage Time in Lock
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Total Time Obs	Num Missing Values	Sum Mins Lock Time	Avg Mins Lock Time	Std Dev Lock Time	Smallest Lock Time	5th Pctile Lock Time	Median Lock Time	95th Pctile Lock Time	Largest Lock Time
MI	09	1	FLY	4:JACKNIFE	U	21	0	1718.00	81.810	19.8711	60.000	60.000	77.000	125.000	142.000
MI	09	1	FLY	5:OTHER	D	1	0	13.00	13.000	.	13.000	13.000	13.000	13.000	13.000
MI	09	1	TURNBACK	1:DOUBLE	D	460	0	48705.00	105.880	23.1299	61.000	79.500	102.000	143.000	295.000
MI	09	1	TURNBACK	1:DOUBLE	U	473	0	43261.00	91.461	19.5596	54.000	65.000	90.000	128.000	190.000
MI	09	1	TURNBACK	5:OTHER	D	2	0	125.00	62.500	3.5355	60.000	60.000	62.500	65.000	65.000
MI	09	1	TURNBACK	3:KNOCKOUT	D	41	0	2449.00	59.732	21.1460	35.000	38.000	54.000	92.000	143.000
MI	09	1	TURNBACK	3:KNOCKOUT	U	15	0	1005.00	67.000	24.2310	31.000	31.000	69.000	122.000	122.000
MI	09	1	TURNBACK	2:SINGLE	D	142	0	3772.00	26.563	12.9305	10.000	12.000	24.000	45.000	115.000
MI	09	1	TURNBACK	2:SINGLE	U	166	0	4049.00	24.392	9.4579	9.000	13.000	23.000	46.000	67.000
MI	09	1	TURNBACK	5:OTHER	D	1	0	112.00	112.000	.	112.000	112.000	112.000	112.000	112.000
MI	09	1	TURNBACK	4:JACKNIFE	D	23	0	1898.00	82.522	49.0638	53.000	55.000	68.000	110.000	293.000
MI	09	1	TURNBACK	4:JACKNIFE	U	11	0	767.00	69.727	11.1004	53.000	53.000	69.000	90.000	90.000
MI	10	1	EXCHANGE	1:DOUBLE	D	516	0	58416.00	113.209	30.9119	60.000	79.000	109.500	165.000	356.000
MI	10	1	EXCHANGE	1:DOUBLE	U	586	0	59161.00	100.957	23.5362	54.000	65.000	98.500	144.000	165.000
MI	10	1	EXCHANGE	3:KNOCKOUT	D	24	0	1609.00	67.042	19.8986	35.000	41.000	64.500	95.000	115.000
MI	10	1	EXCHANGE	3:KNOCKOUT	U	22	0	1521.00	69.136	23.9768	28.000	35.000	72.500	100.000	110.000
MI	10	1	EXCHANGE	2:SINGLE	D	134	0	4243.00	31.664	19.1051	10.000	12.000	27.000	65.000	140.000
MI	10	1	EXCHANGE	2:SINGLE	U	242	0	7380.00	30.496	13.7138	8.000	12.000	30.000	55.000	80.000
MI	10	1	EXCHANGE	4:JACKNIFE	D	22	0	2026.00	92.091	33.6168	50.000	59.000	85.000	173.000	190.000
MI	10	1	EXCHANGE	4:JACKNIFE	U	15	0	1333.00	88.867	22.1291	52.000	52.000	86.000	135.000	135.000
MI	10	1	FLY	1:DOUBLE	D	1441	0	153135.00	106.270	18.8867	40.000	80.000	105.000	140.000	250.000
MI	10	1	FLY	1:DOUBLE	U	1283	0	119771.00	93.352	19.7985	50.000	66.000	90.000	125.000	332.000
MI	10	1	FLY	3:KNOCKOUT	D	77	0	4852.00	63.013	24.8297	25.000	32.000	56.000	100.000	175.000
MI	10	1	FLY	3:KNOCKOUT	U	50	0	2890.00	57.800	18.7845	30.000	33.000	53.500	95.000	113.000
MI	10	1	FLY	2:SINGLE	D	488	0	15098.00	30.939	14.0911	9.000	12.000	30.000	55.000	90.000
MI	10	1	FLY	2:SINGLE	U	556	0	15101.00	27.160	10.5979	7.000	13.000	25.000	45.000	86.000
MI	10	1	FLY	5:OTHER	U	2	0	150.00	75.000	7.0711	70.000	70.000	75.000	80.000	80.000
MI	10	1	FLY	4:JACKNIFE	D	43	0	3165.00	73.605	21.4256	26.000	40.000	75.000	110.000	115.000
MI	10	1	FLY	4:JACKNIFE	U	24	0	1679.00	69.958	20.3822	30.000	35.000	70.000	95.000	115.000
MI	10	1	TURNBACK	1:DOUBLE	D	539	0	55713.00	103.364	23.6924	40.000	73.000	100.000	148.000	222.000
MI	10	1	TURNBACK	1:DOUBLE	U	511	0	43068.00	84.282	19.9464	43.000	57.000	82.000	118.000	224.000
MI	10	1	TURNBACK	3:KNOCKOUT	D	34	0	1669.00	49.088	15.5473	15.000	25.000	46.500	73.000	90.000
MI	10	1	TURNBACK	3:KNOCKOUT	U	22	0	1303.00	59.227	32.3212	25.000	33.000	47.500	125.000	157.000
MI	10	1	TURNBACK	2:SINGLE	D	143	0	3769.00	26.357	12.1900	8.000	12.000	25.000	45.000	90.000
MI	10	1	TURNBACK	2:SINGLE	U	190	0	4441.00	23.374	9.7167	7.000	12.000	22.000	40.000	70.000
MI	10	1	TURNBACK	5:OTHER	D	1	0	38.00	38.000	.	38.000	38.000	38.000	38.000	38.000
MI	10	1	TURNBACK	4:JACKNIFE	D	30	0	2074.00	69.133	13.9079	45.000	45.000	67.000	95.000	95.000
MI	10	1	TURNBACK	4:JACKNIFE	U	10	0	730.00	73.000	15.4560	57.000	57.000	67.000	104.000	104.000
MI	11	1	EXCHANGE	1:DOUBLE	D	717	0	77348.00	107.877	23.1971	62.000	83.000	105.000	137.000	386.000
MI	11	1	EXCHANGE	1:DOUBLE	U	716	0	73139.00	102.149	27.3779	58.000	75.000	100.000	133.000	640.000
MI	11	1	EXCHANGE	3:KNOCKOUT	D	35	0	1749.00	49.971	17.8383	30.000	31.000	45.000	93.000	100.000
MI	11	1	EXCHANGE	3:KNOCKOUT	U	91	0	4486.00	49.297	17.0506	25.000	30.000	45.000	84.000	115.000
MI	11	1	EXCHANGE	2:SINGLE	D	246	0	6671.00	27.118	10.8822	8.000	14.000	25.000	46.000	85.000
MI	11	1	EXCHANGE	2:SINGLE	U	339	0	9367.00	27.631	10.6949	9.000	14.000	26.000	45.000	102.000
MI	11	1	EXCHANGE	5:OTHER	U	1	0	111.00	111.000	.	111.000	111.000	111.000	111.000	111.000
MI	11	1	EXCHANGE	4:JACKNIFE	D	20	0	1366.00	68.300	14.3714	38.000	41.500	69.000	92.500	95.000
MI	11	1	EXCHANGE	4:JACKNIFE	U	18	0	1283.00	71.278	23.6564	34.000	34.000	66.000	135.000	135.000
MI	11	1	FLY	1:DOUBLE	D	1178	0	138804.00	117.830	26.7772	70.000	90.000	115.000	148.000	503.000
MI	11	1	FLY	1:DOUBLE	U	1066	0	115276.00	108.139	23.6781	59.000	80.000	105.000	140.000	435.000
MI	11	1	FLY	5:OTHER	D	1	0	94.00	94.000	.	94.000	94.000	94.000	94.000	94.000

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 80
Total Lockage Time in Lock
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Total Time Obs	Num Missing Values	Sum Mins Lock Time	Avg Mins Lock Time	Std Dev Lock Time	Smallest Lock Time	5th Pctile Lock Time	Median Lock Time	95th Pctile Lock Time	Largest Lock Time
MI	11	1	FLY	5:OTHER	U	1	0	52.00	52.000	.	52.000	52.000	52.000	52.000	52.00
MI	11	1	FLY	3:KNOCKOUT	D	83	0	5413.00	65.217	31.3948	26.000	35.000	55.000	145.000	212.00
MI	11	1	FLY	3:KNOCKOUT	U	130	0	7064.00	54.338	15.5775	23.000	32.000	52.000	80.000	117.00
MI	11	1	FLY	2:SINGLE	D	728	0	23033.00	31.639	13.0522	9.000	15.000	30.000	58.000	100.00
MI	11	1	FLY	2:SINGLE	U	788	0	24142.00	30.637	10.9255	10.000	16.000	29.000	50.000	76.00
MI	11	1	FLY	5:OTHER	D	1	0	100.00	100.000	.	100.000	100.000	100.000	100.000	100.00
MI	11	1	FLY	5:OTHER	U	2	0	120.00	60.000	49.4975	25.000	25.000	60.000	95.000	95.00
MI	11	1	FLY	4:JACKNIFE	D	40	0	3559.00	88.975	18.3478	60.000	62.000	87.500	120.500	133.00
MI	11	1	FLY	4:JACKNIFE	U	25	0	1685.00	67.400	23.4911	32.000	36.000	70.000	107.000	110.00
MI	11	1	FLY	5:OTHER	D	2	0	69.00	34.500	0.7071	34.000	34.000	34.500	35.000	35.00
MI	11	1	TURNBACK	1:DOUBLE	D	650	0	66560.00	102.400	17.3634	66.000	79.000	100.000	132.000	208.00
MI	11	1	TURNBACK	1:DOUBLE	U	638	0	58644.00	91.918	29.6878	58.000	70.000	90.000	117.000	730.00
MI	11	1	TURNBACK	3:KNOCKOUT	D	63	0	2969.00	47.127	17.3284	26.000	28.000	43.000	78.000	110.00
MI	11	1	TURNBACK	3:KNOCKOUT	U	60	0	2623.00	43.717	14.6763	21.000	27.500	40.000	78.000	93.00
MI	11	1	TURNBACK	2:SINGLE	D	275	0	7356.00	26.749	9.7332	11.000	15.000	25.000	40.000	85.00
MI	11	1	TURNBACK	2:SINGLE	U	307	0	7660.00	24.951	8.0967	10.000	13.000	24.000	38.000	60.00
MI	11	1	TURNBACK	4:JACKNIFE	D	21	0	1481.00	70.524	20.0065	31.000	45.000	65.000	105.000	122.00
MI	11	1	TURNBACK	4:JACKNIFE	U	12	0	709.00	59.083	11.9883	36.000	36.000	59.000	80.000	80.00
MI	11	1	TURNBACK	5:OTHER	D	1	0	120.00	120.000	.	120.000	120.000	120.000	120.000	120.00
MI	12	1	EXCHANGE	1:DOUBLE	D	765	0	83924.00	109.705	23.8882	54.000	83.000	106.000	139.000	430.00
MI	12	1	EXCHANGE	1:DOUBLE	U	828	0	86041.00	103.914	20.1276	54.000	74.000	103.000	139.000	190.00
MI	12	1	EXCHANGE	3:KNOCKOUT	D	50	0	3187.00	63.740	22.3386	28.000	35.000	56.500	111.000	133.00
MI	12	1	EXCHANGE	3:KNOCKOUT	U	35	0	2261.00	64.600	24.8799	32.000	33.000	62.000	124.000	128.00
MI	12	1	EXCHANGE	2:SINGLE	D	302	0	7527.00	24.924	11.5754	10.000	13.000	22.000	47.000	81.00
MI	12	1	EXCHANGE	2:SINGLE	U	336	0	8496.00	25.286	11.8433	9.000	12.000	21.000	50.000	73.00
MI	12	1	EXCHANGE	4:JACKNIFE	D	29	0	2054.00	70.828	19.2021	35.000	44.000	69.000	103.000	111.00
MI	12	1	EXCHANGE	4:JACKNIFE	U	18	0	1297.00	72.056	23.3426	34.000	34.000	72.000	130.000	130.00
MI	12	1	FLY	1:DOUBLE	D	1274	0	143821.00	112.889	37.1270	56.000	86.000	109.000	145.000	1050.00
MI	12	1	FLY	1:DOUBLE	U	1148	0	120638.00	105.085	32.5683	62.000	77.000	103.000	132.000	705.00
MI	12	1	FLY	3:KNOCKOUT	D	77	0	5399.00	70.117	22.4106	32.000	40.000	70.000	110.000	120.00
MI	12	1	FLY	3:KNOCKOUT	U	64	0	3998.00	62.469	20.1368	20.000	39.000	55.500	95.000	118.00
MI	12	1	FLY	2:SINGLE	D	584	0	16627.00	28.471	42.3353	9.000	15.000	25.000	49.000	1015.00
MI	12	1	FLY	2:SINGLE	U	672	0	19211.00	28.588	11.7990	10.000	15.000	26.000	45.000	155.00
MI	12	1	FLY	5:OTHER	U	2	0	195.00	97.500	17.6777	85.000	85.000	97.500	110.000	110.00
MI	12	1	FLY	4:JACKNIFE	D	35	0	2647.00	75.629	18.3481	34.000	42.000	75.000	100.000	130.00
MI	12	1	FLY	4:JACKNIFE	U	23	0	1635.00	71.087	15.6870	45.000	47.000	68.000	98.000	105.00
MI	12	1	TURNBACK	1:DOUBLE	D	710	0	76006.00	107.051	27.0752	57.000	79.000	105.000	140.000	521.00
MI	12	1	TURNBACK	1:DOUBLE	U	699	0	62471.00	89.372	22.8755	50.000	63.000	87.000	124.000	415.00
MI	12	1	TURNBACK	3:KNOCKOUT	D	50	0	3240.00	64.800	26.2235	27.000	34.000	62.500	120.000	160.00
MI	12	1	TURNBACK	3:KNOCKOUT	U	41	0	2102.00	51.268	17.7666	14.000	28.000	50.000	74.000	88.00
MI	12	1	TURNBACK	2:SINGLE	D	306	0	7483.00	24.454	10.6324	10.000	12.000	22.000	43.000	66.00
MI	12	1	TURNBACK	2:SINGLE	U	317	0	6885.00	21.719	8.0662	10.000	12.000	20.000	38.000	70.00
MI	12	1	TURNBACK	5:OTHER	U	1	0	26.00	26.000	.	26.000	26.000	26.000	26.000	26.00
MI	12	1	TURNBACK	4:JACKNIFE	D	29	0	2136.00	73.655	14.8379	53.000	53.000	73.000	102.000	124.00
MI	12	1	TURNBACK	4:JACKNIFE	U	15	0	894.00	59.600	9.7453	36.000	36.000	61.000	75.000	75.00
MI	13	1	EXCHANGE	1:DOUBLE	D	740	0	79693.00	107.693	24.0748	63.000	84.000	105.000	139.000	452.00
MI	13	1	EXCHANGE	1:DOUBLE	U	756	0	77200.00	102.116	18.7514	66.000	75.000	100.000	135.000	194.00
MI	13	1	EXCHANGE	3:KNOCKOUT	D	51	0	3543.00	69.471	21.6503	27.000	38.000	68.000	103.000	106.00
MI	13	1	EXCHANGE	3:KNOCKOUT	U	47	0	3650.00	77.660	21.5803	31.000	37.000	78.000	108.000	118.00
MI	13	1	EXCHANGE	2:SINGLE	D	284	0	7201.00	25.356	11.1535	9.000	13.000	22.000	47.000	71.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 81
Total Lockage Time in Lock
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Total Time Obs	Num Missing Values	Sum Mins Lock Time	Avg Mins Lock Time	Std Dev Lock Time	Smallest Lock Time	5th Pctile Lock Time	Median Lock Time	95th Pctile Lock Time	Largest Lock Time
MI	13	1	EXCHANGE	2:SINGLE	U	329	0	8738.00	26.559	9.9393	11.000	15.000	25.000	45.000	72.00
MI	13	1	EXCHANGE	5:OTHER	D	2	0	226.00	113.000	24.0416	96.000	96.000	113.000	130.000	130.00
MI	13	1	EXCHANGE	5:OTHER	U	1	0	100.00	100.000	.	100.000	100.000	100.000	100.000	100.00
MI	13	1	EXCHANGE	4:JACKNIFE	D	26	0	1861.00	71.577	21.5929	40.000	41.000	72.000	111.000	113.00
MI	13	1	EXCHANGE	4:JACKNIFE	U	16	0	1157.00	72.312	19.2898	44.000	44.000	70.500	106.000	106.00
MI	13	1	FLY	1:DOUBLE	D	1297	0	137221.00	105.799	24.2888	69.000	84.000	104.000	130.000	740.00
MI	13	1	FLY	1:DOUBLE	U	1240	0	128959.00	103.999	37.1767	63.000	78.000	101.000	131.500	1150.00
MI	13	1	FLY	3:KNOCKOUT	D	122	0	8973.00	73.549	24.7062	34.000	43.000	74.000	110.000	203.00
MI	13	1	FLY	3:KNOCKOUT	U	88	0	6042.00	68.659	29.1354	30.000	38.000	64.500	110.000	227.00
MI	13	1	FLY	2:SINGLE	D	621	0	16090.00	25.910	9.1881	6.000	15.000	24.000	41.000	95.00
MI	13	1	FLY	2:SINGLE	U	705	0	18774.00	26.630	7.9826	10.000	16.000	25.000	41.000	53.00
MI	13	1	FLY	5:OTHER	D	1	0	104.00	104.000	.	104.000	104.000	104.000	104.000	104.00
MI	13	1	FLY	4:JACKNIFE	D	47	0	3404.00	72.426	16.0458	41.000	49.000	75.000	107.000	109.00
MI	13	1	FLY	4:JACKNIFE	U	29	0	1962.00	67.655	12.0927	48.000	49.000	67.000	88.000	96.00
MI	13	1	TURNBACK	1:DOUBLE	D	696	0	70626.00	101.474	19.2917	58.000	77.000	100.000	130.000	295.00
MI	13	1	TURNBACK	1:DOUBLE	U	669	0	62540.00	93.483	17.0243	55.000	69.000	91.000	124.000	162.00
MI	13	1	TURNBACK	3:KNOCKOUT	D	62	0	4055.00	65.403	24.9389	25.000	35.000	60.000	100.000	141.00
MI	13	1	TURNBACK	3:KNOCKOUT	U	62	0	3963.00	63.919	21.2188	23.000	34.000	69.000	94.000	111.00
MI	13	1	TURNBACK	2:SINGLE	D	308	0	7397.00	24.016	10.6964	10.000	13.000	22.000	41.000	125.00
MI	13	1	TURNBACK	2:SINGLE	U	314	0	7372.00	23.478	7.3538	11.000	15.000	22.000	36.000	75.00
MI	13	1	TURNBACK	5:OTHER	D	3	0	334.00	111.333	16.0104	95.000	95.000	112.000	127.000	127.00
MI	13	1	TURNBACK	5:OTHER	U	1	0	79.00	79.000	.	79.000	79.000	79.000	79.000	79.00
MI	13	1	TURNBACK	4:JACKNIFE	D	28	0	1977.00	70.607	19.8575	44.000	45.000	67.500	100.000	118.00
MI	13	1	TURNBACK	4:JACKNIFE	U	15	0	959.00	63.933	14.6700	37.000	37.000	70.000	81.000	81.00
MI	14	1	EXCHANGE	1:DOUBLE	D	1242	0	156022.00	125.622	36.8650	23.000	87.000	120.000	179.000	756.00
MI	14	1	EXCHANGE	1:DOUBLE	U	1202	0	141436.00	117.667	28.4577	62.000	81.000	115.000	160.000	530.00
MI	14	1	EXCHANGE	5:OTHER	D	2	0	157.00	78.500	20.5061	64.000	64.000	78.500	93.000	93.00
MI	14	1	EXCHANGE	3:KNOCKOUT	D	66	0	3801.00	57.591	18.5456	29.000	31.000	57.000	90.000	109.00
MI	14	1	EXCHANGE	3:KNOCKOUT	U	82	0	5271.00	64.280	28.3633	20.000	30.000	58.500	120.000	154.00
MI	14	1	EXCHANGE	2:SINGLE	D	613	0	19399.00	31.646	14.8287	10.000	16.000	29.000	55.000	196.00
MI	14	1	EXCHANGE	2:SINGLE	U	606	0	20527.00	33.873	17.1122	12.000	15.000	30.000	71.000	139.00
MI	14	1	EXCHANGE	5:OTHER	D	1	0	155.00	155.000	.	155.000	155.000	155.000	155.000	155.00
MI	14	1	EXCHANGE	4:JACKNIFE	D	30	0	2463.00	82.100	16.5599	54.000	56.000	85.000	106.000	120.00
MI	14	1	EXCHANGE	4:JACKNIFE	U	40	0	3557.00	88.925	24.6310	48.000	58.000	80.500	138.000	147.00
MI	14	1	FLY	1:DOUBLE	D	900	0	118203.00	131.337	42.2923	50.000	95.000	127.000	172.500	1020.00
MI	14	1	FLY	1:DOUBLE	U	950	0	110637.00	116.460	29.3522	57.000	86.000	115.000	149.000	580.00
MI	14	1	FLY	5:OTHER	U	1	0	81.00	81.000	.	81.000	81.000	81.000	81.000	81.00
MI	14	1	FLY	3:KNOCKOUT	D	74	0	5197.00	70.230	26.9223	30.000	35.000	65.000	132.000	140.00
MI	14	1	FLY	3:KNOCKOUT	U	69	0	4288.00	62.145	16.6692	30.000	40.000	60.000	90.000	125.00
MI	14	1	FLY	2:SINGLE	D	668	0	23220.00	34.760	22.6961	10.000	17.000	30.000	60.000	487.00
MI	14	1	FLY	2:SINGLE	U	666	0	21693.00	32.572	23.5117	11.000	17.000	30.000	54.000	560.00
MI	14	1	FLY	5:OTHER	U	2	0	155.00	77.500	53.0330	40.000	40.000	77.500	115.000	115.00
MI	14	1	FLY	4:JACKNIFE	D	21	0	1975.00	94.048	22.6086	61.000	70.000	90.000	126.000	148.00
MI	14	1	FLY	4:JACKNIFE	U	17	0	1425.00	83.824	15.9069	59.000	59.000	80.000	110.000	110.00
MI	14	1	TURNBACK	1:DOUBLE	D	1229	0	142348.00	115.824	35.1615	45.000	81.000	110.000	162.000	605.00
MI	14	1	TURNBACK	1:DOUBLE	U	1119	0	116916.00	104.483	30.2198	47.000	72.000	100.000	145.000	499.00
MI	14	1	TURNBACK	3:KNOCKOUT	D	89	0	5540.00	62.247	62.6386	26.000	29.000	51.000	104.000	605.00
MI	14	1	TURNBACK	3:KNOCKOUT	U	104	0	5270.00	50.673	24.2449	22.000	28.000	48.000	76.000	225.00
MI	14	1	TURNBACK	2:SINGLE	D	606	0	18588.00	30.673	17.5063	10.000	15.000	27.000	56.000	315.00
MI	14	1	TURNBACK	2:SINGLE	U	715	0	20295.00	28.385	14.7816	11.000	15.000	25.000	51.000	174.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 82
Total Lockage Time in Lock
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Total Time Obs	Num Missing Values	Sum Mins Lock Time	Avg Mins Lock Time	Std Dev Lock Time	Smallest Lock Time	5th Pctile Lock Time	Median Lock Time	95th Pctile Lock Time	Largest Lock Time
MI	14	1	TURNBACK	5:OTHER	U	1	0	16.00	16.000	.	16.000	16.000	16.000	16.000	16.00
MI	14	1	TURNBACK	4:JACKNIFE	D	35	0	2955.00	84.429	23.5675	40.000	45.000	83.000	129.000	169.00
MI	14	1	TURNBACK	4:JACKNIFE	U	25	0	1889.00	75.560	18.9211	46.000	52.000	72.000	120.000	122.00
MI	14	4	EXCHANGE	1:DOUBLE	D	1	0	86.00	86.000	.	86.000	86.000	86.000	86.000	86.00
MI	14	4	EXCHANGE	3:KNOCKOUT	U	1	0	110.00	110.000	.	110.000	110.000	110.000	110.000	110.00
MI	14	4	EXCHANGE	2:SINGLE	D	10	0	300.00	30.000	11.2448	13.000	13.000	26.500	45.000	45.00
MI	14	4	EXCHANGE	2:SINGLE	U	10	0	248.00	24.800	11.5835	10.000	10.000	22.500	47.000	47.00
MI	14	4	FLY	1:DOUBLE	D	4	0	508.00	127.000	74.3505	65.000	65.000	104.000	235.000	235.00
MI	14	4	FLY	1:DOUBLE	U	11	0	1445.00	131.364	93.0411	61.000	61.000	125.000	390.000	390.00
MI	14	4	FLY	3:KNOCKOUT	D	9	0	508.00	56.444	26.2827	25.000	25.000	63.000	95.000	95.00
MI	14	4	FLY	3:KNOCKOUT	U	9	0	448.00	49.778	29.6723	27.000	27.000	38.000	120.000	120.00
MI	14	4	FLY	2:SINGLE	D	79	0	2567.00	32.494	21.8461	10.000	12.000	28.000	77.000	133.00
MI	14	4	FLY	2:SINGLE	U	71	0	1818.00	25.606	12.4825	10.000	13.000	23.000	45.000	77.00
MI	14	4	FLY	5:OTHER	D	1	0	89.00	89.000	.	89.000	89.000	89.000	89.000	89.00
MI	14	4	FLY	5:OTHER	U	1	0	98.00	98.000	.	98.000	98.000	98.000	98.000	98.00
MI	14	4	FLY	4:JACKNIFE	D	1	0	30.00	30.000	.	30.000	30.000	30.000	30.000	30.00
MI	14	4	TURNBACK	1:DOUBLE	U	3	0	181.00	60.333	8.5049	54.000	54.000	57.000	70.000	70.00
MI	14	4	TURNBACK	3:KNOCKOUT	D	1	0	64.00	64.000	.	64.000	64.000	64.000	64.000	64.00
MI	14	4	TURNBACK	3:KNOCKOUT	U	2	0	92.00	46.000	0.0000	46.000	46.000	46.000	46.000	46.00
MI	14	4	TURNBACK	2:SINGLE	D	13	0	320.00	24.615	8.1296	15.000	15.000	25.000	41.000	41.00
MI	14	4	TURNBACK	2:SINGLE	U	14	0	398.00	28.429	18.7318	11.000	11.000	23.000	78.000	78.00
MI	14	4	TURNBACK	5:OTHER	U	2	0	153.00	76.500	40.3051	48.000	48.000	76.500	105.000	105.00
MI	14	4	TURNBACK	4:JACKNIFE	D	1	0	23.00	23.000	.	23.000	23.000	23.000	23.000	23.00
MI	15	1	EXCHANGE	1:DOUBLE	D	1331	0	171639.00	128.955	29.4274	67.000	91.000	125.000	172.000	592.00
MI	15	1	EXCHANGE	1:DOUBLE	U	1155	0	158466.00	137.200	80.3756	63.000	85.000	129.000	206.000	2468.00
MI	15	1	EXCHANGE	5:OTHER	U	1	0	75.00	75.000	.	75.000	75.000	75.000	75.000	75.00
MI	15	1	EXCHANGE	3:KNOCKOUT	D	70	0	4211.00	60.157	22.3851	26.000	31.000	57.000	104.000	125.00
MI	15	1	EXCHANGE	3:KNOCKOUT	U	93	0	5849.00	62.892	28.7120	17.000	29.000	54.000	115.000	160.00
MI	15	1	EXCHANGE	2:SINGLE	D	463	0	15421.00	33.307	15.8643	8.000	16.000	29.000	65.000	122.00
MI	15	1	EXCHANGE	2:SINGLE	U	620	0	21936.00	35.381	20.6875	11.000	16.000	30.000	78.500	176.00
MI	15	1	EXCHANGE	5:OTHER	U	3	0	226.00	75.333	84.4354	16.000	16.000	38.000	172.000	172.00
MI	15	1	EXCHANGE	4:JACKNIFE	D	29	0	2633.00	90.793	31.1957	35.000	55.000	80.000	156.000	170.00
MI	15	1	EXCHANGE	4:JACKNIFE	U	34	0	3452.00	101.529	40.9036	44.000	60.000	93.500	200.000	239.00
MI	15	1	FLY	1:DOUBLE	D	969	0	120748.00	124.611	25.1855	70.000	91.000	121.000	165.000	410.00
MI	15	1	FLY	1:DOUBLE	U	878	0	107098.00	121.979	32.3047	45.000	87.000	117.000	170.000	630.00
MI	15	1	FLY	5:OTHER	D	2	0	126.00	63.000	57.9828	22.000	22.000	63.000	104.000	104.00
MI	15	1	FLY	3:KNOCKOUT	D	57	0	3780.00	66.316	39.4766	24.000	28.000	55.000	140.000	270.00
MI	15	1	FLY	3:KNOCKOUT	U	67	0	3609.00	53.866	20.5824	16.000	30.000	50.000	95.000	117.00
MI	15	1	FLY	2:SINGLE	D	1112	0	31667.00	28.478	15.4251	10.000	15.000	25.000	50.000	275.00
MI	15	1	FLY	2:SINGLE	U	1089	0	30521.00	28.027	18.5747	12.000	15.000	25.000	50.000	490.00
MI	15	1	FLY	5:OTHER	D	1	0	60.00	60.000	.	60.000	60.000	60.000	60.000	60.00
MI	15	1	FLY	5:OTHER	U	1	0	85.00	85.000	.	85.000	85.000	85.000	85.000	85.00
MI	15	1	FLY	4:JACKNIFE	D	24	0	2297.00	95.708	28.9910	54.000	62.000	87.500	145.000	145.00
MI	15	1	FLY	4:JACKNIFE	U	31	0	2606.00	84.065	24.4907	54.000	59.000	84.000	125.000	175.00
MI	15	1	TURNBACK	1:DOUBLE	D	1051	0	126601.00	120.458	37.2173	57.000	85.000	117.000	161.000	970.00
MI	15	1	TURNBACK	1:DOUBLE	U	1211	0	140228.00	115.795	42.9404	60.000	79.000	109.000	175.000	1050.00
MI	15	1	TURNBACK	5:OTHER	U	1	0	42.00	42.000	.	42.000	42.000	42.000	42.000	42.00
MI	15	1	TURNBACK	3:KNOCKOUT	D	99	0	4952.00	50.020	17.3417	17.000	25.000	46.000	86.000	100.00
MI	15	1	TURNBACK	3:KNOCKOUT	U	100	0	5919.00	59.190	71.3848	23.000	28.000	48.000	103.500	735.00
MI	15	1	TURNBACK	2:SINGLE	D	545	0	17437.00	31.994	43.5902	9.000	16.000	27.000	58.000	997.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 83
Total Lockage Time in Lock
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Total Time Obs	Num Missing Values	Sum Mins Lock Time	Avg Mins Lock Time	Std Dev Lock Time	Smallest Lock Time	5th Pctile Lock Time	Median Lock Time	95th Pctile Lock Time	Largest Lock Time
MI	15	1	TURNBACK	2:SINGLE	U	543	0	16874.00	31.076	16.256	12.000	16.000	25.000	67.000	121.00
MI	15	1	TURNBACK	5:OTHER	U	1	0	45.00	45.000	.	45.000	45.000	45.000	45.000	45.00
MI	15	1	TURNBACK	4:JACKNIFE	D	31	0	2667.00	86.032	30.130	43.000	48.000	79.000	160.000	185.00
MI	15	1	TURNBACK	4:JACKNIFE	U	27	0	2115.00	78.333	29.882	42.000	48.000	72.000	115.000	187.00
MI	15	1	TURNBACK	5:OTHER	D	1	0	30.00	30.000	.	30.000	30.000	30.000	30.000	30.00
MI	15	4	EXCHANGE	1:DOUBLE	D	12	0	2949.00	245.750	104.624	75.000	75.000	263.000	491.000	491.00
MI	15	4	EXCHANGE	1:DOUBLE	U	11	0	1934.00	175.818	58.125	92.000	92.000	196.000	279.000	279.00
MI	15	4	EXCHANGE	3:KNOCKOUT	U	1	0	35.00	35.000	.	35.000	35.000	35.000	35.000	35.00
MI	15	4	EXCHANGE	2:SINGLE	D	149	0	3946.00	26.483	14.578	14.000	17.000	24.000	40.000	178.00
MI	15	4	EXCHANGE	2:SINGLE	U	156	0	3902.00	25.013	7.716	13.000	17.000	23.500	40.000	65.00
MI	15	4	FLY	1:DOUBLE	D	1	0	195.00	195.000	.	195.000	195.000	195.000	195.000	195.00
MI	15	4	FLY	5:OTHER	D	2	0	60.00	30.000	14.142	20.000	20.000	30.000	40.000	40.00
MI	15	4	FLY	5:OTHER	U	2	0	44.00	22.000	4.243	19.000	19.000	22.000	25.000	25.00
MI	15	4	FLY	3:KNOCKOUT	D	1	0	14.00	14.000	.	14.000	14.000	14.000	14.000	14.00
MI	15	4	FLY	3:KNOCKOUT	U	4	0	151.00	37.750	18.715	25.000	25.000	30.500	65.000	65.00
MI	15	4	FLY	2:SINGLE	D	1182	0	30300.00	25.635	9.181	11.000	15.000	25.000	40.000	90.00
MI	15	4	FLY	2:SINGLE	U	1153	0	29721.00	25.777	10.116	9.000	15.000	25.000	42.000	110.00
MI	15	4	FLY	5:OTHER	D	2	0	41.00	20.500	6.364	16.000	16.000	20.500	25.000	25.00
MI	15	4	FLY	5:OTHER	U	3	0	75.00	25.000	5.000	20.000	20.000	25.000	30.000	30.00
MI	15	4	FLY	4:JACKNIFE	U	3	0	121.00	40.333	13.796	30.000	30.000	35.000	56.000	56.00
MI	15	4	FLY	5:OTHER	D	1	0	20.00	20.000	.	20.000	20.000	20.000	20.000	20.00
MI	15	4	TURNBACK	1:DOUBLE	D	7	0	1457.00	208.143	30.119	150.000	150.000	217.000	237.000	237.00
MI	15	4	TURNBACK	1:DOUBLE	U	11	0	2011.00	182.818	72.462	85.000	85.000	160.000	279.000	279.00
MI	15	4	TURNBACK	2:SINGLE	D	98	0	2678.00	27.327	10.945	14.000	16.000	25.000	48.000	95.00
MI	15	4	TURNBACK	2:SINGLE	U	145	0	3883.00	26.779	10.535	14.000	16.000	24.000	49.000	76.00
MI	15	4	TURNBACK	5:OTHER	D	2	0	34.00	17.000	1.414	16.000	16.000	17.000	18.000	18.00
MI	16	1	EXCHANGE	1:DOUBLE	D	1267	0	144845.00	114.321	25.921	53.000	85.000	111.000	148.000	440.00
MI	16	1	EXCHANGE	1:DOUBLE	U	1202	0	125747.00	104.615	25.983	55.000	72.000	102.000	140.000	526.00
MI	16	1	EXCHANGE	3:KNOCKOUT	D	117	0	9130.00	78.034	30.560	22.000	30.000	80.000	125.000	205.00
MI	16	1	EXCHANGE	3:KNOCKOUT	U	131	0	8174.00	62.397	26.315	25.000	30.000	53.000	110.000	130.00
MI	16	1	EXCHANGE	2:SINGLE	D	560	0	15265.00	27.259	11.355	10.000	13.000	25.000	50.000	76.00
MI	16	1	EXCHANGE	2:SINGLE	U	648	0	18318.00	28.269	11.639	9.000	15.000	27.000	46.000	179.00
MI	16	1	EXCHANGE	5:OTHER	D	2	0	248.00	124.000	12.728	115.000	115.000	124.000	133.000	133.00
MI	16	1	EXCHANGE	5:OTHER	U	1	0	109.00	109.000	.	109.000	109.000	109.000	109.000	109.00
MI	16	1	EXCHANGE	4:JACKNIFE	D	29	0	2418.00	83.379	23.570	46.000	50.000	82.000	122.000	135.00
MI	16	1	EXCHANGE	4:JACKNIFE	U	41	0	3134.00	76.439	22.216	35.000	49.000	73.000	107.000	145.00
MI	16	1	FLY	1:DOUBLE	D	1095	0	140295.00	128.123	27.286	70.000	96.000	125.000	168.000	603.00
MI	16	1	FLY	1:DOUBLE	U	1063	0	120216.00	113.091	40.015	65.000	82.000	110.000	145.000	1065.00
MI	16	1	FLY	3:KNOCKOUT	D	111	0	9458.00	85.207	30.772	28.000	41.000	82.000	135.000	170.00
MI	16	1	FLY	3:KNOCKOUT	U	91	0	6342.00	69.692	23.451	30.000	40.000	62.000	114.000	135.00
MI	16	1	FLY	2:SINGLE	D	879	0	30175.00	34.329	32.136	10.000	17.000	30.000	60.000	715.00
MI	16	1	FLY	2:SINGLE	U	931	0	30493.00	32.753	13.479	10.000	18.000	30.000	55.000	250.00
MI	16	1	FLY	4:JACKNIFE	D	17	0	1444.00	84.941	26.878	21.000	21.000	85.000	140.000	140.00
MI	16	1	FLY	4:JACKNIFE	U	35	0	2835.00	81.000	18.737	35.000	40.000	85.000	115.000	117.00
MI	16	1	TURNBACK	1:DOUBLE	D	1170	0	128251.00	109.616	22.981	54.000	80.000	106.000	146.000	370.00
MI	16	1	TURNBACK	1:DOUBLE	U	1194	0	112780.00	94.456	26.009	54.000	67.000	90.000	128.000	481.00
MI	16	1	TURNBACK	5:OTHER	D	1	0	100.00	100.000	.	100.000	100.000	100.000	100.000	100.00
MI	16	1	TURNBACK	3:KNOCKOUT	D	135	0	9250.00	68.519	29.355	23.000	29.000	68.000	118.000	143.00
MI	16	1	TURNBACK	3:KNOCKOUT	U	116	0	6017.00	51.871	22.533	24.000	26.000	45.000	95.000	115.00
MI	16	1	TURNBACK	2:SINGLE	D	537	0	14397.00	26.810	12.871	9.000	14.000	25.000	50.000	155.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 84
Total Lockage Time in Lock
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Total Time Obs	Num Missing Values	Sum Mins Lock Time	Avg Mins Lock Time	Std Dev Lock Time	Smallest Lock Time	5th Pctile Lock Time	Median Lock Time	95th Pctile Lock Time	Largest Lock Time
MI	16	1	TURNBACK	2:SINGLE	U	612	0	15198.00	24.833	12.3138	8.000	13.000	22.000	41.000	233.000
MI	16	1	TURNBACK	5:OTHER	D	3	0	153.00	51.000	34.0735	27.000	27.000	36.000	90.000	90.000
MI	16	1	TURNBACK	4:JACKNIFE	D	35	0	2352.00	67.200	16.5561	32.000	40.000	65.000	93.000	115.000
MI	16	1	TURNBACK	4:JACKNIFE	U	31	0	2262.00	72.968	19.4019	30.000	35.000	74.000	105.000	109.000
MI	17	1	EXCHANGE	1:DOUBLE	D	1479	0	190967.00	129.119	27.5182	70.000	94.000	125.000	170.000	450.000
MI	17	1	EXCHANGE	1:DOUBLE	U	1462	0	156836.00	107.275	27.6873	55.000	78.000	105.000	140.000	655.000
MI	17	1	EXCHANGE	3:KNOCKOUT	D	81	0	6004.00	74.123	33.9534	27.000	34.000	68.000	130.000	200.000
MI	17	1	EXCHANGE	3:KNOCKOUT	U	95	0	5467.00	57.547	18.5557	29.000	35.000	53.000	90.000	115.000
MI	17	1	EXCHANGE	2:SINGLE	D	438	0	15022.00	34.297	17.9888	8.000	15.000	30.000	65.000	195.000
MI	17	1	EXCHANGE	2:SINGLE	U	492	0	15803.00	32.120	19.0971	10.000	16.000	30.000	51.000	360.000
MI	17	1	EXCHANGE	5:OTHER	U	1	0	115.00	115.000	.	115.000	115.000	115.000	115.000	115.000
MI	17	1	EXCHANGE	4:JACKNIFE	D	24	0	2374.00	98.917	27.5885	60.000	60.000	92.000	125.000	190.000
MI	17	1	EXCHANGE	4:JACKNIFE	U	41	0	3475.00	84.756	16.4815	56.000	60.000	85.000	115.000	120.000
MI	17	1	FLY	1:DOUBLE	D	1170	0	165722.00	141.643	25.0617	80.000	107.000	140.000	180.000	345.000
MI	17	1	FLY	1:DOUBLE	U	1061	0	123948.00	116.822	23.4288	70.000	85.000	115.000	150.000	390.000
MI	17	1	FLY	3:KNOCKOUT	D	63	0	5441.00	86.365	35.8187	35.000	45.000	76.000	140.000	215.000
MI	17	1	FLY	3:KNOCKOUT	U	68	0	4519.00	66.456	17.1981	38.000	45.000	65.000	100.000	130.000
MI	17	1	FLY	2:SINGLE	D	407	0	19263.00	47.329	30.5364	12.000	25.000	45.000	75.000	558.000
MI	17	1	FLY	2:SINGLE	U	432	0	17551.00	40.627	13.5680	15.000	25.000	40.000	62.000	155.000
MI	17	1	FLY	5:OTHER	D	1	0	160.00	160.000	.	160.000	160.000	160.000	160.000	160.000
MI	17	1	FLY	4:JACKNIFE	D	18	0	1898.00	105.444	37.8188	50.000	50.000	95.500	205.000	205.000
MI	17	1	FLY	4:JACKNIFE	U	25	0	2309.00	92.360	18.7636	50.000	50.000	90.000	115.000	125.000
MI	17	1	TURNBACK	1:DOUBLE	D	1143	0	138680.00	121.330	24.6483	58.000	87.000	119.000	163.000	272.000
MI	17	1	TURNBACK	1:DOUBLE	U	1193	0	112755.00	94.514	26.4336	48.000	67.000	92.000	126.000	547.000
MI	17	1	TURNBACK	3:KNOCKOUT	D	104	0	6839.00	65.760	28.6209	22.000	27.000	60.000	115.000	140.000
MI	17	1	TURNBACK	3:KNOCKOUT	U	108	0	5022.00	46.500	16.3178	20.000	27.000	43.500	80.000	112.000
MI	17	1	TURNBACK	2:SINGLE	D	450	0	13799.00	30.664	13.4820	10.000	15.000	28.000	57.000	85.000
MI	17	1	TURNBACK	2:SINGLE	U	391	0	10005.00	25.588	12.0468	10.000	15.000	23.000	41.000	130.000
MI	17	1	TURNBACK	5:OTHER	D	1	0	133.00	133.000	.	133.000	133.000	133.000	133.000	133.000
MI	17	1	TURNBACK	4:JACKNIFE	D	39	0	3062.00	78.513	17.5782	40.000	50.000	75.000	109.000	114.000
MI	17	1	TURNBACK	4:JACKNIFE	U	42	0	2909.00	69.262	15.4526	39.000	50.000	65.000	97.000	99.000
MI	18	1	EXCHANGE	1:DOUBLE	D	1519	0	171151.00	112.673	20.2234	50.000	85.000	110.000	145.000	335.000
MI	18	1	EXCHANGE	1:DOUBLE	U	1437	0	152033.00	105.799	23.8302	54.000	74.000	104.000	144.000	378.000
MI	18	1	EXCHANGE	5:OTHER	D	1	0	35.00	35.000	.	35.000	35.000	35.000	35.000	35.000
MI	18	1	EXCHANGE	3:KNOCKOUT	D	67	0	3866.00	57.701	24.8955	25.000	30.000	51.000	99.000	170.000
MI	18	1	EXCHANGE	3:KNOCKOUT	U	88	0	5141.00	58.420	19.3633	33.000	35.000	54.500	98.000	115.000
MI	18	1	EXCHANGE	2:SINGLE	D	405	0	11187.00	27.622	12.1705	8.000	13.000	25.000	50.000	82.000
MI	18	1	EXCHANGE	2:SINGLE	U	436	0	11756.00	26.963	15.9389	9.000	13.000	24.000	49.000	233.000
MI	18	1	EXCHANGE	5:OTHER	D	2	0	214.00	107.000	24.0416	90.000	90.000	107.000	124.000	124.000
MI	18	1	EXCHANGE	4:JACKNIFE	D	31	0	2663.00	85.903	25.9067	47.000	62.000	83.000	127.000	185.000
MI	18	1	EXCHANGE	4:JACKNIFE	U	48	0	4049.00	84.354	22.4144	42.000	51.000	87.000	113.000	144.000
MI	18	1	FLY	1:DOUBLE	D	1239	0	163235.00	131.747	35.9711	61.000	99.000	128.000	166.000	677.000
MI	18	1	FLY	1:DOUBLE	U	1081	0	121085.00	112.012	41.6153	66.000	80.000	108.000	145.000	850.000
MI	18	1	FLY	3:KNOCKOUT	D	51	0	3808.00	74.667	23.8627	40.000	45.000	70.000	120.000	136.000
MI	18	1	FLY	3:KNOCKOUT	U	64	0	3950.00	61.719	16.1692	40.000	44.000	60.000	90.000	120.000
MI	18	1	FLY	2:SINGLE	D	536	0	18743.00	34.968	17.1045	9.000	14.000	32.000	65.000	190.000
MI	18	1	FLY	2:SINGLE	U	590	0	18006.00	30.519	12.8678	8.000	13.000	30.000	51.000	112.000
MI	18	1	FLY	4:JACKNIFE	D	12	0	986.00	82.167	14.1282	57.000	57.000	82.500	105.000	105.000
MI	18	1	FLY	4:JACKNIFE	U	33	0	2873.00	87.061	26.7745	40.000	45.000	85.000	130.000	185.000
MI	18	1	TURNBACK	1:DOUBLE	D	1231	0	135481.00	110.058	31.8285	40.000	80.000	108.000	141.000	885.000

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 85
Total Lockage Time in Lock
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Total Time Obs	Num Missing Values	Sum Mins Lock Time	Avg Mins Lock Time	Std Dev Lock Time	Smallest Lock Time	5th Pctile Lock Time	Median Lock Time	95th Pctile Lock Time	Largest Lock Time
MI	18	1	TURNBACK	1:DOUBLE	U	1357	0	123410.00	90.943	24.5607	47.000	65.000	87.000	125.000	526.00
MI	18	1	TURNBACK	3:KNOCKOUT	D	117	0	6397.00	54.675	22.1934	20.000	27.000	47.000	100.000	122.00
MI	18	1	TURNBACK	3:KNOCKOUT	U	107	0	4532.00	42.355	15.6249	20.000	25.000	38.000	69.000	108.00
MI	18	1	TURNBACK	2:SINGLE	D	452	0	12323.00	27.263	25.4183	10.000	13.000	25.000	45.000	506.00
MI	18	1	TURNBACK	2:SINGLE	U	422	0	9766.00	23.142	10.5219	6.000	12.000	20.000	41.000	118.00
MI	18	1	TURNBACK	4:JACKNIFE	D	41	0	2941.00	71.732	22.9423	31.000	40.000	73.000	115.000	140.00
MI	18	1	TURNBACK	4:JACKNIFE	U	39	0	2465.00	63.205	16.8885	23.000	30.000	67.000	90.000	90.00
MI	18	1	TURNBACK	5:OTHER	U	1	0	20.00	20.000	.	20.000	20.000	20.000	20.000	20.00
MI	19	1	EXCHANGE	2:SINGLE	D	1782	0	116053.00	65.125	25.4593	16.000	28.000	65.000	95.000	706.00
MI	19	1	EXCHANGE	2:SINGLE	U	1654	0	133395.00	80.650	34.5237	20.000	33.000	82.000	129.000	648.00
MI	19	1	EXCHANGE	4:JACKNIFE	U	1	0	95.00	95.000	.	95.000	95.000	95.000	95.000	95.00
MI	19	1	FLY	5:OTHER	D	1	0	84.00	84.000	.	84.000	84.000	84.000	84.000	84.00
MI	19	1	FLY	3:KNOCKOUT	D	1	0	94.00	94.000	.	94.000	94.000	94.000	94.000	94.00
MI	19	1	FLY	2:SINGLE	D	2245	0	142698.00	63.563	25.1622	14.000	28.000	64.000	91.000	511.00
MI	19	1	FLY	2:SINGLE	U	2481	0	156382.00	63.032	18.9262	18.000	33.000	63.000	91.000	247.00
MI	19	1	FLY	5:OTHER	U	1	0	90.00	90.000	.	90.000	90.000	90.000	90.000	90.00
MI	19	1	TURNBACK	2:SINGLE	D	1491	0	92683.00	62.162	19.9590	15.000	30.000	62.000	88.000	307.00
MI	19	1	TURNBACK	2:SINGLE	U	1433	0	75014.00	52.348	18.0284	18.000	29.000	50.000	86.000	240.00
MI	20	1	EXCHANGE	1:DOUBLE	D	1718	0	194356.00	113.129	45.5835	62.000	86.000	110.000	145.000	1689.00
MI	20	1	EXCHANGE	1:DOUBLE	U	1641	0	188203.00	114.688	25.6743	54.000	80.000	111.000	158.000	365.00
MI	20	1	EXCHANGE	3:KNOCKOUT	D	46	0	3012.00	65.478	25.2135	30.000	38.000	56.000	110.000	142.00
MI	20	1	EXCHANGE	3:KNOCKOUT	U	27	0	1738.00	64.370	20.2107	32.000	42.000	60.000	101.000	127.00
MI	20	1	EXCHANGE	2:SINGLE	D	418	0	11266.00	26.952	16.6874	8.000	11.000	23.000	52.000	248.00
MI	20	1	EXCHANGE	2:SINGLE	U	529	0	14965.00	28.289	31.3435	8.000	12.000	24.000	55.000	675.00
MI	20	1	EXCHANGE	5:OTHER	D	1	0	130.00	130.000	.	130.000	130.000	130.000	130.000	130.00
MI	20	1	EXCHANGE	4:JACKNIFE	D	28	0	1984.00	70.857	16.4985	34.000	38.000	72.000	91.000	105.00
MI	20	1	EXCHANGE	4:JACKNIFE	U	39	0	3804.00	97.538	21.9339	50.000	67.000	100.000	133.000	168.00
MI	20	1	FLY	1:DOUBLE	D	1207	0	144633.00	119.829	34.3552	45.000	90.000	115.000	152.000	684.00
MI	20	1	FLY	1:DOUBLE	U	1109	0	127402.00	114.880	35.3639	51.000	85.000	111.000	150.000	709.00
MI	20	1	FLY	3:KNOCKOUT	D	26	0	1767.00	67.962	28.2977	38.000	39.000	59.000	135.000	135.00
MI	20	1	FLY	3:KNOCKOUT	U	22	0	1314.00	59.727	10.9291	44.000	45.000	59.500	80.000	80.00
MI	20	1	FLY	2:SINGLE	D	496	0	14934.00	30.109	32.1162	7.000	13.000	25.000	52.000	617.00
MI	20	1	FLY	2:SINGLE	U	600	0	18409.00	30.682	32.6949	7.000	13.000	27.000	53.000	764.00
MI	20	1	FLY	4:JACKNIFE	D	18	0	1465.00	81.389	15.4583	55.000	55.000	82.500	110.000	110.00
MI	20	1	FLY	4:JACKNIFE	U	28	0	2373.00	84.750	17.3880	47.000	60.000	84.000	115.000	115.00
MI	20	1	TURNBACK	1:DOUBLE	D	1433	0	156368.00	109.119	26.2324	32.000	82.000	108.000	137.000	548.00
MI	20	1	TURNBACK	1:DOUBLE	U	1412	0	136561.00	96.715	26.8698	43.000	70.000	93.000	135.000	604.00
MI	20	1	TURNBACK	3:KNOCKOUT	D	54	0	3074.00	56.926	20.5856	25.000	32.000	52.500	95.000	138.00
MI	20	1	TURNBACK	3:KNOCKOUT	U	43	0	2206.00	51.302	15.4250	25.000	33.000	49.000	78.000	108.00
MI	20	1	TURNBACK	2:SINGLE	D	399	0	9925.00	24.875	11.2498	8.000	12.000	22.000	48.000	72.00
MI	20	1	TURNBACK	2:SINGLE	U	424	0	10020.00	23.632	9.4787	9.000	12.000	22.000	44.000	71.00
MI	20	1	TURNBACK	5:OTHER	D	3	0	133.00	44.333	59.4671	10.000	10.000	10.000	113.000	113.00
MI	20	1	TURNBACK	4:JACKNIFE	D	40	0	2959.00	73.975	18.9838	23.000	43.500	77.500	97.500	110.00
MI	20	1	TURNBACK	4:JACKNIFE	U	49	0	3599.00	73.449	19.5939	28.000	47.000	74.000	119.000	120.00
MI	21	1	EXCHANGE	1:DOUBLE	D	1775	0	204975.00	115.479	27.6416	67.000	90.000	111.000	151.000	563.00
MI	21	1	EXCHANGE	1:DOUBLE	U	1776	0	203625.00	114.654	22.6749	53.000	80.000	114.000	151.000	420.00
MI	21	1	EXCHANGE	3:KNOCKOUT	D	40	0	2486.00	62.150	19.3914	29.000	41.500	53.500	105.000	110.00
MI	21	1	EXCHANGE	3:KNOCKOUT	U	36	0	2387.00	66.306	22.3221	28.000	37.000	64.000	110.000	117.00
MI	21	1	EXCHANGE	2:SINGLE	D	422	0	11069.00	26.230	16.2139	8.000	12.000	23.000	47.000	228.00
MI	21	1	EXCHANGE	2:SINGLE	U	534	0	13861.00	25.957	14.8740	9.000	11.000	20.000	55.000	111.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 86
Total Lockage Time in Lock
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Total Time Obs	Num Missing Values	Sum Mins Lock Time	Avg Mins Lock Time	Std Dev Lock Time	Smallest Lock Time	5th Pctile Lock Time	Median Lock Time	95th Pctile Lock Time	Largest Lock Time
MI	21	1	EXCHANGE	5:OTHER	D	3	0	227.00	75.667	57.501	10.000	10.000	100.000	117.000	117.00
MI	21	1	EXCHANGE	5:OTHER	U	4	0	412.00	103.000	44.113	40.000	40.000	118.500	135.000	135.00
MI	21	1	EXCHANGE	4:JACKNIFE	D	21	0	1629.00	77.571	18.140	45.000	56.000	75.000	103.000	120.00
MI	21	1	EXCHANGE	4:JACKNIFE	U	51	0	4709.00	92.333	20.163	37.000	65.000	91.000	127.000	138.00
MI	21	1	FLY	1:DOUBLE	D	1288	0	173911.00	135.024	25.278	82.000	105.000	133.000	167.000	653.00
MI	21	1	FLY	1:DOUBLE	U	1153	0	139044.00	120.593	36.744	66.000	87.000	117.000	155.000	780.00
MI	21	1	FLY	3:KNOCKOUT	D	31	0	2354.00	75.935	25.882	42.000	50.000	66.000	117.000	175.00
MI	21	1	FLY	3:KNOCKOUT	U	22	0	1560.00	70.909	23.594	40.000	45.000	67.000	110.000	125.00
MI	21	1	FLY	2:SINGLE	D	417	0	14003.00	33.580	17.141	10.000	15.000	30.000	62.000	164.00
MI	21	1	FLY	2:SINGLE	U	494	0	16679.00	33.763	16.779	10.000	15.000	30.000	59.000	235.00
MI	21	1	FLY	4:JACKNIFE	D	17	0	1700.00	100.000	25.385	61.000	61.000	91.000	155.000	155.00
MI	21	1	FLY	4:JACKNIFE	U	36	0	3468.00	96.333	14.732	67.000	68.000	99.500	120.000	120.00
MI	21	1	FLY	5:OTHER	D	1	0	15.00	15.000	.	15.000	15.000	15.000	15.000	15.00
MI	21	1	TURNBACK	1:DOUBLE	D	1470	0	162026.00	110.222	28.411	65.000	85.000	107.000	140.000	630.00
MI	21	1	TURNBACK	1:DOUBLE	U	1364	0	130552.00	95.713	31.775	44.000	69.000	91.000	133.000	818.00
MI	21	1	TURNBACK	3:KNOCKOUT	D	55	0	2733.00	49.691	11.768	27.000	30.000	46.000	68.000	85.00
MI	21	1	TURNBACK	3:KNOCKOUT	U	51	0	2557.00	50.137	17.005	15.000	30.000	47.000	83.000	97.00
MI	21	1	TURNBACK	2:SINGLE	D	449	0	11094.00	24.708	12.327	8.000	13.000	22.000	46.000	113.00
MI	21	1	TURNBACK	2:SINGLE	U	438	0	9795.00	22.363	9.331	9.000	12.000	20.000	41.000	65.00
MI	21	1	TURNBACK	5:OTHER	U	4	0	228.00	57.000	44.310	19.000	19.000	51.500	106.000	106.00
MI	21	1	TURNBACK	4:JACKNIFE	D	40	0	2814.00	70.350	16.412	22.000	45.000	70.000	98.500	115.00
MI	21	1	TURNBACK	4:JACKNIFE	U	38	0	2781.00	73.184	13.396	44.000	53.000	73.000	96.000	107.00
MI	22	1	EXCHANGE	1:DOUBLE	D	1972	0	252376.00	127.980	35.974	74.000	96.000	123.000	170.000	618.00
MI	22	1	EXCHANGE	1:DOUBLE	U	1901	0	238782.00	125.609	33.257	54.000	86.000	122.000	170.000	734.00
MI	22	1	EXCHANGE	5:OTHER	U	1	0	70.00	70.000	.	70.000	70.000	70.000	70.000	70.00
MI	22	1	EXCHANGE	3:KNOCKOUT	D	54	0	5069.00	93.870	100.293	36.000	40.000	72.000	160.000	662.00
MI	22	1	EXCHANGE	3:KNOCKOUT	U	35	0	3009.00	85.971	74.825	44.000	44.000	71.000	163.000	495.00
MI	22	1	EXCHANGE	2:SINGLE	D	373	0	11609.00	31.123	16.911	10.000	15.000	28.000	56.000	187.00
MI	22	1	EXCHANGE	2:SINGLE	U	492	0	14529.00	29.530	15.326	11.000	14.000	25.000	61.000	96.00
MI	22	1	EXCHANGE	5:OTHER	D	1	0	112.00	112.000	.	112.000	112.000	112.000	112.000	112.00
MI	22	1	EXCHANGE	4:JACKNIFE	D	34	0	2819.00	82.912	22.968	42.000	46.000	83.000	122.000	130.00
MI	22	1	EXCHANGE	4:JACKNIFE	U	59	0	6393.00	108.356	33.763	65.000	72.000	110.000	152.000	303.00
MI	22	1	FLY	1:DOUBLE	D	934	0	141277.00	151.260	51.359	45.000	116.000	145.000	190.000	1087.00
MI	22	1	FLY	1:DOUBLE	U	775	0	106033.00	136.817	37.073	78.000	102.000	132.000	180.000	752.00
MI	22	1	FLY	5:OTHER	D	1	0	127.00	127.000	.	127.000	127.000	127.000	127.000	127.00
MI	22	1	FLY	3:KNOCKOUT	D	25	0	2280.00	91.200	30.745	46.000	46.000	86.000	135.000	145.00
MI	22	1	FLY	3:KNOCKOUT	U	16	0	1138.00	71.125	23.386	45.000	45.000	67.000	130.000	130.00
MI	22	1	FLY	2:SINGLE	D	246	0	14392.00	58.504	125.528	10.000	21.000	44.000	81.000	1823.00
MI	22	1	FLY	2:SINGLE	U	297	0	14849.00	49.997	70.380	14.000	24.000	39.000	74.000	887.00
MI	22	1	FLY	4:JACKNIFE	D	12	0	1210.00	100.833	17.012	75.000	75.000	97.500	132.000	132.00
MI	22	1	FLY	4:JACKNIFE	U	24	0	2530.00	105.417	21.387	73.000	81.000	102.500	137.000	142.00
MI	22	1	TURNBACK	1:DOUBLE	D	1640	0	196441.00	119.781	30.726	69.000	91.000	115.000	158.000	607.00
MI	22	1	TURNBACK	1:DOUBLE	U	1651	0	177561.00	107.548	35.958	55.000	76.000	102.000	150.000	748.00
MI	22	1	TURNBACK	5:OTHER	D	1	0	40.00	40.000	.	40.000	40.000	40.000	40.000	40.00
MI	22	1	TURNBACK	3:KNOCKOUT	D	68	0	4648.00	68.353	42.902	32.000	35.000	57.000	125.000	342.00
MI	22	1	TURNBACK	3:KNOCKOUT	U	63	0	3869.00	61.413	22.165	31.000	38.000	56.000	99.000	133.00
MI	22	1	TURNBACK	2:SINGLE	D	411	0	13664.00	33.246	50.199	10.000	14.000	27.000	57.000	967.00
MI	22	1	TURNBACK	2:SINGLE	U	390	0	10214.00	26.190	15.472	9.000	14.000	22.000	50.000	195.00
MI	22	1	TURNBACK	5:OTHER	D	2	0	120.00	60.000	65.054	14.000	14.000	60.000	106.000	106.00
MI	22	1	TURNBACK	5:OTHER	U	2	0	116.00	58.000	29.698	37.000	37.000	58.000	79.000	79.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 87
Total Lockage Time in Lock
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Total Time Obs	Num Missing Values	Sum Mins Lock Time	Avg Mins Lock Time	Std Dev Lock Time	Smallest Lock Time	5th Pctile Lock Time	Median Lock Time	95th Pctile Lock Time	Largest Lock Time
MI	22	1	TURNBACK	4:JACKNIFE	D	32	0	2495.00	77.969	17.9722	53.000	55.000	77.500	120.000	123.00
MI	22	1	TURNBACK	4:JACKNIFE	U	53	0	4645.00	87.642	21.7672	40.000	60.000	83.000	120.000	145.00
MI	24	1	EXCHANGE	1:DOUBLE	D	1982	0	254571.00	128.441	38.1353	46.000	97.000	125.000	165.000	775.00
MI	24	1	EXCHANGE	1:DOUBLE	U	1946	0	218584.00	112.325	29.7291	61.000	79.000	110.000	150.000	700.00
MI	24	1	EXCHANGE	3:KNOCKOUT	D	68	0	3922.00	57.676	17.5936	23.000	37.000	55.500	95.000	102.00
MI	24	1	EXCHANGE	3:KNOCKOUT	U	48	0	3015.00	62.813	21.5324	35.000	39.000	60.000	100.000	154.00
MI	24	1	EXCHANGE	2:SINGLE	D	378	0	11556.00	30.571	38.1657	8.000	13.000	26.500	51.000	730.00
MI	24	1	EXCHANGE	2:SINGLE	U	495	0	13985.00	28.253	10.8241	8.000	14.000	26.000	50.000	84.00
MI	24	1	EXCHANGE	5:OTHER	D	2	0	253.00	126.500	13.4350	117.000	117.000	126.500	136.000	136.00
MI	24	1	EXCHANGE	5:OTHER	U	1	0	20.00	20.000	.	20.000	20.000	20.000	20.000	20.00
MI	24	1	EXCHANGE	4:JACKNIFE	D	31	0	2407.00	77.645	19.7274	45.000	51.000	73.000	118.000	125.00
MI	24	1	EXCHANGE	4:JACKNIFE	U	56	0	4895.00	87.411	21.4050	41.000	60.000	85.000	124.000	150.00
MI	24	1	FLY	1:DOUBLE	D	909	0	118670.00	130.550	41.7569	77.000	98.000	125.000	165.000	765.00
MI	24	1	FLY	1:DOUBLE	U	848	0	98495.00	116.150	21.6253	65.000	85.000	115.000	150.000	265.00
MI	24	1	FLY	3:KNOCKOUT	D	35	0	2040.00	58.286	13.8045	30.000	34.000	58.000	82.000	90.00
MI	24	1	FLY	3:KNOCKOUT	U	22	0	1738.00	79.000	24.7386	45.000	55.000	74.000	110.000	157.00
MI	24	1	FLY	2:SINGLE	D	313	0	10771.00	34.412	17.5218	10.000	15.000	33.000	60.000	160.00
MI	24	1	FLY	2:SINGLE	U	347	0	11630.00	33.516	12.4815	11.000	17.000	32.000	52.000	92.00
MI	24	1	FLY	5:OTHER	D	1	0	135.00	135.000	.	135.000	135.000	135.000	135.000	135.00
MI	24	1	FLY	5:OTHER	U	1	0	27.00	27.000	.	27.000	27.000	27.000	27.000	27.00
MI	24	1	FLY	4:JACKNIFE	D	10	0	792.00	79.200	13.4065	64.000	64.000	75.000	106.000	106.00
MI	24	1	FLY	4:JACKNIFE	U	26	0	2417.00	92.962	19.1091	65.000	70.000	89.000	120.000	145.00
MI	24	1	TURNBACK	1:DOUBLE	D	1826	0	221377.00	121.236	34.0897	63.000	91.000	117.000	155.000	790.00
MI	24	1	TURNBACK	1:DOUBLE	U	1663	0	169070.00	101.666	26.4772	55.000	73.000	99.000	135.000	534.00
MI	24	1	TURNBACK	3:KNOCKOUT	D	85	0	4746.00	55.835	29.4719	31.000	34.000	51.000	93.000	270.00
MI	24	1	TURNBACK	3:KNOCKOUT	U	54	0	3057.00	56.611	31.8235	28.000	32.000	51.500	81.000	265.00
MI	24	1	TURNBACK	2:SINGLE	D	370	0	12056.00	32.584	52.7915	9.000	14.000	27.000	48.000	730.00
MI	24	1	TURNBACK	2:SINGLE	U	428	0	11025.00	25.759	10.6806	10.000	13.000	24.000	43.000	100.00
MI	24	1	TURNBACK	5:OTHER	U	1	0	91.00	91.000	.	91.000	91.000	91.000	91.000	91.00
MI	24	1	TURNBACK	4:JACKNIFE	D	36	0	2714.00	75.389	13.8281	45.000	56.000	74.500	100.000	110.00
MI	24	1	TURNBACK	4:JACKNIFE	U	54	0	4439.00	82.204	18.5466	42.000	46.000	77.000	115.000	120.00
MI	25	1	EXCHANGE	1:DOUBLE	D	2313	0	277603.00	120.019	28.2557	20.000	91.000	116.000	157.000	647.00
MI	25	1	EXCHANGE	1:DOUBLE	U	1784	0	203360.00	113.991	36.6655	13.000	77.000	111.000	154.000	681.00
MI	25	1	EXCHANGE	3:KNOCKOUT	D	74	0	4610.00	62.297	25.9339	26.000	35.000	57.500	116.000	190.00
MI	25	1	EXCHANGE	3:KNOCKOUT	U	56	0	3738.00	66.750	26.7448	26.000	37.000	58.000	131.000	135.00
MI	25	1	EXCHANGE	2:SINGLE	D	437	0	10431.00	23.870	16.2157	6.000	10.000	20.000	46.000	255.00
MI	25	1	EXCHANGE	2:SINGLE	U	717	0	15559.00	21.700	18.1287	7.000	10.000	17.000	45.000	307.00
MI	25	1	EXCHANGE	4:JACKNIFE	D	28	0	2514.00	89.786	65.1291	28.000	57.000	77.000	128.000	409.00
MI	25	1	EXCHANGE	4:JACKNIFE	U	60	0	5922.00	98.700	60.7203	52.000	59.000	87.000	147.500	491.00
MI	25	1	FLY	1:DOUBLE	D	697	0	98167.00	140.842	41.8252	48.000	100.000	135.000	190.000	592.00
MI	25	1	FLY	1:DOUBLE	U	809	0	99290.00	122.732	45.2261	46.000	85.000	119.000	162.000	722.00
MI	25	1	FLY	5:OTHER	D	1	0	105.00	105.000	.	105.000	105.000	105.000	105.000	105.00
MI	25	1	FLY	3:KNOCKOUT	D	24	0	1493.00	62.208	16.8032	39.000	41.000	59.000	90.000	96.00
MI	25	1	FLY	3:KNOCKOUT	U	25	0	1788.00	71.520	23.5728	43.000	46.000	67.000	125.000	130.00
MI	25	1	FLY	2:SINGLE	D	401	0	11827.00	29.494	18.4367	9.000	11.000	25.000	57.000	217.00
MI	25	1	FLY	2:SINGLE	U	804	0	19569.00	24.340	13.8204	6.000	11.000	21.000	46.000	151.00
MI	25	1	FLY	4:JACKNIFE	D	11	0	1037.00	94.273	12.5227	80.000	80.000	89.000	115.000	115.00
MI	25	1	FLY	4:JACKNIFE	U	22	0	2634.00	119.727	98.0768	56.000	75.000	94.000	273.000	517.00
MI	25	1	TURNBACK	1:DOUBLE	D	1728	0	200369.00	115.954	46.6688	25.000	85.000	112.000	153.000	1698.00
MI	25	1	TURNBACK	1:DOUBLE	U	1881	0	187845.00	99.864	28.8618	31.000	70.000	97.000	137.000	639.00

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 88
Total Lockage Time in Lock
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Total Time Obs	Num Missing Values	Sum Mins Lock Time	Avg Mins Lock Time	Std Dev Lock Time	Smallest Lock Time	5th Pctile Lock Time	Median Lock Time	95th Pctile Lock Time	Largest Lock Time
MI	25	1	TURNBACK	3:KNOCKOUT	D	95	0	4824.00	50.779	32.7454	26.000	32.000	45.000	89.000	335.000
MI	25	1	TURNBACK	3:KNOCKOUT	U	50	0	2391.00	47.820	14.0969	32.000	33.000	45.500	75.000	84.000
MI	25	1	TURNBACK	2:SINGLE	D	430	0	10003.00	23.263	12.1821	5.000	11.000	21.000	41.000	149.000
MI	25	1	TURNBACK	2:SINGLE	U	516	0	10883.00	21.091	11.1676	7.000	10.000	18.000	43.000	125.000
MI	25	1	TURNBACK	4:JACKNIFE	D	39	0	2778.00	71.231	15.3288	36.000	44.000	71.000	95.000	97.000
MI	25	1	TURNBACK	4:JACKNIFE	U	57	0	4577.00	80.298	18.0347	39.000	47.000	78.000	115.000	137.000
MI	26	1	EXCHANGE	1:DOUBLE	D	1	0	170.00	170.000	.	170.000	170.000	170.000	170.000	170.000
MI	26	1	EXCHANGE	2:SINGLE	D	2588	0	129275.00	49.952	20.4755	13.000	28.000	48.000	75.000	468.000
MI	26	1	EXCHANGE	2:SINGLE	U	3431	0	155057.00	45.193	15.9593	12.000	26.000	45.000	68.000	528.000
MI	26	1	EXCHANGE	5:OTHER	U	1	0	38.00	38.000	.	38.000	38.000	38.000	38.000	38.000
MI	26	1	FLY	1:DOUBLE	D	1	0	341.00	341.000	.	341.000	341.000	341.000	341.000	341.000
MI	26	1	FLY	3:KNOCKOUT	D	1	0	44.00	44.000	.	44.000	44.000	44.000	44.000	44.000
MI	26	1	FLY	2:SINGLE	D	4511	0	258924.00	57.398	18.0315	12.000	36.000	57.000	75.000	485.000
MI	26	1	FLY	2:SINGLE	U	3778	0	195985.00	51.875	22.2367	5.000	31.000	51.000	70.000	833.000
MI	26	1	FLY	5:OTHER	D	3	0	190.00	63.333	7.6376	55.000	55.000	65.000	70.000	70.000
MI	26	1	FLY	5:OTHER	U	1	0	65.00	65.000	.	65.000	65.000	65.000	65.000	65.000
MI	26	1	TURNBACK	3:KNOCKOUT	U	1	0	45.00	45.000	.	45.000	45.000	45.000	45.000	45.000
MI	26	1	TURNBACK	2:SINGLE	D	3186	0	138253.00	43.394	16.2095	11.000	26.000	41.000	67.000	301.000
MI	26	1	TURNBACK	2:SINGLE	U	3089	0	115918.00	37.526	14.7420	11.000	23.000	34.000	58.000	338.000
MI	26	1	TURNBACK	5:OTHER	D	1	0	52.00	52.000	.	52.000	52.000	52.000	52.000	52.000
MI	26	1	TURNBACK	5:OTHER	U	1	0	25.00	25.000	.	25.000	25.000	25.000	25.000	25.000
MI	26	4	EXCHANGE	1:DOUBLE	D	318	0	31639.00	99.494	49.2592	20.000	59.000	84.500	192.000	487.000
MI	26	4	EXCHANGE	1:DOUBLE	U	316	0	28520.00	90.253	36.3861	21.000	56.000	84.500	134.000	541.000
MI	26	4	EXCHANGE	3:KNOCKOUT	D	34	0	1718.00	50.529	16.9173	29.000	30.000	47.500	75.000	120.000
MI	26	4	EXCHANGE	3:KNOCKOUT	U	42	0	1909.00	45.452	13.0593	18.000	29.000	43.500	61.000	101.000
MI	26	4	EXCHANGE	2:SINGLE	D	273	0	7111.00	26.048	12.4505	9.000	12.000	24.000	50.000	97.000
MI	26	4	EXCHANGE	2:SINGLE	U	329	0	8035.00	24.422	8.9790	9.000	13.000	23.000	43.000	60.000
MI	26	4	EXCHANGE	4:JACKNIFE	D	9	0	594.00	66.000	24.1557	33.000	33.000	69.000	100.000	100.000
MI	26	4	EXCHANGE	4:JACKNIFE	U	22	0	1302.00	59.182	17.9990	36.000	40.000	55.000	91.000	101.000
MI	26	4	EXCHANGE	5:OTHER	D	1	0	35.00	35.000	.	35.000	35.000	35.000	35.000	35.000
MI	26	4	FLY	1:DOUBLE	D	30	0	3692.00	123.067	64.1716	53.000	54.000	103.000	290.000	300.000
MI	26	4	FLY	1:DOUBLE	U	14	0	1423.00	101.643	38.8104	43.000	43.000	114.000	175.000	175.000
MI	26	4	FLY	5:OTHER	U	1	0	205.00	205.000	.	205.000	205.000	205.000	205.000	205.000
MI	26	4	FLY	3:KNOCKOUT	D	120	0	7029.00	58.575	13.4992	38.000	41.000	57.500	81.000	116.000
MI	26	4	FLY	3:KNOCKOUT	U	138	0	7785.00	56.413	10.9603	30.000	38.000	55.000	77.000	94.000
MI	26	4	FLY	2:SINGLE	D	2491	0	79036.00	31.729	10.5748	8.000	17.000	30.000	50.000	119.000
MI	26	4	FLY	2:SINGLE	U	2350	0	70128.00	29.842	12.5993	6.000	16.000	29.000	47.000	410.000
MI	26	4	FLY	5:OTHER	D	2	0	30.00	15.000	4.2426	12.000	12.000	15.000	18.000	18.000
MI	26	4	FLY	5:OTHER	U	4	0	89.00	22.250	12.0381	11.000	11.000	20.000	38.000	38.000
MI	26	4	FLY	4:JACKNIFE	D	11	0	880.00	80.000	25.1476	34.000	34.000	80.000	129.000	129.000
MI	26	4	FLY	4:JACKNIFE	U	21	0	1632.00	77.714	16.7605	48.000	55.000	78.000	107.000	115.000
MI	26	4	FLY	5:OTHER	U	3	0	113.00	37.667	12.6623	28.000	28.000	33.000	52.000	52.000
MI	26	4	TURNBACK	1:DOUBLE	D	366	0	34181.00	93.391	53.9955	14.000	31.000	82.500	171.000	601.000
MI	26	4	TURNBACK	1:DOUBLE	U	418	0	33312.00	79.694	29.7433	14.000	30.000	77.000	132.000	240.000
MI	26	4	TURNBACK	3:KNOCKOUT	D	58	0	3283.00	56.603	29.8810	31.000	31.000	46.500	144.000	175.000
MI	26	4	TURNBACK	3:KNOCKOUT	U	40	0	2133.00	53.325	40.4148	25.000	29.000	44.000	87.000	284.000
MI	26	4	TURNBACK	2:SINGLE	D	345	0	8876.00	25.728	14.5607	9.000	13.000	23.000	45.000	179.000
MI	26	4	TURNBACK	2:SINGLE	U	265	0	5763.00	21.747	7.3835	9.000	12.000	20.000	35.000	50.000
MI	26	4	TURNBACK	5:OTHER	D	2	0	33.00	16.500	0.7071	16.000	16.000	16.500	17.000	17.000
MI	26	4	TURNBACK	5:OTHER	U	1	0	28.00	28.000	.	28.000	28.000	28.000	28.000	28.000

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 89
Total Lockage Time in Lock
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Total Time Obs	Num Missing Values	Sum Mins Lock Time	Avg Mins Lock Time	Std Dev Lock Time	Smallest Lock Time	5th Pctile Lock Time	Median Lock Time	95th Pctile Lock Time	Largest Lock Time
MI	26	4	TURNBACK	4:JACKNIFE	D	11	0	617.00	56.091	16.6340	36.0000	36.0000	50.000	80.000	80.000
MI	26	4	TURNBACK	4:JACKNIFE	U	27	0	1791.00	66.333	21.4225	26.0000	41.0000	68.000	104.000	119.000
MI	26	4	TURNBACK	5:OTHER	U	1	0	46.00	46.000	.	46.0000	46.0000	46.000	46.000	46.000
MI	27	1	EXCHANGE	3:KNOCKOUT	D	1	0	24.00	24.000	.	24.0000	24.0000	24.000	24.000	24.000
MI	27	1	EXCHANGE	3:KNOCKOUT	U	2	0	148.00	74.000	21.2132	59.0000	59.0000	74.000	89.000	89.000
MI	27	1	EXCHANGE	2:SINGLE	D	3979	0	192512.00	48.382	16.6913	9.0000	25.0000	46.000	77.000	188.000
MI	27	1	EXCHANGE	2:SINGLE	U	4318	0	191966.00	44.457	14.2199	12.0000	24.0000	43.000	68.000	201.000
MI	27	1	EXCHANGE	5:OTHER	D	2	0	110.00	55.000	11.3137	47.0000	47.0000	55.000	63.000	63.000
MI	27	1	FLY	3:KNOCKOUT	U	4	0	242.00	60.500	6.7577	53.0000	53.0000	60.500	68.000	68.000
MI	27	1	FLY	2:SINGLE	D	4742	0	221211.00	46.649	17.8973	13.0000	22.0000	46.000	71.000	404.000
MI	27	1	FLY	2:SINGLE	U	4689	0	204901.00	43.698	14.2387	12.0000	22.0000	43.000	67.000	221.000
MI	27	1	FLY	5:OTHER	D	4	0	177.00	44.250	14.5000	27.0000	27.0000	45.500	59.000	59.000
MI	27	1	FLY	5:OTHER	U	3	0	97.00	32.333	10.9697	20.0000	20.0000	36.000	41.000	41.000
MI	27	1	TURNBACK	5:OTHER	U	1	0	28.00	28.000	.	28.0000	28.0000	28.000	28.000	28.000
MI	27	1	TURNBACK	3:KNOCKOUT	U	6	0	247.00	41.167	19.2709	17.0000	17.0000	38.000	71.000	71.000
MI	27	1	TURNBACK	2:SINGLE	D	4811	0	190584.00	39.614	13.3017	12.0000	24.0000	37.000	63.000	222.000
MI	27	1	TURNBACK	2:SINGLE	U	4794	0	182169.00	37.999	13.0428	13.0000	23.0000	36.000	59.000	407.000
MI	27	1	TURNBACK	5:OTHER	D	1	0	26.00	26.000	.	26.0000	26.0000	26.000	26.000	26.000
MI	27	1	TURNBACK	5:OTHER	U	2	0	63.00	31.500	9.1924	25.0000	25.0000	31.500	38.000	38.000
MI	27	4	EXCHANGE	1:DOUBLE	D	41	0	4192.00	102.244	22.2977	66.0000	77.0000	99.000	141.000	171.000
MI	27	4	EXCHANGE	1:DOUBLE	U	45	0	4415.00	98.111	27.3755	55.0000	68.0000	88.000	153.000	188.000
MI	27	4	EXCHANGE	3:KNOCKOUT	D	36	0	1711.00	47.528	10.6864	26.0000	26.0000	46.500	66.000	73.000
MI	27	4	EXCHANGE	3:KNOCKOUT	U	27	0	1439.00	53.296	15.9899	24.0000	24.0000	55.000	80.000	81.000
MI	27	4	EXCHANGE	2:SINGLE	D	332	0	9197.00	27.702	11.2079	11.0000	15.0000	26.000	49.000	104.000
MI	27	4	EXCHANGE	2:SINGLE	U	338	0	8428.00	24.935	9.9781	6.0000	14.0000	23.000	43.000	79.000
MI	27	4	EXCHANGE	5:OTHER	D	2	0	64.00	32.000	15.5563	21.0000	21.0000	32.000	43.000	43.000
MI	27	4	EXCHANGE	4:JACKNIFE	D	4	0	278.00	69.500	14.3875	56.0000	56.0000	66.500	89.000	89.000
MI	27	4	EXCHANGE	4:JACKNIFE	U	5	0	382.00	76.400	30.4434	34.0000	34.0000	76.000	120.000	120.000
MI	27	4	FLY	1:DOUBLE	D	9	0	1151.00	127.889	29.6793	77.0000	77.0000	126.000	190.000	190.000
MI	27	4	FLY	1:DOUBLE	U	13	0	1454.00	111.846	26.7452	81.0000	81.0000	110.000	181.000	181.000
MI	27	4	FLY	5:OTHER	U	1	0	18.00	18.000	.	18.0000	18.0000	18.000	18.000	18.000
MI	27	4	FLY	3:KNOCKOUT	D	143	0	7376.00	51.580	12.4247	32.0000	35.0000	51.000	75.000	117.000
MI	27	4	FLY	3:KNOCKOUT	U	153	0	7777.00	50.830	11.5484	27.0000	32.0000	50.000	72.000	78.000
MI	27	4	FLY	2:SINGLE	D	2374	0	71978.00	30.319	10.3850	7.0000	17.0000	29.000	48.000	101.000
MI	27	4	FLY	2:SINGLE	U	2146	0	63228.00	29.463	10.2051	4.0000	17.0000	27.000	48.000	113.000
MI	27	4	FLY	5:OTHER	D	1	0	27.00	27.000	.	27.0000	27.0000	27.000	27.000	27.000
MI	27	4	FLY	5:OTHER	U	2	0	50.00	25.000	4.2426	22.0000	22.0000	25.000	28.000	28.000
MI	27	4	FLY	4:JACKNIFE	D	15	0	981.00	65.400	16.8769	39.0000	39.0000	71.000	92.000	92.000
MI	27	4	FLY	4:JACKNIFE	U	9	0	668.00	74.222	26.0422	32.0000	32.0000	76.000	116.000	116.000
MI	27	4	TURNBACK	1:DOUBLE	D	58	0	5675.00	97.845	21.0828	62.0000	68.0000	96.500	144.000	149.000
MI	27	4	TURNBACK	1:DOUBLE	U	37	0	3708.00	100.216	31.6466	69.0000	70.0000	90.000	192.000	212.000
MI	27	4	TURNBACK	3:KNOCKOUT	D	33	0	1742.00	52.788	25.2460	31.0000	32.0000	48.000	79.000	177.000
MI	27	4	TURNBACK	3:KNOCKOUT	U	47	0	2286.00	48.638	13.4252	28.0000	32.0000	47.000	79.000	92.000
MI	27	4	TURNBACK	2:SINGLE	D	307	0	8114.00	26.430	9.5489	11.0000	15.0000	24.000	45.000	77.000
MI	27	4	TURNBACK	2:SINGLE	U	233	0	5814.00	24.953	10.0178	12.0000	14.0000	22.000	43.000	83.000
MI	27	4	TURNBACK	4:JACKNIFE	D	3	0	194.00	64.667	10.2144	53.0000	53.0000	69.000	72.000	72.000
MI	27	4	TURNBACK	4:JACKNIFE	U	9	0	804.00	89.333	36.8578	45.0000	45.0000	89.000	175.000	175.000
MI	51	1	EXCHANGE	3:KNOCKOUT	D	249	0	6001.00	24.100	5.9258	15.0000	17.0000	23.000	34.000	49.000
MI	51	1	EXCHANGE	3:KNOCKOUT	U	139	0	3626.00	26.086	7.9048	10.0000	20.0000	24.000	35.000	94.000
MI	51	1	EXCHANGE	2:SINGLE	D	245	0	4542.00	18.539	4.2344	10.0000	13.0000	18.000	26.000	38.000

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 90
Total Lockage Time in Lock
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Total Time Obs	Num Missing Values	Sum Mins Lock Time	Avg Mins Lock Time	Std Dev Lock Time	Smallest Lock Time	5th Pctile Lock Time	Median Lock Time	95th Pctile Lock Time	Largest Lock Time
MI	51	1	EXCHANGE	2:SINGLE	U	91	0	1515.00	16.648	3.1247	11.0000	12.0000	16.000	22.000	27.000
MI	51	1	FLY	5:OTHER	D	8	0	199.00	24.875	3.1368	21.0000	21.0000	24.000	30.000	30.000
MI	51	1	FLY	5:OTHER	U	7	0	165.00	23.571	2.2991	20.0000	20.0000	23.000	27.000	27.000
MI	51	1	FLY	3:KNOCKOUT	D	1773	0	48168.00	27.168	6.5749	13.0000	20.0000	26.000	39.000	87.000
MI	51	1	FLY	3:KNOCKOUT	U	1995	0	51961.00	26.046	6.9622	13.0000	20.0000	25.000	34.000	144.000
MI	51	1	FLY	2:SINGLE	D	1954	0	40377.00	20.664	5.6762	11.0000	14.0000	20.000	30.000	81.000
MI	51	1	FLY	2:SINGLE	U	2176	0	37007.00	17.007	3.6004	6.0000	13.0000	16.000	23.000	78.000
MI	51	1	FLY	5:OTHER	U	1	0	27.00	27.000	.	27.0000	27.0000	27.000	27.000	27.000
MI	51	1	TURNBACK	3:KNOCKOUT	D	95	0	2390.00	25.158	5.7876	17.0000	18.0000	24.000	37.000	40.000
MI	51	1	TURNBACK	3:KNOCKOUT	U	52	0	1261.00	24.250	3.4464	18.0000	19.0000	23.000	30.000	34.000
MI	51	1	TURNBACK	2:SINGLE	D	149	0	2794.00	18.752	5.0763	12.0000	13.0000	17.000	29.000	39.000
MI	51	1	TURNBACK	2:SINGLE	U	44	0	748.00	17.000	3.5764	11.0000	13.0000	16.000	23.000	31.000
MI	51	1	TURNBACK	5:OTHER	D	1	0	15.00	15.000	.	15.0000	15.0000	15.000	15.000	15.000
MI	52	1	EXCHANGE	3:KNOCKOUT	D	96	0	2511.00	26.156	5.1510	19.0000	20.0000	25.000	38.000	47.000
MI	52	1	EXCHANGE	3:KNOCKOUT	U	196	0	5458.00	27.847	5.6675	20.0000	21.0000	27.000	39.000	49.000
MI	52	1	EXCHANGE	2:SINGLE	D	121	0	2454.00	20.281	5.0054	13.0000	15.0000	19.000	27.000	53.000
MI	52	1	EXCHANGE	2:SINGLE	U	216	0	4400.00	20.370	4.1228	14.0000	16.0000	20.000	27.000	45.000
MI	52	1	FLY	5:OTHER	D	1	0	31.00	31.000	.	31.0000	31.0000	31.000	31.000	31.000
MI	52	1	FLY	3:KNOCKOUT	D	1999	0	53196.00	26.611	5.2258	17.0000	21.0000	25.000	35.000	88.000
MI	52	1	FLY	3:KNOCKOUT	U	1851	0	65208.00	35.229	7.1683	17.0000	24.0000	35.000	47.000	142.000
MI	52	1	FLY	2:SINGLE	D	1075	0	22767.00	21.179	5.6361	12.0000	16.0000	20.000	28.000	86.000
MI	52	1	FLY	2:SINGLE	U	874	0	22264.00	25.474	6.7872	8.0000	17.0000	25.000	36.000	83.000
MI	52	1	FLY	5:OTHER	D	2	0	46.00	23.000	7.0711	18.0000	18.0000	23.000	28.000	28.000
MI	52	1	FLY	5:OTHER	U	4	0	108.00	27.000	5.9442	22.0000	22.0000	25.500	35.000	35.000
MI	52	1	TURNBACK	3:KNOCKOUT	D	54	0	1334.00	24.704	4.5042	18.0000	20.0000	23.000	33.000	39.000
MI	52	1	TURNBACK	3:KNOCKOUT	U	144	0	3913.00	27.174	5.7589	16.0000	22.0000	26.000	37.000	60.000
MI	52	1	TURNBACK	2:SINGLE	D	57	0	1144.00	20.070	5.4145	15.0000	16.0000	19.000	25.000	55.000
MI	52	1	TURNBACK	2:SINGLE	U	122	0	2479.00	20.320	3.8597	14.0000	16.0000	19.000	29.000	35.000
MI	55	1	EXCHANGE	1:DOUBLE	D	406	0	41177.00	101.421	18.1364	64.0000	75.0000	100.000	135.000	180.000
MI	55	1	EXCHANGE	1:DOUBLE	U	304	0	30227.00	99.431	24.8904	53.0000	66.0000	96.000	140.000	215.000
MI	55	1	EXCHANGE	3:KNOCKOUT	D	21	0	1102.00	52.476	16.1574	30.0000	34.0000	49.000	80.000	91.000
MI	55	1	EXCHANGE	3:KNOCKOUT	U	12	0	635.00	52.917	19.5470	33.0000	33.0000	49.500	103.000	103.000
MI	55	1	EXCHANGE	2:SINGLE	D	85	0	2347.00	27.612	13.4917	10.0000	13.0000	25.000	48.000	95.000
MI	55	1	EXCHANGE	2:SINGLE	U	196	0	4945.00	25.230	13.0141	8.0000	10.0000	22.500	50.000	75.000
MI	55	1	EXCHANGE	5:OTHER	U	2	0	136.00	68.000	42.4264	38.0000	38.0000	68.000	98.000	98.000
MI	55	1	EXCHANGE	4:JACKNIFE	D	16	0	1370.00	85.625	20.8163	63.0000	63.0000	80.000	139.000	139.000
MI	55	1	EXCHANGE	4:JACKNIFE	U	3	0	199.00	66.333	5.5076	61.0000	61.0000	66.000	72.000	72.000
MI	55	1	FLY	1:DOUBLE	D	834	0	87714.00	105.173	17.0488	66.0000	80.0000	102.000	137.000	168.000
MI	55	1	FLY	1:DOUBLE	U	790	0	75866.00	96.033	17.3182	55.0000	71.0000	94.000	126.000	175.000
MI	55	1	FLY	3:KNOCKOUT	D	66	0	3623.00	54.894	15.6678	34.0000	38.0000	50.000	85.000	110.000
MI	55	1	FLY	3:KNOCKOUT	U	51	0	2811.00	55.118	13.9723	29.0000	34.0000	53.000	78.000	95.000
MI	55	1	FLY	2:SINGLE	D	358	0	9561.00	26.707	11.7132	8.0000	12.0000	25.000	50.000	85.000
MI	55	1	FLY	2:SINGLE	U	633	0	16306.00	25.760	10.6374	8.0000	11.0000	25.000	45.000	70.000
MI	55	1	FLY	5:OTHER	D	1	0	92.00	92.000	.	92.0000	92.0000	92.000	92.000	92.000
MI	55	1	FLY	4:JACKNIFE	D	61	0	4669.00	76.541	14.9862	28.0000	53.0000	77.000	95.000	112.000
MI	55	1	FLY	4:JACKNIFE	U	8	0	577.00	72.125	15.0280	45.0000	45.0000	76.000	90.000	90.000
MI	55	1	FLY	5:OTHER	D	1	0	16.00	16.000	.	16.0000	16.0000	16.000	16.000	16.000
MI	55	1	TURNBACK	1:DOUBLE	D	298	0	28454.00	95.483	15.7074	61.0000	71.0000	95.000	122.000	160.000
MI	55	1	TURNBACK	1:DOUBLE	U	290	0	24522.00	84.559	18.9574	48.0000	61.0000	81.000	112.000	226.000
MI	55	1	TURNBACK	3:KNOCKOUT	D	44	0	2165.00	49.205	12.8399	31.0000	34.0000	46.500	75.000	89.000

Summary Statistics for Locks in Simulation Model by lockage type 12:49 Friday, June 24, 2005 91
Total Lockage Time in Lock
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

River Code	Lock Number	Lock Chamber Number	Operation Type	Lockage Type	Travel Direction	Num Total Time Obs	Num Missing Values	Sum Mins Lock Time	Avg Mins Lock Time	Std Dev Lock Time	Smallest Lock Time	5th Pctile Lock Time	Median Lock Time	95th Pctile Lock Time	Largest Lock Time
MI	55	1	TURNBACK	3:KNOCKOUT	U	19	0	906.00	47.6842	15.2645	29.0000	29.0000	44.0000	90.0000	90.0000
MI	55	1	TURNBACK	2:SINGLE	D	114	0	2936.00	25.7544	10.7626	8.0000	10.0000	25.0000	45.0000	60.0000
MI	55	1	TURNBACK	2:SINGLE	U	139	0	3003.00	21.6043	7.2408	7.0000	11.0000	22.0000	34.0000	46.0000
MI	55	1	TURNBACK	5:OTHER	D	1	0	93.00	93.0000	.	93.0000	93.0000	93.0000	93.0000	93.0000
MI	55	1	TURNBACK	4:JACKNIFE	D	20	0	1266.00	63.3000	12.5325	34.0000	40.5000	61.5000	86.5000	89.0000
MI	55	1	TURNBACK	4:JACKNIFE	U	6	0	371.00	61.8333	19.1355	42.0000	42.0000	63.0000	93.0000	93.0000

itinerary characteristics of lockage records 12:49 Friday, June 24, 2005 92
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of newpool by seqdstr

newpool	seqdstr		
Frequency Percent Row Pct Col Pct	0	1	Total
CH01U	24658 5.57 100.00 7.43	0 0.00 0.00 0.00	24658 5.57
CH02D	24347 5.50 100.00 7.34	0 0.00 0.00 0.00	24347 5.50
IL01U	4986 1.13 100.00 1.50	0 0.00 0.00 0.00	4986 1.13
IL02D	5006 1.13 100.00 1.51	0 0.00 0.00 0.00	5006 1.13
IL02U	5925 1.34 100.00 1.79	0 0.00 0.00 0.00	5925 1.34
IL03D	5844 1.32 98.48 1.76	90 0.02 1.52 0.08	5934 1.34
IL03U	5967 1.35 100.00 1.80	0 0.00 0.00 0.00	5967 1.35
IL04D	1446 0.33 24.28 0.44	4510 1.02 75.72 4.06	5956 1.34
Total	331927 74.94	111020 25.06	442947 100.00

(Continued)

itinerary characteristics of lockage records 12:49 Friday, June 24, 2005 93
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of newpool by seqdstr

newpool / seqdstr	0	1	Total
IL04U	5714	0	5714
	1.29	0.00	1.29
	100.00	0.00	
	1.72	0.00	
IL05D	3115	2614	5729
	0.70	0.59	1.29
	54.37	45.63	
	0.94	2.35	
IL05U	5466	0	5466
	1.23	0.00	1.23
	100.00	0.00	
	1.65	0.00	
IL06D	2811	2667	5478
	0.63	0.60	1.24
	51.31	48.69	
	0.85	2.40	
IL06U	6125	0	6125
	1.38	0.00	1.38
	100.00	0.00	
	1.85	0.00	
IL07D	2658	3478	6136
	0.60	0.79	1.39
	43.32	56.68	
	0.80	3.13	
IL07U	7594	0	7594
	1.71	0.00	1.71
	100.00	0.00	
	2.29	0.00	
IL08D	5715	1891	7606
	1.29	0.43	1.72
	75.14	24.86	
	1.72	1.70	
Total	331927	111020	442947
	74.94	25.06	100.00

(Continued)

itinerary characteristics of lockage records 12:49 Friday, June 24, 2005 94
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of newpool by seqdstr

newpool / seqdstr	0	1	Total
ILO8U	6971	0	6971
	1.57	0.00	1.57
	100.00	0.00	
	2.10	0.00	
ILO9D	3615	3299	6914
	0.82	0.74	1.56
	52.29	47.71	
	1.09	2.97	
KSO1U	1182	0	1182
	0.27	0.00	0.27
	100.00	0.00	
	0.36	0.00	
KSO2D	1191	0	1191
	0.27	0.00	0.27
	100.00	0.00	
	0.36	0.00	
MIO1D	648	2757	3405
	0.15	0.62	0.77
	19.03	80.97	
	0.20	2.48	
MIO1U	2795	0	2795
	0.63	0.00	0.63
	100.00	0.00	
	0.84	0.00	
MIO2D	482	2320	2802
	0.11	0.52	0.63
	17.20	82.80	
	0.15	2.09	
MIO2U	2162	0	2162
	0.49	0.00	0.49
	100.00	0.00	
	0.65	0.00	
Total	331927	111020	442947
	74.94	25.06	100.00

(Continued)

itinerary characteristics of lockage records 12:49 Friday, June 24, 2005 95
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of newpool by seqdstr

newpool	seqdstr		
Frequency Percent Row Pct Col Pct	0	1	Total
MIO3D	2159 0.49 99.63 0.65	8 0.00 0.37 0.01	2167 0.49
MIO3U	2620 0.59 100.00 0.79	0 0.00 0.00 0.00	2620 0.59
MIO4D	480 0.11 20.28 0.14	1887 0.43 79.72 1.70	2367 0.53
MIO4U	2259 0.51 100.00 0.68	0 0.00 0.00 0.00	2259 0.51
MIO5D	1038 0.23 22.56 0.31	3564 0.80 77.44 3.21	4602 1.04
MIO5U	2291 0.52 100.00 0.69	0 0.00 0.00 0.00	2291 0.52
MIO6U	2671 0.60 100.00 0.80	0 0.00 0.00 0.00	2671 0.60
MIO7D	1128 0.25 41.81 0.34	1570 0.35 58.19 1.41	2698 0.61
Total	331927 74.94	111020 25.06	442947 100.00

(Continued)

itinerary characteristics of lockage records 12:49 Friday, June 24, 2005 96
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of newpool by seqdstr

newpool / seqdstr	0	1	Total
MI07U	3150	0	3150
Percent	0.71	0.00	0.71
Row Pct	100.00	0.00	
Col Pct	0.95	0.00	
MI08D	635	2410	3045
Percent	0.14	0.54	0.69
Row Pct	20.85	79.15	
Col Pct	0.19	2.17	
MI08U	2740	0	2740
Percent	0.62	0.00	0.62
Row Pct	100.00	0.00	
Col Pct	0.83	0.00	
MI09D	743	2023	2766
Percent	0.17	0.46	0.62
Row Pct	26.86	73.14	
Col Pct	0.22	1.82	
MI09U	2914	0	2914
Percent	0.66	0.00	0.66
Row Pct	100.00	0.00	
Col Pct	0.88	0.00	
MI10D	560	2369	2929
Percent	0.13	0.53	0.66
Row Pct	19.12	80.88	
Col Pct	0.17	2.13	
MI10U	3513	0	3513
Percent	0.79	0.00	0.79
Row Pct	100.00	0.00	
Col Pct	1.06	0.00	
MI11D	1541	1951	3492
Percent	0.35	0.44	0.79
Row Pct	44.13	55.87	
Col Pct	0.46	1.76	
Total	331927	111020	442947
	74.94	25.06	100.00

(Continued)

itinerary characteristics of lockage records 12:49 Friday, June 24, 2005 97
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of newpool by seqdstr

newpool	seqdstr		
Frequency / Percent / Row Pct / Col Pct	0	1	Total
MI11U	4194	0	4194
	0.95	0.00	0.95
	100.00	0.00	
	1.26	0.00	
MI12D	1109	2952	4061
	0.25	0.67	0.92
	27.31	72.69	
	0.33	2.66	
MI12U	4199	0	4199
	0.95	0.00	0.95
	100.00	0.00	
	1.27	0.00	
MI13D	1859	2352	4211
	0.42	0.53	0.95
	44.15	55.85	
	0.56	2.12	
MI13U	4272	0	4272
	0.96	0.00	0.96
	100.00	0.00	
	1.29	0.00	
MI14D	1200	3088	4288
	0.27	0.70	0.97
	27.99	72.01	
	0.36	2.78	
MI14U	5723	0	5723
	1.29	0.00	1.29
	100.00	0.00	
	1.72	0.00	
MI15D	3024	2672	5696
	0.68	0.60	1.29
	53.09	46.91	
	0.91	2.41	
Total	331927	111020	442947
	74.94	25.06	100.00

(Continued)

itinerary characteristics of lockage records 12:49 Friday, June 24, 2005 98
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of newpool by seqdstr

newpool seqdstr

Frequency Percent Row Pct Col Pct	0	1	Total
MI15U	7344 1.66 100.00 2.21	0 0.00 0.00 0.00	7344 1.66
MI16D	2923 0.66 40.36 0.88	4319 0.98 59.64 3.89	7242 1.63
MI16U	6096 1.38 100.00 1.84	0 0.00 0.00 0.00	6096 1.38
MI17D	2250 0.51 37.76 0.68	3708 0.84 62.24 3.34	5958 1.35
MI17U	5411 1.22 100.00 1.63	0 0.00 0.00 0.00	5411 1.22
MI18D	1098 0.25 20.27 0.33	4320 0.98 79.73 3.89	5418 1.22
MI18U	5703 1.29 100.00 1.72	0 0.00 0.00 0.00	5703 1.29
MI19D	1374 0.31 24.09 0.41	4330 0.98 75.91 3.90	5704 1.29
Total	331927 74.94	111020 25.06	442947 100.00

(Continued)

itinerary characteristics of lockage records 12:49 Friday, June 24, 2005 99
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of newpool by seqdstr

newpool	seqdstr		
Frequency / Percent / Row Pct / Col Pct	0	1	Total
MI19U	5570 1.26 100.00 1.68	0 0.00 0.00 0.00	5570 1.26
MI20D	1741 0.39 31.54 0.52	3779 0.85 68.46 3.40	5520 1.25
MI20U	5923 1.34 100.00 1.78	0 0.00 0.00 0.00	5923 1.34
MI21D	1567 0.35 26.62 0.47	4320 0.98 73.38 3.89	5887 1.33
MI21U	6001 1.35 100.00 1.81	0 0.00 0.00 0.00	6001 1.35
MI22D	1809 0.41 30.00 0.54	4220 0.95 70.00 3.80	6029 1.36
MI22U	5759 1.30 100.00 1.74	0 0.00 0.00 0.00	5759 1.30
MI24D	1225 0.28 21.10 0.37	4581 1.03 78.90 4.13	5806 1.31
Total	331927 74.94	111020 25.06	442947 100.00

(Continued)

itinerary characteristics of lockage records 12:49 Friday, June 24, 2005 100
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of newpool by seqdstr

newpool	seqdstr		
Frequency / Percent / Row Pct / Col Pct	0	1	Total
MI24U	5990 1.35 100.00 1.80	0 0.00 0.00 0.00	5990 1.35
MI25D	1428 0.32 23.62 0.43	4618 1.04 76.38 4.16	6046 1.36
MI25U	6781 1.53 100.00 2.04	0 0.00 0.00 0.00	6781 1.53
MI26D	879 0.20 14.00 0.26	5399 1.22 86.00 4.86	6278 1.42
MI26U	14294 3.23 100.00 4.31	0 0.00 0.00 0.00	14294 3.23
MI27D	5669 1.28 39.47 1.71	8694 1.96 60.53 7.83	14363 3.24
MI27U	16884 3.81 100.00 5.09	0 0.00 0.00 0.00	16884 3.81
MI28D	10674 2.41 63.17 3.22	6224 1.41 36.83 5.61	16898 3.81
Total	331927 74.94	111020 25.06	442947 100.00

(Continued)

itinerary characteristics of lockage records 12:49 Friday, June 24, 2005 101
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of newpool by seqdstr

newpool	seqdstr		
Frequency Percent Row Pct Col Pct	0	1	Total
MI5AD	250 0.06 10.94 0.08	2036 0.46 89.06 1.83	2286 0.52
MI5AU	2453 0.55 100.00 0.74	0 0.00 0.00 0.00	2453 0.55
MILSD	4474 1.01 100.00 1.35	0 0.00 0.00 0.00	4474 1.01
MILSU	3407 0.77 100.00 1.03	0 0.00 0.00 0.00	3407 0.77
MIUSU	4505 1.02 100.00 1.36	0 0.00 0.00 0.00	4505 1.02
Total	331927 74.94	111020 25.06	442947 100.00

itinerary characteristics of lockage records 12:49 Friday, June 24, 2005 102
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of newpool by sequpstr

newpool sequpstr

Frequency Percent Row Pct Col Pct	0	1	Total
CH01U	24658 5.57 100.00 7.36	0 0.00 0.00 0.00	24658 5.57
CH02D	24347 5.50 100.00 7.27	0 0.00 0.00 0.00	24347 5.50
IL01U	4955 1.12 99.38 1.48	31 0.01 0.62 0.03	4986 1.13
IL02D	5006 1.13 100.00 1.49	0 0.00 0.00 0.00	5006 1.13
IL02U	1592 0.36 26.87 0.48	4333 0.98 73.13 4.02	5925 1.34
IL03D	5934 1.34 100.00 1.77	0 0.00 0.00 0.00	5934 1.34
IL03U	2958 0.67 49.57 0.88	3009 0.68 50.43 2.79	5967 1.35
IL04D	5956 1.34 100.00 1.78	0 0.00 0.00 0.00	5956 1.34
Total	335116 75.66	107831 24.34	442947 100.00

(Continued)

itinerary characteristics of lockage records 12:49 Friday, June 24, 2005 103
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of newpool by sequpstr

newpool / sequpstr	0	1	Total
IL04U	2125	3589	5714
Percent	0.48	0.81	1.29
Row Pct	37.19	62.81	
Col Pct	0.63	3.33	
IL05D	5729	0	5729
Percent	1.29	0.00	1.29
Row Pct	100.00	0.00	
Col Pct	1.71	0.00	
IL05U	1813	3653	5466
Percent	0.41	0.82	1.23
Row Pct	33.17	66.83	
Col Pct	0.54	3.39	
IL06D	5478	0	5478
Percent	1.24	0.00	1.24
Row Pct	100.00	0.00	
Col Pct	1.63	0.00	
IL06U	4089	2036	6125
Percent	0.92	0.46	1.38
Row Pct	66.76	33.24	
Col Pct	1.22	1.89	
IL07D	6136	0	6136
Percent	1.39	0.00	1.39
Row Pct	100.00	0.00	
Col Pct	1.83	0.00	
IL07U	3953	3641	7594
Percent	0.89	0.82	1.71
Row Pct	52.05	47.95	
Col Pct	1.18	3.38	
IL08D	7606	0	7606
Percent	1.72	0.00	1.72
Row Pct	100.00	0.00	
Col Pct	2.27	0.00	
Total	335116	107831	442947
	75.66	24.34	100.00

(Continued)

itinerary characteristics of lockage records 12:49 Friday, June 24, 2005 104
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of newpool by sequpstr

newpool / sequpstr	0	1	Total
IL08U	3070	3901	6971
Percent	0.69	0.88	1.57
Row Pct	44.04	55.96	
Col Pct	0.92	3.62	
IL09D	6914	0	6914
Percent	1.56	0.00	1.56
Row Pct	100.00	0.00	
Col Pct	2.06	0.00	
KS01U	1182	0	1182
Percent	0.27	0.00	0.27
Row Pct	100.00	0.00	
Col Pct	0.35	0.00	
KS02D	1191	0	1191
Percent	0.27	0.00	0.27
Row Pct	100.00	0.00	
Col Pct	0.36	0.00	
MI01D	3405	0	3405
Percent	0.77	0.00	0.77
Row Pct	100.00	0.00	
Col Pct	1.02	0.00	
MI01U	2773	22	2795
Percent	0.63	0.00	0.63
Row Pct	99.21	0.79	
Col Pct	0.83	0.02	
MI02D	2802	0	2802
Percent	0.63	0.00	0.63
Row Pct	100.00	0.00	
Col Pct	0.84	0.00	
MI02U	302	1860	2162
Percent	0.07	0.42	0.49
Row Pct	13.97	86.03	
Col Pct	0.09	1.72	
Total	335116	107831	442947
	75.66	24.34	100.00

(Continued)

itinerary characteristics of lockage records 12:49 Friday, June 24, 2005 105
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of newpool by sequpstr

newpool / sequpstr	0	1	Total
MIO3D	2167	0	2167
Percent	0.49	0.00	0.49
Row Pct	100.00	0.00	
Col Pct	0.65	0.00	
MIO3U	1140	1480	2620
Percent	0.26	0.33	0.59
Row Pct	43.51	56.49	
Col Pct	0.34	1.37	
MIO4D	2367	0	2367
Percent	0.53	0.00	0.53
Row Pct	100.00	0.00	
Col Pct	0.71	0.00	
MIO4U	399	1860	2259
Percent	0.09	0.42	0.51
Row Pct	17.66	82.34	
Col Pct	0.12	1.72	
MIO5D	4602	0	4602
Percent	1.04	0.00	1.04
Row Pct	100.00	0.00	
Col Pct	1.37	0.00	
MIO5U	258	2033	2291
Percent	0.06	0.46	0.52
Row Pct	11.26	88.74	
Col Pct	0.08	1.89	
MIO6U	314	2357	2671
Percent	0.07	0.53	0.60
Row Pct	11.76	88.24	
Col Pct	0.09	2.19	
MIO7D	2698	0	2698
Percent	0.61	0.00	0.61
Row Pct	100.00	0.00	
Col Pct	0.81	0.00	
Total	335116	107831	442947
	75.66	24.34	100.00

(Continued)

itinerary characteristics of lockage records 12:49 Friday, June 24, 2005 106
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of newpool by sequpstr

newpool	sequpstr		
Frequency Percent Row Pct Col Pct	0	1	Total
MI07U	1642 0.37 52.13 0.49	1508 0.34 47.87 1.40	3150 0.71
MI08D	3045 0.69 100.00 0.91	0 0.00 0.00 0.00	3045 0.69
MI08U	908 0.20 33.14 0.27	1832 0.41 66.86 1.70	2740 0.62
MI09D	2766 0.62 100.00 0.83	0 0.00 0.00 0.00	2766 0.62
MI09U	1131 0.26 38.81 0.34	1783 0.40 61.19 1.65	2914 0.66
MI10D	2929 0.66 100.00 0.87	0 0.00 0.00 0.00	2929 0.66
MI10U	498 0.11 14.18 0.15	3015 0.68 85.82 2.80	3513 0.79
MI11D	3492 0.79 100.00 1.04	0 0.00 0.00 0.00	3492 0.79
Total	335116 75.66	107831 24.34	442947 100.00

(Continued)

itinerary characteristics of lockage records 12:49 Friday, June 24, 2005 107
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of newpool by sequpstr

newpool	sequpstr		
Frequency Percent Row Pct Col Pct	0	1	Total
MI11U	2296 0.52 54.74 0.69	1898 0.43 45.26 1.76	4194 0.95
MI12D	4061 0.92 100.00 1.21	0 0.00 0.00 0.00	4061 0.92
MI12U	1159 0.26 27.60 0.35	3040 0.69 72.40 2.82	4199 0.95
MI13D	4211 0.95 100.00 1.26	0 0.00 0.00 0.00	4211 0.95
MI13U	1909 0.43 44.69 0.57	2363 0.53 55.31 2.19	4272 0.96
MI14D	4288 0.97 100.00 1.28	0 0.00 0.00 0.00	4288 0.97
MI14U	1389 0.31 24.27 0.41	4334 0.98 75.73 4.02	5723 1.29
MI15D	5696 1.29 100.00 1.70	0 0.00 0.00 0.00	5696 1.29
Total	335116 75.66	107831 24.34	442947 100.00

(Continued)

itinerary characteristics of lockage records 12:49 Friday, June 24, 2005 108
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of newpool by sequpstr

newpool / sequpstr	0	1	Total
MI15U	4342	3002	7344
Percent	0.98	0.68	1.66
Row Pct	59.12	40.88	
Col Pct	1.30	2.78	
MI16D	7242	0	7242
Percent	1.63	0.00	1.63
Row Pct	100.00	0.00	
Col Pct	2.16	0.00	
MI16U	2297	3799	6096
Percent	0.52	0.86	1.38
Row Pct	37.68	62.32	
Col Pct	0.69	3.52	
MI17D	5958	0	5958
Percent	1.35	0.00	1.35
Row Pct	100.00	0.00	
Col Pct	1.78	0.00	
MI17U	1149	4262	5411
Percent	0.26	0.96	1.22
Row Pct	21.23	78.77	
Col Pct	0.34	3.95	
MI18D	5418	0	5418
Percent	1.22	0.00	1.22
Row Pct	100.00	0.00	
Col Pct	1.62	0.00	
MI18U	2297	3406	5703
Percent	0.52	0.77	1.29
Row Pct	40.28	59.72	
Col Pct	0.69	3.16	
MI19D	5704	0	5704
Percent	1.29	0.00	1.29
Row Pct	100.00	0.00	
Col Pct	1.70	0.00	
Total	335116	107831	442947
	75.66	24.34	100.00

(Continued)

itinerary characteristics of lockage records 12:49 Friday, June 24, 2005 109
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of newpool by sequpstr

newpool sequpstr

Frequency Percent Row Pct Col Pct	0	1	Total
MI19U	1760 0.40 31.60 0.53	3810 0.86 68.40 3.53	5570 1.26
MI20D	5520 1.25 100.00 1.65	0 0.00 0.00 0.00	5520 1.25
MI20U	1931 0.44 32.60 0.58	3992 0.90 67.40 3.70	5923 1.34
MI21D	5887 1.33 100.00 1.76	0 0.00 0.00 0.00	5887 1.33
MI21U	1549 0.35 25.81 0.46	4452 1.01 74.19 4.13	6001 1.35
MI22D	6029 1.36 100.00 1.80	0 0.00 0.00 0.00	6029 1.36
MI22U	1636 0.37 28.41 0.49	4123 0.93 71.59 3.82	5759 1.30
MI24D	5806 1.31 100.00 1.73	0 0.00 0.00 0.00	5806 1.31
Total	335116 75.66	107831 24.34	442947 100.00

(Continued)

itinerary characteristics of lockage records 12:49 Friday, June 24, 2005 110
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of newpool by sequpstr

newpool	sequpstr		
Frequency / Percent / Row Pct / Col Pct	0	1	Total
MI24U	772	5218	5990
	0.17	1.18	1.35
	12.89	87.11	
	0.23	4.84	
MI25D	6046	0	6046
	1.36	0.00	1.36
	100.00	0.00	
	1.80	0.00	
MI25U	1843	4938	6781
	0.42	1.11	1.53
	27.18	72.82	
	0.55	4.58	
MI26D	6278	0	6278
	1.42	0.00	1.42
	100.00	0.00	
	1.87	0.00	
MI26U	7276	7018	14294
	1.64	1.58	3.23
	50.90	49.10	
	2.17	6.51	
MI27D	14363	0	14363
	3.24	0.00	3.24
	100.00	0.00	
	4.29	0.00	
MI27U	16884	0	16884
	3.81	0.00	3.81
	100.00	0.00	
	5.04	0.00	
MI28D	16898	0	16898
	3.81	0.00	3.81
	100.00	0.00	
	5.04	0.00	
Total	335116	107831	442947
	75.66	24.34	100.00

(Continued)

itinerary characteristics of lockage records 12:49 Friday, June 24, 2005 111
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of newpool by sequpstr

newpool	sequpstr		
Frequency Percent Row Pct Col Pct	0	1	Total
MI5AD	2286 0.52 100.00 0.68	0 0.00 0.00 0.00	2286 0.52
MI5AU	1171 0.26 47.74 0.35	1282 0.29 52.26 1.19	2453 0.55
MILSD	4474 1.01 100.00 1.34	0 0.00 0.00 0.00	4474 1.01
MILSU	1097 0.25 32.20 0.33	2310 0.52 67.80 2.14	3407 0.77
MIUSU	1864 0.42 41.38 0.56	2641 0.60 58.62 2.45	4505 1.02
Total	335116 75.66	107831 24.34	442947 100.00

successive lock entry pools for vessels 12:49 Friday, June 24, 2005 112
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of poldpool by oldpool

poldpool(prev entry pool) oldpool(curr entry pool)

Frequency Percent Row Pct Col Pct	MI18D	MI19D	MI20D	MI20U	MI21D	MI21U	MI22D	Total
IL03U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 50.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 50.00 0.02	2 0.00
IL04D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
IL04U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
IL05D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
IL06D	1 0.00 25.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	4 0.00
IL07D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	6 0.01
IL07U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.00
IL08D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 0.89 0.02	0 0.00 0.00 0.00	112 0.12
Total	5701 6.23	5516 6.03	5885 6.43	5565 6.08	6024 6.58	5919 6.47	5804 6.34	91513 100.00

(Continued)

successive lock entry pools for vessels 12:49 Friday, June 24, 2005 113
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of poldpool by oldpool

poldpool(prev entry pool) oldpool(curr entry pool)

Frequency Percent Row Pct Col Pct	MI18D	MI19D	MI20D	MI20U	MI21D	MI21U	MI22D	Total
ILO8U	0 0.00 0.00 0.00	1 0.00 33.33 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.00
ILO9U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 8.33 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	12 0.01
KSO1D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
MIO3U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
MIO4D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
MIO5U	1 0.00 50.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00
MIO6D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 50.00 0.02	0 0.00 0.00 0.00	1 0.00 50.00 0.02	2 0.00
MIO8U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 100.00 0.02	0 0.00 0.00 0.00	1 0.00
Total	5701 6.23	5516 6.03	5885 6.43	5565 6.08	6024 6.58	5919 6.47	5804 6.34	91513 100.00

(Continued)

successive lock entry pools for vessels 12:49 Friday, June 24, 2005 114
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of poldpool by oldpool

poldpool(prev entry pool) oldpool(curr entry pool)

Frequency Percent Row Pct Col Pct	MI18D	MI19D	MI20D	MI20U	MI21D	MI21U	MI22D	Total
MI09D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 100.00 0.02	0 0.00 0.00 0.00	1 0.00
MI10D	0 0.00 0.00 0.00	1 0.00 50.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 50.00 0.02	2 0.00
MI11D	0 0.00 0.00 0.00	1 0.00 33.33 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 33.33 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.00
MI11U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00 50.00 0.03	4 0.00
MI13D	1 0.00 25.00 0.02	0 0.00 0.00 0.00	1 0.00 25.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	4 0.00
MI14D	1 0.00 50.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00
MI14U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 100.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
MI15D	5 0.01 62.50 0.09	1 0.00 12.50 0.02	0 0.00 0.00 0.00	1 0.00 12.50 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	8 0.01
Total	5701 6.23	5516 6.03	5885 6.43	5565 6.08	6024 6.58	5919 6.47	5804 6.34	91513 100.00

(Continued)

successive lock entry pools for vessels 12:49 Friday, June 24, 2005 115
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of poldpool by oldpool

poldpool(prev entry pool) oldpool(curr entry pool)

Frequency Percent Row Pct Col Pct	MI18D	MI19D	MI20D	MI20U	MI21D	MI21U	MI22D	Total
MI15U	0 0.00 0.00 0.00	1 0.00 100.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
MI16D	14 0.02 53.85 0.25	5 0.01 19.23 0.09	3 0.00 11.54 0.05	2 0.00 7.69 0.04	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 3.85 0.02	26 0.03
MI16U	0 0.00 0.00 0.00	1 0.00 25.00 0.02	0 0.00 0.00 0.00	2 0.00 50.00 0.04	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	4 0.00
MI17D	5312 5.80 99.57 93.18	19 0.02 0.36 0.34	1 0.00 0.02 0.02	0 0.00 0.00 0.00	3 0.00 0.06 0.05	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5335 5.83
MI17U	1 0.00 16.67 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 16.67 0.02	2 0.00 33.33 0.03	0 0.00 0.00 0.00	0 0.00 0.00 0.00	6 0.01
MI18D	29 0.03 0.56 0.51	5114 5.59 98.65 92.71	26 0.03 0.50 0.44	2 0.00 0.04 0.04	6 0.01 0.12 0.10	2 0.00 0.04 0.03	1 0.00 0.02 0.02	5184 5.66
MI18U	5 0.01 62.50 0.09	1 0.00 12.50 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 12.50 0.02	0 0.00 0.00 0.00	8 0.01
MI19D	0 0.00 0.00 0.00	3 0.00 0.05 0.05	5338 5.83 97.02 90.71	133 0.15 2.42 2.39	14 0.02 0.25 0.23	6 0.01 0.11 0.10	3 0.00 0.05 0.05	5502 6.01
Total	5701 6.23	5516 6.03	5885 6.43	5565 6.08	6024 6.58	5919 6.47	5804 6.34	91513 100.00

(Continued)

successive lock entry pools for vessels 12:49 Friday, June 24, 2005 116
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of poldpool by oldpool

poldpool(prev entry pool) oldpool(curr entry pool)

Frequency Percent Row Pct Col Pct	MI18D	MI19D	MI20D	MI20U	MI21D	MI21U	MI22D	Total
MI19U	313	7	2	2	0	0	2	327
	0.34	0.01	0.00	0.00	0.00	0.00	0.00	0.36
	95.72	2.14	0.61	0.61	0.00	0.00	0.61	
	5.49	0.13	0.03	0.04	0.00	0.00	0.03	
MI20D	0	5	55	12	5367	408	16	5878
	0.00	0.01	0.06	0.01	5.86	0.45	0.02	6.42
	0.00	0.09	0.94	0.20	91.31	6.94	0.27	
	0.00	0.09	0.93	0.22	89.09	6.89	0.28	
MI20U	10	333	12	79	0	4	1	445
	0.01	0.36	0.01	0.09	0.00	0.00	0.00	0.49
	2.25	74.83	2.70	17.75	0.00	0.90	0.22	
	0.18	6.04	0.20	1.42	0.00	0.07	0.02	
MI21D	3	0	2	1	45	11	5302	6018
	0.00	0.00	0.00	0.00	0.05	0.01	5.79	6.58
	0.05	0.00	0.03	0.02	0.75	0.18	88.10	
	0.05	0.00	0.03	0.02	0.75	0.19	91.35	
MI21U	2	14	427	5289	8	135	0	5882
	0.00	0.02	0.47	5.78	0.01	0.15	0.00	6.43
	0.03	0.24	7.26	89.92	0.14	2.30	0.00	
	0.04	0.25	7.26	95.04	0.13	2.28	0.00	
MI22D	1	0	0	1	0	1	6	5793
	0.00	0.00	0.00	0.00	0.00	0.00	0.01	6.33
	0.02	0.00	0.00	0.02	0.00	0.02	0.10	
	0.02	0.00	0.00	0.02	0.00	0.02	0.10	
MI22U	0	1	7	28	558	5316	16	5976
	0.00	0.00	0.01	0.03	0.61	5.81	0.02	6.53
	0.00	0.02	0.12	0.47	9.34	88.96	0.27	
	0.00	0.02	0.12	0.50	9.26	89.81	0.28	
MI24D	0	1	3	0	1	0	4	6025
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.58
	0.00	0.02	0.05	0.00	0.02	0.00	0.07	
	0.00	0.02	0.05	0.00	0.02	0.00	0.07	
Total	5701	5516	5885	5565	6024	5919	5804	91513
	6.23	6.03	6.43	6.08	6.58	6.47	6.34	100.00

(Continued)

successive lock entry pools for vessels 12:49 Friday, June 24, 2005 117
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of poldpool by oldpool

poldpool(prev entry pool) oldpool(curr entry pool)

Frequency Percent Row Pct Col Pct	MI18D	MI19D	MI20D	MI20U	MI21D	MI21U	MI22D	Total
MI24U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.00 0.05 0.05	7 0.01 0.12 0.13	12 0.01 0.21 0.20	22 0.02 0.38 0.37	443 0.48 7.70 7.63	5753 6.29
MI25D	0 0.00 0.00 0.00	1 0.00 0.19 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00 0.37 0.03	1 0.00 0.19 0.02	1 0.00 0.19 0.02	538 0.59
MI25U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 0.02 0.02	0 0.00 0.00 0.00	1 0.00 0.02 0.02	2 0.00 0.03 0.03	5972 6.53
MI26D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 0.05 0.02	0 0.00 0.00 0.00	1 0.00 0.05 0.02	2004 2.19
MI26U	0 0.00 0.00 0.00	1 0.00 0.01 0.02	1 0.00 0.01 0.02	1 0.00 0.01 0.02	0 0.00 0.00 0.00	3 0.00 0.04 0.05	0 0.00 0.00 0.00	6756 7.38
MI27D	0 0.00 0.00 0.00	3 0.00 0.92 0.05	1 0.00 0.31 0.02	0 0.00 0.00 0.00	3 0.00 0.92 0.05	3 0.00 0.92 0.05	0 0.00 0.00 0.00	327 0.36
MI27U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00 0.03 0.03	0 0.00 0.00 0.00	5742 6.27
MI28U	2 0.00 0.02 0.04	2 0.00 0.02 0.04	1 0.00 0.01 0.02	2 0.00 0.02 0.04	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	11833 12.93
Total	5701 6.23	5516 6.03	5885 6.43	5565 6.08	6024 6.58	5919 6.47	5804 6.34	91513 100.00

(Continued)

successive lock entry pools for vessels 12:49 Friday, June 24, 2005 118
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of poldpool by oldpool

poldpool(prev entry pool) oldpool(curr entry pool)

Frequency Percent Row Pct Col Pct	MI22U	MI24D	MI24U	MI25D	MI25U	MI26U	MI27U	Total
IL03U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00
IL04D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 100.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
IL04U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 100.00 0.01	1 0.00
IL05D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 100.00 0.01	1 0.00
IL06D	2 0.00 50.00 0.03	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 25.00 0.01	0 0.00 0.00 0.00	4 0.00
IL07D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.00 50.00 0.04	3 0.00 50.00 0.02	6 0.01
IL07U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.00 100.00 0.02	3 0.00
IL08D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 0.89 0.02	1 0.00 0.89 0.02	2 0.00 1.79 0.03	70 0.08 62.50 1.03	37 0.04 33.04 0.26	112 0.12
Total	5997 6.55	6041 6.60	5754 6.29	6278 6.86	5989 6.54	6775 7.40	14265 15.59	91513 100.00

(Continued)

successive lock entry pools for vessels 12:49 Friday, June 24, 2005 119
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of poldpool by oldpool

poldpool(prev entry pool) oldpool(curr entry pool)

Frequency Percent Row Pct Col Pct	MI22U	MI24D	MI24U	MI25D	MI25U	MI26U	MI27U	Total
ILO8U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 33.33 0.02	0 0.00 0.00 0.00	1 0.00 33.33 0.01	3 0.00
ILO9U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 8.33 0.01	10 0.01 83.33 0.07	12 0.01
KS01D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 100.00 0.01	1 0.00
MI03U	0 0.00 0.00 0.00	1 0.00 100.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
MI04D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 100.00 0.01	1 0.00
MI05U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 50.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00
MI06D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00
MI08U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
Total	5997 6.55	6041 6.60	5754 6.29	6278 6.86	5989 6.54	6775 7.40	14265 15.59	91513 100.00

(Continued)

successive lock entry pools for vessels 12:49 Friday, June 24, 2005 120
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of poldpool by oldpool

poldpool(prev entry pool) oldpool(curr entry pool)

Frequency Percent Row Pct Col Pct	MI22U	MI24D	MI24U	MI25D	MI25U	MI26U	MI27U	Total
MI09D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
MI10D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00
MI11D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 33.33 0.01	3 0.00
MI11U	1 0.00 25.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 25.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	4 0.00
MI13D	0 0.00 0.00 0.00	2 0.00 50.00 0.03	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	4 0.00
MI14D	1 0.00 50.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00
MI14U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
MI15D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 12.50 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	8 0.01
Total	5997 6.55	6041 6.60	5754 6.29	6278 6.86	5989 6.54	6775 7.40	14265 15.59	91513 100.00

(Continued)

successive lock entry pools for vessels 12:49 Friday, June 24, 2005 121
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of poldpool by oldpool

poldpool(prev entry pool) oldpool(curr entry pool)

Frequency Percent Row Pct Col Pct	MI22U	MI24D	MI24U	MI25D	MI25U	MI26U	MI27U	Total
MI15U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
MI16D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 3.85 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	26 0.03
MI16U	1 0.00 25.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	4 0.00
MI17D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5335 5.83
MI17U	0 0.00 0.00 0.00	2 0.00 33.33 0.03	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	6 0.01
MI18D	1 0.00 0.02 0.02	1 0.00 0.02 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 0.02 0.02	0 0.00 0.00 0.00	1 0.00 0.02 0.01	5184 5.66
MI18U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 12.50 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	8 0.01
MI19D	0 0.00 0.00 0.00	5 0.01 0.09 0.08	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5502 6.01
Total	5997 6.55	6041 6.60	5754 6.29	6278 6.86	5989 6.54	6775 7.40	14265 15.59	91513 100.00

(Continued)

successive lock entry pools for vessels 12:49 Friday, June 24, 2005 122
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of poldpool by oldpool

poldpool(prev entry pool) oldpool(curr entry pool)

Frequency Percent Row Pct Col Pct	MI22U	MI24D	MI24U	MI25D	MI25U	MI26U	MI27U	Total
MI19U	1 0.00 0.31 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	327 0.36
MI20D	11 0.01 0.19 0.18	2 0.00 0.03 0.03	1 0.00 0.02 0.02	0 0.00 0.00 0.00	1 0.00 0.02 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5878 6.42
MI20U	5 0.01 1.12 0.08	0 0.00 0.00 0.00	1 0.00 0.22 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	445 0.49
MI21D	626 0.68 10.40 10.44	17 0.02 0.28 0.28	8 0.01 0.13 0.14	2 0.00 0.03 0.03	1 0.00 0.02 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	6018 6.58
MI21U	4 0.00 0.07 0.07	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 0.02 0.02	0 0.00 0.00 0.00	1 0.00 0.02 0.01	1 0.00 0.02 0.01	5882 6.43
MI22D	6 0.01 0.10 0.10	5516 6.03 95.22 91.31	226 0.25 3.90 3.93	27 0.03 0.47 0.43	5 0.01 0.09 0.08	0 0.00 0.00 0.00	4 0.00 0.07 0.03	5793 6.33
MI22U	47 0.05 0.79 0.78	1 0.00 0.02 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00 0.03 0.03	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5976 6.53
MI24D	3 0.00 0.05 0.05	14 0.02 0.23 0.23	5 0.01 0.08 0.09	5722 6.25 94.97 91.14	267 0.29 4.43 4.46	4 0.00 0.07 0.06	1 0.00 0.02 0.01	6025 6.58
Total	5997 6.55	6041 6.60	5754 6.29	6278 6.86	5989 6.54	6775 7.40	14265 15.59	91513 100.00

(Continued)

successive lock entry pools for vessels 12:49 Friday, June 24, 2005 123
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of poldpool by oldpool

poldpool(prev entry pool) oldpool(curr entry pool)

Frequency Percent Row Pct Col Pct	MI22U	MI24D	MI24U	MI25D	MI25U	MI26U	MI27U	Total
MI24U	5249 5.74 91.24 87.53	8 0.01 0.14 0.13	8 0.01 0.14 0.14	0 0.00 0.00 0.00	1 0.00 0.02 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5753 6.29
MI25D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	53 0.06 9.85 0.84	5 0.01 0.93 0.08	465 0.51 86.43 6.86	10 0.01 1.86 0.07	538 0.59
MI25U	25 0.03 0.42 0.42	453 0.50 7.59 7.50	5463 5.97 91.48 94.94	6 0.01 0.10 0.10	16 0.02 0.27 0.27	2 0.00 0.03 0.03	3 0.00 0.05 0.02	5972 6.53
MI26D	3 0.00 0.15 0.05	1 0.00 0.05 0.02	0 0.00 0.00 0.00	2 0.00 0.10 0.03	1 0.00 0.05 0.02	22 0.02 1.10 0.32	1973 2.16 98.45 13.83	2004 2.19
MI26U	6 0.01 0.09 0.10	11 0.01 0.16 0.18	29 0.03 0.43 0.50	456 0.50 6.75 7.26	5647 6.17 83.58 94.29	600 0.66 8.88 8.86	1 0.00 0.01 0.01	6756 7.38
MI27D	2 0.00 0.61 0.03	3 0.00 0.92 0.05	2 0.00 0.61 0.03	1 0.00 0.31 0.02	5 0.01 1.53 0.08	10 0.01 3.06 0.15	294 0.32 89.91 2.06	327 0.36
MI27U	2 0.00 0.03 0.03	3 0.00 0.05 0.05	5 0.01 0.09 0.09	5 0.01 0.09 0.08	21 0.02 0.37 0.35	5560 6.08 96.83 82.07	144 0.16 2.51 1.01	5742 6.27
MI28U	1 0.00 0.01 0.02	1 0.00 0.01 0.02	3 0.00 0.03 0.05	2 0.00 0.02 0.03	9 0.01 0.08 0.15	36 0.04 0.30 0.53	11774 12.87 99.50 82.54	11833 12.93
Total	5997 6.55	6041 6.60	5754 6.29	6278 6.86	5989 6.54	6775 7.40	14265 15.59	91513 100.00

Frequency Missing = 75

successive lock exit pools for vessels 12:49 Friday, June 24, 2005 124
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by newpool

pnewpool(prev exit pool) newpool(curr exit pool)

Frequency Percent Row Pct Col Pct	MI19D	MI19U	MI20D	MI20U	MI21D	MI21U	MI22D	Total
BIRTH	3 0.00 4.00 0.05	5 0.01 6.67 0.09	4 0.00 5.33 0.07	4 0.00 5.33 0.07	2 0.00 2.67 0.03	4 0.00 5.33 0.07	5 0.01 6.67 0.08	75 0.08
IL02U	0 0.00 0.00 0.00	1 0.00 50.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00
IL03U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
IL05D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
IL06D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
IL06U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.00
IL07D	1 0.00 25.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00 50.00 0.03	0 0.00 0.00 0.00	4 0.00
Total	5704 6.23	5570 6.08	5520 6.03	5923 6.47	5887 6.43	6001 6.55	6029 6.58	91588 100.00

(Continued)

successive lock exit pools for vessels 12:49 Friday, June 24, 2005 125
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by newpool

pnewpool(prev exit pool) newpool(curr exit pool)

Frequency Percent Row Pct Col Pct	MI19D	MI19U	MI20D	MI20U	MI21D	MI21U	MI22D	Total
IL07U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 33.33 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.00
IL08D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	6 0.01
IL08U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 8.33 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	12 0.01
IL09D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 0.89 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	112 0.12
KS02D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
MI02U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
MI04U	1 0.00 50.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00
Total	5704 6.23	5570 6.08	5520 6.03	5923 6.47	5887 6.43	6001 6.55	6029 6.58	91588 100.00

(Continued)

successive lock exit pools for vessels 12:49 Friday, June 24, 2005 126
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by newpool

pnewpool(prev exit pool) newpool(curr exit pool)

Frequency Percent Row Pct Col Pct	MI19D	MI19U	MI20D	MI20U	MI21D	MI21U	MI22D	Total
MI05D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
MI07D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 50.00 0.02	2 0.00
MI07U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 100.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
MI10D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 100.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
MI10U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 25.00 0.02	0 0.00 0.00 0.00	4 0.00
MI11D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 50.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00
MI12D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 33.33 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 33.33 0.02	3 0.00
Total	5704 6.23	5570 6.08	5520 6.03	5923 6.47	5887 6.43	6001 6.55	6029 6.58	91588 100.00

(Continued)

successive lock exit pools for vessels 12:49 Friday, June 24, 2005 127
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by newpool

pnewpool(prev exit pool) newpool(curr exit pool)

Frequency Percent Row Pct Col Pct	MI19D	MI19U	MI20D	MI20U	MI21D	MI21U	MI22D	Total
MI13U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 100.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
MI14D	1 0.00 25.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 25.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	4 0.00
MI14U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 100.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
MI15D	1 0.00 50.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 50.00 0.02	0 0.00 0.00 0.00	2 0.00
MI15U	0 0.00 0.00 0.00	2 0.00 50.00 0.04	1 0.00 25.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 25.00 0.02	0 0.00 0.00 0.00	4 0.00
MI16D	5 0.01 62.50 0.09	1 0.00 12.50 0.02	1 0.00 12.50 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	8 0.01
MI16U	1 0.00 16.67 0.02	1 0.00 16.67 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00 33.33 0.03	6 0.01
Total	5704 6.23	5570 6.08	5520 6.03	5923 6.47	5887 6.43	6001 6.55	6029 6.58	91588 100.00

(Continued)

successive lock exit pools for vessels 12:49 Friday, June 24, 2005 128
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by newpool

pnewpool(prev exit pool) newpool(curr exit pool)

Frequency Percent Row Pct Col Pct	MI19D	MI19U	MI20D	MI20U	MI21D	MI21U	MI22D	Total
MI17D	14 0.02 53.85 0.25	2 0.00 7.69 0.04	5 0.01 19.23 0.09	0 0.00 0.00 0.00	3 0.00 11.54 0.05	0 0.00 0.00 0.00	0 0.00 0.00 0.00	26 0.03
MI17U	5 0.01 62.50 0.09	0 0.00 0.00 0.00	1 0.00 12.50 0.02	1 0.00 12.50 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	8 0.01
MI18D	5312 5.80 99.57 93.13	0 0.00 0.00 0.00	19 0.02 0.36 0.34	0 0.00 0.00 0.00	1 0.00 0.02 0.02	0 0.00 0.00 0.00	3 0.00 0.06 0.05	5335 5.82
MI18U	313 0.34 95.72 5.49	2 0.00 0.61 0.04	7 0.01 2.14 0.13	0 0.00 0.00 0.00	2 0.00 0.61 0.03	1 0.00 0.31 0.02	0 0.00 0.00 0.00	327 0.36
MI19D	29 0.03 0.56 0.51	2 0.00 0.04 0.04	5114 5.58 98.65 92.64	2 0.00 0.04 0.03	26 0.03 0.50 0.44	1 0.00 0.02 0.02	6 0.01 0.12 0.10	5184 5.66
MI19U	10 0.01 2.25 0.18	79 0.09 17.75 1.42	333 0.36 74.83 6.03	4 0.00 0.90 0.07	12 0.01 2.70 0.20	5 0.01 1.12 0.08	0 0.00 0.00 0.00	445 0.49
MI20D	0 0.00 0.00 0.00	133 0.15 2.42 2.39	3 0.00 0.05 0.05	6 0.01 0.11 0.10	5338 5.83 97.02 90.67	0 0.00 0.00 0.00	14 0.02 0.25 0.23	5502 6.01
Total	5704 6.23	5570 6.08	5520 6.03	5923 6.47	5887 6.43	6001 6.55	6029 6.58	91588 100.00

(Continued)

successive lock exit pools for vessels 12:49 Friday, June 24, 2005 129
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by newpool

pnewpool(prev exit pool) newpool(curr exit pool)

Frequency Percent Row Pct Col Pct	MI19D	MI19U	MI20D	MI20U	MI21D	MI21U	MI22D	Total
MI20U	2	5289	14	135	427	4	8	5882
	0.00	5.77	0.02	0.15	0.47	0.00	0.01	6.42
	0.03	89.92	0.24	2.30	7.26	0.07	0.14	
	0.04	94.96	0.25	2.28	7.25	0.07	0.13	
MI21D	0	12	5	408	55	11	5367	5878
	0.00	0.01	0.01	0.45	0.06	0.01	5.86	6.42
	0.00	0.20	0.09	6.94	0.94	0.19	91.31	
	0.00	0.22	0.09	6.89	0.93	0.18	89.02	
MI21U	0	28	1	5316	7	47	558	5976
	0.00	0.03	0.00	5.80	0.01	0.05	0.61	6.52
	0.00	0.47	0.02	88.96	0.12	0.79	9.34	
	0.00	0.50	0.02	89.75	0.12	0.78	9.26	
MI22D	3	1	0	11	2	626	45	6018
	0.00	0.00	0.00	0.01	0.00	0.68	0.05	6.57
	0.05	0.02	0.00	0.18	0.03	10.40	0.75	
	0.05	0.02	0.00	0.19	0.03	10.43	0.75	
MI22U	0	7	0	22	3	5249	12	5753
	0.00	0.01	0.00	0.02	0.00	5.73	0.01	6.28
	0.00	0.12	0.00	0.38	0.05	91.24	0.21	
	0.00	0.13	0.00	0.37	0.05	87.47	0.20	
MI24D	1	1	0	1	0	6	0	5793
	0.00	0.00	0.00	0.00	0.00	0.01	0.00	6.33
	0.02	0.02	0.00	0.02	0.00	0.10	0.00	
	0.02	0.02	0.00	0.02	0.00	0.10	0.00	
MI24U	0	1	0	1	0	25	0	5972
	0.00	0.00	0.00	0.00	0.00	0.03	0.00	6.52
	0.00	0.02	0.00	0.02	0.00	0.42	0.00	
	0.00	0.02	0.00	0.02	0.00	0.42	0.00	
Total	5704	5570	5520	5923	5887	6001	6029	91588
	6.23	6.08	6.03	6.47	6.43	6.55	6.58	100.00

(Continued)

successive lock exit pools for vessels 12:49 Friday, June 24, 2005 130
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by newpool

pnewpool(prev exit pool) newpool(curr exit pool)

Frequency Percent Row Pct Col Pct	MI19D	MI19U	MI20D	MI20U	MI21D	MI21U	MI22D	Total
MI25D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 0.02 0.02	0 0.00 0.00 0.00	3 0.00 0.05 0.05	3 0.00 0.05 0.05	1 0.00 0.02 0.02	6025 6.58
MI25U	0 0.00 0.00 0.00	1 0.00 0.01 0.02	1 0.00 0.01 0.02	3 0.00 0.04 0.05	1 0.00 0.01 0.02	6 0.01 0.09 0.10	0 0.00 0.00 0.00	6756 7.38
MI26D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 0.19 0.02	1 0.00 0.19 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00 0.37 0.03	538 0.59
MI26U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00 0.03 0.03	0 0.00 0.00 0.00	2 0.00 0.03 0.03	0 0.00 0.00 0.00	5742 6.27
MI27D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.00 0.15 0.05	1 0.00 0.05 0.02	2004 2.19
MI27U	2 0.00 0.02 0.04	2 0.00 0.02 0.04	2 0.00 0.02 0.04	0 0.00 0.00 0.00	1 0.00 0.01 0.02	1 0.00 0.01 0.02	0 0.00 0.00 0.00	11833 12.92
MI28D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.00 0.92 0.05	3 0.00 0.92 0.05	1 0.00 0.31 0.02	2 0.00 0.61 0.03	3 0.00 0.92 0.05	327 0.36
Total	5704 6.23	5570 6.08	5520 6.03	5923 6.47	5887 6.43	6001 6.55	6029 6.58	91588 100.00

(Continued)

successive lock exit pools for vessels 12:49 Friday, June 24, 2005 131
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by newpool

pnewpool(prev exit pool) newpool(curr exit pool)

Frequency Percent Row Pct Col Pct	MI22U	MI24D	MI24U	MI25D	MI25U	MI26D	MI26U	Total
BIRTH	5 0.01 6.67 0.09	2 0.00 2.67 0.03	1 0.00 1.33 0.02	5 0.01 6.67 0.08	6 0.01 8.00 0.09	0 0.00 0.00 0.00	29 0.03 38.67 0.20	75 0.08
IL02U	0 0.00 0.00 0.00	1 0.00 50.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00
IL03U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 100.00 0.01	1 0.00
IL05D	1 0.00 100.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
IL06D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 100.00 0.01	1 0.00
IL06U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.00 100.00 0.02	3 0.00
IL07D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 25.00 0.01	0 0.00 0.00 0.00	0 0.00 0.00 0.00	4 0.00
Total	5759 6.29	5806 6.34	5990 6.54	6046 6.60	6781 7.40	6278 6.85	14294 15.61	91588 100.00

(Continued)

successive lock exit pools for vessels 12:49 Friday, June 24, 2005 132
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by newpool

pnewpool(prev exit pool) newpool(curr exit pool)

Frequency Percent Row Pct Col Pct	MI22U	MI24D	MI24U	MI25D	MI25U	MI26D	MI26U	Total
IL07U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 33.33 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 33.33 0.01	3 0.00
IL08D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.00 50.00 0.04	0 0.00 0.00 0.00	3 0.00 50.00 0.02	6 0.01
IL08U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 8.33 0.01	0 0.00 0.00 0.00	10 0.01 83.33 0.07	12 0.01
IL09D	1 0.00 0.89 0.02	0 0.00 0.00 0.00	2 0.00 1.79 0.03	0 0.00 0.00 0.00	70 0.08 62.50 1.03	1 0.00 0.89 0.02	37 0.04 33.04 0.26	112 0.12
KS02D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 100.00 0.01	1 0.00
MI02U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 100.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
MI04U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 50.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00
Total	5759 6.29	5806 6.34	5990 6.54	6046 6.60	6781 7.40	6278 6.85	14294 15.61	91588 100.00

(Continued)

successive lock exit pools for vessels 12:49 Friday, June 24, 2005 133
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by newpool

pnewpool(prev exit pool) newpool(curr exit pool)

Frequency Percent Row Pct Col Pct	MI22U	MI24D	MI24U	MI25D	MI25U	MI26D	MI26U	Total
MI05D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 100.00 0.01	1 0.00
MI07D	0 0.00 0.00 0.00	1 0.00 50.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00
MI07U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
MI10D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
MI10U	0 0.00 0.00 0.00	2 0.00 50.00 0.03	1 0.00 25.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	4 0.00
MI11D	0 0.00 0.00 0.00	1 0.00 50.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00
MI12D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 33.33 0.01	3 0.00
Total	5759 6.29	5806 6.34	5990 6.54	6046 6.60	6781 7.40	6278 6.85	14294 15.61	91588 100.00

(Continued)

successive lock exit pools for vessels 12:49 Friday, June 24, 2005 134
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by newpool

pnewpool(prev exit pool) newpool(curr exit pool)

Frequency Percent Row Pct Col Pct	MI22U	MI24D	MI24U	MI25D	MI25U	MI26D	MI26U	Total
MI13U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
MI14D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00 50.00 0.03	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	4 0.00
MI14U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00
MI15D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00
MI15U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	4 0.00
MI16D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 12.50 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	8 0.01
MI16U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.00 33.33 0.03	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	6 0.01
Total	5759 6.29	5806 6.34	5990 6.54	6046 6.60	6781 7.40	6278 6.85	14294 15.61	91588 100.00

(Continued)

successive lock exit pools for vessels 12:49 Friday, June 24, 2005 135
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by newpool

pnewpool(prev exit pool) newpool(curr exit pool)

Frequency Percent Row Pct Col Pct	MI22U	MI24D	MI24U	MI25D	MI25U	MI26D	MI26U	Total
MI17D	0 0.00 0.00 0.00	1 0.00 3.85 0.02	1 0.00 3.85 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	26 0.03
MI17U	1 0.00 12.50 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	8 0.01
MI18D	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5335 5.82
MI18U	0 0.00 0.00 0.00	2 0.00 0.61 0.03	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	327 0.36
MI19D	0 0.00 0.00 0.00	1 0.00 0.02 0.02	1 0.00 0.02 0.02	1 0.00 0.02 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 0.02 0.01	5184 5.66
MI19U	1 0.00 0.22 0.02	1 0.00 0.22 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	445 0.49
MI20D	0 0.00 0.00 0.00	3 0.00 0.05 0.05	0 0.00 0.00 0.00	5 0.01 0.09 0.08	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5502 6.01
Total	5759 6.29	5806 6.34	5990 6.54	6046 6.60	6781 7.40	6278 6.85	14294 15.61	91588 100.00

(Continued)

successive lock exit pools for vessels 12:49 Friday, June 24, 2005 136
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by newpool

pnewpool(prev exit pool) newpool(curr exit pool)

Frequency Percent Row Pct Col Pct	MI22U	MI24D	MI24U	MI25D	MI25U	MI26D	MI26U	Total
MI20U	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.00 0.02 0.01	1 0.00 0.02 0.02	1 0.00 0.02 0.01	5882 6.42
MI21D	1 0.00 0.02 0.02	16 0.02 0.27 0.28	1 0.00 0.02 0.02	2 0.00 0.03 0.03	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5878 6.42
MI21U	0 0.00 0.00 0.00	16 0.02 0.27 0.28	2 0.00 0.03 0.03	1 0.00 0.02 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5976 6.52
MI22D	8 0.01 0.13 0.14	5302 5.79 88.10 91.32	1 0.00 0.02 0.02	17 0.02 0.28 0.28	0 0.00 0.00 0.00	2 0.00 0.03 0.03	0 0.00 0.00 0.00	6018 6.57
MI22U	8 0.01 0.14 0.14	443 0.48 7.70 7.63	1 0.00 0.02 0.02	8 0.01 0.14 0.13	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5753 6.28
MI24D	226 0.25 3.90 3.92	6 0.01 0.10 0.10	5 0.01 0.09 0.08	5516 6.02 95.22 91.23	0 0.00 0.00 0.00	27 0.03 0.47 0.43	4 0.00 0.07 0.03	5793 6.33
MI24U	5463 5.96 91.48 94.86	2 0.00 0.03 0.03	16 0.02 0.27 0.27	453 0.49 7.59 7.49	2 0.00 0.03 0.03	6 0.01 0.10 0.10	3 0.00 0.05 0.02	5972 6.52
Total	5759 6.29	5806 6.34	5990 6.54	6046 6.60	6781 7.40	6278 6.85	14294 15.61	91588 100.00

(Continued)

successive lock exit pools for vessels 12:49 Friday, June 24, 2005 137
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by newpool

pnewpool(prev exit pool) newpool(curr exit pool)

Frequency Percent Row Pct Col Pct	MI22U	MI24D	MI24U	MI25D	MI25U	MI26D	MI26U	Total
MI25D	5	4	267	14	4	5722	1	6025
	0.01	0.00	0.29	0.02	0.00	6.25	0.00	6.58
	0.08	0.07	4.43	0.23	0.07	94.97	0.02	
	0.09	0.07	4.46	0.23	0.06	91.14	0.01	
MI25U	29	0	5647	11	600	456	1	6756
	0.03	0.00	6.17	0.01	0.66	0.50	0.00	7.38
	0.43	0.00	83.58	0.16	8.88	6.75	0.01	
	0.50	0.00	94.27	0.18	8.85	7.26	0.01	
MI26D	0	1	5	0	465	53	10	538
	0.00	0.00	0.01	0.00	0.51	0.06	0.01	0.59
	0.00	0.19	0.93	0.00	86.43	9.85	1.86	
	0.00	0.02	0.08	0.00	6.86	0.84	0.07	
MI26U	5	0	21	3	5560	5	144	5742
	0.01	0.00	0.02	0.00	6.07	0.01	0.16	6.27
	0.09	0.00	0.37	0.05	96.83	0.09	2.51	
	0.09	0.00	0.35	0.05	81.99	0.08	1.01	
MI27D	0	1	1	1	22	2	1973	2004
	0.00	0.00	0.00	0.00	0.02	0.00	2.15	2.19
	0.00	0.05	0.05	0.05	1.10	0.10	98.45	
	0.00	0.02	0.02	0.02	0.32	0.03	13.80	
MI27U	3	0	9	1	36	2	11774	11833
	0.00	0.00	0.01	0.00	0.04	0.00	12.86	12.92
	0.03	0.00	0.08	0.01	0.30	0.02	99.50	
	0.05	0.00	0.15	0.02	0.53	0.03	82.37	
MI28D	2	0	5	3	10	1	294	327
	0.00	0.00	0.01	0.00	0.01	0.00	0.32	0.36
	0.61	0.00	1.53	0.92	3.06	0.31	89.91	
	0.03	0.00	0.08	0.05	0.15	0.02	2.06	
Total	5759	5806	5990	6046	6781	6278	14294	91588
	6.29	6.34	6.54	6.60	7.40	6.85	15.61	100.00

Summary Transit Statistics for Locks in Simulation Model 12:49 Friday, June 24, 2005 138
Transit Times (hours) from Previous Lockage
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

newpool	Sequential Locks Upstream	Sequential Locks Downstream	Stop	Num Transit Obs	Num Missing Values	Sum Hrs Transit Time	Avg Hrs Transit Time	Std Dev Transit Time	Smallest Transit Time	5th Pctile Transit Time	Median Transit Time	95th Pctile Transit Time	Largest Transit Time
MI20D	N	N		276	2	71058.27	257.457	1580.60	0.033	1.6667	6.3167	759.550	22437.58
MI20D	N	N	N	86	0	5336.85	62.056	224.67	-2.667	1.1500	9.2250	361.450	1651.97
MI20D	N	N	Y	1375	2	64127.47	46.638	667.60	-28.117	6.6667	11.4667	44.833	24110.08
MI20D	N	Y	N	3779	0	44276.77	11.717	277.70	1.933	4.5167	6.9167	9.750	17074.58
MI20U	N	N		618	3	37754.62	61.092	283.12	-3.017	0.3333	2.9167	186.717	3361.17
MI20U	N	N	N	158	0	8445.85	53.455	199.48	-6.350	0.6167	4.6417	348.350	1923.02
MI20U	N	N	Y	1151	1	28914.08	25.121	290.76	-14.650	1.6333	5.6667	36.100	8689.37
MI20U	Y	N	N	3992	0	15963.40	3.999	7.36	-0.050	2.0833	3.3500	5.867	285.22
MI21D	N	N		489	1	40566.38	82.958	652.39	-8.100	1.2500	8.0833	173.167	13043.67
MI21D	N	N	N	109	0	3490.43	32.022	69.29	-28.133	0.1833	5.7333	167.133	446.45
MI21D	N	N	Y	967	1	29572.83	30.582	218.79	-24.233	2.6667	6.5833	53.150	4911.78
MI21D	N	Y	N	4320	0	18338.90	4.245	35.97	-1.100	1.5500	2.5833	4.183	2116.02
MI21U	N	N		525	2	61733.80	117.588	642.63	0.000	1.1667	3.8167	355.083	7286.50
MI21U	N	N	N	167	0	2001.67	11.986	21.92	-49.083	-0.0833	6.0833	49.267	123.67
MI21U	N	N	Y	853	2	23794.90	27.896	125.50	-5.117	0.9500	5.9500	96.033	1946.58
MI21U	Y	N	N	4452	0	21355.33	4.797	3.93	1.400	2.9667	4.3667	6.717	137.50
MI22D	N	N		386	3	51343.90	133.015	609.64	-53.383	1.0833	3.2667	470.333	9553.73
MI22D	N	N	N	98	0	4436.28	45.268	151.20	-13.417	1.3000	6.5000	178.667	1287.40
MI22D	N	N	Y	1320	2	75940.00	57.530	293.64	-6.783	2.2167	5.7500	255.033	5352.63
MI22D	N	Y	N	4220	0	14315.78	3.392	32.27	-0.650	1.4000	2.2333	3.383	1571.95
MI22U	N	N		382	4	13475.60	35.276	256.61	-0.200	2.5000	4.0667	20.867	3123.25
MI22U	N	N	N	121	1	7996.28	66.085	343.03	-20.667	-10.9667	7.0333	238.000	3470.77
MI22U	N	N	Y	1128	0	22569.05	20.008	108.43	-11.283	3.4833	7.4167	19.700	2356.67
MI22U	Y	N	N	4123	0	22717.68	5.510	10.48	-4.667	3.1000	4.7833	7.233	369.70
MI24D	N	N		274	1	24556.90	89.624	465.81	-5.833	1.4500	2.6667	389.667	5802.60
MI24D	N	N	N	111	0	3898.93	35.126	132.41	-24.617	-11.6333	7.8500	109.133	1075.83
MI24D	N	N	Y	838	1	21055.43	25.126	122.96	-11.383	2.3333	6.1667	45.200	1718.70
MI24D	N	Y	N	4581	0	14328.48	3.128	3.29	-2.533	1.8500	2.8167	4.333	140.50
MI24U	N	N		421	1	15584.35	37.017	235.84	-5.050	1.6833	4.9500	93.350	3673.75
MI24U	N	N	N	124	0	10626.80	85.700	415.28	-114.667	-8.8833	9.9417	203.733	3884.25
MI24U	N	N	Y	226	0	11466.27	50.736	233.04	-13.500	0.0000	11.4333	141.783	2858.42
MI24U	Y	N	N	5218	0	35855.02	6.871	3.63	-4.333	4.1667	6.5000	9.933	113.63
MI25D	N	N		298	2	46482.62	155.982	1225.08	-0.167	0.6000	2.9250	284.433	18981.42
MI25D	N	N	N	166	2	5233.30	31.526	120.46	-14.083	-1.4833	5.6000	135.317	1176.90
MI25D	N	N	Y	959	1	18176.30	18.953	75.77	-57.750	2.0833	7.8833	41.083	1414.68
MI25D	N	Y	N	4618	0	18602.23	4.028	9.54	-0.300	2.4833	3.5833	5.700	628.17
MI25U	N	N		1149	4	55729.03	48.502	289.03	-10.017	2.6333	10.3000	91.433	6200.53
MI25U	N	N	N	270	2	21764.23	80.608	545.70	-10.367	0.2500	11.5583	194.633	8639.85
MI25U	N	N	Y	418	0	7444.70	17.810	59.88	-4.000	2.5500	9.0750	45.767	1150.83
MI25U	Y	N	N	4938	0	41598.72	8.424	17.44	2.717	4.9000	7.5667	11.400	695.23

Summary Transit Statistics for Locks in Simulation Model by lockage type 139
Transit Times (hours) from Previous Lockage 12:49 Friday, June 24, 2005
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

newpool	Lockage Type	Sequential Locks Upstream	Sequential Locks Downstream	Stop	Num Transit Obs	Num Missing Values	Sum Hrs Transit Time	Avg Hrs Transit Time	Std Dev Transit Time	Smallest Transit Time	5th Pctile Transit Time	Median Transit Time	95th Pctile Transit Time	Largest Transit Time
MI20D	5:OTHER	N	N		1	0	72.57	72.567	.	72.567	72.567	72.567	72.567	72.57
MI20D	2:SINGLE	N	N		275	2	70985.70	258.130	1583.44	0.033	1.667	6.283	759.550	22437.58
MI20D	2:SINGLE	N	N	N	86	0	5336.85	62.056	224.67	-2.667	1.150	9.225	361.450	1651.97
MI20D	2:SINGLE	N	N	Y	1375	2	64127.47	46.638	667.60	-28.117	6.667	11.467	44.833	24110.08
MI20D	3:KNOCKOUT	N	Y	N	1	0	7.88	7.883	.	7.883	7.883	7.883	7.883	7.88
MI20D	2:SINGLE	N	Y	N	3778	0	44268.88	11.718	277.73	1.933	4.517	6.908	9.750	17074.58
MI20U	2:SINGLE	N	N		618	3	37754.62	61.092	283.12	-3.017	0.333	2.917	186.717	3361.17
MI20U	1:DOUBLE	N	N	N	87	0	1029.57	11.834	48.64	-6.350	2.250	4.900	12.867	446.58
MI20U	2:SINGLE	N	N	N	71	0	7416.28	104.455	285.58	-0.017	0.433	4.250	500.817	1923.02
MI20U	1:DOUBLE	N	N	Y	839	0	5596.53	6.670	6.64	-14.650	3.083	5.783	11.183	100.60
MI20U	3:KNOCKOUT	N	N	Y	12	0	76.27	6.356	1.42	4.050	4.050	6.075	8.833	8.83
MI20U	2:SINGLE	N	N	Y	298	1	23223.32	77.931	568.72	-1.500	0.267	4.900	171.217	8689.37
MI20U	4:JACKNIFE	N	N	Y	2	0	17.97	8.983	10.56	1.517	1.517	8.983	16.450	16.45
MI20U	1:DOUBLE	Y	N	N	3236	0	12307.42	3.803	4.11	-0.050	2.133	3.383	5.583	111.00
MI20U	3:KNOCKOUT	Y	N	N	80	0	238.35	2.979	0.91	0.950	1.942	2.742	4.567	6.58
MI20U	2:SINGLE	Y	N	N	562	0	3058.82	5.443	16.86	1.133	1.967	3.333	9.250	285.22
MI20U	4:JACKNIFE	Y	N	N	114	0	358.82	3.148	1.33	1.167	1.833	2.908	4.583	11.33
MI21D	2:SINGLE	N	N		488	1	40440.15	82.869	653.06	-8.100	1.250	8.033	173.167	13043.67
MI21D	5:OTHER	N	N		1	0	126.23	126.233	.	126.233	126.233	126.233	126.233	126.23
MI21D	1:DOUBLE	N	N	N	55	0	344.73	6.268	12.85	-28.133	-1.500	4.283	15.917	73.28
MI21D	3:KNOCKOUT	N	N	N	2	0	14.22	7.108	3.22	4.833	4.833	7.108	9.383	9.38
MI21D	2:SINGLE	N	N	N	52	0	3131.48	60.221	91.87	0.000	0.650	23.683	188.067	446.45
MI21D	1:DOUBLE	N	N	Y	727	0	5386.32	7.409	5.68	-24.233	2.900	6.283	14.500	95.40
MI21D	3:KNOCKOUT	N	N	Y	23	0	194.63	8.462	4.71	2.667	3.317	7.250	16.733	18.42
MI21D	2:SINGLE	N	N	Y	215	1	23980.83	111.539	455.52	-3.767	1.233	9.200	564.333	4911.78
MI21D	5:OTHER	N	N	Y	1	0	6.83	6.833	.	6.833	6.833	6.833	6.833	6.83
MI21D	4:JACKNIFE	N	N	Y	1	0	4.22	4.217	.	4.217	4.217	4.217	4.217	4.22
MI21D	1:DOUBLE	N	Y	N	3576	0	10142.42	2.836	1.21	-1.100	1.733	2.683	4.117	24.52
MI21D	3:KNOCKOUT	N	Y	N	101	0	256.12	2.536	1.59	0.933	1.550	2.167	3.900	13.25
MI21D	2:SINGLE	N	Y	N	556	0	7687.67	13.827	99.76	-0.400	1.283	1.933	13.650	2116.02
MI21D	5:OTHER	N	Y	N	2	0	21.60	10.800	10.72	3.217	3.217	10.800	18.383	18.38
MI21D	4:JACKNIFE	N	Y	N	85	0	231.10	2.719	2.65	1.100	1.450	2.133	3.950	20.72
MI21U	2:SINGLE	N	N		525	2	61733.80	117.588	642.63	0.000	1.167	3.817	355.083	7286.50
MI21U	1:DOUBLE	N	N	N	108	0	654.00	6.056	10.96	-49.083	-0.250	5.217	14.267	90.83
MI21U	3:KNOCKOUT	N	N	N	1	0	7.63	7.633	.	7.633	7.633	7.633	7.633	7.63
MI21U	2:SINGLE	N	N	N	57	0	1325.65	23.257	31.58	-30.400	-0.083	11.450	100.833	123.67
MI21U	4:JACKNIFE	N	N	N	1	0	14.38	14.383	.	14.383	14.383	14.383	14.383	14.38
MI21U	1:DOUBLE	N	N	Y	322	0	2076.05	6.447	5.56	-3.750	3.167	5.117	13.583	58.88
MI21U	3:KNOCKOUT	N	N	Y	6	0	121.28	20.214	33.49	4.517	4.517	6.075	88.367	88.37
MI21U	2:SINGLE	N	N	Y	524	2	21593.65	41.209	158.63	-5.117	0.850	7.942	147.100	1946.58
MI21U	4:JACKNIFE	N	N	Y	1	0	3.92	3.917	.	3.917	3.917	3.917	3.917	3.92
MI21U	1:DOUBLE	Y	N	N	3863	0	18301.78	4.738	2.61	1.400	3.083	4.417	6.533	72.82
MI21U	3:KNOCKOUT	Y	N	N	102	0	415.55	4.074	2.04	2.283	2.583	3.525	6.917	19.32
MI21U	2:SINGLE	Y	N	N	356	0	2129.73	5.982	10.78	1.617	2.500	3.917	16.333	137.50
MI21U	5:OTHER	Y	N	N	8	0	33.98	4.248	1.03	2.950	2.950	4.367	5.583	5.58
MI21U	4:JACKNIFE	Y	N	N	123	0	474.28	3.856	0.88	2.333	2.867	3.650	5.167	9.50
MI22D	3:KNOCKOUT	N	N		1	0	1.65	1.650	.	1.650	1.650	1.650	1.650	1.65
MI22D	2:SINGLE	N	N		383	3	50942.12	133.008	611.86	-53.383	1.083	3.250	470.333	9553.73
MI22D	5:OTHER	N	N		2	0	400.13	200.067	224.18	41.550	41.550	200.067	358.583	358.58
MI22D	1:DOUBLE	N	N	N	59	0	1797.88	30.473	167.42	-13.417	1.683	5.150	77.767	1287.40

Summary Transit Statistics for Locks in Simulation Model by lockage type 140
Transit Times (hours) from Previous Lockage 12:49 Friday, June 24, 2005
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

newpool	Lockage Type	Sequential Locks Upstream	Sequential Locks Downstream	Stop	Num Transit Obs	Num Missing Values	Sum Hrs Transit Time	Avg Hrs Transit Time	Std Dev Transit Time	Smallest Transit Time	5th Pctile Transit Time	Median Transit Time	95th Pctile Transit Time	Largest Transit Time
MI22D	2:SINGLE	N	N	N	38	0	2543.73	66.940	122.879	1.100	1.1333	23.5083	234.02	705.27
MI22D	4:JACKNIFE	N	N	N	1	0	94.67	94.667	.	94.667	94.6667	94.6667	94.67	94.67
MI22D	1:DOUBLE	N	N	Y	938	0	6681.52	7.123	19.240	-6.783	2.5333	5.1333	11.47	398.42
MI22D	3:KNOCKOUT	N	N	Y	19	0	306.95	16.155	17.826	1.833	1.8333	6.2500	55.93	55.93
MI22D	2:SINGLE	N	N	Y	361	2	68929.63	190.941	538.848	-0.133	1.4833	41.8667	573.07	5352.63
MI22D	5:OTHER	N	N	Y	1	0	4.93	4.933	.	4.933	4.9333	4.9333	4.93	4.93
MI22D	4:JACKNIFE	N	N	Y	1	0	16.97	16.967	.	16.967	16.9667	16.9667	16.97	16.97
MI22D	1:DOUBLE	N	Y	N	3536	0	8856.68	2.505	3.212	-0.650	1.5833	2.3000	3.30	111.68
MI22D	3:KNOCKOUT	N	Y	N	106	0	211.90	1.999	1.074	0.983	1.1667	1.8000	3.05	11.18
MI22D	2:SINGLE	N	Y	N	501	0	5101.55	10.183	93.069	-0.033	1.1167	1.6333	10.23	1571.95
MI22D	5:OTHER	N	Y	N	1	0	1.93	1.933	.	1.933	1.9333	1.9333	1.93	1.93
MI22D	4:JACKNIFE	N	Y	N	76	0	143.72	1.891	0.652	0.050	1.3333	1.8333	2.60	5.75
MI22U	2:SINGLE	N	N		382	4	13475.60	35.276	256.607	-0.200	2.5000	4.0667	20.87	3123.25
MI22U	1:DOUBLE	N	N	N	89	1	619.25	6.958	10.245	-20.667	-12.9167	6.1667	26.65	55.02
MI22U	2:SINGLE	N	N	N	31	0	7378.67	238.022	655.213	0.167	3.8333	19.0833	1196.75	3470.77
MI22U	4:JACKNIFE	N	N	N	1	0	-1.63	-1.633	.	-1.633	-1.6333	-1.6333	-1.63	-1.63
MI22U	1:DOUBLE	N	N	Y	894	0	7919.90	8.859	13.880	-11.283	4.2833	7.4750	16.05	397.65
MI22U	3:KNOCKOUT	N	N	Y	11	0	104.75	9.523	4.415	3.350	3.3500	9.1667	17.22	17.22
MI22U	2:SINGLE	N	N	Y	220	0	14526.32	66.029	238.907	0.000	1.6000	7.0583	310.76	2356.67
MI22U	5:OTHER	N	N	Y	1	0	6.17	6.167	.	6.167	6.1667	6.1667	6.17	6.17
MI22U	4:JACKNIFE	N	N	Y	2	0	11.92	5.958	1.945	4.583	4.5833	5.9583	7.33	7.33
MI22U	1:DOUBLE	Y	N	N	3343	0	18631.10	5.573	9.356	-4.667	3.2500	4.9667	7.28	308.92
MI22U	5:OTHER	Y	N	N	1	0	5.13	5.133	.	5.133	5.1333	5.1333	5.13	5.13
MI22U	3:KNOCKOUT	Y	N	N	103	0	439.37	4.266	1.188	1.000	2.9167	4.0000	5.93	10.17
MI22U	2:SINGLE	Y	N	N	542	0	3003.25	5.541	16.999	2.333	2.8667	3.8333	7.23	369.70
MI22U	5:OTHER	Y	N	N	1	0	3.53	3.533	.	3.533	3.5333	3.5333	3.53	3.53
MI22U	4:JACKNIFE	Y	N	N	133	0	635.30	4.777	5.280	2.517	3.0000	4.1667	6.40	63.98
MI24D	2:SINGLE	N	N		274	1	24556.90	89.624	465.812	-5.833	1.4500	2.6667	389.67	5802.60
MI24D	1:DOUBLE	N	N	N	47	0	479.65	10.205	31.162	-24.617	-12.3500	3.2667	90.75	150.03
MI24D	3:KNOCKOUT	N	N	N	2	0	-3.62	-1.808	29.097	-22.383	-22.3833	-1.8083	18.77	18.77
MI24D	2:SINGLE	N	N	N	61	0	3415.05	55.984	174.351	0.150	1.8167	13.1500	285.50	1075.83
MI24D	4:JACKNIFE	N	N	N	1	0	7.85	7.850	.	7.850	7.8500	7.8500	7.85	7.85
MI24D	1:DOUBLE	N	N	Y	402	0	3154.58	7.847	30.466	-11.383	2.6667	5.1333	12.08	601.68
MI24D	3:KNOCKOUT	N	N	Y	16	0	232.45	14.528	17.135	2.950	2.9500	6.7333	61.12	61.12
MI24D	2:SINGLE	N	N	Y	419	1	17623.23	42.060	169.692	0.417	2.2000	10.0833	66.78	1718.70
MI24D	4:JACKNIFE	N	N	Y	1	0	45.17	45.167	.	45.167	45.1667	45.1667	45.17	45.17
MI24D	1:DOUBLE	N	Y	N	4097	0	12560.43	3.066	1.849	-2.533	1.9333	2.8500	4.28	73.00
MI24D	5:OTHER	N	Y	N	2	0	4.93	2.467	0.636	2.017	2.0167	2.4667	2.92	2.92
MI24D	3:KNOCKOUT	N	Y	N	129	0	414.23	3.211	4.046	1.417	1.6667	2.3167	4.78	39.17
MI24D	2:SINGLE	N	Y	N	274	0	1140.55	4.163	10.985	-0.083	1.4000	2.2500	10.92	140.50
MI24D	5:OTHER	N	Y	N	3	0	16.35	5.450	4.862	2.300	2.3000	3.0000	11.05	11.05
MI24D	4:JACKNIFE	N	Y	N	76	0	191.98	2.526	1.304	1.500	1.6667	2.3000	3.58	11.80
MI24U	2:SINGLE	N	N		421	1	15584.35	37.017	235.836	-5.050	1.6833	4.9500	93.35	3673.75
MI24U	1:DOUBLE	N	N	N	71	0	4566.40	64.315	461.088	-114.667	-15.6167	6.8000	71.75	3884.25
MI24U	2:SINGLE	N	N	N	52	0	6013.28	115.640	350.059	-0.183	0.0000	21.8917	387.52	2468.03
MI24U	5:OTHER	N	N	N	1	0	47.12	47.117	.	47.117	47.1167	47.1167	47.12	47.12
MI24U	1:DOUBLE	N	N	Y	120	0	1192.48	9.937	8.525	-13.500	-2.5667	8.9833	23.88	43.67
MI24U	3:KNOCKOUT	N	N	Y	3	0	41.47	13.822	2.355	11.750	11.7500	13.3333	16.38	16.38
MI24U	2:SINGLE	N	N	Y	102	0	10226.88	100.264	341.151	-2.883	0.1167	18.7000	503.22	2858.42
MI24U	4:JACKNIFE	N	N	Y	1	0	5.43	5.433	.	5.433	5.4333	5.4333	5.43	5.43

Summary Transit Statistics for Locks in Simulation Model by lockage type 141
Transit Times (hours) from Previous Lockage 12:49 Friday, June 24, 2005
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

newpool	Lockage Type	Sequential Locks Upstream	Sequential Locks Downstream	Stop	Num Transit Obs	Num Missing Values	Sum Hrs Transit Time	Avg Hrs Transit Time	Std Dev Transit Time	Smallest Transit Time	5th Pctile Transit Time	Median Transit Time	95th Pctile Transit Time	Largest Transit Time
MI24U	1:DOUBLE	Y	N	N	4266	0	30233.82	7.087	3.39	2.3000	4.61667	6.7167	9.933	113.63
MI24U	3:KNOCKOUT	Y	N	N	121	0	718.62	5.939	2.31	-4.3333	3.90000	5.5167	10.667	15.68
MI24U	2:SINGLE	Y	N	N	694	0	4036.68	5.817	4.38	2.3833	3.58333	4.8167	13.033	70.00
MI24U	5:OTHER	Y	N	N	2	0	11.18	5.592	0.34	5.3500	5.35000	5.5917	5.833	5.83
MI24U	4:JACKNIFE	Y	N	N	135	0	854.72	6.331	6.02	3.5333	4.06667	5.5333	8.317	73.17
MI25D	2:SINGLE	N	N		298	2	46482.62	155.982	1225.08	-0.1667	0.60000	2.9250	284.433	18981.42
MI25D	1:DOUBLE	N	N	N	85	0	1688.67	19.867	127.47	-14.0833	-7.50000	5.6333	22.767	1176.90
MI25D	3:KNOCKOUT	N	N	N	3	0	12.38	4.128	0.92	3.2833	3.28333	4.0000	5.100	5.10
MI25D	2:SINGLE	N	N	N	78	2	3532.25	45.285	114.00	-0.0833	0.00000	5.6833	234.317	633.25
MI25D	1:DOUBLE	N	N	Y	725	0	8522.95	11.756	28.18	-57.7500	3.41667	7.9167	21.883	509.27
MI25D	3:KNOCKOUT	N	N	Y	71	0	1287.87	18.139	21.87	3.0000	3.83333	9.3333	70.667	119.00
MI25D	2:SINGLE	N	N	Y	162	1	8356.93	51.586	170.51	0.0000	0.08333	6.4833	191.817	1414.68
MI25D	5:OTHER	N	N	Y	1	0	8.55	8.550	.	8.5500	8.55000	8.5500	8.550	8.55
MI25D	1:DOUBLE	N	Y	N	3907	0	15440.27	3.952	1.39	0.2167	2.61667	3.7167	5.700	23.38
MI25D	3:KNOCKOUT	N	Y	N	114	0	418.07	3.667	2.13	2.1333	2.28333	3.1333	9.167	14.37
MI25D	2:SINGLE	N	Y	N	518	0	2498.83	4.824	28.21	-0.3000	2.10000	2.9167	5.617	628.17
MI25D	5:OTHER	N	Y	N	2	0	7.83	3.917	1.53	2.8333	2.83333	3.9167	5.000	5.00
MI25D	4:JACKNIFE	N	Y	N	77	0	237.23	3.081	0.92	0.0667	2.40000	3.0667	4.017	9.37
MI25U	2:SINGLE	N	N		1149	4	55729.03	48.502	289.03	-10.0167	2.63333	10.3000	91.433	6200.53
MI25U	1:DOUBLE	N	N	N	139	0	11649.30	83.808	732.99	-10.3667	-0.73333	8.7167	90.583	8639.85
MI25U	3:KNOCKOUT	N	N	N	6	0	112.87	18.811	21.08	5.8000	5.80000	9.6667	60.367	60.37
MI25U	2:SINGLE	N	N	N	119	2	9933.02	83.471	223.67	-1.2167	0.25000	20.7333	383.417	1506.70
MI25U	4:JACKNIFE	N	N	N	6	0	69.05	11.508	6.02	5.4167	5.41667	10.9000	18.433	18.43
MI25U	1:DOUBLE	N	N	Y	315	0	3964.25	12.585	17.37	-4.0000	2.91667	8.8833	32.033	243.83
MI25U	3:KNOCKOUT	N	N	Y	5	0	104.55	20.910	19.12	7.2167	7.21667	14.3333	53.450	53.45
MI25U	2:SINGLE	N	N	Y	94	0	3336.90	35.499	120.94	-0.0167	0.33333	14.7500	88.500	1150.83
MI25U	4:JACKNIFE	N	N	Y	4	0	39.00	9.750	5.67	4.9000	4.90000	8.1083	17.883	17.88
MI25U	1:DOUBLE	Y	N	N	4020	0	32465.43	8.076	2.81	2.9833	5.28333	7.8333	11.250	68.58
MI25U	3:KNOCKOUT	Y	N	N	120	0	918.13	7.651	5.72	3.1667	4.50000	6.5083	12.917	50.75
MI25U	2:SINGLE	Y	N	N	669	0	7380.02	11.031	46.75	2.7167	4.40000	5.8667	18.600	695.23
MI25U	4:JACKNIFE	Y	N	N	129	0	835.13	6.474	2.07	4.1833	4.66667	6.0333	9.283	20.73

Utilization Statistics for Vessels 12:49 Friday, June 24, 2005 142
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

Obs	Start Date	End Date	Sum Transit Hours	Sum Wait to Lock Hours	Sum Lockage Times Hours	Number of Movements	Sum of Total Movement Time	Total Days of Movement	Percentage of Total Movement Time in Transit	Percentage of Total Movement Time Waiting to Lock	Percentage of Total Movement Time in Lockage
1	01JAN00	31DEC03	22012700.75	550068.17	481237.63	437119	23044006.55	1460.98	95.5246	2.38703	2.08834

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 143
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by nxtstep

pnewpool nxtstep

Frequency / Percent / Row Pct / Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
BIRTH	34	0	0	0	0	0	34
	0.05	0.00	0.00	0.00	0.00	0.00	0.05
	100.00	0.00	0.00	0.00	0.00	0.00	
	100.00	0.00	0.00	0.00	0.00	0.00	
IL02U	0	0	0	1	0	0	1
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	100.00	0.00	0.00	
	0.00	0.00	0.00	1.16	0.00	0.00	
IL05D	0	0	0	1	0	0	1
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	100.00	0.00	0.00	
	0.00	0.00	0.00	1.16	0.00	0.00	
IL07D	0	0	0	3	0	0	3
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	100.00	0.00	0.00	
	0.00	0.00	0.00	3.49	0.00	0.00	
IL07U	0	0	0	1	0	0	1
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	100.00	0.00	0.00	
	0.00	0.00	0.00	1.16	0.00	0.00	
IL08D	0	0	0	3	0	0	3
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	100.00	0.00	0.00	
	0.00	0.00	0.00	3.49	0.00	0.00	
IL08U	0	0	0	2	0	0	2
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	100.00	0.00	0.00	
	0.00	0.00	0.00	2.33	0.00	0.00	
IL09D	0	0	0	75	0	0	75
	0.00	0.00	0.00	0.10	0.00	0.00	0.10
	0.00	0.00	0.00	100.00	0.00	0.00	
	0.00	0.00	0.00	87.21	0.00	0.00	
Total	34	54484	10857	86	1972	4329	71762
	0.05	75.92	15.13	0.12	2.75	6.03	100.00

(Continued)

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 144
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by nxtstep

pnewpool nxtstep

Frequency / Percent / Row Pct / Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
MI02U	0	0	0	0	1	0	1
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	100.00	0.00	
	0.00	0.00	0.00	0.00	0.05	0.00	
MI04U	0	0	0	0	1	0	1
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	100.00	0.00	
	0.00	0.00	0.00	0.00	0.05	0.00	
MI07D	0	0	0	0	2	0	2
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	100.00	0.00	
	0.00	0.00	0.00	0.00	0.10	0.00	
MI07U	0	0	0	0	1	0	1
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	100.00	0.00	
	0.00	0.00	0.00	0.00	0.05	0.00	
MI10D	0	0	0	0	1	0	1
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	100.00	0.00	
	0.00	0.00	0.00	0.00	0.05	0.00	
MI10U	0	0	0	0	4	0	4
	0.00	0.00	0.00	0.00	0.01	0.00	0.01
	0.00	0.00	0.00	0.00	100.00	0.00	
	0.00	0.00	0.00	0.00	0.20	0.00	
MI11D	0	0	0	0	1	0	1
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	100.00	0.00	
	0.00	0.00	0.00	0.00	0.05	0.00	
MI12D	0	0	0	0	1	0	1
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	100.00	0.00	
	0.00	0.00	0.00	0.00	0.05	0.00	
Total	34	54484	10857	86	1972	4329	71762
	0.05	75.92	15.13	0.12	2.75	6.03	100.00

(Continued)

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 145
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by nxtstep

pnewpool nxtstep

Frequency / Percent / Row Pct / Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
MI13U	0	0	0	0	1	0	1
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	100.00	0.00	
	0.00	0.00	0.00	0.00	0.05	0.00	
MI14D	0	0	0	0	3	0	3
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	100.00	0.00	
	0.00	0.00	0.00	0.00	0.15	0.00	
MI15D	0	0	0	0	1	0	1
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	100.00	0.00	
	0.00	0.00	0.00	0.00	0.05	0.00	
MI15U	0	0	0	0	1	0	1
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	100.00	0.00	
	0.00	0.00	0.00	0.00	0.05	0.00	
MI16D	0	0	0	0	1	0	1
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	100.00	0.00	
	0.00	0.00	0.00	0.00	0.05	0.00	
MI16U	0	0	0	0	4	0	4
	0.00	0.00	0.00	0.00	0.01	0.00	0.01
	0.00	0.00	0.00	0.00	100.00	0.00	
	0.00	0.00	0.00	0.00	0.20	0.00	
MI17D	0	0	0	0	5	0	5
	0.00	0.00	0.00	0.00	0.01	0.00	0.01
	0.00	0.00	0.00	0.00	100.00	0.00	
	0.00	0.00	0.00	0.00	0.25	0.00	
MI17U	0	0	0	0	2	0	2
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	100.00	0.00	
	0.00	0.00	0.00	0.00	0.10	0.00	
Total	34	54484	10857	86	1972	4329	71762
	0.05	75.92	15.13	0.12	2.75	6.03	100.00

(Continued)

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 146
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by nxtstep

pnewpool nxtstep

Frequency / Percent / Row Pct / Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
MI18D	0	0	0	0	4	0	4
	0.00	0.00	0.00	0.00	0.01	0.00	0.01
	0.00	0.00	0.00	0.00	100.00	0.00	
	0.00	0.00	0.00	0.00	0.20	0.00	
MI18U	0	0	0	0	5	0	5
	0.00	0.00	0.00	0.00	0.01	0.00	0.01
	0.00	0.00	0.00	0.00	100.00	0.00	
	0.00	0.00	0.00	0.00	0.25	0.00	
MI19D	0	0	0	0	38	0	38
	0.00	0.00	0.00	0.00	0.05	0.00	0.05
	0.00	0.00	0.00	0.00	100.00	0.00	
	0.00	0.00	0.00	0.00	1.93	0.00	
MI19U	0	0	0	0	23	0	23
	0.00	0.00	0.00	0.00	0.03	0.00	0.03
	0.00	0.00	0.00	0.00	100.00	0.00	
	0.00	0.00	0.00	0.00	1.17	0.00	
MI20D	0	4320	1018	0	28	0	5366
	0.00	6.02	1.42	0.00	0.04	0.00	7.48
	0.00	80.51	18.97	0.00	0.52	0.00	
	0.00	7.93	9.38	0.00	1.42	0.00	
MI20U	0	3810	1479	0	204	427	5920
	0.00	5.31	2.06	0.00	0.28	0.60	8.25
	0.00	64.36	24.98	0.00	3.45	7.21	
	0.00	6.99	13.62	0.00	10.34	9.86	
MI21D	0	4220	1147	0	107	408	5882
	0.00	5.88	1.60	0.00	0.15	0.57	8.20
	0.00	71.74	19.50	0.00	1.82	6.94	
	0.00	7.75	10.56	0.00	5.43	9.42	
MI21U	0	3992	1324	0	121	558	5995
	0.00	5.56	1.84	0.00	0.17	0.78	8.35
	0.00	66.59	22.09	0.00	2.02	9.31	
	0.00	7.33	12.19	0.00	6.14	12.89	
Total	34	54484	10857	86	1972	4329	71762
	0.05	75.92	15.13	0.12	2.75	6.03	100.00

(Continued)

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 147
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by nxtstep

pnewpool nxtstep

Frequency / Percent / Row Pct / Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
MI22D	0	4581	721	0	99	626	6027
	0.00	6.38	1.00	0.00	0.14	0.87	8.40
	0.00	76.01	11.96	0.00	1.64	10.39	
	0.00	8.41	6.64	0.00	5.02	14.46	
MI22U	0	4452	797	0	67	443	5759
	0.00	6.20	1.11	0.00	0.09	0.62	8.03
	0.00	77.31	13.84	0.00	1.16	7.69	
	0.00	8.17	7.34	0.00	3.40	10.23	
MI24D	0	4618	898	0	61	226	5803
	0.00	6.44	1.25	0.00	0.09	0.31	8.09
	0.00	79.58	15.47	0.00	1.05	3.89	
	0.00	8.48	8.27	0.00	3.09	5.22	
MI24U	0	4123	1340	0	72	453	5988
	0.00	5.75	1.87	0.00	0.10	0.63	8.34
	0.00	68.85	22.38	0.00	1.20	7.57	
	0.00	7.57	12.34	0.00	3.65	10.46	
MI25D	0	5399	323	0	53	267	6042
	0.00	7.52	0.45	0.00	0.07	0.37	8.42
	0.00	89.36	5.35	0.00	0.88	4.42	
	0.00	9.91	2.98	0.00	2.69	6.17	
MI25U	0	5218	429	0	676	456	6779
	0.00	7.27	0.60	0.00	0.94	0.64	9.45
	0.00	76.97	6.33	0.00	9.97	6.73	
	0.00	9.58	3.95	0.00	34.28	10.53	
MI26D	0	4813	759	0	232	465	6269
	0.00	6.71	1.06	0.00	0.32	0.65	8.74
	0.00	76.77	12.11	0.00	3.70	7.42	
	0.00	8.83	6.99	0.00	11.76	10.74	
MI26U	0	4938	622	0	38	0	5598
	0.00	6.88	0.87	0.00	0.05	0.00	7.80
	0.00	88.21	11.11	0.00	0.68	0.00	
	0.00	9.06	5.73	0.00	1.93	0.00	
Total	34	54484	10857	86	1972	4329	71762
	0.05	75.92	15.13	0.12	2.75	6.03	100.00

(Continued)

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 148
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by nxtstep

pnewpool nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
MI27D	0	0	0	0	31	0	31
	0.00	0.00	0.00	0.00	0.04	0.00	0.04
	0.00	0.00	0.00	0.00	100.00	0.00	
	0.00	0.00	0.00	0.00	1.57	0.00	
MI27U	0	0	0	0	53	0	53
	0.00	0.00	0.00	0.00	0.07	0.00	0.07
	0.00	0.00	0.00	0.00	100.00	0.00	
	0.00	0.00	0.00	0.00	2.69	0.00	
MI28D	0	0	0	0	30	0	30
	0.00	0.00	0.00	0.00	0.04	0.00	0.04
	0.00	0.00	0.00	0.00	100.00	0.00	
	0.00	0.00	0.00	0.00	1.52	0.00	
Total	34	54484	10857	86	1972	4329	71762
	0.05	75.92	15.13	0.12	2.75	6.03	100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 149
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 1 of plockagetype by nxtstep
Controlling for pnewpool=BIRTH

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOST OP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	1 2.94 100.00 2.94	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 2.94
5:OTHER	1 2.94 100.00 2.94	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 2.94
3:KNOCKOUT	0 0.00 . 0.00	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00
2:SINGLE	32 94.12 100.00 94.12	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	32 94.12
4:JACKNIFE	0 0.00 . 0.00	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00
Total	34 100.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	34 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 150
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 2 of plockagetype by nxtstep
Controlling for pnewpool=IL02U

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00 . .	0 0.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 100.00 100.00 100.00	0 0.00 0.00 .	0 0.00 0.00 .	1 100.00
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	1 100.00	0 0.00	0 0.00	1 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 151
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 3 of plockagetype by nxtstep
Controlling for pnewpool=ILO5D

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00 . .	0 0.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 100.00 100.00 100.00	0 0.00 0.00 .	0 0.00 0.00 .	1 100.00
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	1 100.00	0 0.00	0 0.00	1 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 152
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 4 of plockagetype by nxtstep
Controlling for pnewpool=IL07D

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00 . .	0 0.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	3 100.00 100.00 100.00	0 0.00 0.00 .	0 0.00 0.00 .	3 100.00
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	3 100.00	0 0.00	0 0.00	3 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 153
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 5 of plockagetype by nxtstep
Controlling for pnewpool=IL07U

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 100.00 100.00 100.00	0 0.00 0.00 .	0 0.00 0.00 .	1 100.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00 . .	0 0.00
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	1 100.00	0 0.00	0 0.00	1 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 154
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 6 of plockagetype by nxtstep
Controlling for pnewpool=IL08D

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00 . .	0 0.00
5:OTHER	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 33.33 100.00 33.33	0 0.00 0.00 .	0 0.00 0.00 .	1 33.33
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	2 66.67 100.00 66.67	0 0.00 0.00 .	0 0.00 0.00 .	2 66.67
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	3 100.00	0 0.00	0 0.00	3 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 155
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 7 of plockagetype by nxtstep
Controlling for pnewpool=IL08U

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00 . .	0 0.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 50.00 100.00 50.00	0 0.00 0.00 .	0 0.00 0.00 .	1 50.00
2:SINGLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 50.00 100.00 50.00	0 0.00 0.00 .	0 0.00 0.00 .	1 50.00
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	2 100.00	0 0.00	0 0.00	2 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 156
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 8 of plockagetype by nxtstep
Controlling for pnewpool=IL09D

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	10 13.33 100.00 13.33	0 0.00 0.00 .	0 0.00 0.00 .	10 13.33
5:OTHER	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	27 36.00 100.00 36.00	0 0.00 0.00 .	0 0.00 0.00 .	27 36.00
3:KNOCKOUT	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 1.33 100.00 1.33	0 0.00 0.00 .	0 0.00 0.00 .	1 1.33
2:SINGLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	37 49.33 100.00 49.33	0 0.00 0.00 .	0 0.00 0.00 .	37 49.33
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	75 100.00	0 0.00	0 0.00	75 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 157
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 9 of plockagetype by nxtstep
Controlling for pnewpool=MI02U

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 100.00 100.00 100.00	0 0.00 0.00 .	1 100.00
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	0 0.00	1 100.00	0 0.00	1 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 158
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 10 of plockagetype by nxtstep
Controlling for pnewpool=MI04U

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 100.00 100.00 100.00	0 0.00 0.00 .	1 100.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	0 0.00	1 100.00	0 0.00	1 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 159
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 11 of plockagetype by nxtstep
Controlling for pnewpool=MI07D

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 50.00 100.00 50.00	0 0.00 0.00 .	1 50.00
4:JACKNIFE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 50.00 100.00 50.00	0 0.00 0.00 .	1 50.00
Total	0 0.00	0 0.00	0 0.00	0 0.00	2 100.00	0 0.00	2 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 160
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 12 of plockagetype by nxtstep
Controlling for pnewpool=MI07U

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 100.00 100.00 100.00	0 0.00 0.00 .	1 100.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	0 0.00	1 100.00	0 0.00	1 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 161
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 13 of plockagetype by nxtstep
Controlling for pnewpool=MI1OD

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 100.00 100.00 100.00	0 0.00 0.00 .	1 100.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	0 0.00	1 100.00	0 0.00	1 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 162
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 14 of plockagetype by nxtstep
Controlling for pnewpool=MI10U

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	3 75.00 100.00 75.00	0 0.00 0.00 .	3 75.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 25.00 100.00 25.00	0 0.00 0.00 .	1 25.00
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	0 0.00	4 100.00	0 0.00	4 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 163
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 15 of plockagetype by nxtstep
Controlling for pnewpool=MI11D

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 100.00 100.00 100.00	0 0.00 0.00 .	1 100.00
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	0 0.00	1 100.00	0 0.00	1 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 164
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 16 of plockagetype by nxtstep
Controlling for pnewpool=MI12D

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 100.00 100.00 100.00	0 0.00 0.00 .	1 100.00
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	0 0.00	1 100.00	0 0.00	1 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 165
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 17 of plockagetype by nxtstep
Controlling for pnewpool=MI13U

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 100.00 100.00 100.00	0 0.00 0.00 .	1 100.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	0 0.00	1 100.00	0 0.00	1 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 166
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 18 of plockagetype by nxtstep
Controlling for pnewpool=MI14D

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	3 100.00 100.00 100.00	0 0.00 0.00 .	3 100.00
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	0 0.00	3 100.00	0 0.00	3 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 167
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 19 of plockagetype by nxtstep
Controlling for pnewpool=MI15D

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 100.00 100.00 100.00	0 0.00 0.00 .	1 100.00
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	0 0.00	1 100.00	0 0.00	1 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 168
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 20 of plockagetype by nxtstep
Controlling for pnewpool=MI15U

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 100.00 100.00 100.00	0 0.00 0.00 .	1 100.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	0 0.00	1 100.00	0 0.00	1 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 169
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 21 of plockagetype by nxtstep
Controlling for pnewpool=MI16D

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 100.00 100.00 100.00	0 0.00 0.00 .	1 100.00
2:SINGLE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	0 0.00	1 100.00	0 0.00	1 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 170
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 22 of plockagetype by nxtstep
Controlling for pnewpool=MI16U

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 25.00 100.00 25.00	0 0.00 0.00 .	1 25.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	3 75.00 100.00 75.00	0 0.00 0.00 .	3 75.00
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	0 0.00	4 100.00	0 0.00	4 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 171
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 23 of plockagetype by nxtstep
Controlling for pnewpool=MI17D

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	5 100.00 100.00 100.00	0 0.00 0.00 .	5 100.00
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	0 0.00	5 100.00	0 0.00	5 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 172
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 24 of plockagetype by nxtstep
Controlling for pnewpool=MI17U

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 50.00 100.00 50.00	0 0.00 0.00 .	1 50.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 50.00 100.00 50.00	0 0.00 0.00 .	1 50.00
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	0 0.00	2 100.00	0 0.00	2 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 173
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 25 of plockagetype by nxtstep
Controlling for pnewpool=MI18D

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	2 50.00 100.00 50.00	0 0.00 0.00 .	2 50.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	2 50.00 100.00 50.00	0 0.00 0.00 .	2 50.00
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	0 0.00	4 100.00	0 0.00	4 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 174
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 26 of plockagetype by nxtstep
Controlling for pnewpool=MI18U

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 20.00 100.00 20.00	0 0.00 0.00 .	1 20.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	4 80.00 100.00 80.00	0 0.00 0.00 .	4 80.00
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	0 0.00	5 100.00	0 0.00	5 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 175
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 27 of plockagetype by nxtstep
Controlling for pnewpool=MI19D

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	5 13.16 100.00 13.16	0 0.00 0.00 .	5 13.16
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	33 86.84 100.00 86.84	0 0.00 0.00 .	33 86.84
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	0 0.00	38 100.00	0 0.00	38 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 176
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 28 of plockagetype by nxtstep
Controlling for pnewpool=MI19U

plockagetype nxtstep

Frequency / Percent / Row Pct / Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	23 100.00 100.00 100.00	0 0.00 0.00 .	23 100.00
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	0 0.00	23 100.00	0 0.00	23 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 177
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 29 of plockagetype by nxtstep
Controlling for pnewpool=MI2OD

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 . .	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
5:OTHER	0 0.00 0.00 .	0 0.00 0.00 0.00	1 0.02 100.00 0.10	0 0.00 0.00 .	0 0.00 0.00 0.00	0 0.00 0.00 .	1 0.02
3:KNOCKOUT	0 0.00 0.00 .	1 0.02 100.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 .	0 0.00 0.00 0.00	0 0.00 0.00 .	1 0.02
2:SINGLE	0 0.00 0.00 .	4319 80.49 80.52 99.98	1017 18.95 18.96 99.90	0 0.00 0.00 .	28 0.52 0.52 100.00	0 0.00 0.00 .	5364 99.96
4:JACKNIFE	0 0.00 . .	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
Total	0 0.00	4320 80.51	1018 18.97	0 0.00	28 0.52	0 0.00	5366 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 178
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 30 of plockagetype by nxtstep
Controlling for pnewpool=MI2OU

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0	3037	1069	0	12	44	4162
	0.00	51.30	18.06	0.00	0.20	0.74	70.30
	0.00	72.97	25.68	0.00	0.29	1.06	
	.	79.71	72.28	.	5.88	10.30	
5:OTHER	0	0	0	0	0	0	0
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	.	.	.	.	.	.	
	.	0.00	0.00	.	0.00	0.00	
3:KNOCKOUT	0	83	9	0	0	0	92
	0.00	1.40	0.15	0.00	0.00	0.00	1.55
	0.00	90.22	9.78	0.00	0.00	0.00	
	.	2.18	0.61	.	0.00	0.00	
2:SINGLE	0	580	397	0	192	381	1550
	0.00	9.80	6.71	0.00	3.24	6.44	26.18
	0.00	37.42	25.61	0.00	12.39	24.58	
	.	15.22	26.84	.	94.12	89.23	
4:JACKNIFE	0	110	4	0	0	2	116
	0.00	1.86	0.07	0.00	0.00	0.03	1.96
	0.00	94.83	3.45	0.00	0.00	1.72	
	.	2.89	0.27	.	0.00	0.47	
Total	0	3810	1479	0	204	427	5920
	0.00	64.36	24.98	0.00	3.45	7.21	100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 179
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 31 of plockagetype by nxtstep
Controlling for pnewpool=MI21D

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0	3534	766	0	12	46	4358
	0.00	60.08	13.02	0.00	0.20	0.78	74.09
	0.00	81.09	17.58	0.00	0.28	1.06	
	.	83.74	66.78	.	11.21	11.27	
5:OTHER	0	3	1	0	0	0	4
	0.00	0.05	0.02	0.00	0.00	0.00	0.07
	0.00	75.00	25.00	0.00	0.00	0.00	
	.	0.07	0.09	.	0.00	0.00	
3:KNOCKOUT	0	100	24	0	1	1	126
	0.00	1.70	0.41	0.00	0.02	0.02	2.14
	0.00	79.37	19.05	0.00	0.79	0.79	
	.	2.37	2.09	.	0.93	0.25	
2:SINGLE	0	500	354	0	93	361	1308
	0.00	8.50	6.02	0.00	1.58	6.14	22.24
	0.00	38.23	27.06	0.00	7.11	27.60	
	.	11.85	30.86	.	86.92	88.48	
4:JACKNIFE	0	83	2	0	1	0	86
	0.00	1.41	0.03	0.00	0.02	0.00	1.46
	0.00	96.51	2.33	0.00	1.16	0.00	
	.	1.97	0.17	.	0.93	0.00	
Total	0	4220	1147	0	107	408	5882
	0.00	71.74	19.50	0.00	1.82	6.94	100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 180
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 32 of plockagetype by nxtstep
Controlling for pnewpool=MI21U

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0	3227	937	0	16	113	4293
	0.00	53.83	15.63	0.00	0.27	1.88	71.61
	0.00	75.17	21.83	0.00	0.37	2.63	
	.	80.84	70.77	.	13.22	20.25	
5:OTHER	0	7	1	0	0	0	8
	0.00	0.12	0.02	0.00	0.00	0.00	0.13
	0.00	87.50	12.50	0.00	0.00	0.00	
	.	0.18	0.08	.	0.00	0.00	
3:KNOCKOUT	0	86	10	0	1	12	109
	0.00	1.43	0.17	0.00	0.02	0.20	1.82
	0.00	78.90	9.17	0.00	0.92	11.01	
	.	2.15	0.76	.	0.83	2.15	
2:SINGLE	0	559	374	0	103	424	1460
	0.00	9.32	6.24	0.00	1.72	7.07	24.35
	0.00	38.29	25.62	0.00	7.05	29.04	
	.	14.00	28.25	.	85.12	75.99	
4:JACKNIFE	0	113	2	0	1	9	125
	0.00	1.88	0.03	0.00	0.02	0.15	2.09
	0.00	90.40	1.60	0.00	0.80	7.20	
	.	2.83	0.15	.	0.83	1.61	
Total	0	3992	1324	0	121	558	5995
	0.00	66.59	22.09	0.00	2.02	9.31	100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 181
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 33 of plockagetype by nxtstep
Controlling for pnewpool=MI22D

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0	4114	328	0	16	75	4533
	0.00	68.26	5.44	0.00	0.27	1.24	75.21
	0.00	90.76	7.24	0.00	0.35	1.65	
	.	89.81	45.49	.	16.16	11.98	
5:OTHER	0	2	0	0	0	2	4
	0.00	0.03	0.00	0.00	0.00	0.03	0.07
	0.00	50.00	0.00	0.00	0.00	50.00	
	.	0.04	0.00	.	0.00	0.32	
3:KNOCKOUT	0	115	11	0	0	0	126
	0.00	1.91	0.18	0.00	0.00	0.00	2.09
	0.00	91.27	8.73	0.00	0.00	0.00	
	.	2.51	1.53	.	0.00	0.00	
2:SINGLE	0	274	382	0	82	548	1286
	0.00	4.55	6.34	0.00	1.36	9.09	21.34
	0.00	21.31	29.70	0.00	6.38	42.61	
	.	5.98	52.98	.	82.83	87.54	
4:JACKNIFE	0	76	0	0	1	1	78
	0.00	1.26	0.00	0.00	0.02	0.02	1.29
	0.00	97.44	0.00	0.00	1.28	1.28	
	.	1.66	0.00	.	1.01	0.16	
Total	0	4581	721	0	99	626	6027
	0.00	76.01	11.96	0.00	1.64	10.39	100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 182
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 34 of plockagetype by nxtstep
Controlling for pnewpool=MI22U

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0	3869	358	0	19	81	4327
	0.00	67.18	6.22	0.00	0.33	1.41	75.13
	0.00	89.42	8.27	0.00	0.44	1.87	
	.	86.90	44.92	.	28.36	18.28	
5:OTHER	0	3	0	0	0	0	3
	0.00	0.05	0.00	0.00	0.00	0.00	0.05
	0.00	100.00	0.00	0.00	0.00	0.00	
	.	0.07	0.00	.	0.00	0.00	
3:KNOCKOUT	0	100	3	0	0	11	114
	0.00	1.74	0.05	0.00	0.00	0.19	1.98
	0.00	87.72	2.63	0.00	0.00	9.65	
	.	2.25	0.38	.	0.00	2.48	
2:SINGLE	0	356	433	0	48	342	1179
	0.00	6.18	7.52	0.00	0.83	5.94	20.47
	0.00	30.20	36.73	0.00	4.07	29.01	
	.	8.00	54.33	.	71.64	77.20	
4:JACKNIFE	0	124	3	0	0	9	136
	0.00	2.15	0.05	0.00	0.00	0.16	2.36
	0.00	91.18	2.21	0.00	0.00	6.62	
	.	2.79	0.38	.	0.00	2.03	
Total	0	4452	797	0	67	443	5759
	0.00	77.31	13.84	0.00	1.16	7.69	100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 183
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 35 of plockagetype by nxtstep
Controlling for pnewpool=MI24D

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 0.00 .	3899 67.19 85.77 84.43	539 9.29 11.86 60.02	0 0.00 0.00 .	18 0.31 0.40 29.51	90 1.55 1.98 39.82	4546 78.34
5:OTHER	0 0.00 0.00 .	4 0.07 80.00 0.09	0 0.00 0.00 0.00	0 0.00 0.00 .	0 0.00 0.00 0.00	1 0.02 20.00 0.44	5 0.09
3:KNOCKOUT	0 0.00 0.00 .	121 2.09 82.31 2.62	22 0.38 14.97 2.45	0 0.00 0.00 .	1 0.02 0.68 1.64	3 0.05 2.04 1.33	147 2.53
2:SINGLE	0 0.00 0.00 .	518 8.93 50.44 11.22	335 5.77 32.62 37.31	0 0.00 0.00 .	42 0.72 4.09 68.85	132 2.27 12.85 58.41	1027 17.70
4:JACKNIFE	0 0.00 0.00 .	76 1.31 97.44 1.65	2 0.03 2.56 0.22	0 0.00 0.00 .	0 0.00 0.00 0.00	0 0.00 0.00 0.00	78 1.34
Total	0 0.00	4618 79.58	898 15.47	0 0.00	61 1.05	226 3.89	5803 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 184
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 36 of plockagetype by nxtstep
Controlling for pnewpool=MI24U

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOST OP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0	3341	933	0	23	160	4457
	0.00	55.79	15.58	0.00	0.38	2.67	74.43
	0.00	74.96	20.93	0.00	0.52	3.59	
	.	81.03	69.63	.	31.94	35.32	
5:OTHER	0	2	0	0	0	1	3
	0.00	0.03	0.00	0.00	0.00	0.02	0.05
	0.00	66.67	0.00	0.00	0.00	33.33	
	.	0.05	0.00	.	0.00	0.22	
3:KNOCKOUT	0	106	6	0	0	12	124
	0.00	1.77	0.10	0.00	0.00	0.20	2.07
	0.00	85.48	4.84	0.00	0.00	9.68	
	.	2.57	0.45	.	0.00	2.65	
2:SINGLE	0	541	401	0	48	278	1268
	0.00	9.03	6.70	0.00	0.80	4.64	21.18
	0.00	42.67	31.62	0.00	3.79	21.92	
	.	13.12	29.93	.	66.67	61.37	
4:JACKNIFE	0	133	0	0	1	2	136
	0.00	2.22	0.00	0.00	0.02	0.03	2.27
	0.00	97.79	0.00	0.00	0.74	1.47	
	.	3.23	0.00	.	1.39	0.44	
Total	0	4123	1340	0	72	453	5988
	0.00	68.85	22.38	0.00	1.20	7.57	100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 185
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 37 of plockagetype by nxtstep
Controlling for pnewpool=MI25D

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0	4523	65	0	24	105	4717
	0.00	74.86	1.08	0.00	0.40	1.74	78.07
	0.00	95.89	1.38	0.00	0.51	2.23	
	.	83.77	20.12	.	45.28	39.33	
5:OTHER	0	3	0	0	0	0	3
	0.00	0.05	0.00	0.00	0.00	0.00	0.05
	0.00	100.00	0.00	0.00	0.00	0.00	
	.	0.06	0.00	.	0.00	0.00	
3:KNOCKOUT	0	183	5	0	0	0	188
	0.00	3.03	0.08	0.00	0.00	0.00	3.11
	0.00	97.34	2.66	0.00	0.00	0.00	
	.	3.39	1.55	.	0.00	0.00	
2:SINGLE	0	617	249	0	29	162	1057
	0.00	10.21	4.12	0.00	0.48	2.68	17.49
	0.00	58.37	23.56	0.00	2.74	15.33	
	.	11.43	77.09	.	54.72	60.67	
4:JACKNIFE	0	73	4	0	0	0	77
	0.00	1.21	0.07	0.00	0.00	0.00	1.27
	0.00	94.81	5.19	0.00	0.00	0.00	
	.	1.35	1.24	.	0.00	0.00	
Total	0	5399	323	0	53	267	6042
	0.00	89.36	5.35	0.00	0.88	4.42	100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 186
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 38 of plockagetype by nxtstep
Controlling for pnewpool=MI25U

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0	4262	64	0	33	115	4474
	0.00	62.87	0.94	0.00	0.49	1.70	66.00
	0.00	95.26	1.43	0.00	0.74	2.57	
	.	81.68	14.92	.	4.88	25.22	
5:OTHER	0	0	0	0	0	0	0
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	.	.	.	.	.	.	
	.	0.00	0.00	.	0.00	0.00	
3:KNOCKOUT	0	125	1	0	1	4	131
	0.00	1.84	0.01	0.00	0.01	0.06	1.93
	0.00	95.42	0.76	0.00	0.76	3.05	
	.	2.40	0.23	.	0.15	0.88	
2:SINGLE	0	693	363	0	642	337	2035
	0.00	10.22	5.35	0.00	9.47	4.97	30.02
	0.00	34.05	17.84	0.00	31.55	16.56	
	.	13.28	84.62	.	94.97	73.90	
4:JACKNIFE	0	138	1	0	0	0	139
	0.00	2.04	0.01	0.00	0.00	0.00	2.05
	0.00	99.28	0.72	0.00	0.00	0.00	
	.	2.64	0.23	.	0.00	0.00	
Total	0	5218	429	0	676	456	6779
	0.00	76.97	6.33	0.00	9.97	6.73	100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 187
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 39 of plockagetype by nxtstep
Controlling for pnewpool=MI26D

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOST OP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 0.00 .	4041 64.46 85.29 83.96	460 7.34 9.71 60.61	0 0.00 0.00 .	92 1.47 1.94 39.66	145 2.31 3.06 31.18	4738 75.58
5:OTHER	0 0.00 0.00 .	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 .	1 0.02 100.00 0.43	0 0.00 0.00 0.00	1 0.02
3:KNOCKOUT	0 0.00 0.00 .	156 2.49 80.83 3.24	22 0.35 11.40 2.90	0 0.00 0.00 .	15 0.24 7.77 6.47	0 0.00 0.00 0.00	193 3.08
2:SINGLE	0 0.00 0.00 .	549 8.76 43.61 11.41	272 4.34 21.60 35.84	0 0.00 0.00 .	119 1.90 9.45 51.29	319 5.09 25.34 68.60	1259 20.08
4:JACKNIFE	0 0.00 0.00 .	67 1.07 85.90 1.39	5 0.08 6.41 0.66	0 0.00 0.00 .	5 0.08 6.41 2.16	1 0.02 1.28 0.22	78 1.24
Total	0 0.00	4813 76.77	759 12.11	0 0.00	232 3.70	465 7.42	6269 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 188
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 40 of plockagetype by nxtstep
Controlling for pnewpool=MI26U

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOST OP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0	215	20	0	2	0	237
	0.00	3.84	0.36	0.00	0.04	0.00	4.23
	0.00	90.72	8.44	0.00	0.84	0.00	
	.	4.35	3.22	.	5.26	.	
5:OTHER	0	2	0	0	0	0	2
	0.00	0.04	0.00	0.00	0.00	0.00	0.04
	0.00	100.00	0.00	0.00	0.00	0.00	
	.	0.04	0.00	.	0.00	.	
3:KNOCKOUT	0	22	3	0	0	0	25
	0.00	0.39	0.05	0.00	0.00	0.00	0.45
	0.00	88.00	12.00	0.00	0.00	0.00	
	.	0.45	0.48	.	0.00	.	
2:SINGLE	0	4690	599	0	36	0	5325
	0.00	83.78	10.70	0.00	0.64	0.00	95.12
	0.00	88.08	11.25	0.00	0.68	0.00	
	.	94.98	96.30	.	94.74	.	
4:JACKNIFE	0	9	0	0	0	0	9
	0.00	0.16	0.00	0.00	0.00	0.00	0.16
	0.00	100.00	0.00	0.00	0.00	0.00	
	.	0.18	0.00	.	0.00	.	
Total	0	4938	622	0	38	0	5598
	0.00	88.21	11.11	0.00	0.68	0.00	100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 189
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 41 of plockagetype by nxtstep
Controlling for pnewpool=MI27D

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	3 9.68 100.00 9.68	0 0.00 0.00 .	3 9.68
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	1 3.23 100.00 3.23	0 0.00 0.00 .	1 3.23
2:SINGLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	25 80.65 100.00 80.65	0 0.00 0.00 .	25 80.65
4:JACKNIFE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	2 6.45 100.00 6.45	0 0.00 0.00 .	2 6.45
Total	0 0.00	0 0.00	0 0.00	0 0.00	31 100.00	0 0.00	31 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 190
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 42 of plockagetype by nxtstep
Controlling for pnewpool=MI27U

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	53 100.00 100.00 100.00	0 0.00 0.00 .	53 100.00
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	0 0.00	53 100.00	0 0.00	53 100.00

pool activity at prior Mississipi River lock 12:49 Friday, June 24, 2005 191
for lockages with arrivals between mdy(1,1,2000) and mdy(12,31,2003)

The FREQ Procedure

Table 43 of plockagetype by nxtstep
Controlling for pnewpool=MI28D

plockagetype nxtstep

Frequency Percent Row Pct Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
1:DOUBLE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
5:OTHER	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
3:KNOCKOUT	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
2:SINGLE	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	0 0.00 0.00 .	30 100.00 100.00 100.00	0 0.00 0.00 .	30 100.00
4:JACKNIFE	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . .	0 0.00 . 0.00	0 0.00 . .	0 0.00
Total	0 0.00	0 0.00	0 0.00	0 0.00	30 100.00	0 0.00	30 100.00

12:49 Friday, June 24, 2005 192

Time-weighted average and maximum queues for lock 19 and surrounding pool sizes

		Downbound		In Lockage		Upbound	
Year	Month	Average in Pool 18	Average Queue Lock 19	Average in Pool 19	Average Lock Utilization Lock 19	Average in Pool 19	Average Queue Lock 19	Average in Pool 18
2000	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	2	0.08	0.00	0.03	0.03	0.17	0.00	0.11
2000	3	1.92	0.09	2.33	0.39	2.25	0.12	1.31
2000	4	1.97	0.15	3.97	0.51	2.17	0.15	1.42
2000	5	1.91	0.19	2.85	0.49	2.00	0.17	1.69
2000	6	1.03	0.13	1.82	0.45	2.18	0.12	3.11
2000	7	1.00	0.15	3.38	0.48	2.60	0.14	3.15
2000	8	0.96	0.28	6.13	0.46	2.06	0.38	2.10
2000	9	0.94	0.12	6.01	0.38	2.90	0.10	4.09
2000	10	0.89	0.15	5.68	0.45	4.93	0.17	2.84
2000	11	1.02	0.26	7.10	0.50	4.67	0.19	1.63
2000	12	0.34	0.07	7.35	0.16	1.09	0.02	1.56
2001	1	0.00	0.00	7.00	0.00	0.00	0.00	1.00
2001	2	0.00	0.00	6.98	0.01	0.04	0.00	1.05
2001	3	0.47	0.04	5.76	0.23	2.97	0.04	3.21
2001	4	0.47	0.10	4.84	0.26	3.72	0.13	3.66
2001	5	0.24	0.04	4.62	0.14	3.93	0.07	2.33
2001	6	2.53	0.24	6.23	0.54	6.39	0.21	4.69
2001	7	1.98	0.20	6.26	0.51	7.59	0.25	3.79
2001	8	0.98	0.26	6.48	0.51	6.80	0.23	2.50
2001	9	0.77	0.12	5.92	0.38	7.30	0.10	2.39
2001	10	0.78	0.12	8.54	0.40	4.30	0.11	2.79
2001	11	1.67	0.17	10.57	0.45	4.03	0.11	3.88

Year	Month	Maximum in Pool 18	Maximum Queue Lock 19	Maximum in Pool 19	Maximum Lock Utilization Lock 19	Maximum in Pool 19	Maximum Queue Lock 19	Maximum in Pool 18
2000	1	0	0	0	0	0	0	0
2000	2	2	1	3	1	4	1	3
2000	3	5	4	7	2	7	3	6
2000	4	6	3	8	1	6	3	5
2000	5	5	3	9	1	6	3	5
2000	6	5	3	5	1	6	3	8
2000	7	4	3	8	1	6	2	8
2000	8	3	4	11	2	7	5	7
2000	9	4	2	11	2	8	3	8
2000	10	5	2	9	2	11	3	9
2000	11	4	4	13	2	10	3	7
2000	12	5	2	12	2	8	2	7
2001	1	0	0	7	0	0	0	1
2001	2	0	0	8	1	2	1	4
2001	3	3	1	10	1	8	2	6
2001	4	3	3	11	1	10	3	10
2001	5	3	2	9	1	10	3	6
2001	6	6	3	12	2	11	3	10
2001	7	6	3	10	2	12	3	8
2001	8	4	4	11	2	11	3	7
2001	9	4	3	10	2	12	2	6
2001	10	4	2	14	2	9	3	7
2001	11	5	3	16	2	7	2	10

12:49 Friday, June 24, 2005 193

Time-weighted average and maximum queues for lock 19 and surrounding pool sizes

		Downbound			In Lockage		Upbound	
Year	Month	Average in Pool 18	Average Queue Lock 19	Average in Pool 19	Average Lock Utilization Lock 19	Average in Pool 19	Average Queue Lock 19	Average in Pool 18
2001	12	0.92	0.10	8.07	0.21	3.28	0.03	2.63
2002	1	0.00	0.00	5.00	0.00	2.00	0.00	1.00
2002	2	0.00	0.00	5.02	0.00	1.39	0.00	1.01
2002	3	0.75	0.10	4.94	0.41	3.96	0.16	4.29
2002	4	0.86	0.15	3.02	0.50	4.14	0.15	6.23
2002	5	0.91	0.23	3.12	0.46	3.79	0.15	5.66
2002	6	0.78	0.22	3.33	0.55	4.45	0.24	4.70
2002	7	1.78	0.25	3.49	0.57	4.54	0.25	4.17
2002	8	2.37	0.23	3.28	0.47	2.88	0.15	4.00
2002	9	1.75	0.11	2.47	0.40	4.57	0.14	4.38
2002	10	2.88	0.21	4.36	0.50	4.52	0.18	3.22
2002	11	3.78	0.22	4.62	0.55	4.78	0.16	2.92
2002	12	3.71	0.03	5.94	0.13	1.18	0.01	0.47
2003	1	3.00	0.00	6.00	0.00	0.00	0.00	0.00
2003	2	2.74	0.00	6.21	0.00	0.00	0.00	0.04
2003	3	1.66	0.07	5.65	0.25	2.84	0.12	1.65
2003	4	0.97	0.13	6.17	0.44	5.51	0.13	2.75
2003	5	0.99	0.13	6.83	0.41	3.35	0.15	1.48
2003	6	2.01	0.19	7.91	0.48	3.70	0.19	1.51
2003	7	1.00	0.20	6.70	0.48	3.26	0.17	2.35
2003	8	1.10	0.12	7.99	0.39	1.83	0.11	1.62
2003	9	2.97	0.11	7.69	0.34	2.33	0.10	2.18
2003	10	2.98	0.16	7.38	0.42	3.58	0.13	2.20

Year	Month	Maximum in Pool 18	Maximum Queue Lock 19	Maximum in Pool 19	Maximum Lock Utilization Lock 19	Maximum in Pool 19	Maximum Queue Lock 19	Maximum in Pool 18
2001	12	5	6	16	2	7	3	7
2002	1	0	0	5	0	2	0	1
2002	2	1	1	6	1	2	1	2
2002	3	4	3	10	1	9	3	9
2002	4	3	3	7	2	8	3	10
2002	5	5	3	7	2	8	2	10
2002	6	3	3	8	2	8	3	9
2002	7	5	3	7	2	9	3	8
2002	8	5	3	8	2	6	2	9
2002	9	5	2	7	2	8	3	8
2002	10	8	6	10	2	9	3	7
2002	11	7	3	9	2	10	2	7
2002	12	7	2	9	1	6	2	4
2003	1	3	0	6	0	0	0	0
2003	2	3	0	7	0	0	0	1
2003	3	4	3	11	1	12	4	7
2003	4	4	3	11	2	10	2	7
2003	5	6	4	11	1	8	4	5
2003	6	6	2	12	2	8	3	5
2003	7	4	3	11	2	7	3	6
2003	8	5	2	12	2	8	3	5
2003	9	6	4	14	1	7	3	5
2003	10	7	2	12	2	8	3	6

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Time-weighted average and maximum queues for lock 19 and surrounding pool sizes

		Downbound		In Lockage		Upbound	
Year	Month	Average in Pool 18	Average Queue Lock 19	Average in Pool 19	Average Lock Utilization Lock 19	Average in Pool 19	Average Queue Lock 19	Average in Pool 18
2003	11	1.37	0.17	8.57	0.42	3.17	0.13	2.09
2003	12	0.36	0.10	8.51	0.16	1.35	0.02	0.69

Year	Month	Maximum in Pool 18	Maximum Queue Lock 19	Maximum in Pool 19	Maximum Lock Utilization Lock 19	Maximum in Pool 19	Maximum Queue Lock 19	Maximum in Pool 18
2003	11	5	4	13	2	9	3	7
2003	12	4	4	14	2	6	1	4

Time-weighted average and maximum queues for lock 20 and surrounding pool sizes

		Downbound		In Lockage		Upbound	
Year	Month	Average in Pool 19	Average Queue Lock 20	Average in Pool 20	Average Lock Utilization Lock 20	Average in Pool 20	Average Queue Lock 20	Average in Pool 19
2000	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	2	0.03	0.00	0.01	0.04	0.14	0.00	0.17
2000	3	2.33	0.22	0.70	0.60	2.90	0.42	2.25
2000	4	3.97	0.45	1.53	0.75	2.70	0.42	2.17
2000	5	2.85	0.44	1.92	0.71	1.84	0.41	2.00
2000	6	1.82	0.35	2.79	0.67	2.22	0.33	2.18
2000	7	3.38	0.58	2.57	0.74	3.07	0.55	2.60
2000	8	6.13	2.23	2.39	0.64	3.38	1.13	2.06
2000	9	6.01	0.29	1.33	0.57	3.35	0.25	2.90
2000	10	5.68	0.53	1.28	0.68	5.32	0.65	4.93
2000	11	7.10	0.61	3.75	0.71	2.48	0.45	4.67
2000	12	7.35	0.12	5.16	0.27	1.60	0.06	1.09
2001	1	7.00	0.00	4.00	0.00	0.04	0.00	0.00
2001	2	6.98	0.00	3.91	0.06	0.64	0.02	0.04
2001	3	5.76	0.06	3.10	0.36	2.39	0.10	2.97
2001	4	4.84	0.20	3.26	0.41	2.60	0.28	3.72
2001	5	4.62	0.08	3.03	0.22	1.99	0.24	3.93
2001	6	6.23	0.98	3.43	0.83	2.42	0.84	6.39
2001	7	6.26	1.23	2.67	0.79	2.61	0.71	7.59
2001	8	6.48	0.90	2.27	0.75	2.56	0.83	6.80
2001	9	5.92	0.24	1.20	0.55	2.80	0.22	7.30
2001	10	8.54	0.21	2.37	0.59	3.60	0.23	4.30
2001	11	10.57	0.36	2.56	0.65	4.25	0.26	4.03

Year	Month	Maximum in Pool 19	Maximum Queue Lock 20	Maximum in Pool 20	Maximum Lock Utilization Lock 20	Maximum in Pool 20	Maximum Queue Lock 20	Maximum in Pool 19
2000	1	0	0	0	0	0	0	0
2000	2	3	1	1	1	3	2	4
2000	3	7	3	5	2	7	4	7
2000	4	8	4	6	1	6	3	6
2000	5	9	4	5	1	6	4	6
2000	6	5	4	6	1	5	3	6
2000	7	8	6	6	1	7	4	6
2000	8	11	15	6	1	10	10	7
2000	9	11	3	6	1	7	4	8
2000	10	9	4	5	2	9	5	11
2000	11	13	5	8	2	7	4	10
2000	12	12	3	9	1	6	3	8
2001	1	7	1	4	1	2	0	0
2001	2	8	1	4	1	3	2	2
2001	3	10	2	6	1	6	3	8
2001	4	11	3	9	1	7	6	10
2001	5	9	3	6	1	6	5	10
2001	6	12	7	7	2	6	5	11
2001	7	10	8	6	1	7	5	12
2001	8	11	5	7	1	7	5	11
2001	9	10	4	5	1	7	4	12
2001	10	14	3	7	1	12	3	9
2001	11	16	4	6	1	8	3	7

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Time-weighted average and maximum queues for lock 20 and surrounding pool sizes

		Downbound		In Lockage		Upbound	
Year	Month	Average in Pool 19	Average Queue Lock 20	Average in Pool 20	Average Lock Utilization Lock 20	Average in Pool 20	Average Queue Lock 20	Average in Pool 19
2001	12	8.07	0.12	0.90	0.30	3.62	0.06	3.28
2002	1	5.00	0.00	1.00	0.00	3.00	0.00	2.00
2002	2	5.02	0.00	1.00	0.00	3.01	0.00	1.39
2002	3	4.94	0.28	1.02	0.59	4.23	0.50	3.96
2002	4	3.02	0.31	2.37	0.69	4.02	0.40	4.14
2002	5	3.12	0.57	2.65	0.67	3.91	0.34	3.79
2002	6	3.33	0.99	2.27	0.79	4.74	1.05	4.45
2002	7	3.49	0.50	2.62	0.80	5.82	0.51	4.54
2002	8	3.28	0.46	3.68	0.65	3.95	0.38	2.88
2002	9	2.47	0.24	3.14	0.55	2.83	0.24	4.57
2002	10	4.36	0.49	3.24	0.74	3.05	0.43	4.52
2002	11	4.62	0.59	3.75	0.81	3.00	0.45	4.78
2002	12	5.94	0.06	3.61	0.19	2.77	0.03	1.18
2003	1	6.00	0.00	3.00	0.00	3.00	0.00	0.00
2003	2	6.21	0.00	3.00	0.00	3.00	0.00	0.00
2003	3	5.65	0.10	2.32	0.35	3.87	0.23	2.84
2003	4	6.17	0.35	2.45	0.65	4.28	0.34	5.51
2003	5	6.83	0.22	4.70	0.62	4.35	0.30	3.35
2003	6	7.91	0.33	2.85	0.68	4.60	0.34	3.70
2003	7	6.70	0.61	3.11	0.73	3.12	0.51	3.26
2003	8	7.99	0.26	4.59	0.60	2.83	0.29	1.83
2003	9	7.69	0.23	2.62	0.52	4.91	0.22	2.33
2003	10	7.38	0.26	2.77	0.61	4.53	0.28	3.58

Year	Month	Maximum in Pool 19	Maximum Queue Lock 20	Maximum in Pool 20	Maximum Lock Utilization Lock 20	Maximum in Pool 20	Maximum Queue Lock 20	Maximum in Pool 19
2001	12	16	3	4	1	10	4	7
2002	1	5	0	1	0	3	0	2
2002	2	6	1	2	1	4	1	2
2002	3	10	3	4	1	9	5	9
2002	4	7	4	5	1	8	3	8
2002	5	7	4	6	1	9	4	8
2002	6	8	6	6	1	9	6	8
2002	7	7	4	6	2	11	4	9
2002	8	8	4	7	1	7	3	6
2002	9	7	4	6	1	6	3	8
2002	10	10	4	7	2	8	3	9
2002	11	9	3	8	1	8	4	10
2002	12	9	2	8	1	6	2	6
2003	1	6	0	3	0	3	0	0
2003	2	7	0	3	0	3	0	0
2003	3	11	3	5	1	9	5	12
2003	4	11	5	6	1	8	4	10
2003	5	11	3	8	1	8	4	8
2003	6	12	3	6	1	7	4	8
2003	7	11	5	7	2	7	4	7
2003	8	12	4	8	1	6	4	8
2003	9	14	3	5	2	10	3	7
2003	10	12	4	7	1	9	4	8

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Time-weighted average and maximum queues for lock 20 and surrounding pool sizes

		Downbound		In Lockage		Upbound	
Year	Month	Average in Pool 19	Average Queue Lock 20	Average in Pool 20	Average Lock Utilization Lock 20	Average in Pool 20	Average Queue Lock 20	Average in Pool 19
2003	11	8.57	0.48	2.12	0.63	5.44	0.32	3.17
2003	12	8.51	0.12	3.32	0.23	3.81	0.05	1.35

Year	Month	Maximum in Pool 19	Maximum Queue Lock 20	Maximum in Pool 20	Maximum Lock Utilization Lock 20	Maximum in Pool 20	Maximum Queue Lock 20	Maximum in Pool 19
2003	11	13	6	6	1	10	4	9
2003	12	14	3	7	1	8	2	6

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Time-weighted average and maximum queues for lock 21 and surrounding pool sizes

		Downbound		In Lockage		Upbound	
Year	Month	Average in Pool 20	Average Queue Lock 21	Average in Pool 21	Average Lock Utilization Lock 21	Average in Pool 21	Average Queue Lock 21	Average in Pool 20
2000	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	2	0.01	0.00	0.09	0.05	0.10	0.01	0.14
2000	3	0.70	0.18	1.72	0.64	3.10	0.25	2.90
2000	4	1.53	0.49	2.32	0.80	2.57	0.50	2.70
2000	5	1.92	0.48	2.84	0.75	2.16	0.41	1.84
2000	6	2.79	0.31	2.63	0.72	2.30	0.36	2.22
2000	7	2.57	0.41	3.06	0.76	1.75	0.44	3.07
2000	8	2.39	0.77	4.07	0.69	3.43	2.05	3.38
2000	9	1.33	0.25	2.93	0.62	1.83	0.23	3.35
2000	10	1.28	0.41	1.98	0.73	2.39	0.44	5.32
2000	11	3.75	0.37	4.31	0.73	3.00	0.26	2.48
2000	12	5.16	0.17	4.91	0.31	5.02	0.07	1.60
2001	1	4.00	0.02	4.51	0.06	6.43	0.01	0.04
2001	2	3.91	0.01	3.80	0.15	6.29	0.02	0.64
2001	3	3.10	0.08	3.93	0.41	4.77	0.12	2.39
2001	4	3.26	0.15	3.71	0.43	4.86	0.24	2.60
2001	5	3.03	0.19	3.56	0.25	6.15	0.37	1.99
2001	6	3.43	1.04	3.05	0.85	3.58	0.96	2.42
2001	7	2.67	2.05	3.13	0.81	4.45	1.25	2.61
2001	8	2.27	0.63	3.59	0.78	3.06	0.58	2.56
2001	9	1.20	0.25	2.97	0.59	2.96	0.18	2.80
2001	10	2.37	0.30	2.23	0.64	3.82	0.21	3.60
2001	11	2.56	0.44	1.83	0.71	4.02	0.29	4.25

Year	Month	Maximum in Pool 20	Maximum Queue Lock 21	Maximum in Pool 21	Maximum Lock Utilization Lock 21	Maximum in Pool 21	Maximum Queue Lock 21	Maximum in Pool 20
2000	1	0	0	0	0	0	0	0
2000	2	1	1	2	1	3	1	3
2000	3	5	3	4	2	6	4	7
2000	4	6	4	5	1	6	4	6
2000	5	5	5	6	1	6	4	6
2000	6	6	4	6	1	5	4	5
2000	7	6	3	7	2	6	4	7
2000	8	6	6	8	1	15	18	10
2000	9	6	3	7	2	6	3	7
2000	10	5	4	6	1	6	4	9
2000	11	8	4	9	2	7	3	7
2000	12	9	3	8	2	8	2	6
2001	1	4	2	6	1	9	2	2
2001	2	4	1	5	1	10	3	3
2001	3	6	2	6	1	10	3	6
2001	4	9	3	7	1	10	4	7
2001	5	6	4	9	1	8	6	6
2001	6	7	6	7	2	8	5	6
2001	7	6	10	6	2	10	8	7
2001	8	7	5	7	1	6	4	7
2001	9	5	3	7	1	7	3	7
2001	10	7	4	6	1	8	3	12
2001	11	6	5	5	2	8	4	8

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Time-weighted average and maximum queues for lock 21 and surrounding pool sizes

		Downbound			In Lockage		Upbound	
Year	Month	Average in Pool 20	Average Queue Lock 21	Average in Pool 21	Average Lock Utilization Lock 21	Average in Pool 21	Average Queue Lock 21	Average in Pool 20
2001	12	0.90	0.16	2.21	0.38	3.85	0.06	3.62
2002	1	1.00	0.00	3.00	0.00	4.01	0.00	3.00
2002	2	1.00	0.00	3.39	0.00	4.88	0.00	3.01
2002	3	1.02	0.23	3.65	0.63	4.03	0.42	4.23
2002	4	2.37	0.39	1.60	0.73	3.71	0.33	4.02
2002	5	2.65	0.37	2.17	0.70	3.28	0.35	3.91
2002	6	2.27	0.52	2.61	0.81	2.33	0.58	4.74
2002	7	2.62	0.43	3.47	0.80	2.28	0.39	5.82
2002	8	3.68	0.35	4.07	0.69	1.92	0.30	3.95
2002	9	3.14	0.17	4.40	0.59	2.85	0.22	2.83
2002	10	3.24	0.39	3.62	0.76	4.19	0.35	3.05
2002	11	3.75	0.69	3.89	0.86	3.69	0.42	3.00
2002	12	3.61	0.05	2.98	0.21	4.81	0.04	2.77
2003	1	3.00	0.00	3.00	0.00	6.00	0.00	3.00
2003	2	3.00	0.00	3.00	0.00	6.00	0.00	3.00
2003	3	2.32	0.14	2.71	0.38	4.98	0.26	3.87
2003	4	2.45	0.41	2.00	0.71	3.95	0.40	4.28
2003	5	4.70	0.28	2.73	0.66	3.04	0.25	4.35
2003	6	2.85	0.29	1.54	0.73	3.63	0.34	4.60
2003	7	3.11	0.35	3.19	0.74	4.36	0.33	3.12
2003	8	4.59	0.27	3.11	0.62	3.98	0.23	2.83
2003	9	2.62	0.12	2.79	0.49	2.42	0.13	4.91
2003	10	2.77	0.32	2.36	0.65	3.43	0.27	4.53

Year	Month	Maximum in Pool 20	Maximum Queue Lock 21	Maximum in Pool 21	Maximum Lock Utilization Lock 21	Maximum in Pool 21	Maximum Queue Lock 21	Maximum in Pool 20
2001	12	4	4	5	1	7	3	10
2002	1	1	1	3	1	5	1	3
2002	2	2	1	4	1	6	1	4
2002	3	4	4	7	1	7	4	9
2002	4	5	4	4	2	7	3	8
2002	5	6	5	5	1	7	3	9
2002	6	6	4	6	2	6	4	9
2002	7	6	3	6	1	7	4	11
2002	8	7	4	8	1	6	4	7
2002	9	6	3	8	2	6	4	6
2002	10	7	3	8	1	7	3	8
2002	11	8	5	7	1	7	4	8
2002	12	8	2	6	1	8	2	6
2003	1	3	0	3	0	6	0	3
2003	2	3	0	3	0	6	0	3
2003	3	5	4	5	1	8	4	9
2003	4	6	5	5	1	7	4	8
2003	5	8	5	6	1	7	3	8
2003	6	6	4	6	1	7	3	7
2003	7	7	4	8	1	8	4	7
2003	8	8	4	7	2	8	4	6
2003	9	5	2	5	2	6	2	10
2003	10	7	5	7	2	8	3	9

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Time-weighted average and maximum queues for lock 21 and surrounding pool sizes

		Downbound		In Lockage		Upbound	
Year	Month	Average in Pool 20	Average Queue Lock 21	Average in Pool 21	Average Lock Utilization Lock 21	Average in Pool 21	Average Queue Lock 21	Average in Pool 20
2003	11	2.12	0.36	1.16	0.67	3.99	0.33	5.44
2003	12	3.32	0.17	2.91	0.26	3.59	0.06	3.81

Year	Month	Maximum in Pool 20	Maximum Queue Lock 21	Maximum in Pool 21	Maximum Lock Utilization Lock 21	Maximum in Pool 21	Maximum Queue Lock 21	Maximum in Pool 20
2003	11	6	3	4	2	7	3	10
2003	12	7	5	5	2	7	4	8

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Time-weighted average and maximum queues for lock 22 and surrounding pool sizes

		Downbound		In Lockage		Upbound	
Year	Month	Average in Pool 21	Average Queue Lock 22	Average in Pool 22	Average Lock Utilization Lock 22	Average in Pool 22	Average Queue Lock 22	Average in Pool 21
2000	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	2	0.09	0.01	0.02	0.08	0.19	0.02	0.10
2000	3	1.72	0.26	0.91	0.69	2.00	0.38	3.10
2000	4	2.32	1.40	2.07	0.88	2.44	1.37	2.57
2000	5	2.84	0.73	3.53	0.84	2.28	0.79	2.16
2000	6	2.63	0.84	5.36	0.80	1.77	0.94	2.30
2000	7	3.06	0.75	5.46	0.84	1.63	0.77	1.75
2000	8	4.07	1.06	4.99	0.81	2.96	1.03	3.43
2000	9	2.93	0.60	5.10	0.73	3.70	0.53	1.83
2000	10	1.98	0.59	5.65	0.81	3.24	0.69	2.39
2000	11	4.31	0.70	6.38	0.78	3.39	0.57	3.00
2000	12	4.91	0.24	3.76	0.34	2.94	0.08	5.02
2001	1	4.51	0.08	3.31	0.14	2.32	0.10	6.43
2001	2	3.80	0.01	3.38	0.21	2.45	0.04	6.29
2001	3	3.93	0.09	4.24	0.46	4.22	0.14	4.77
2001	4	3.71	0.31	4.57	0.49	3.82	0.43	4.86
2001	5	3.56	0.63	4.29	0.26	2.61	1.57	6.15
2001	6	3.05	2.21	4.94	0.90	2.76	2.06	3.58
2001	7	3.13	2.51	5.52	0.84	3.08	3.10	4.45
2001	8	3.59	1.28	4.78	0.84	4.04	1.32	3.06
2001	9	2.97	0.36	5.79	0.64	2.20	0.28	2.96
2001	10	2.23	0.43	4.62	0.69	2.77	0.37	3.82
2001	11	1.83	0.57	5.02	0.77	2.09	0.40	4.02

Year	Month	Maximum in Pool 21	Maximum Queue Lock 22	Maximum in Pool 22	Maximum Lock Utilization Lock 22	Maximum in Pool 22	Maximum Queue Lock 22	Maximum in Pool 21
2000	1	0	0	0	0	0	0	0
2000	2	2	1	1	1	4	2	3
2000	3	4	3	5	1	5	3	6
2000	4	5	6	6	1	5	7	6
2000	5	6	5	7	1	7	5	6
2000	6	6	5	9	1	7	7	5
2000	7	7	4	8	1	5	5	6
2000	8	8	6	8	2	7	6	15
2000	9	7	5	8	2	8	4	6
2000	10	6	5	9	1	7	5	6
2000	11	9	5	10	2	7	5	7
2000	12	8	4	8	1	6	3	8
2001	1	6	3	6	1	5	2	9
2001	2	5	1	6	1	5	2	10
2001	3	6	4	8	1	9	3	10
2001	4	7	3	8	2	10	7	10
2001	5	9	10	7	1	7	12	8
2001	6	7	8	8	2	6	12	8
2001	7	6	8	9	2	8	15	10
2001	8	7	5	8	2	8	7	6
2001	9	7	4	10	1	7	4	7
2001	10	6	4	8	2	6	3	8
2001	11	5	4	9	1	6	3	8

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Time-weighted average and maximum queues for lock 22 and surrounding pool sizes

		Downbound		In Lockage		Upbound	
Year	Month	Average in Pool 21	Average Queue Lock 22	Average in Pool 22	Average Lock Utilization Lock 22	Average in Pool 22	Average Queue Lock 22	Average in Pool 21
2001	12	2.21	0.21	6.30	0.42	1.45	0.10	3.85
2002	1	3.00	0.00	6.60	0.01	2.20	0.00	4.01
2002	2	3.39	0.00	5.21	0.00	3.00	0.00	4.88
2002	3	3.65	0.33	5.74	0.66	3.33	0.69	4.03
2002	4	1.60	0.73	5.76	0.82	3.07	0.76	3.71
2002	5	2.17	0.67	6.28	0.79	3.03	0.70	3.28
2002	6	2.61	1.12	4.99	0.86	3.84	1.15	2.33
2002	7	3.47	0.66	4.18	0.86	3.11	0.74	2.28
2002	8	4.07	0.42	6.06	0.73	2.02	0.36	1.92
2002	9	4.40	0.34	4.84	0.64	3.10	0.34	2.85
2002	10	3.62	0.57	5.16	0.81	4.17	0.60	4.19
2002	11	3.89	0.94	4.33	0.90	3.58	0.77	3.69
2002	12	2.98	0.08	3.71	0.24	1.63	0.04	4.81
2003	1	3.00	0.00	3.00	0.00	1.00	0.00	6.00
2003	2	3.00	0.00	3.00	0.00	1.00	0.00	6.00
2003	3	2.71	0.15	4.20	0.42	2.35	0.29	4.98
2003	4	2.00	0.45	6.72	0.74	1.70	0.51	3.95
2003	5	2.73	0.42	5.91	0.69	2.04	0.41	3.04
2003	6	1.54	0.48	6.04	0.77	1.86	0.51	3.63
2003	7	3.19	0.61	5.68	0.79	1.27	0.59	4.36
2003	8	3.11	0.35	6.42	0.70	1.40	0.41	3.98
2003	9	2.79	0.20	6.67	0.56	2.26	0.21	2.42
2003	10	2.36	0.57	5.77	0.71	2.06	0.51	3.43

Year	Month	Maximum in Pool 21	Maximum Queue Lock 22	Maximum in Pool 22	Maximum Lock Utilization Lock 22	Maximum in Pool 22	Maximum Queue Lock 22	Maximum in Pool 21
2001	12	5	4	11	2	6	3	7
2002	1	3	1	9	1	3	1	5
2002	2	4	0	6	0	3	0	6
2002	3	7	3	9	2	8	9	7
2002	4	4	5	8	1	8	7	7
2002	5	5	7	10	1	8	6	7
2002	6	6	5	9	1	7	6	6
2002	7	6	3	8	1	9	5	7
2002	8	8	3	10	1	4	3	6
2002	9	8	3	8	1	6	5	6
2002	10	8	5	9	1	7	5	7
2002	11	7	6	7	1	9	6	7
2002	12	6	3	7	1	5	2	8
2003	1	3	0	3	0	1	0	6
2003	2	3	0	3	0	1	0	6
2003	3	5	3	9	1	7	4	8
2003	4	5	5	10	1	5	5	7
2003	5	6	4	10	1	6	3	7
2003	6	6	4	9	1	5	4	7
2003	7	8	4	8	1	5	5	8
2003	8	7	4	10	2	6	4	8
2003	9	5	3	10	2	7	3	6
2003	10	7	6	10	2	7	7	8

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Time-weighted average and maximum queues for lock 22 and surrounding pool sizes

		Downbound		In Lockage		Upbound	
Year	Month	Average in Pool 21	Average Queue Lock 22	Average in Pool 22	Average Lock Utilization Lock 22	Average in Pool 22	Average Queue Lock 22	Average in Pool 21
2003	11	1.16	0.44	5.24	0.72	2.10	0.35	3.99
2003	12	2.91	0.32	2.89	0.30	1.05	0.14	3.59

Year	Month	Maximum in Pool 21	Maximum Queue Lock 22	Maximum in Pool 22	Maximum Lock Utilization Lock 22	Maximum in Pool 22	Maximum Queue Lock 22	Maximum in Pool 21
2003	11	4	4	9	2	5	3	7
2003	12	5	4	7	2	6	3	7

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Time-weighted average and maximum queues for lock 24 and surrounding pool sizes

		Downbound		In Lockage		Upbound	
Year	Month	Average in Pool 22	Average Queue Lock 24	Average in Pool 24	Average Lock Utilization Lock 24	Average in Pool 24	Average Queue Lock 24	Average in Pool 22	Maximum in Pool 22
2000	1	0.00	0.00	0.00	0.02	0.09	0.00	0.00	0
2000	2	0.02	0.01	0.23	0.07	0.41	0.18	0.19	1
2000	3	0.91	0.28	1.63	0.66	2.88	0.42	2.00	5
2000	4	2.07	0.84	1.42	0.82	2.49	0.80	2.44	6
2000	5	3.53	0.65	3.53	0.80	2.70	0.63	2.28	7
2000	6	5.36	0.53	2.94	0.78	2.61	0.52	1.77	9
2000	7	5.46	0.62	2.65	0.81	2.33	0.60	1.63	8
2000	8	4.99	0.66	4.36	0.72	2.09	0.46	2.96	8
2000	9	5.10	0.33	2.87	0.63	2.03	0.30	3.70	8
2000	10	5.65	0.70	1.84	0.77	2.36	0.76	3.24	9
2000	11	6.38	0.78	2.74	0.76	1.26	0.49	3.39	10
2000	12	3.76	0.31	2.69	0.32	0.54	0.12	2.94	8
2001	1	3.31	0.02	2.66	0.11	0.36	0.02	2.32	6
2001	2	3.38	0.03	3.37	0.15	1.34	0.02	2.45	6
2001	3	4.24	0.06	2.97	0.40	2.04	0.14	4.22	8
2001	4	4.57	0.19	3.91	0.45	2.23	0.28	3.82	8
2001	5	4.29	0.59	3.17	0.28	4.73	2.46	2.61	7
2001	6	4.94	1.01	3.61	0.83	2.66	1.07	2.76	8
2001	7	5.52	1.78	3.96	0.79	2.38	1.69	3.08	9
2001	8	4.78	1.57	3.11	0.82	2.26	1.33	4.04	8
2001	9	5.79	0.55	3.01	0.67	2.72	0.39	2.20	10
2001	10	4.62	0.27	3.04	0.66	2.21	0.24	2.77	8
2001	11	5.02	0.52	3.09	0.73	2.42	0.35	2.09	9

Year	Month	Maximum Queue Lock 24	Maximum in Pool 24	Maximum Lock Utilization Lock 24	Maximum in Pool 24	MaximumQueue Lock 24	Maximum in Pool 22
2000	1	1	0	1	1	1	0
2000	2	1	2	1	5	4	4
2000	3	3	4	1	7	4	5
2000	4	5	6	1	7	5	5
2000	5	4	7	1	7	5	7
2000	6	4	7	2	7	4	7
2000	7	3	6	1	6	4	5
2000	8	4	8	1	6	3	7
2000	9	3	8	2	5	3	8
2000	10	5	5	1	6	5	7
2000	11	5	9	2	4	4	7
2000	12	4	7	2	4	3	6
2001	1	2	5	2	4	3	5
2001	2	2	6	1	5	4	5
2001	3	2	6	1	8	3	9
2001	4	4	9	1	8	5	10
2001	5	8	6	1	8	18	7
2001	6	7	7	1	6	10	6
2001	7	8	9	2	6	6	8
2001	8	7	6	2	5	6	8
2001	9	4	7	2	7	4	7
2001	10	3	6	1	6	3	6
2001	11	5	6	1	6	3	6

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Time-weighted average and maximum queues for lock 24 and surrounding pool sizes

		Downbound		In Lockage		Upbound	
Year	Month	Average in Pool 22	Average Queue Lock 24	Average in Pool 24	Average Lock Utilization Lock 24	Average in Pool 24	Average Queue Lock 24	Average in Pool 22	Maximum in Pool 22
2001	12	6.30	0.23	3.36	0.43	2.10	0.10	1.45	11
2002	1	6.60	0.00	3.20	0.00	1.00	0.00	2.20	9
2002	2	5.21	0.00	3.00	0.00	1.00	0.00	3.00	6
2002	3	5.74	0.34	5.23	0.62	2.92	1.55	3.33	9
2002	4	5.76	0.41	5.93	0.76	2.27	0.52	3.07	8
2002	5	6.28	0.47	6.17	0.73	2.99	0.51	3.03	10
2002	6	4.99	1.00	6.87	0.82	3.16	1.05	3.84	9
2002	7	4.18	1.97	4.83	0.88	2.87	1.78	3.11	8
2002	8	6.06	0.56	3.92	0.73	2.37	0.49	2.02	10
2002	9	4.84	0.41	3.79	0.67	2.62	0.49	3.10	8
2002	10	5.16	0.89	4.09	0.82	3.84	1.20	4.17	9
2002	11	4.33	3.42	4.25	0.91	3.16	1.88	3.58	7
2002	12	3.71	0.67	4.13	0.27	1.21	0.11	1.63	7
2003	1	3.00	0.00	4.00	0.00	1.00	0.00	1.00	3
2003	2	3.00	0.00	4.00	0.00	1.00	0.00	1.00	3
2003	3	4.20	0.15	3.48	0.42	3.13	0.48	2.35	9
2003	4	6.72	0.45	2.90	0.73	5.90	0.45	1.70	10
2003	5	5.91	0.31	2.69	0.67	6.36	0.43	2.04	10
2003	6	6.04	0.75	2.86	0.76	5.68	0.70	1.86	9
2003	7	5.68	0.59	2.84	0.75	4.28	0.55	1.27	8
2003	8	6.42	0.38	4.26	0.66	3.21	0.37	1.40	10
2003	9	6.67	0.21	4.11	0.54	2.60	1.04	2.26	10
2003	10	5.77	0.38	4.40	0.68	3.16	0.32	2.06	10

Year	Month	Maximum Queue Lock 24	Maximum in Pool 24	Maximum Lock Utilization Lock 24	Maximum in Pool 24	MaximumQueue Lock 24	Maximum in Pool 22
2001	12	4	6	1	5	4	6
2002	1	1	4	1	1	0	3
2002	2	0	3	0	1	0	3
2002	3	3	9	1	14	14	8
2002	4	3	10	1	6	4	8
2002	5	4	9	2	7	5	8
2002	6	6	10	2	7	6	7
2002	7	7	11	2	7	7	9
2002	8	3	7	1	6	5	4
2002	9	3	7	2	8	4	6
2002	10	4	8	1	7	8	7
2002	11	10	8	3	7	6	9
2002	12	10	7	1	4	4	5
2003	1	0	4	0	1	0	1
2003	2	0	4	0	1	0	1
2003	3	3	5	2	9	6	7
2003	4	6	7	2	11	5	5
2003	5	4	6	1	10	5	6
2003	6	4	6	1	9	5	5
2003	7	4	5	1	8	5	5
2003	8	4	8	1	7	4	6
2003	9	3	9	1	8	6	7
2003	10	6	10	2	7	4	7

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Time-weighted average and maximum queues for lock 24 and surrounding pool sizes

		Downbound		In Lockage		Upbound	
Year	Month	Average in Pool 22	Average Queue Lock 24	Average in Pool 24	Average Lock Utilization Lock 24	Average in Pool 24	Average Queue Lock 24	Average in Pool 22	Maximum in Pool 22
2003	11	5.24	0.61	3.91	0.77	3.04	0.55	2.10	9
2003	12	2.89	0.44	4.36	0.35	2.33	0.16	1.05	7

Year	Month	Maximum Queue Lock 24	Maximum in Pool 24	Maximum Lock Utilization Lock 24	Maximum in Pool 24	MaximumQueue Lock 24	Maximum in Pool 22
2003	11	4	7	2	6	5	5
2003	12	4	8	2	6	4	6

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Time-weighted average and maximum queues for lock 25 and surrounding pool sizes

		Downbound		In Lockage		Upbound	
Year	Month	Average in Pool 24	Average Queue Lock 25	Average in Pool 25	Average Lock Utilization Lock 25	Average in Pool 25	Average Queue Lock 25	Average in Pool 24
2000	1	0.00	0.00	0.03	0.03	0.02	0.00	0.09
2000	2	0.23	0.00	0.41	0.09	0.69	0.02	0.41
2000	3	1.63	0.25	0.90	0.66	2.06	0.42	2.88
2000	4	1.42	0.75	1.90	0.82	1.66	0.97	2.49
2000	5	3.53	0.66	2.94	0.78	2.07	0.82	2.70
2000	6	2.94	0.78	3.04	0.77	2.76	0.74	2.61
2000	7	2.65	0.49	2.94	0.77	3.10	0.52	2.33
2000	8	4.36	0.53	1.77	0.73	2.51	0.56	2.09
2000	9	2.87	0.75	1.97	0.70	2.07	0.57	2.03
2000	10	1.84	0.93	1.58	0.79	2.54	1.35	2.36
2000	11	2.74	0.93	2.20	0.80	2.08	0.65	1.26
2000	12	2.69	0.40	1.86	0.34	1.36	0.14	0.54
2001	1	2.66	0.13	1.79	0.08	0.82	0.02	0.36
2001	2	3.37	0.04	0.36	0.20	1.30	0.06	1.34
2001	3	2.97	0.13	0.44	0.41	2.63	0.24	2.04
2001	4	3.91	0.51	1.51	0.50	2.70	0.50	2.23
2001	5	3.17	0.79	2.02	0.27	2.38	7.11	4.73
2001	6	3.61	0.86	3.09	0.82	2.84	0.89	2.66
2001	7	3.96	1.52	3.46	0.81	2.49	2.05	2.38
2001	8	3.11	1.74	4.09	0.83	3.33	1.59	2.26
2001	9	3.01	0.52	5.52	0.65	3.81	0.38	2.72
2001	10	3.04	0.32	5.44	0.69	3.06	0.42	2.21
2001	11	3.09	0.58	5.24	0.75	2.23	0.45	2.42

Year	Month	Maximum in Pool 24	Maximum Queue Lock 25	Maximum in Pool 25	Maximum Lock Utilization Lock 25	Maximum in Pool 25	Maximum Queue Lock 25	Maximum in Pool 24
2000	1	0	1	1	1	1	1	1
2000	2	2	1	2	1	4	2	5
2000	3	4	3	4	1	6	5	7
2000	4	6	5	6	2	5	7	7
2000	5	7	5	6	1	6	5	7
2000	6	7	7	6	1	7	4	7
2000	7	6	3	6	1	8	4	6
2000	8	8	3	6	1	6	4	6
2000	9	8	5	6	2	7	4	5
2000	10	5	5	5	1	7	7	6
2000	11	9	6	5	2	6	4	4
2000	12	7	6	5	1	5	3	4
2001	1	5	4	5	1	4	2	4
2001	2	6	2	3	1	8	6	5
2001	3	6	3	4	1	8	5	8
2001	4	9	9	5	2	7	6	8
2001	5	6	11	6	1	8	27	8
2001	6	7	5	6	1	8	6	6
2001	7	9	7	7	2	9	10	6
2001	8	6	10	7	2	10	9	5
2001	9	7	4	9	2	9	4	7
2001	10	6	5	9	1	8	4	6
2001	11	6	5	9	1	7	4	6

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Time-weighted average and maximum queues for lock 25 and surrounding pool sizes

		Downbound		In Lockage		Upbound	
Year	Month	Average in Pool 24	Average Queue Lock 25	Average in Pool 25	Average Lock Utilization Lock 25	Average in Pool 25	Average Queue Lock 25	Average in Pool 24
2001	12	3.36	0.24	3.85	0.41	1.14	0.10	2.10
2002	1	3.20	0.00	3.01	0.01	1.21	0.00	1.00
2002	2	3.00	0.00	3.00	0.02	1.60	0.07	1.00
2002	3	5.23	0.22	3.52	0.61	2.16	0.40	2.92
2002	4	5.93	0.50	3.29	0.77	2.36	0.56	2.27
2002	5	6.17	0.48	2.77	0.75	2.34	0.54	2.99
2002	6	6.87	0.96	2.92	0.80	2.71	0.90	3.16
2002	7	4.83	1.08	3.51	0.84	2.35	0.98	2.87
2002	8	3.92	0.40	3.72	0.68	2.48	0.33	2.37
2002	9	3.79	0.28	3.71	0.62	2.59	0.35	2.62
2002	10	4.09	0.58	3.18	0.76	2.52	0.64	3.84
2002	11	4.25	1.01	3.27	0.84	2.11	0.94	3.16
2002	12	4.13	0.26	3.44	0.27	1.45	0.09	1.21
2003	1	4.00	0.00	3.00	0.00	1.01	0.00	1.00
2003	2	4.00	0.00	3.00	0.00	1.00	0.00	1.00
2003	3	3.48	0.17	3.22	0.43	1.86	0.36	3.13
2003	4	2.90	0.44	2.51	0.73	2.14	0.62	5.90
2003	5	2.69	0.30	2.60	0.68	2.12	0.37	6.36
2003	6	2.86	0.46	3.20	0.76	2.19	0.47	5.68
2003	7	2.84	0.82	3.74	0.77	3.02	0.75	4.28
2003	8	4.26	0.51	3.09	0.67	2.68	0.48	3.21
2003	9	4.11	0.22	3.84	0.55	1.63	0.20	2.60
2003	10	4.40	0.34	3.13	0.66	3.55	0.34	3.16

Year	Month	Maximum in Pool 24	Maximum Queue Lock 25	Maximum in Pool 25	Maximum Lock Utilization Lock 25	Maximum in Pool 25	Maximum Queue Lock 25	Maximum in Pool 24
2001	12	6	5	8	1	4	3	5
2002	1	4	1	4	1	2	1	1
2002	2	3	1	3	1	9	2	1
2002	3	9	2	7	1	11	5	14
2002	4	10	4	7	1	5	4	6
2002	5	9	4	6	1	7	5	7
2002	6	10	8	6	2	7	6	7
2002	7	11	5	7	1	6	6	7
2002	8	7	3	7	1	6	4	6
2002	9	7	3	7	1	7	3	8
2002	10	8	4	6	2	7	7	7
2002	11	8	5	7	2	7	7	7
2002	12	7	4	6	1	4	3	4
2003	1	4	1	3	1	2	1	1
2003	2	4	0	3	0	1	0	1
2003	3	5	3	6	1	6	5	9
2003	4	7	4	6	1	7	6	11
2003	5	6	3	6	1	5	3	10
2003	6	6	3	6	1	5	4	9
2003	7	5	6	6	2	7	6	8
2003	8	8	4	6	1	7	6	7
2003	9	9	3	6	1	5	3	8
2003	10	10	4	7	1	8	4	7

Time-weighted average and maximum queues for lock 25 and surrounding pool sizes

		Downbound		In Lockage		Upbound	
Year	Month	Average in Pool 24	Average Queue Lock 25	Average in Pool 25	Average Lock Utilization Lock 25	Average in Pool 25	Average Queue Lock 25	Average in Pool 24
2003	11	3.91	0.34	3.19	0.68	2.31	0.39	3.04
2003	12	4.36	0.19	2.63	0.32	1.10	0.11	2.33

Year	Month	Maximum in Pool 24	Maximum Queue Lock 25	Maximum in Pool 25	Maximum Lock Utilization Lock 25	Maximum in Pool 25	Maximum Queue Lock 25	Maximum in Pool 24
2003	11	7	3	7	2	7	6	6
2003	12	8	4	7	2	5	2	6

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Time-weighted average and maximum queues for lock 26 and surrounding pool sizes

		Downbound		In Lockage		Upbound	
Year	Month	Average in Pool 25	Average Queue Lock 26	Average in Pool 26	Average Lock Utilization Lock 26	Average in Pool 26	Average Queue Lock 26	Average in Pool 25
2000	1	0.03	0.22	1.06	0.46	3.27	0.39	0.02
2000	2	0.41	0.61	1.11	0.54	4.03	0.83	0.69
2000	3	0.90	0.20	1.90	0.62	4.08	0.30	2.06
2000	4	1.90	0.21	2.43	0.66	5.55	0.33	1.66
2000	5	2.94	0.22	4.54	0.63	5.02	0.26	2.07
2000	6	3.04	0.79	4.38	0.66	5.68	0.62	2.76
2000	7	2.94	0.34	6.30	0.67	6.63	0.37	3.10
2000	8	1.77	3.65	7.39	0.79	6.59	3.43	2.51
2000	9	1.97	2.20	9.07	0.64	9.91	1.68	2.07
2000	10	1.58	0.22	10.22	0.62	10.99	0.23	2.54
2000	11	2.20	0.20	9.68	0.64	11.12	0.19	2.08
2000	12	1.86	0.19	10.03	0.39	10.25	0.08	1.36
2001	1	1.79	4.56	9.24	0.63	11.62	2.82	0.82
2001	2	0.36	4.46	7.63	0.88	6.68	6.23	1.30
2001	3	0.44	4.17	7.00	0.84	4.14	3.77	2.63
2001	4	1.51	2.47	8.31	0.68	7.26	3.59	2.70
2001	5	2.02	0.10	7.28	0.53	9.18	0.21	2.38
2001	6	3.09	0.24	9.49	0.66	6.19	0.26	2.84
2001	7	3.46	0.26	8.21	0.70	9.48	0.37	2.49
2001	8	4.09	0.41	7.54	0.71	8.92	0.41	3.33
2001	9	5.52	0.50	5.96	0.58	8.88	0.56	3.81
2001	10	5.44	0.25	6.18	0.66	10.24	0.36	3.06
2001	11	5.24	0.32	6.51	0.73	6.18	0.30	2.23

Year	Month	Maximum in Pool 25	Maximum Queue Lock 26	Maximum in Pool 26	Maximum Lock Utilization Lock 26	Maximum in Pool 26	Maximum Queue Lock 26	Maximum in Pool 25
2000	1	1	5	2	2	12	9	1
2000	2	2	6	3	2	10	7	4
2000	3	4	4	6	3	11	5	6
2000	4	6	3	7	2	13	5	5
2000	5	6	3	9	2	12	4	6
2000	6	6	12	8	3	12	11	7
2000	7	6	6	10	2	16	4	8
2000	8	6	19	11	3	17	13	6
2000	9	6	24	14	3	21	21	7
2000	10	5	5	15	2	21	3	7
2000	11	5	4	13	2	17	4	6
2000	12	5	4	16	3	25	3	5
2001	1	5	23	13	2	22	12	4
2001	2	3	16	11	2	18	15	8
2001	3	4	14	10	2	11	17	8
2001	4	5	14	12	3	18	20	7
2001	5	6	3	12	3	17	5	8
2001	6	6	5	14	2	14	4	8
2001	7	7	4	12	2	17	4	9
2001	8	7	9	19	2	17	4	10
2001	9	9	7	11	3	20	8	9
2001	10	9	4	11	3	19	5	8
2001	11	9	4	10	2	15	4	7

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Time-weighted average and maximum queues for lock 26 and surrounding pool sizes

		Downbound		In Lockage		Upbound	
Year	Month	Average in Pool 25	Average Queue Lock 26	Average in Pool 26	Average Lock Utilization Lock 26	Average in Pool 26	Average Queue Lock 26	Average in Pool 25
2001	12	3.85	0.38	6.48	0.66	9.17	0.31	1.14
2002	1	3.01	0.21	5.02	0.54	5.67	0.34	1.21
2002	2	3.00	0.09	5.03	0.47	5.64	0.12	1.60
2002	3	3.52	0.35	6.21	0.63	6.00	0.36	2.16
2002	4	3.29	0.19	6.43	0.65	5.23	0.27	2.36
2002	5	2.77	0.22	6.84	0.56	7.67	0.23	2.34
2002	6	2.92	0.23	6.40	0.65	5.29	0.27	2.71
2002	7	3.51	0.21	7.74	0.70	5.76	0.31	2.35
2002	8	3.72	0.22	7.71	0.64	7.07	0.29	2.48
2002	9	3.71	0.18	9.03	0.58	7.02	0.28	2.59
2002	10	3.18	0.26	8.43	0.70	9.27	0.33	2.52
2002	11	3.27	0.41	10.06	0.82	10.51	0.50	2.11
2002	12	3.44	0.34	8.01	0.65	6.48	0.39	1.45
2003	1	3.00	0.16	7.01	0.47	5.59	0.13	1.01
2003	2	3.00	0.12	7.00	0.46	7.61	0.14	1.00
2003	3	3.22	0.22	7.86	0.65	9.86	0.37	1.86
2003	4	2.51	0.20	8.46	0.64	7.42	0.24	2.14
2003	5	2.60	0.14	9.25	0.59	6.66	0.16	2.12
2003	6	3.20	0.27	9.10	0.69	5.50	0.32	2.19
2003	7	3.74	0.24	8.62	0.65	5.45	0.31	3.02
2003	8	3.09	0.20	8.63	0.63	5.94	0.16	2.68
2003	9	3.84	0.26	7.65	0.58	8.96	0.29	1.63
2003	10	3.13	0.28	7.72	0.68	5.82	0.30	3.55

Year	Month	Maximum in Pool 25	Maximum Queue Lock 26	Maximum in Pool 26	Maximum Lock Utilization Lock 26	Maximum in Pool 26	Maximum Queue Lock 26	Maximum in Pool 25
2001	12	8	8	10	3	20	4	4
2002	1	4	4	6	2	14	7	2
2002	2	3	3	6	3	13	3	9
2002	3	7	9	11	2	14	6	11
2002	4	7	3	10	2	13	5	5
2002	5	6	4	11	2	27	4	7
2002	6	6	5	11	3	14	4	7
2002	7	7	4	11	2	13	4	6
2002	8	7	4	12	2	16	4	6
2002	9	7	4	13	2	16	5	7
2002	10	6	3	13	3	21	4	7
2002	11	7	5	15	3	20	6	7
2002	12	6	5	13	2	18	5	4
2003	1	3	4	8	2	12	3	2
2003	2	3	3	7	2	16	3	1
2003	3	6	3	10	3	17	6	6
2003	4	6	4	12	2	17	4	7
2003	5	6	3	12	2	13	3	5
2003	6	6	4	13	2	12	4	5
2003	7	6	4	13	2	13	4	7
2003	8	6	4	12	2	13	3	7
2003	9	6	5	14	2	27	5	5
2003	10	7	4	13	3	16	4	8

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Time-weighted average and maximum queues for lock 26 and surrounding pool sizes

		Downbound		In Lockage		Upbound	
Year	Month	Average in Pool 25	Average Queue Lock 26	Average in Pool 26	Average Lock Utilization Lock 26	Average in Pool 26	Average Queue Lock 26	Average in Pool 25
2003	11	3.19	0.31	8.53	0.70	4.79	0.34	2.31
2003	12	2.63	0.26	8.49	0.60	4.74	0.21	1.10

Year	Month	Maximum in Pool 25	Maximum Queue Lock 26	Maximum in Pool 26	Maximum Lock Utilization Lock 26	Maximum in Pool 26	Maximum Queue Lock 26	Maximum in Pool 25
2003	11	7	5	13	3	12	4	7
2003	12	7	6	13	2	13	4	5

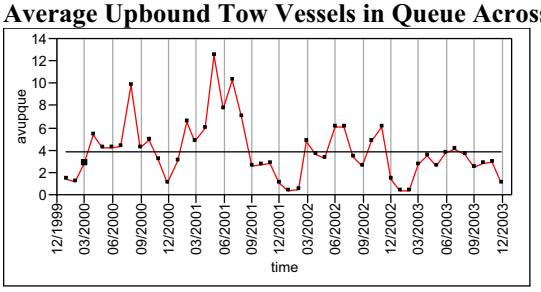
Time-weighted average and maximum queues for locks 19 - 26

Year	Month	Average Downbound Queue	Maximum Downbound Queue	Average Upbound Queue	Maximum Upbound Queue
2000	1	1.22	9	1.48	14
2000	2	0.80	8	1.27	10
2000	3	1.93	11	2.87	9
2000	4	5.16	14	5.40	16
2000	5	4.17	12	4.26	13
2000	6	4.40	17	4.22	16
2000	7	4.41	14	4.34	14
2000	8	9.89	28	9.81	29
2000	9	5.25	28	4.20	24
2000	10	4.17	13	4.93	13
2000	11	4.49	13	3.21	14
2000	12	2.06	13	1.10	11
2001	1	4.92	23	3.08	13
2001	2	4.71	16	6.56	16
2001	3	4.90	15	4.79	22
2001	4	4.38	19	5.97	27
2001	5	2.73	18	12.55	47
2001	6	8.78	21	7.74	24
2001	7	10.64	26	10.36	26
2001	8	7.65	21	7.12	17
2001	9	3.03	12	2.61	11
2001	10	2.55	10	2.72	12
2001	11	3.94	14	2.91	11
2001	12	2.00	14	1.15	9
2002	1	0.31	4	0.46	8
2002	2	0.32	4	0.48	6
2002	3	2.43	13	4.79	25
2002	4	3.27	14	3.65	13
2002	5	3.95	17	3.36	12
2002	6	5.86	20	6.16	21
2002	7	6.16	15	6.09	16
2002	8	3.92	14	3.44	13
2002	9	2.33	11	2.65	11
2002	10	4.49	13	4.81	15
2002	11	8.43	23	6.13	17
2002	12	2.43	20	1.49	12
2003	1	0.56	7	0.41	5
2003	2	0.49	6	0.38	6
2003	3	1.52	9	2.71	12
2003	4	3.10	11	3.50	11
2003	5	2.30	10	2.60	11
2003	6	3.57	13	3.78	12
2003	7	4.35	13	4.10	15
2003	8	4.11	16	3.67	15
2003	9	1.75	8	2.55	10
2003	10	3.08	14	2.86	11
2003	11	3.41	13	3.01	11
2003	12	2.17	14	1.08	10

A.1 Descriptive Statistics

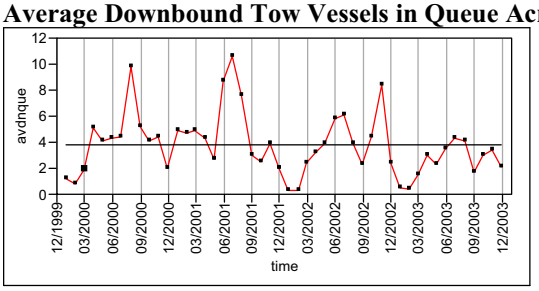
The following time series plots average the data for all locks to show the general trend of queues. The remaining plots show the averages and maximums for the individual locks by direction. The x-coordinate displays the month/year and the y-coordinate is the average number or maximum number of vessels in queue for a given month/year.

Average Upbound Tow Vessels in Queue Across All Locks



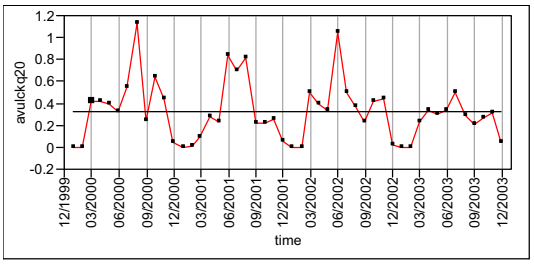
Mean	3.9347457
Std	2.5588173
N	48

Average Downbound Tow Vessels in Queue Across All Locks



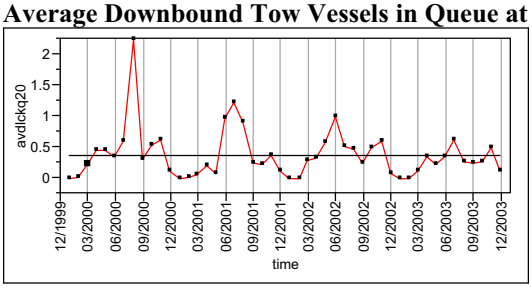
Mean	3.8019456
Std	2.3311717
N	48

Average Upbound Tow Vessels in Queue at Lock 20



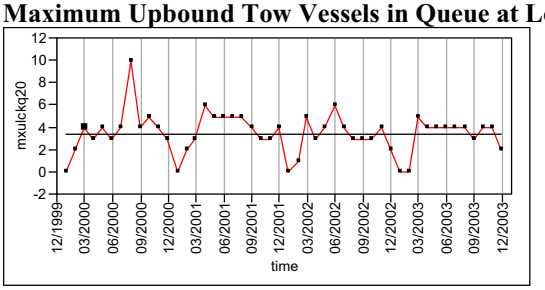
Mean	0.3263684
Std	0.26753
N	48

Average Downbound Tow Vessels in Queue at Lock 20



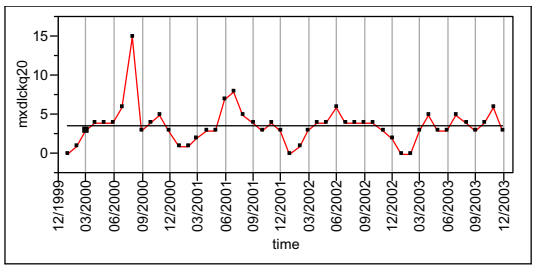
Mean	0.3685864
Std	0.3925267
N	48

Maximum Upbound Tow Vessels in Queue at Lock 20



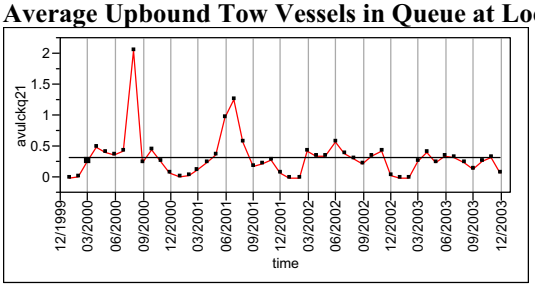
Mean	3.4791667
Std	1.7910609
N	48

Maximum Downbound Tow Vessels in Queue at Lock 20



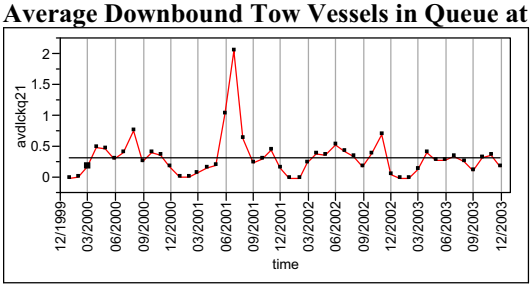
Mean	3.625
Std	2.4033397
N	48

Average Upbound Tow Vessels in Queue at Lock 21



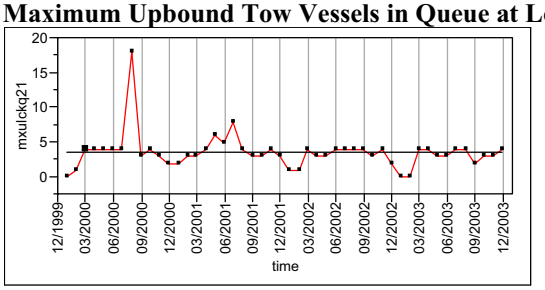
Mean	0.3187553
Std	0.3452463
N	48

Average Downbound Tow Vessels in Queue at Lock 21



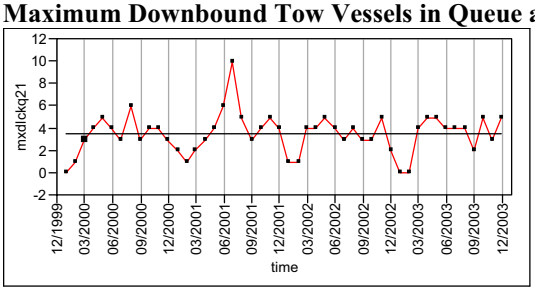
Mean	0.3225273
Std	0.3325613
N	48

Maximum Upbound Tow Vessels in Queue at Lock 21



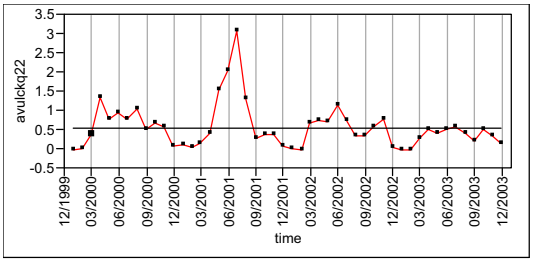
Mean	3.5416667
Std	2.5491693
N	48

Maximum Downbound Tow Vessels in Queue at Lock 21



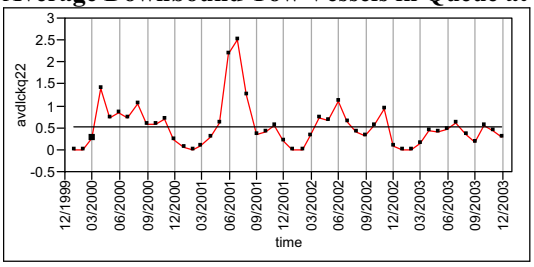
Mean	3.5208333
Std	1.7793911
N	48

Average Upbound Tow Vessels in Queue at Lock 22



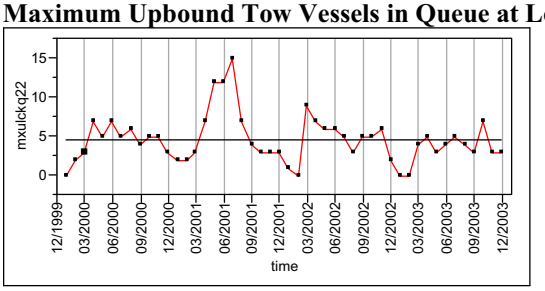
Mean	0.5656779
Std	0.5751656
N	48

Average Downbound Tow Vessels in Queue at Lock 22



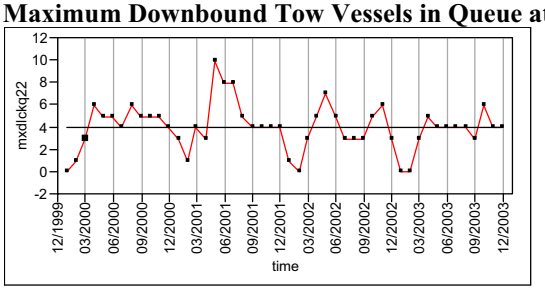
Mean	0.5356209
Std	0.5108384
N	48

Maximum Upbound Tow Vessels in Queue at Lock 22



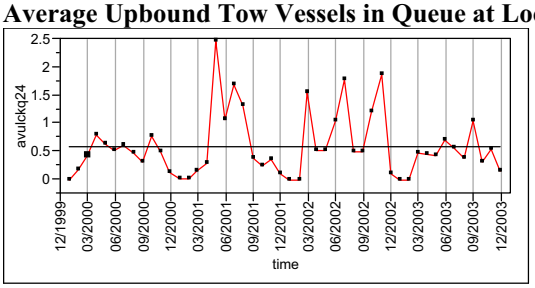
Mean	4.6041667
Std	3.0120562
N	48

Maximum Downbound Tow Vessels in Queue at Lock 22



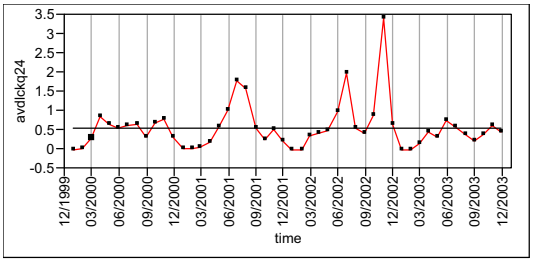
Mean	4
Std	2.0615528
N	48

Average Upbound Tow Vessels in Queue at Lock 24



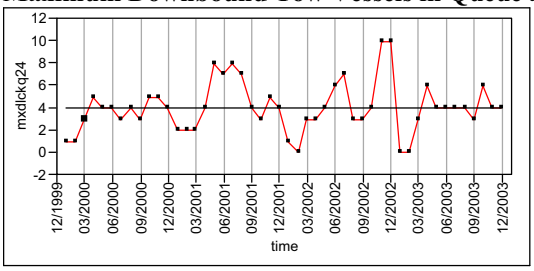
Mean	0.583006
Std	0.5522424
N	48

Average Downbound Tow Vessels in Queue at Lock 24



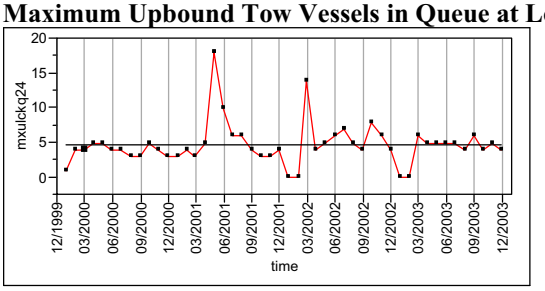
Mean	0.5612327
Std	0.5987618
N	48

Maximum Downbound Tow Vessels in Queue at Lock 24



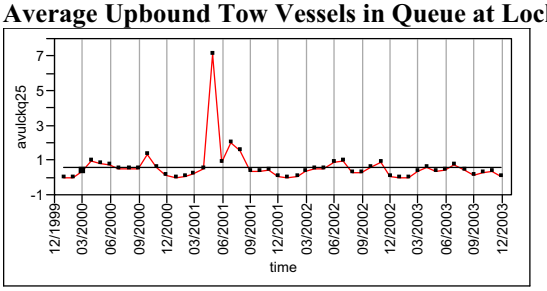
Mean	4.0416667
Std	2.2542398
N	48

Maximum Upbound Tow Vessels in Queue at Lock 24



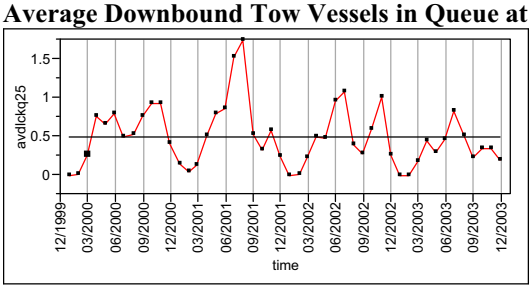
Mean	4.7083333
Std	3.0547663
N	48

Average Upbound Tow Vessels in Queue at Lock 25



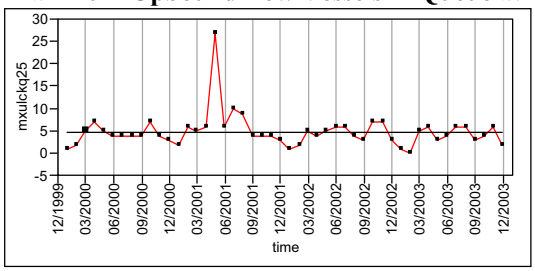
Mean	0.6344583
Std	1.0327465
N	48

Average Downbound Tow Vessels in Queue at Lock 25



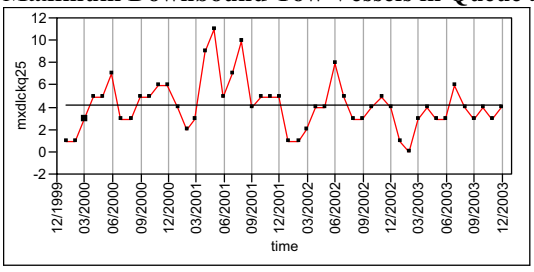
Mean	0.4877838
Std	0.3827032
N	48

Maximum Upbound Tow Vessels in Queue at Lock 25



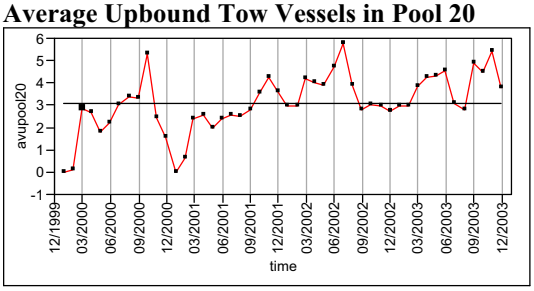
Mean	4.8958333
Std	3.803724
N	48

Maximum Downbound Tow Vessels in Queue at Lock 25



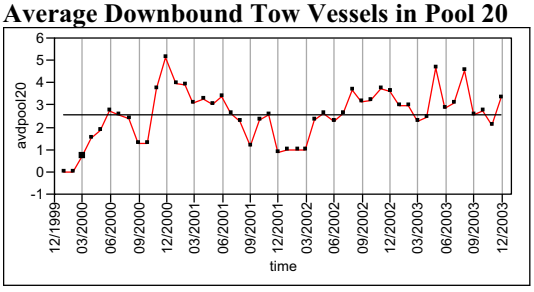
Mean	4.2083333
Std	2.2542398
N	48

Average Upbound Tow Vessels in Pool 20



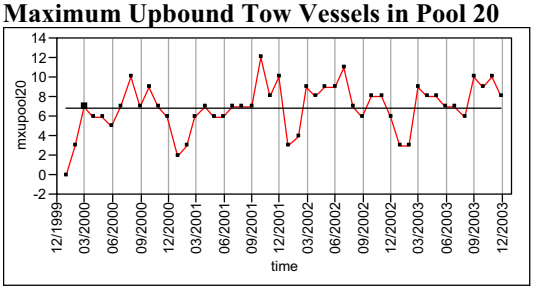
Mean	3.1374635
Std	1.289991
N	48

Average Downbound Tow Vessels in Pool 20



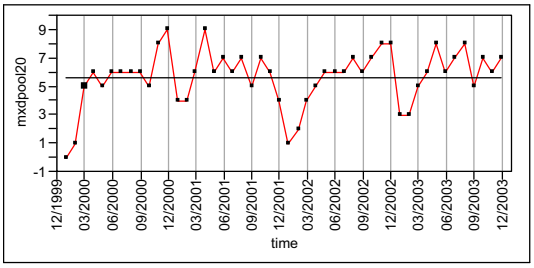
Mean	2.5690924
Std	1.137013
N	48

Maximum Upbound Tow Vessels in Pool 20



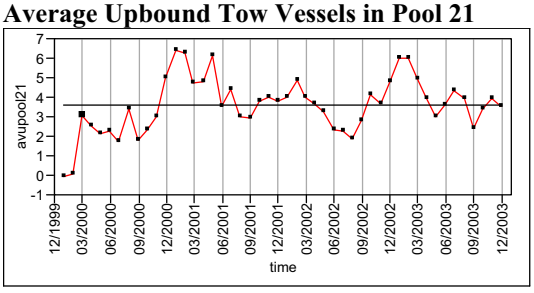
Mean	6.875
Std	2.429206
N	48

Maximum Downbound Tow Vessels in Pool 20



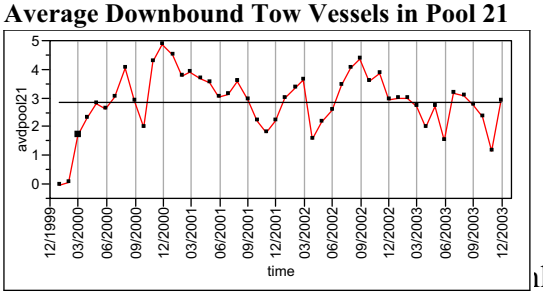
Mean	5.6458333
Std	1.9524513
N	48

Average Upbound Tow Vessels in Pool 21



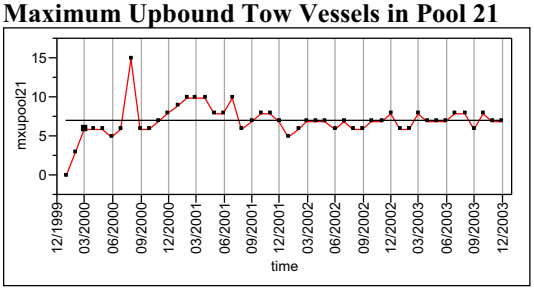
Mean	3.609881
Std	1.3982371
N	48

Average Downbound Tow Vessels in Pool 21



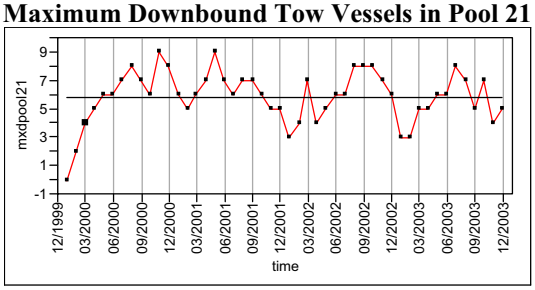
Mean	2.890443
Std	1.0137413
N	48

Maximum Upbound Tow Vessels in Pool 21



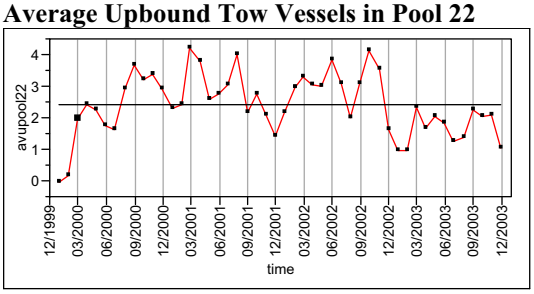
Mean	7.0625
Std	2.0453835
N	48

Maximum Downbound Tow Vessels in Pool 21



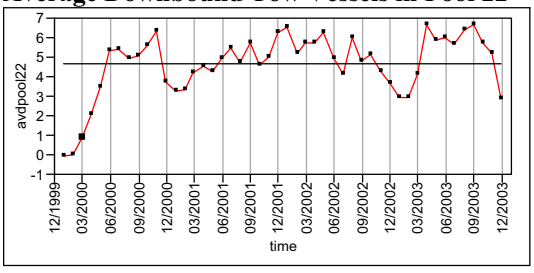
Mean	5.8333333
Std	1.7950549
N	48

Average Upbound Tow Vessels in Pool 22



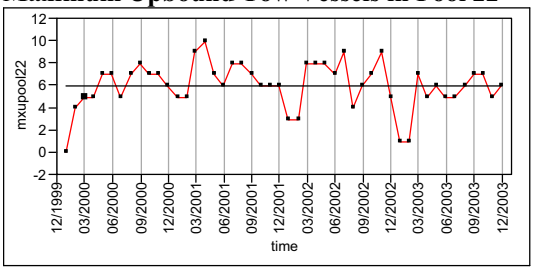
Mean	2.4273606
Std	0.9706151
N	48

Average Downbound Tow Vessels in Pool 22



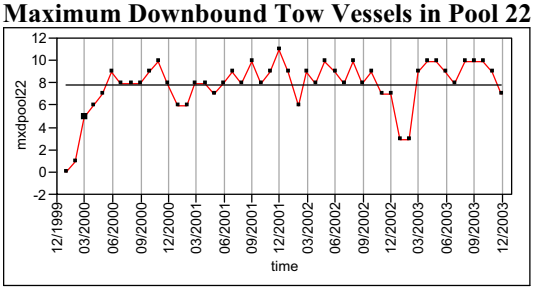
Mean	4.6750202
Std	1.5754881
N	48

Maximum Upbound Tow Vessels in Pool 22



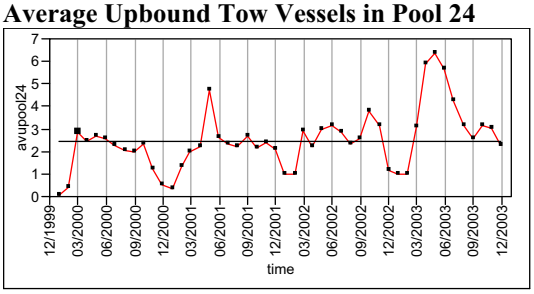
Mean	6.0208333
Std	2.0462321
N	48

Maximum Downbound Tow Vessels in Pool 22



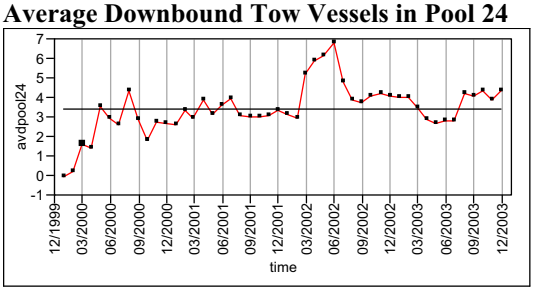
Mean	7.8125
Std	2.2698775
N	48

Average Upbound Tow Vessels in Pool 24



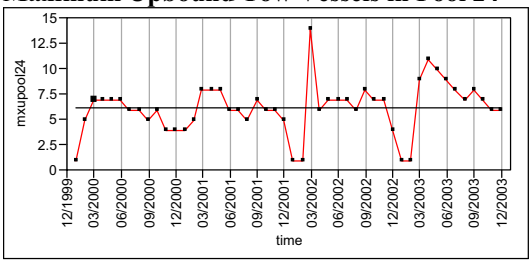
Mean	2.5075699
Std	1.3159538
N	48

Average Downbound Tow Vessels in Pool 24



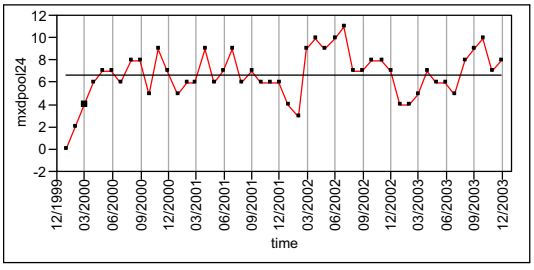
Mean	3.4453164
Std	1.2514783
N	48

Maximum Upbound Tow Vessels in Pool 24



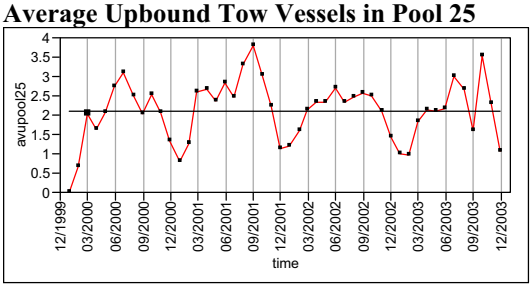
Mean	6.1875
Std	2.5137642
N	48

Maximum Downbound Tow Vessels in Pool 24



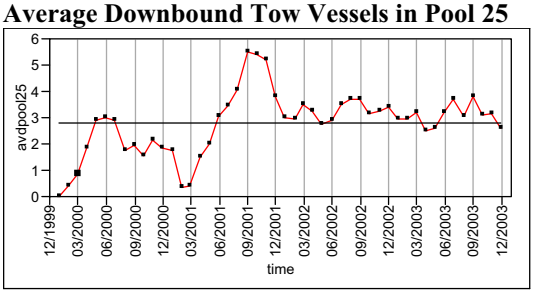
Mean	6.6666667
Std	2.1441134
N	48

Average Upbound Tow Vessels in Pool 25



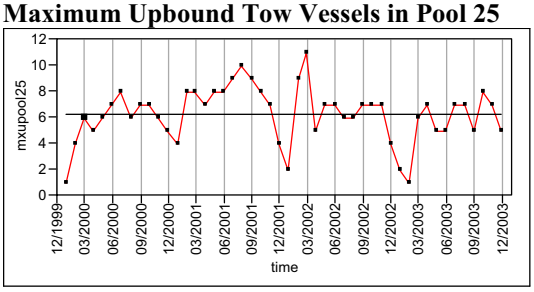
Mean	2.1277854
Std	0.7694914
N	48

Average Downbound Tow Vessels in Pool 25



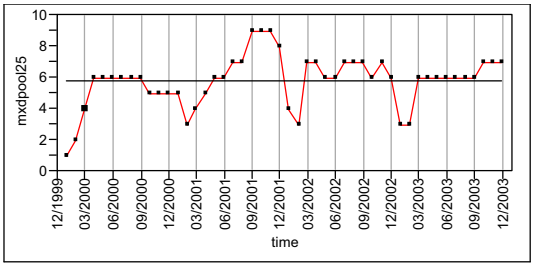
Mean	2.8092256
Std	1.1852264
N	48

Maximum Upbound Tow Vessels in Pool 25



Mean	6.2708333
Std	2.0990036
N	48

Maximum Downbound Tow Vessels in Pool 25



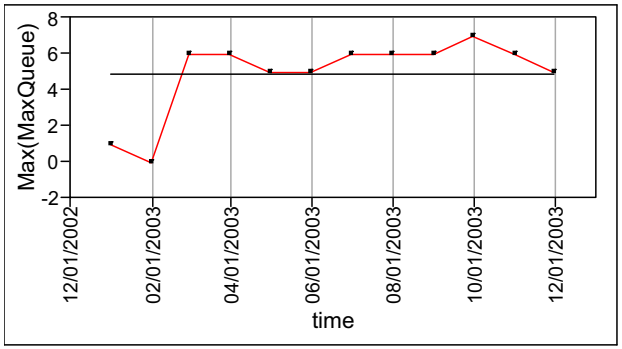
Mean	5.7916667
Std	1.6703085
N	48

A.2 Lock Utilization and Maximum Queues for Tows Only

Utilization Statistics for Vessels 16:41 Tuesday, June 28, 2005 112
%& with elimination of recreational vessels = yes
for lockages with arrivals between mdy(1,1,2003) and mdy(12,31,2003)

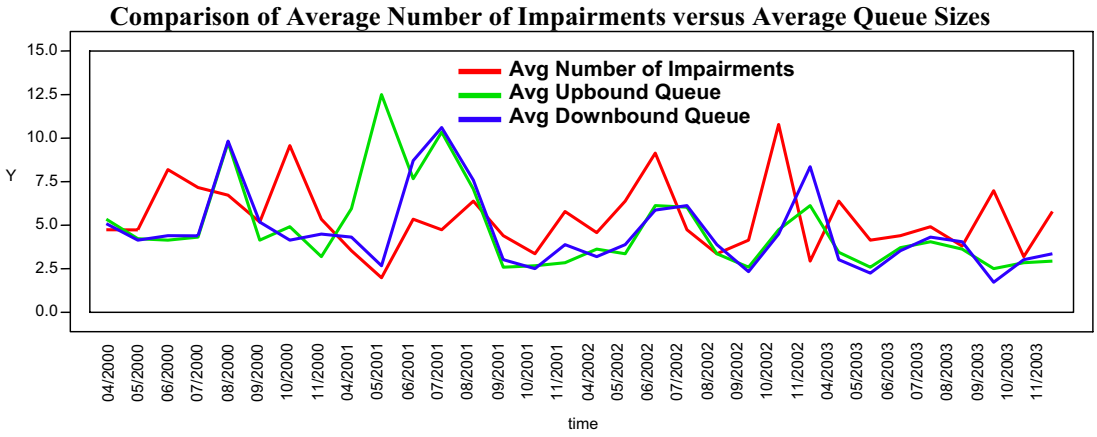
Obs	Start Date	End Date	Sum Transit Hours	Sum Wait to Lock Hours	Sum Lockage Times Hours	Number of Movements	Sum of Total Movement Time	Total Days of Movement	Percentage of Total Movement Time in Transit	Percentage of Total Movement Time Waiting to Lock	Percentage of Total Movement Time in Lockage
1	01JAN03	31DEC03	6702214.63	102876.35	115646.2	104730	6920737.18	364.989	96.8425	1.48649	1.67101

Maximum Queue Size of Tow Vessels Across All Locks for 2003



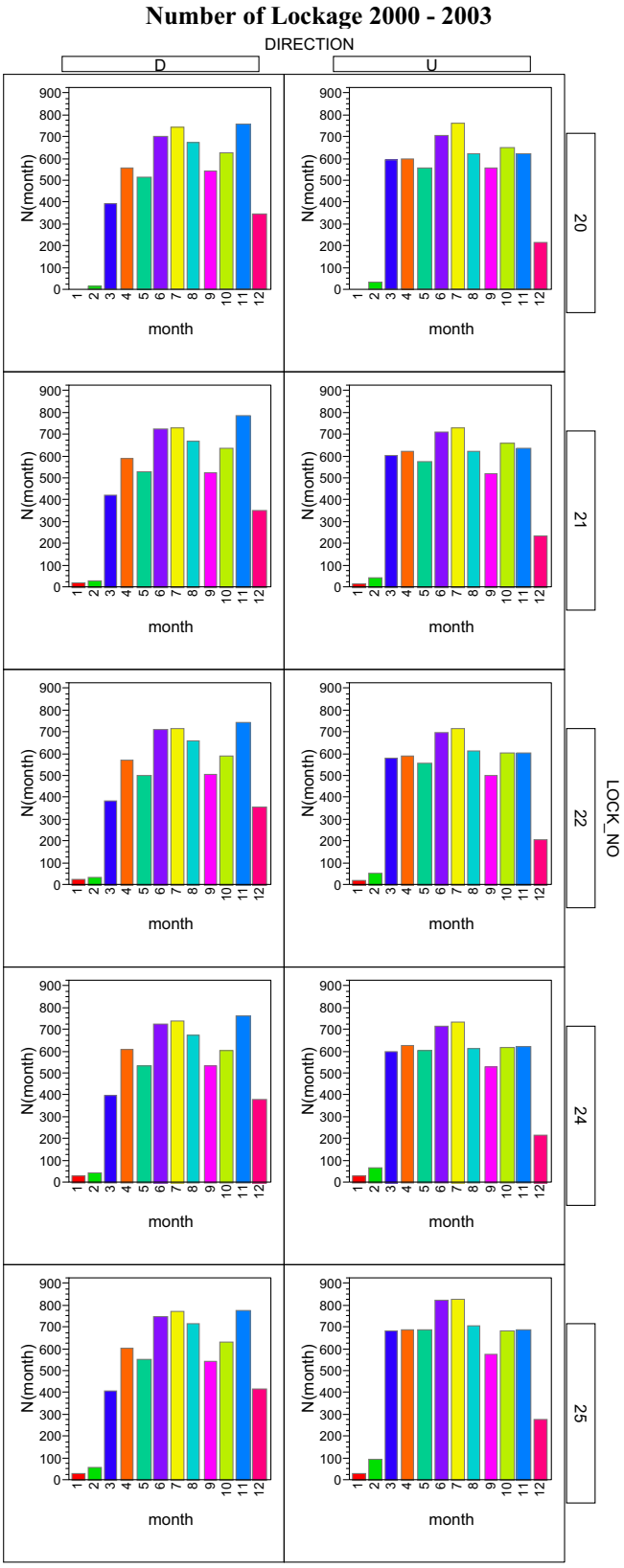
Mean	4.9166667
Std	2.0598678
N	12

A.3 Lock Queue and Impairment Comparison



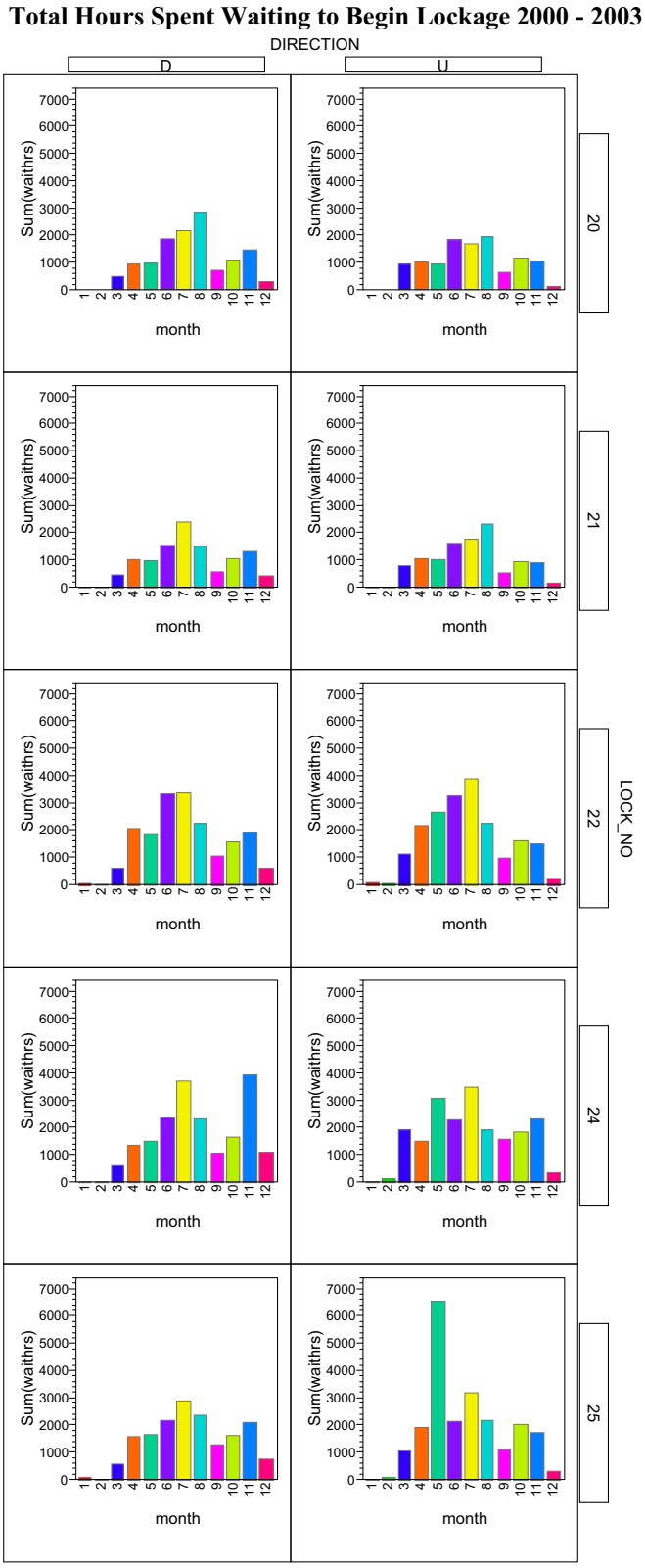
A.4 Statistical Models

A.4.1 Summary Statistics



A.4 Statistical Models

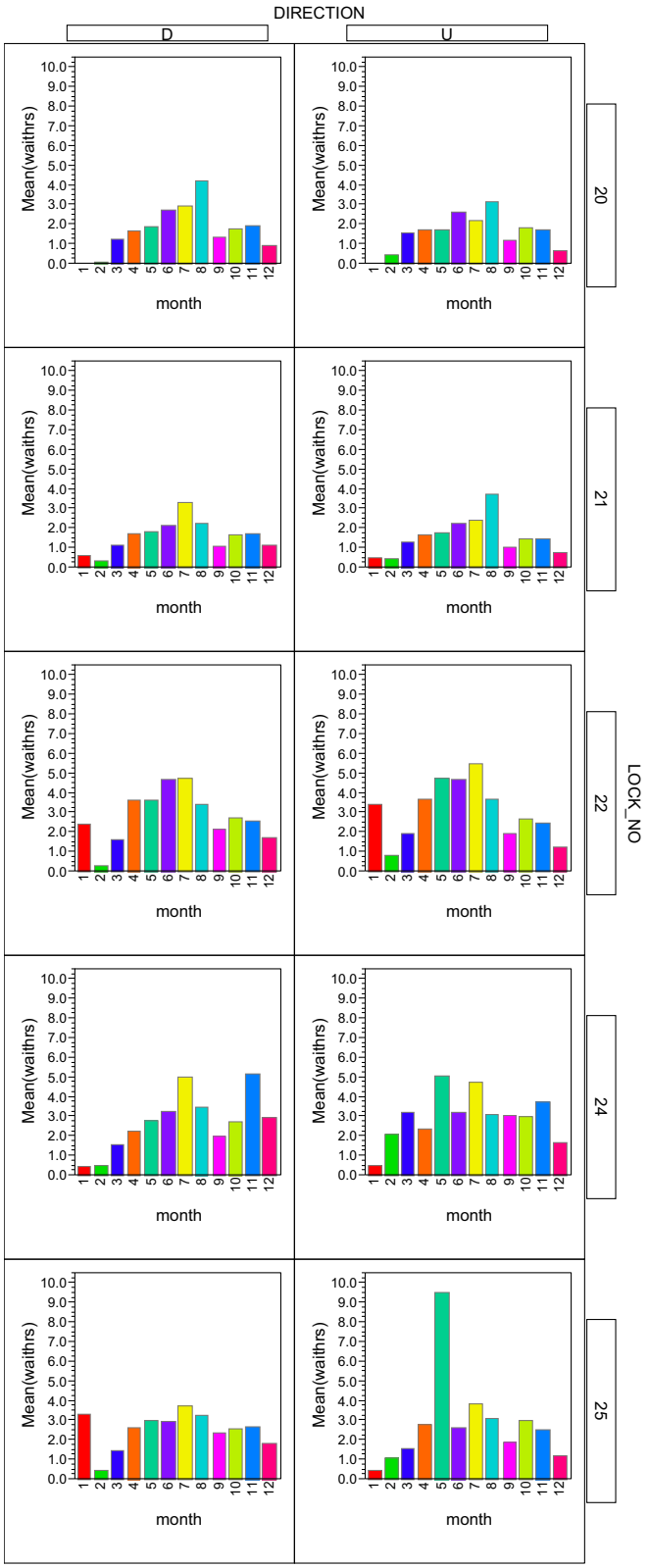
A.4.1 Summary Statistics



A.4 Statistical Models

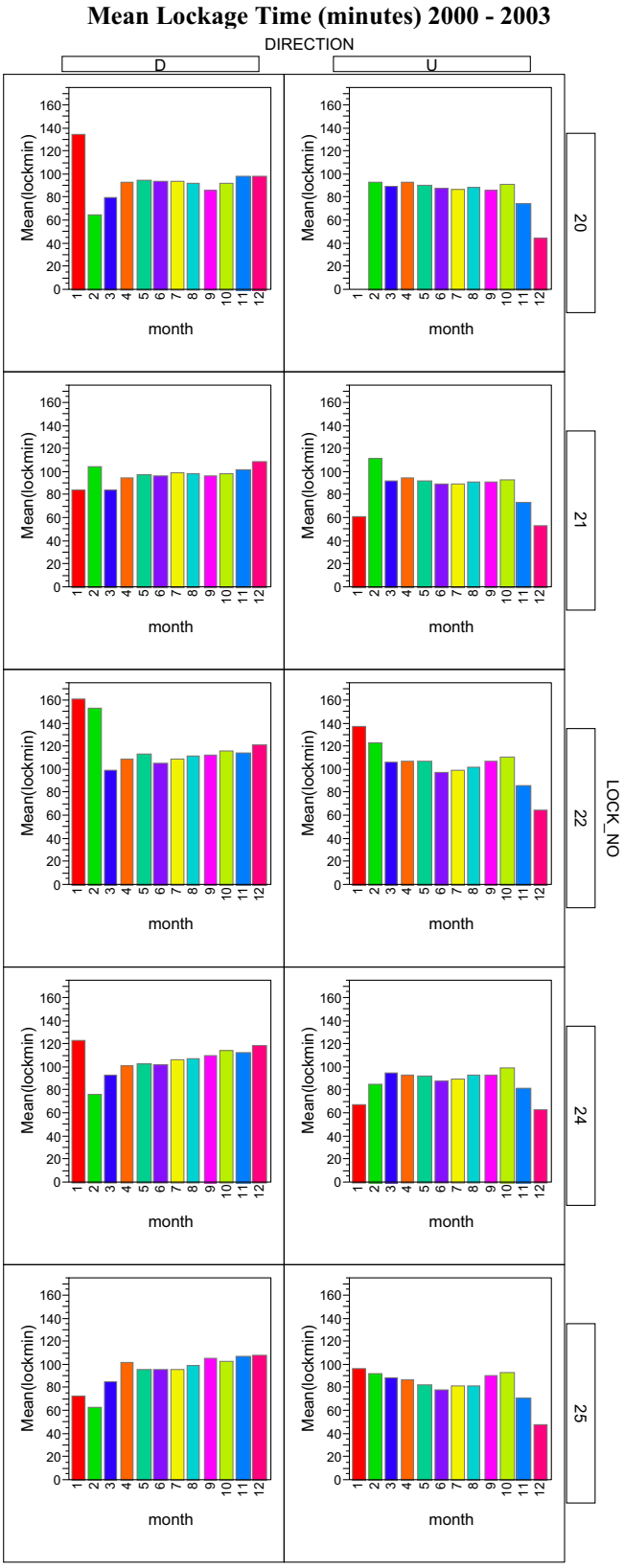
A.4.1 Summary Statistics

Mean Hours Spent Waiting to Begin Lockage 2000 - 2003



A.4 Statistical Models

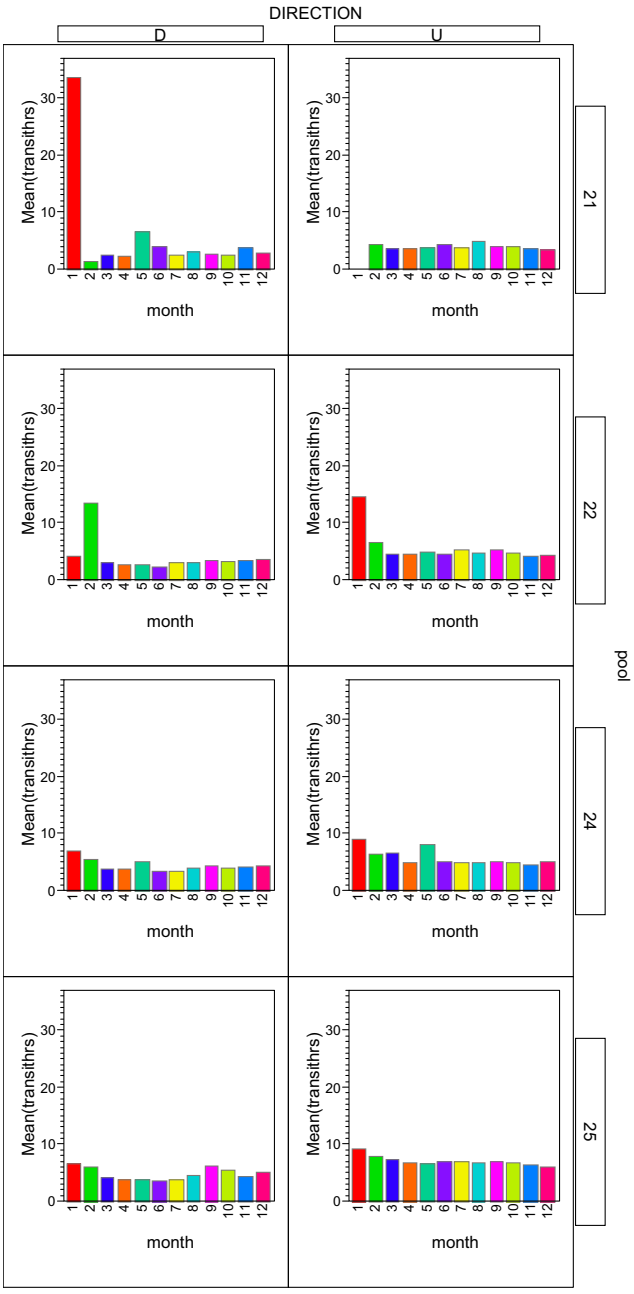
A.4.1 Summary Statistics



A.4 Statistical Models

A.4.1 Summary Statistics

Mean Transit Time for Each Pool Years 2000 - 2003

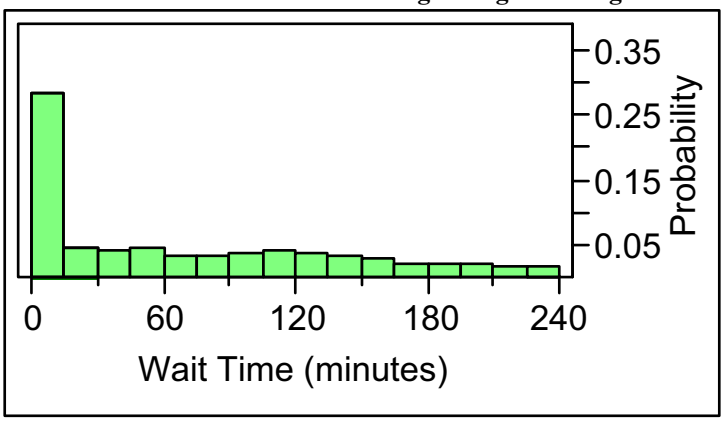


A.4 Statistical Models

A.4.1 Summary Statistics

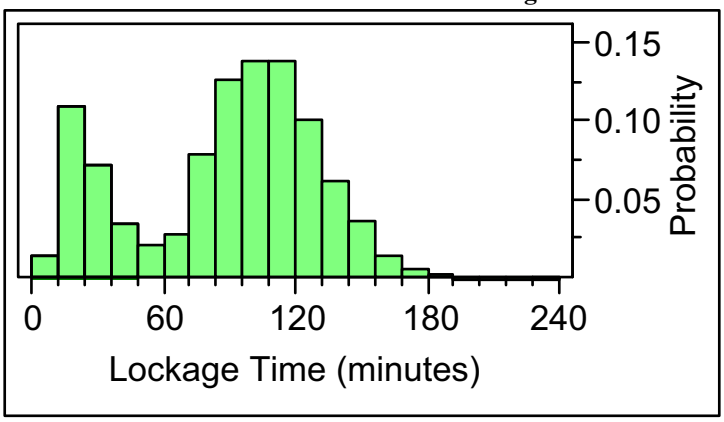
Distributions for Locks 20 – 25 (2000 – 2003)

Distribution of Time Waiting to Begin Lockage



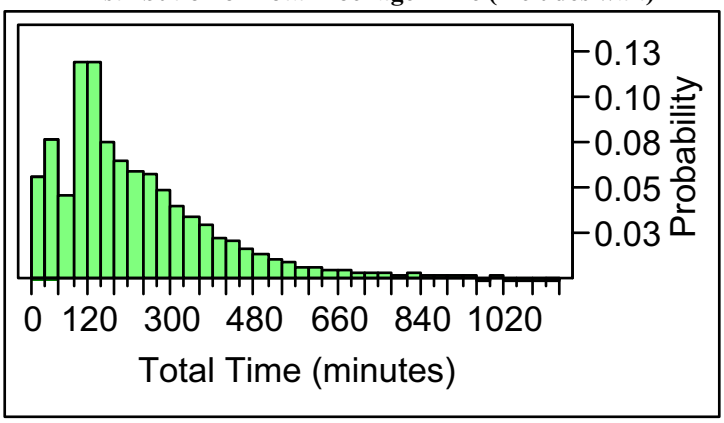
DIRECTION = Upbound

Distribution of Time in Lockage



DIRECTION = Upbound

Distribution of Total Lockage Time (includes wait)



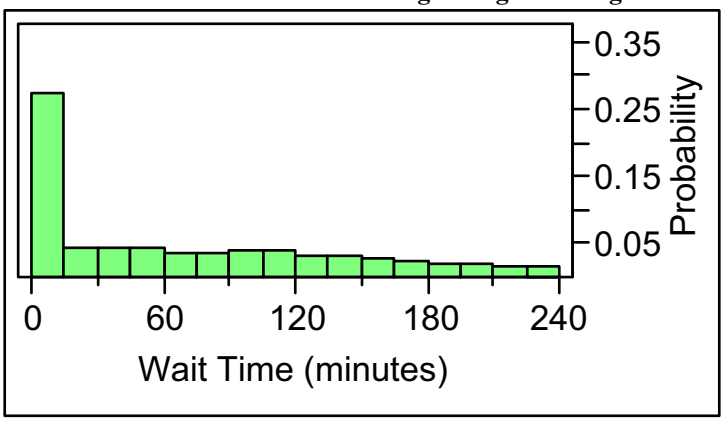
DIRECTION = Upbound

A.4 Statistical Models

A.4.1 Summary Statistics

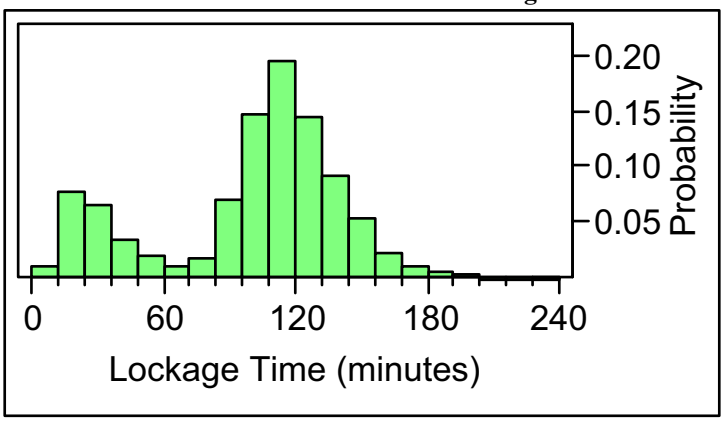
Distributions for Locks 20 – 25 (2000 – 2003)

Distribution of Time Waiting to Begin Lockage



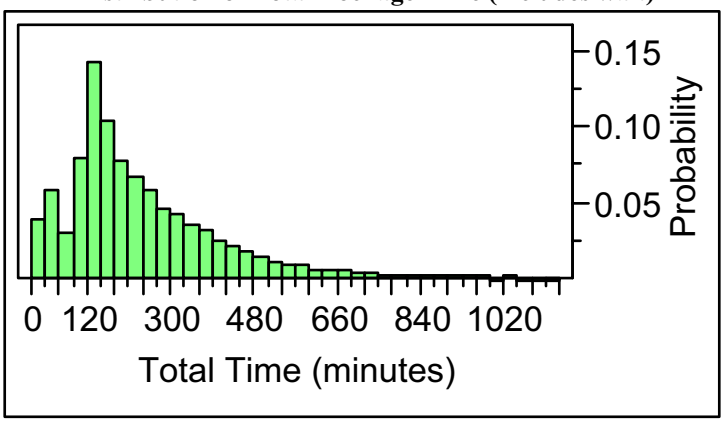
DIRECTION = Downbound

Distribution of Time in Lockage



DIRECTION = Downbound

Distribution of Total Lockage Time (includes wait)



DIRECTION = Downbound

```
 /*********************************************************************
 * Program:   FITMOD.SAS   - for lockage activity and pool transit     *
 * Narrative: Calibrates models for nonstationary Markovian transition *
 *            probabilities and writes corresponding equations to a    *
 *            flat file for importation by the simulation model     *
 *            The calibration of the models makes use of a set of SAS  *
 *            macros in  STATMAC.SAS                                   *
 *            Also estimates expected transit times for next lockage   *
 * Author:    L.D.Smith,                                               *
 *********************************************************************/

 /*** Copyright (c) 2004 by the unuators of the University of Missouri
  *** Any use or copying of this program without authorization
  *** of the University of Missouri Board of unuators is strictly
  *** prohibited.   *** */
 ** include SAS macros created for model building;
 %macro subset; if plockno ge 20 and plockno le 25;  %mend;
%macro fitmod(
  regen=yes,       /* regenerate temporary regression files  */
  start=mdy(1,1,2000),   /* starting date for subsetting */
  end=mdy(12,31,2003),   /* ending date for subsetting */
  subset=subset,   /* name of subsetting macro for selecting observations */
  path=~/waterway/,  /* directory path to sas datasets and flat files with source statements*/
  modout=tprob,    /* root for name of file to contain transition  equations */
  intopool=MI21D,  /* entering pool for which transition probabilities are to be calculated */
  tmodel=yes,        /* create transition models and equations */
  times=yes,         /* create models for average activity times */
  mxlpdn=100,       /* max pct of time lock impaired in lockage */
  mxtpdn=100,       /* max pct of time next lock impaired during transit */
  timeout=times,   /* root for name of file to contain transition  equations */
  screen=yes,   /* compute screens for depvar */
  loscreen=min,    /* low screen from proc univariate for fitting model */
  hiscreen=max,   /* high screen for fitting model */
  ols=YES,     /* use ols or logistic approach rather than catmod */
  modmacro=%autostep,  /* choice of macro for fitting models for transitional equation
                          %autoreg for linear equations using all selected variables
                          %autostep for linear equations using stepwise selection
                          %autolog for logistic equations using all selected variables
                          %asteplog for logistic equations using stepwise selection  */
  alpha=.01,      /* significance lvl for choosing variables stepwise */
  catmod=no,     /* create multinomial logit models */
  maxiter=20,      /* max. no. of MLE iterations */
  round=yes,       /* round selected variables for fitting with catmod */
  lowkeep=1,       /* keep 1 in every "lowkeep" records from calibration
                      file to fit transitions*/
  dsetin=water.regfile,    /* input dataset for fitting models (from lockperf.sas) */
  sumstat=yes,   /* produce summary statistics for accounts in
                    each state */
  catout=mltprob,    /* name of file to contain nultinomial logit equations */
  debug=no,         /* browse logit characteristics for debugging */
  mxobs=20000000,          /* maximum no. obs on input file to read */
  recs=no,         /* run lockage equations for recreational vehicles */
  varlimit=,  /* dataset containing statements with reasonable limits
                           to be imposed on variables */
  dorest=yes,   /* execute rest of macro routine under development */
  flow=flow,     /* defines the flow variable */
  rptflowvar=,      /*  defines a variable to include in report title  */
```

SAS Program “fitmodx.sas”


```
  useflow=no,     /* determines if flow data is used and modifies variable names */
   );

  options dquote mprint macrogen;

  libname water  "&path";

   /*********
  %if %upcase(&useflow)=NO %then %do;
    %let  modout=NFtprob;
    %let  flow=;
    %let  timeout=NFtimes;
    %let  rptflowvar=WithoutFlowData;
  %end;
        ********/

  %if %upcase(&recs)=YES %then %do;
     %let  timeout=timesREC;
  %end;


  %let tmodel=%upcase(&tmodel);
  %let catmod=%upcase(&catmod);

* THIS SECTION OF PROGRAM transforms explanatory variables for models;
 %if %upcase(&regen)=YES %then %do;
  data regfile
     single double knockout jacknife othtype   ;
   set  &dsetin;

  *restrict to desired dates;
   if datepart(parrtime) ge &start and datepart(parrtime) le &end;

 * Defining dummy variables for seasonal variations;
 length jan feb mar apr may jun jul aug sep oct nov dec 3;

   if month=01 then jan=1;else jan=0;
   if month=02 then feb=1;else feb=0;
   if month=03 then mar=1;else mar=0;
   if month=04 then apr=1;else apr=0;
   if month=05 then may=1;else may=0;
   if month=06 then jun=1;else jun=0;
   if month=07 then jul=1;else jul=0;
   if month=08 then aug=1;else aug=0;
   if month=09 then sep=1;else sep=0;
   if month=10 then oct=1;else oct=0;
   if month=11 then nov=1;else nov=0;
   if month=12 then dec=1;else dec=0;

   if month in (1,3,5,7,8,10,12) then m31day=1; else m31day=0;
   if month in (4,6,9,11) then m30day=1; else m30day=0;

   if month in (1,2,3) then qtr1=1; else qtr1=0;
   if month in (4,5,6) then qtr2=1; else qtr2=0;
   if month in (7,8,9) then qtr3=1; else qtr3=0;
   if month in (10,11,12) then qtr4=1; else qtr4=0;
```

SAS Program “fitmodx.sas” (cont.)

```
 *** impose limit and reasonable test;
 %if &varlimit ne %str() %then %include "&path.&varlimit";   ;


*************************************************************;
* be careful to put all computations of variables before the output
  stmts below or those data sets will not contain the new
  variables;

   *** variables to describe tow configuration at previous lock;

   length psingle pdouble pknockout pjacknife pothtype 3 ;
   psingle=0; pdouble=0;  pknockout=0; pjacknife=0; pothtype=0;
  if plockagetype eq 'S' then psingle=1;
   else if plockagetype eq 'C' then pdouble=1;
    else if plockagetype eq 'K' then pknockout=1;
     else if plockagetype eq 'V' then pjacknife=1;
       else pothtype=1;

    length pconfig $10;
    if pdouble then  pconfig='1:double';
    if psingle  then  pconfig='2:single';
    if pknockout then  pconfig='3:knockout';
    if pjacknife then  pconfig='4:jacknife';
    if pconfig eq ' ' then pconfig='5:Other';

    length exchange turnback 3;
    if popstype='EXCHANGE' then pexchange=1;  else pexchange=0;
    if popstype='TURNBACK' then pturnback=1;  else pturnback=0;

   *** variables to describe tow configuration at next lock;

   length single double knockout jacknife othtype 4.;
   single=0; double=0;  knockout=0; jacknife=0; othtype=0;
  if lockage_type eq 'S' then single=1;
   else if lockage_type eq 'C' then double=1;
    else if lockage_type eq 'K' then knockout=1;
     else if lockage_type eq 'V' then jacknife=1;
       else othtype=1;

  if lockage_type eq 'S' then output single;
   else if lockage_type eq 'C' then output double;
    else if lockage_type eq 'K' then output knockout;
     else if lockage_type eq 'V' then output jacknife;
       else output othtype;

   *** variables to describe next step;

  length contthru return contstop kill 3;
     if upcase(nxtstep) eq 'CONTNOSTOP'  THEN CONTTHRU=1; ELSE CONTTHRU=0;
     if upcase(nxtstep) eq 'CONTSTOP'  THEN contstop=1; ELSE contstop=0;
     if upcase(nxtstep) eq 'RETURN'  THEN return=1; ELSE return=0;
     if return eq 0 and contstop eq 0 and contthru eq 0 then kill=1; else kill=0;

    length nextstep  $8;
     if contthru eq 1 then nextstep='1:contthru';
     if contstop eq 1 then nextstep='2:contstop';
```



```
     if return eq 1 then nextstep='3:return';
     if kill eq 1 then nextstep='4:kill';

   length doutcome $12;
   if contthru eq 1 then doutcome='1:contsame';
   if double and contstop then doutcome='2:contdouble';
   if single and contstop then doutcome='3:contsingle';
   if knockout and contstop then doutcome='4:contko';
   if jacknife and contstop then doutcome='5:contjk';
   if double and return then doutcome='6:retdouble';
   if single and return then doutcome='7:retsingle';
   if knockout and return then doutcome='8:retko';
   if jacknife and return then doutcome='9:retjk';
   if doutcome eq ' ' then doutcome='x:kill';

   length contsame contdouble contsingle contko contjk retdouble
          retsingle retko retjk xkill 3;

    if  doutcome='1:contsame'   then contsame=1; else contsame=0;
    if  doutcome='2:contdouble' then contdouble=1; else contdouble=0;
    if  doutcome='3:contsingle' then contsingle=1; else contsingle=0;
    if  doutcome='4:contko' then contko=1; else contko=0;
    if  doutcome='5:contjk' then contjk=1; else contjk=0;
    if  doutcome='6:retdouble' then retdouble=1; else retdouble=0;
    if  doutcome='7:retsingle' then retsingle=1; else retsingle=0;
    if  doutcome='8:retko' then retko=1; else retko=0;
    if  doutcome='9:retjk' then retjk=1; else retjk=0;
    if  doutcome='x:kill' then xkill=1; else xkill=0;

    transithrs=(arrtime-pdeptime)/3600;
    if transithrs gt 0 then do;
       logtrnhrs=log(transithrs);
    end;

    plockhrs=(pdeptime-pstrtlcktime)/3660;
    if plockhrs gt 0 then do;
       loglckhrs=log(plockhrs);
    end;
    ** selected interactions between original configuration and next event;
    thrusingle=contsame*psingle;
    thruother=contsame*(1-psingle)*(1-pdouble);
    contother= contstop*(1-contdouble)*(1-contsingle);
    retother= return*(1-retdouble)*(1-retsingle);

    thrudoubnite=contsame*pdouble*pcttrannite/100;
    thrusingnite=contsame*psingle*pcttrannite/100;
    thruothnite=thruother*pcttrannite/100;


    ** selected interactions between lockage configurations and nighttime;
    pdoubnite=pdouble*pctplcknite/100;
    psingnite=psingle*pctplcknite/100;
    pothnite=(1-pdouble)*(1-psingle)* pctplcknite/100;

  %if &intopool ne %str() %then if pnewpool eq "%upcase(&intopool)"   ; ;

  ** output datasets for model building;
```

```
      %subset;

   ** output all observations in regfile;

      output regfile;

   ** output subsets for different configurations;

   if plockagetype eq 'S' then output single;
    else if plockagetype eq 'C' then output double;
     else if plockagetype eq 'K' then output knockout;
      else if plockagetype eq 'V' then output jacknife;
        else output othtype;

  run;

 %if %upcase(&sumstat)=YES %then %do;

    title "resulting regfile for &start to &end ";
    proc means data=regfile n nmiss sum mean min max;
    proc freq data= regfile;
     tables pnewpool * pconfig * doutcome  pnewpool * pconfig * nextstep;
    run;
 %end; *of  sumstat;
 %end; * of regen;

 %if %upcase(&sumstat)=YES %then %do;

 proc means data = single  n nmiss sum mean min max ;
 title "Statistics from &dsetin for regfile"  ;
  ;

 %end; *of  sumstat;

*** macros for fitting and writing equations;
 %macro where; %mend;
** macro for regression on specified variables only;
%macro autoreg;
 proc reg data= %data  outest=modelest outsscp=sscp;
   model %depvar = %indvar ;
  %where ;
 run;
data tempa; set modelest;
 array vars (i)  %indvar ;
 file %modlfile  %newmod ;
 put " * model  fitted   &sysdate &systime   ;"  ;
 put " %eqnvar = " ;
 put intercept  ;
 do over vars;
   if vars=. then vars=0;
   length varname $16;
   call vname(vars,varname);
   put '+ ( ' vars ')  * ' varname ;
 end;
 put '   ; '/;
 put ' * stderr = ' _rmse_ ' ;'/;
```

SAS Program “fitmodx.sas” (cont.)


```
 run;
data tempb; set sscp;
 if _n_ gt 1 then stop;
 file %modlfile  mod ;
 meanval = %depvar /intercept ;
 put " %eqnmvar = " meanval ";" ;
 put " *  based on " intercept comma15. " observations; "// ;
run;
%mend;


 ** macro for automatic addition or deletion of variables according to degree
    of statistical significance;

 * specify approach to building model (forward backward or stepwise);
 %macro select; stepwise %mend;


%macro autostep;
 proc reg data= %data  outest=modelest outsscp=sscp;
   model %depvar = %indvar/ selection=%select
      slentry=&alpha slstay=&alpha ;
  %where ;
 run;
data tempa; set modelest;
 array vars (i)  %indvar ;
 file %modlfile  %newmod ;
 put " * model  fitted   &sysdate &systime   ;"  ;
 put "%eqnvar="@;
 put intercept@;
 do over vars;
   if vars=. then vars=0;
   length varname $16;
   call vname(vars,varname);
   put'+('vars')*'varname@;
 end;
 put '   ; '/;

 put ' * stderr = ' _rmse_ ' ;'/ ;
 run;
data tempb; set sscp;
 if _n_ gt 1 then stop;
 file %modlfile  mod ;
 meanval = %depvar /intercept ;
 put " %eqnmvar = " meanval ";" ;
 put " *  based on " intercept comma15. " observations; "/
     " * with alpha = &alpha for stepwise addition and elimination of
 variables; "// ;
run;
%mend;

 ** macro for printing zero probabilitiy for nonocurring states;
%macro nullout;
  data tempa;
   file %modlfile  %newmod ;
   put " * model  fitted   &sysdate &systime   ;"  ;
   put " %eqnvar = 0; " ;
```

SAS Program “fitmodx.sas” (cont.)

```
   put " %eqnmvar = 0;" ;
  run;
 %mend;

%macro screen;
  proc univariate data = %data noprint;
    var  %depvar;
    output out= screen
       &&loscreen =loval
       &&hiscreen = hival;
    run;
  data screen; set screen;
   call symput ('loval',put(loval,8.3));
   call symput ('hival',put(hival,8.3));
  run;
 %mend;


 ***** macro for fitting specified logistic model;

%macro autolog;
 proc logistic data= %data  outest=modelest covout      ;
   model %depvar = %indvar;       %where;  %weight;
 run;
data tempa; set modelest;
 array vars (i)  %indvar ;
 file %modlfile  %newmod ;
 if _n_ eq 1 then do;
 put " * model  fitted   &sysdate &systime   ;"  ;
 put " %eqnvar =  1/(1+exp( " ;
 put intercpt  ;
 do over vars;
   if vars=. then vars=0;
   length varname $16;
   call vname(vars,varname);
   put '+ ( ' vars ')  * ' varname ;
 end;
 put ' )) ; '/;
 end; * of model parameter values;
 run;
 ** determine mean value of dependent variable;
 proc univariate data=%data noprint;
  var %depvar;
  output out=meandep n=numobs mean=meanval;
 run;
data tempb; set meandep;
 file %modlfile  mod ;
 put " %eqnmvar = " meanval ";" ;
 put " *  based on all " numobs comma13. " observations; "//;
run;
%mend;

 ** stepwise logit with automatic output of equation;
%macro asteplog;
 proc logistic data= %data  outest=modelest covout      ;
   model %depvar = %indvar/ selection= %select
      slentry=&alpha slstay=&alpha ;    %where; %weight;
```

SAS Program “fitmodx.sas” (cont.)


```
     %where;  %weight;
 run;
data tempa; set modelest;
 time=datetime();    * changed from &sysdate &systime;
 array vars (i)  %indvar ;
 file %modlfile  %newmod ;
 if _n_ eq 1 then do;
 put " * model  fitted " time datetime16.  " ;" ;
 put " %eqnvar =  1/(1+exp( " ;
 put intercpt  ;
 do over vars;
   if vars=. then vars=0;
   length varname $16;
   call vname(vars,varname);
   put '+ ( ' vars ')  * ' varname ;
 end;
 put ' )) ; '/
 " * with alpha = &alpha for stepwise addition and elimination of variables; "// ;
 end; * of model parameter values;
 run;
 ** determine mean value of dependent variable;
 proc univariate data=%data noprint;
  var %depvar;
  output out=meandep n=numobs mean=meanval;
 run;
data tempb; set meandep;
 file %modlfile  mod ;
 put " %eqnmvar = " meanval ";" ;
 put " *  based on all " numobs comma13. " observations; "//;
run;
%mend;


%macro data; regfile %mend;
%macro  depvar;  descending nxtstep;  %mend;

***  identify explanatory variables to be considered for transition models;
%macro indvar;
  feb -- dec  single jacknife  knockout othtype;
%mend;

* set where and weight to null for logit modeling;
%macro where; %mend;
%macro weight; %mend;

%if %upcase(&tmodel) eq YES %then %do;

** count number of outcomes in each ending state and
   save as macro variables to control model building;
 data temp; set regfile (keep=  contthru return contstop kill
    contsame contdouble contsingle contko contjk retdouble
           retsingle retko retjk xkill ) end=eof;
    ncontthru+ contthru ;
    nreturn +    return;
    ncontstop+ contstop;
    nkill + kill;
    ncontsame +contsame;
```

SAS Program “fitmodx.sas” (cont.)

```
    ncontdouble +contdouble ;
    ncontsingle +contsingle;
    ncontko+contko;
    ncontjk +contjk;
    nretdouble + retdouble;
    nretsingle + retsingle;
    nretko  + retko;
    nretjk +  retjk ;
    nxkill +  xkill;


   if eof then do;
    output;
    call symput('ncontthru',put(ncontthru,7.));
    call symput('nreturn',put(nreturn,7.));
    call symput('ncontstop',put(ncontstop,7.));
    call symput('nkill',put(nkill,7.));
    call symput('ncontsame',put(ncontsame,7.));
    call symput('ncontdouble',put(ncontdouble,7.));
    call symput('ncontsingle',put(ncontsingle,7.));
    call symput('ncontko',put(ncontko,7.));
    call symput('ncontjk',put(ncontjk,7.));
    call symput('nretdouble',put(nretdouble,7.));
    call symput('nretsingle',put(nretsingle,7.));
    call symput('nretko',put(nretko,7.));
    call symput('nretjk',put(nretjk,7.));
    call symput('nxkill',put(nxkill,7.));

   end;
  run;
 %put " ***** ";
 %put " ncontthru=&ncontthru nreturn = &nreturn ncontstop=&ncontstop nkill=&nkill " ;
 %put " ncontsame=&ncontsame  ncontdouble=&ncontdouble ncontsingle=&ncontsingle";
 %put " ncontko=&ncontko ncontjk=&ncontjk nretdouble=&nretdouble  nretsingle=&nretsingle";
 %put " nretko=&nretko nretjk=&nretjk nxkill=&nxkill";
 %put " ***** ";

%if %upcase(&recs)=NO %then %do;    *** restriction when running for recs;

%if %upcase(&ols)=YES %then %do;

* outcomes on entry into pool  ;
%macro data; regfile %mend;
/***  %macro modlfile; "&path&modout.&intopool..sas" %mend;  ***/
%macro modlfile; "&path&modout..sas" %mend;

%macro where; where pnewpool eq "&intopool"  %mend;
%macro  depvar; contsame %mend;
%macro indvar; feb -- dec  psingle pjacknife  pknockout pothtype %mend;
%macro eqnvar; pcontsame %mend;
%macro eqnmvar; mcontsame %mend;
/***  %macro newmod; new %mend;   ***/
%macro newmod; mod %mend;

  title 'Transition models using key variables from stepwise proc'  ;
  title2 'transitions  to contthru';
 data null;
```

SAS Program “fitmodx.sas” (cont.)


```
   file %modlfile %newmod ;
    put " ***** probabilities of outcomes after entering pool &intopool ; " ;
    put " ***** based on data from &start to &end &rptflowvar; " //;
 run;

%macro newmod; mod %mend;

 %if %eval(&ncontsame) gt 0 %then  &modmacro; %else %nullout;

%macro  depvar; contdouble%mend;
%macro eqnvar; pcontdouble %mend;
%macro eqnmvar; mcontdouble %mend;

/*****

 %if %eval(&ncontdouble) gt 0 %then  &modmacro; %else %nullout;

%macro  depvar; contsingle %mend;
%macro eqnvar; pcontsingle %mend;
%macro eqnmvar; mcontsingle %mend;

 %if %eval(&ncontsingle) gt 0 %then  &modmacro; %else %nullout;

%macro  depvar; contko %mend;
%macro eqnvar; pcontko %mend;
%macro eqnmvar; mcontko %mend;

 %if %eval(&ncontko) gt 0 %then  &modmacro; %else %nullout;

%macro  depvar; contjk %mend;
%macro eqnvar; pcontjk %mend;
%macro eqnmvar; mcontjk %mend;

 %if %eval(&ncontjk) gt 0 %then  &modmacro; %else %nullout;

%macro  depvar; retdouble %mend;
%macro eqnvar; pretdouble %mend;
%macro eqnmvar; mretdouble %mend;

 %if %eval(&nretdouble) gt 0 %then  &modmacro; %else %nullout;

%macro  depvar; retsingle %mend;
%macro eqnvar; pretsingle %mend;
%macro eqnmvar; mretsingle %mend;

 %if %eval(&nretsingle) gt 0 %then  &modmacro; %else %nullout;

%macro  depvar; retko %mend;
%macro eqnvar; pretko %mend;
%macro eqnmvar; mretko %mend;

 %if %eval(&nretko) gt 0 %then  &modmacro; %else %nullout;

%macro  depvar; retjk %mend;
%macro eqnvar; pretjk %mend;
%macro eqnmvar; mretjk %mend;
```

SAS Program “fitmodx.sas” (cont.)

```
 %if %eval(&nretjk) gt 0 %then  &modmacro; %else %nullout;

%macro  depvar; xkill %mend;
%macro eqnvar; pxkill %mend;
%macro eqnmvar; mxkill %mend;

 %if %eval(&nxkill) gt 0 %then  &modmacro; %else %nullout;
*******/

%end; * of logistic or ols fits;

%end;   ****** end of recs macro;

 %if %upcase(&dorest)=YES %then %do;

%macro weight; %mend;
%macro out; %mend;
%macro varfmt; %mend;
%macro data; temp1 %mend;
%macro begstate; %mend;
%macro where;  %mend;

*** catmod fits ;
%MACRO CATMOD;

 * erase dataset with parameters from previous model;
 proc datasets lib=work;
   delete logitparm;
 run;

 ** determine frequencies with nonmissing indep vars;
 data nonmiss; set %data;
  array indvars (i) %indvar;
  missing=0;
  do over indvars;
   if indvars eq . then missing=1;
  end;
  if missing eq 1 then delete;
 run;

 proc freq data = nonmiss; %varfmt;
  tables %depvar /out=frqout;
*title3 individual frequencies of categories to be predicted with nonmissing indep vars;
run;
 proc means n nmiss mean sum min max data = nonmiss;
 *title3 summary statistics for individual explanatory variables;
run;
** initialiaze relevant states to null;
%do i = 1 %to 9;
  %let state&i = %str(0);
%end;

** count parameters and identify associated logits;
 data frqout2; set frqout end=eof;
   retain nvars;
  if _n_ eq 1 then do;
    * count indep vars;
```



```
    length %indvar $16;
    array indvars (i) %indvar;
      nvars=0;
     do over indvars;
      nvars+1;
     end;
 end;
  length logitnm logitch $6;

  ** identify logit if category has more than nvars outcomes;
 if count gt nvars then do;
      numcat+1;  numobs+count;
  logitch='logit'||substr(status,2,1);
  logitnm='logit'||put(numcat,1.);
  * create macro variable with name of logit expression;
  call symput(logitnm,logitch);
  pctnm='pct'||put(numcat,1.);
  call symput(pctnm,put(percent,7.4));
  cntnm='cnt'||put(numcat,1.);
  call symput(cntnm,left(put(count,6.)));
  statenm='state'||put(numcat,1.);
  call symput(statenm,substr(status,2,1));
  end;
  if eof then do;

       nparms=(nvars+1)*(numcat-1);
       if nparms lt 10 then
            call symput('numcoeff',put(nparms,1.));
         else if nparms lt 100 then
            call symput('numcoeff',put(nparms,2.));
              else
            call symput('numcoeff',put(nparms,3.));
       length numexpr $1;
    numexpr=numcat-1;
    call symput('numexpr',put(numexpr,1.));
       call symput('numcats',put(numcat,1.));
       call symput('nvars',put(nvars,2.));
       call symput('numobs',put(numobs,comma9.));
    output;
   end;
  run;
 /* for debugging */

  data frqout2; set frqout2;
    length numobsc $ 9;
   %do n=1 %to &numcats;
        length logit&n $6 ;
        logit&n = "&&logit&n";
     pct&n = &&pct&n;
        cnt&n = &&cnt&n;
       %end;
        numobsc="&numobs";
      run;

%if %upcase(&debug)=YES %then %do;
  proc fsbrowse data=frqout2;
  run;
```

```
 %end;

 PROC CATMOD DATA= %DATA;
  %where;
 DIRECT %INDVAR ;
 MODEL %DEPVAR = %INDVAR /
    ML NODESIGN NOPROFILE maxiter=&maxiter;  %WEIGHT  ;
  %where ;
 %OUT;
 RESPONSE logits / outest=logitparm;

 RUN;

** bring in multinomial logit parameters;

 data parmvals; set logitparm;

   if _type_ eq 'PARMS';
  keep b1-b&numcoeff;
  run;
** erase previous version of model file ???;
/***proc datasets ddname=&path;
 delete %modlfile;
 run;***/



** write equations for transitions;
 data parmvals;
   set parmvals;
   array lcoeff {*} b1-b&numcoeff;
   length varname  $16;
   array lvars (j) %indvar ;
   file %modlfilel  new;
   put "* %begstate transition model  fitted  &sysdate &systime   ;"  ;
   %do i=1 %to &numcats -1;
     put "&&logit&i =  " lcoeff{&i};
           do j=1 to &nvars;
             call vname(lvars,varname);
         put "   + (" lcoeff{&i+(&numcats-1)*j} ') * ' varname ;
       end;
           put "   ;  * for &&pct&i pct of transitions;" ;
    %end;
   put "&&logit&numcats = log(1) ; * for &&pct&numcats pct of transitions;" ;
  put " *  based on &numobs observations; "/;

  totacc=&nunut+&nlow+&nmed+&nhic+&novc+&ndhid+&ndovd+&ndflt+&npdoff;
  mprb1 = &nunut/totacc;
  mprb2 = &nlow/totacc;
  mprb3 = &nmed/totacc;
  mprb4 = &nhic/totacc;
  mprb5 = &novc/totacc;
  mprb6 = &ndhid/totacc;
  mprb7 = &ndovd/totacc;
  mprb8 = &ndflt/totacc;
  mprb9 = &npdoff/totacc;
   put /' * mean probs including obs with nonmissing indep vars;'/;
```



```
   %do i=1 %to 9;
    put "mprb&i = " mprb&i ';' ;
   %end;
run;


%mend;  ** of catmod with writing of equations to flat file;


%if %upcase(&catmod)=YES %then %do;

%macro where;  where intopool eq '&intopool' and substr(doutcome,2,1)
        substr(doutcome,2,1) in  ("&state1","&state2","&state3",
   "&state4","&state5","&state6","&state7","&state8","&state9") %mend;


  * transitions on entering pool ;
%macro data; regfile %mend;
%macro  depvar; doutcome   %mend;
%macro begstate; &&intopool %mend;
%macro modlfile; "&path.&catout..&&intopool" %mend;
%macro newmod; new %mend;   ** to overwrite;
title 'Multinomial Logistic models using key variables'  ;
%macro indvar; feb -- dec  single jacknife  knockout othtype %mend;

  %catmod;


%end;  * of catmod fits;
%end; ** of dorest;
%end;  ** of tmodel ;

 %if %upcase(&times)=YES %then %do;

* average times for activities after arrival for lockage ;

%if %upcase(&recs)=NO %then %do;    *** restriction when running for recs;

  ****** lockage time for double lockages;

%macro data; regfile %mend;
/***  %macro modlfile; "&path.lock.&timeout.&intopool..sas" %mend; **/
%macro modlfile; "&path.lock.&timeout..sas" %mend;

%macro  depvar; plockhrs %mend;
%macro indvar; feb -- dec
        pturnback pexchange   %mend;
%macro eqnvar; dlockhrs %mend;
%macro eqnmvar; mdlckhrs %mend;
/** %macro newmod; new %mend;  **/
%macro newmod; mod %mend;
 data %data; set %data;
   if pnewpool eq "&intopool" ;
 run;

%if %upcase(&screen)=YES %then %screen ;;
```

```
%macro where; where pdouble eq 1 and %depvar ge &&loval and %depvar le &&hival  %mend;

  title 'Activity times using key variables from stepwise proc'  ;
 data null;
   file %modlfile %newmod ;
    put " ***** lockage  times (hours) for double lockages entering pool &intopool ; "  ;
    put " ***** based on data from &start to &end &rptflowvar; " ;
    put " *** with time screen between &loscreen = &&loval and &hiscreen = &&hival  ;" //;
 run;

%macro newmod; mod %mend;

  %autostep ;

* logarithms of average times for activities after arrival for lockage ;
%macro data; regfile %mend;
/*** %macro modlfile; "&path.lock.&timeout.&intopool..sas" %mend; **/
%macro modlfile; "&path.lock.&timeout..sas" %mend;

%macro  depvar; loglckhrs %mend;
%macro indvar; feb -- dec
          pturnback pexchange  %mend;
%macro eqnvar; lgdlckhrs %mend;
%macro eqnmvar; mlgdlckhrs %mend;
 data %data; set %data;
   if pnewpool eq "&intopool" ;
 run;

%if %upcase(&screen)=YES %then %screen ;;

%macro where; where pdouble eq 1 and %depvar ge &&loval and %depvar le &&hival  %mend;

  title 'Logarithms of double lockage times using key variables from stepwise proc'  ;
 data null;
   file %modlfile %newmod ;
    put " ***** log(lockage times) for double lockages entering pool &intopool ; "  ;
    put " ***** based on data from &start to &end &rptflowvar; " ;
    put " *** with screen between &loscreen = &&loval and &hiscreen = &&hival   ;" //;
 run;

%macro newmod; mod %mend;

  %autostep ;

%end;  ** end of recs macro;

 ***** single lockage times;
%macro data; regfile %mend;
/*** %macro modlfile; "&path.lock.&timeout.&intopool..sas" %mend; **/
%macro modlfile; "&path.lock.&timeout..sas" %mend;

%macro  depvar; plockhrs %mend;
%macro indvar; feb -- dec  pjacknife pknockout pothtype
           pturnback pexchange %mend;
%macro eqnvar; slockhrs %mend;
%macro eqnmvar; mslckhrs %mend;
%macro newmod; mod %mend;
```



```
 data %data; set %data;
   if pnewpool eq "&intopool" ;
 run;

%if %upcase(&screen)=YES %then %screen ;;

%macro where; where psingle eq 1 and %depvar ge &&loval and %depvar le &&hival   %mend;

  title 'Activity times using key variables from stepwise proc'  ;
 data null;
   file %modlfile %newmod ;
    put " ***** lockage  times (hours) for single lockages entering pool &intopool ; "  ;
    put " ***** based on data from &start to &end &rptflowvar; " ;
    put " *** with time screen between &loscreen = &&loval and &hiscreen = &&hival   ;" //;
 run;

%macro newmod; mod %mend;

  %autostep ;

* logarithms of average times for activities after arrival for lockage ;
%macro data; regfile %mend;
/*** %macro modlfile; "&path.lock.&timeout.&intopool..sas" %mend; **/
%macro modlfile; "&path.lock.&timeout..sas" %mend;

%macro  depvar; loglckhrs %mend;
%macro indvar; feb -- dec pjacknife pknockout pothtype
           pturnback pexchange   %mend;
%macro eqnvar; lgslckhrs %mend;
%macro eqnmvar; mlgslckhrs %mend;
 data %data; set %data;
   if pnewpool eq "&intopool" ;
 run;

%if %upcase(&screen)=YES %then %screen ;;

%macro where; where psingle eq 1 and %depvar ge &&loval and %depvar le &&hival  %mend;

  title 'Logarithms of single lockage times using key variables from stepwise proc'  ;
 data null;
   file %modlfile %newmod ;
    put " ***** log(lockage times) for single lockages entering pool &intopool ; "  ;
    put " ***** based on data from &start to &end &rptflowvar; " ;
    put " *** with screen between &loscreen = &&loval and &hiscreen = &&hival   ;" //;
 run;

%macro newmod; mod %mend;

  %autostep ;

  /*******  comment out  modeling for combined movements
  title Transit times for all movements;
%macro data; regfile %mend;
%macro  depvar; transithrs %mend;
%macro eqnvar; transithrs %mend;
%macro eqnmvar; mtransithrs %mend;
%macro indvar; feb -- dec  contsame thrusingle thrudoubnite
```

```
      thrusingnite thruothnite contdouble contsingle contother retdouble retsingle
        retother  pcttrandn pcttrannite  waitmin  %mend;

%if %upcase(&screen)=YES %then %screen ;;

%macro where; where %depvar ge &&loval and %depvar le &&hival  %mend;

%macro modlfile; "&path.thru.&timeout.&intopool..sas" %mend;
%macro modlfile; "&path.thru.&timeout..sas" %mend;

 data null;
   file %modlfile %newmod ;
    put " ***** transit times for all movements on entering pool &intopool ; " ;
    put " ***** based on data from &start to &end &rptflowvar; " ;
    put " *** with screen between &loscreen = &&loval and &hiscreen = &&hival   ;" //;
 run;

%macro newmod; mod %mend;

* %autostep ;
           ********** end comment out of modeling for all mocvement *****/

 data regthru; set regfile; where contthru eq 1; run;

%if %upcase(&recs)=NO %then %do;    *** restriction when running for recs;

***************  transit equations for doubles;

%macro data; regthru %mend;
%macro  depvar; transithrs %mend;
%macro eqnvar; nstransithrs %mend;
%macro eqnmvar; mnstransithrs %mend;
/*** %macro modlfile; "&path.thru.&timeout.&intopool..sas" %mend; **/
%macro modlfile; "&path.thru.&timeout..sas" %mend;

%macro indvar; feb -- dec
           %mend;
/*** %macro newmod; new %mend;  ***/
%macro newmod; mod %mend;

%if %upcase(&screen)=YES %then %screen ;;

%macro where; where pdouble eq 1 and %depvar ge &&loval and %depvar le &&hival   %mend;
 data null;
   file %modlfile %newmod ;
    put " ***** transit times for doubles continuing nonstop on entering pool &intopool ; " ;
    put " ***** based on data from &start to &end &rptflowvar; " ;
    put " *** with screen between &loscreen = &&loval and &hiscreen = &&hival   ;" //;
 run;

%macro newmod; mod %mend;
  %autostep ;


%macro data; regthru %mend;
%macro  depvar; logtrnhrs %mend;
%macro eqnvar; lognstrnhrs %mend;
```

SAS Program “fitmodx.sas” (cont.)

A.4 Statistical Models
A.4.2 Simulation Enhancement Level 1

```
%macro eqnmvar; mlognstrnhrs %mend;
/*** %macro modlfile; "&path.thru.&timeout.&intopool..sas" %mend; **/
%macro modlfile; "&path.thru.&timeout..sas" %mend;

%macro indvar; feb -- dec
           %mend;

%if %upcase(&screen)=YES %then %screen ;;

%macro where; where pdouble eq 1 and %depvar ge &&loval and %depvar le &&hival   %mend;
 data null;
   file %modlfile %newmod ;
    put " ***** log(transit times) for doubles continuing straight
                                    through on entering pool &intopool ; " ;
    put " ***** based on data from &start to &end &rptflowvar; " ;
    put " *** with screen between &loscreen = &&loval and &hiscreen = &&hival   ;" //;
 run;

%macro newmod; mod %mend;
  %autostep ;

***************** transit equations for singles;

%macro data; regthru %mend;
%macro  depvar; transithrs %mend;
%macro eqnvar; nstransithrs %mend;
%macro eqnmvar; mnstransithrs %mend;
/*** %macro modlfile; "&path.thru.&timeout.&intopool..sas" %mend; **/
%macro modlfile; "&path.thru.&timeout..sas" %mend;

%macro indvar; feb -- dec  thruother
           %mend;
%macro newmod; mod %mend;

%if %upcase(&screen)=YES %then %screen ;;

%macro where; where psingle eq 1 and %depvar ge &&loval and %depvar le &&hival   %mend;
 data null;
   file %modlfile %newmod ;
    put " ***** transit times for singles continuing nonstop on entering pool &intopool ; " ;
    put " ***** based on data from &start to &end &rptflowvar; " ;
    put " *** with screen between &loscreen = &&loval and &hiscreen = &&hival   ;" //;
 run;

%macro newmod; mod %mend;
  %autostep ;


%macro data; regthru %mend;
%macro  depvar; logtrnhrs %mend;
%macro eqnvar; lognstrnhrs %mend;
%macro eqnmvar; mlognstrnhrs %mend;
/*** %macro modlfile; "&path.thru.&timeout.&intopool..sas" %mend; **/
%macro modlfile; "&path.thru.&timeout..sas" %mend;

%macro indvar; feb -- dec  thruother
           %mend;
```

SAS Program “fitmodx.sas” (cont.)

```
%if %upcase(&screen)=YES %then %screen ;;

%macro where; where psingle eq 1 and %depvar ge &&loval and %depvar le &&hival   %mend;
 data null;
   file %modlfile %newmod ;
    put " ***** log(transit times) for singles continuing straight

                              through on entering pool &intopool ; " ;
    put " ***** based on data from &start to &end &rptflowvar; " ;
    put " *** with screen between &loscreen = &&loval and &hiscreen = &&hival   ;" //;
 run;

%macro newmod; mod %mend;
  %autostep ;

%end;   ****** end of recs macro;

/******** commented out stop equations

 data regstop; set regfile; where contthru ne 1; run;

%macro data; regstop %mend;

%macro  depvar; transithrs %mend;
%macro eqnvar; transithrs %mend;
%macro eqnmvar; mtransithrs %mend;
%macro modlfile; "&path.stop.&timeout.&intopool..sas" %mend;
%macro indvar; feb -- dec
      contsingle contother retdouble retsingle
        retother pcttrandn  pcttrannite  %mend;
%macro newmod; new %mend;

%if %upcase(&screen)=YES %then %screen ;;

%macro where; where %depvar ge &&loval and %depvar le &&hival  %mend;

 data null;
   file %modlfile %newmod ;
    put " ***** activity times for vessels that stop before next lockage

                                        after entering pool &intopool ; " ;
    put " ***** based on data from &start to &end &rptflowvar; " ;
    put " *** with screen between &loscreen = &&loval and &hiscreen = &&hival   ;" //;
 run;
%macro newmod; mod %mend;

  %autostep ;


%macro  depvar; logtrnhrs %mend;
%macro eqnvar; logtrnhrs %mend;
%macro eqnmvar; mlogtrnthrs %mend;
%macro modlfile; "&path.stop.&timeout.&intopool..sas" %mend;
%macro indvar; feb -- dec
      contsingle contother retdouble retsingle
        retother pcttrandn pcttrannite  %mend;
```

SAS Program “fitmodx.sas” (cont.)

A.4 Statistical Models
A.4.2 Simulation Enhancement Level 1

```
%if %upcase(&screen)=YES %then %screen ;;

%macro where; where %depvar ge &&loval and %depvar le &&hival  %mend;

 data null;
   file %modlfile %newmod ;
    put " ***** log(activity times) for vessels that stop before next lockage

                                                                after entering pool &intopool ; " ;
    put " ***** based on data from &start to &end &rptflowvar; " ;
    put " *** with screen between &loscreen = &&loval and &hiscreen = &&hival   ;" //;
 run;
%macro newmod; mod %mend;

  %autostep ;
*****************************/

 %end;  ** of estimating activity times;



%mend; * of fitmod;

 %fitmod(intopool=MI2OU);
 %fitmod(intopool=MI21D);
 %fitmod(intopool=MI21U);
 %fitmod(intopool=MI22D);
 %fitmod(intopool=MI22U);
 %fitmod(intopool=MI24D);
 %fitmod(intopool=MI24U);
 %fitmod(intopool=MI25D);
 %fitmod(intopool=MI25U);
 %fitmod(intopool=MI26D);
```

SAS Program “fitmodx.sas” (cont.)

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 13:12 Friday, June 24, 2005 1

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	5914	0	24410412236	4127563.79	3618336.00	4329186.00
strtlcktime	Start/lockge/time	5914	0	7.8440829E12	1326358293	1266837900	1388488500
arrtime	Arriv/time	5914	0	7.8440669E12	1326355573	1266837900	1388488500
deptime	Leave/lockge/time	5914	0	7.8441053E12	1326362077	1266840600	1388490300
BOW_OVER_SILL	BOW_OVER_SILL	5914	0	7.8440908E12	1326359629	1266838680	1388489400
END_OF_ENTRY	END_OF_ENTRY	5914	0	7.8440942E12	1326360204	1266838980	1388489700
START_OF_EXIT	START_OF_EXIT	5914	0	7.8441016E12	1326361447	1266840300	1388490000
SIGNAL_DATE	SIGNAL_DATE	0	5914	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	5914	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	5306	608	23810.00	4.4873728	0	16.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	5306	608	38531.00	7.2617791	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	5914	.	.	.	.
vess_no		5914	0	4348821385	735343.49	2611.00	8888864.00
vss_hp		5893	21	26633781.00	4519.56	75.0000000	81800.00
frsttime		5914	0	7.8440669E12	1326355573	1266837900	1388488500
lasttime		5914	0	7.8441053E12	1326362077	1266840600	1388490300
newpoolno		5914	0	113383.00	19.1719648	4.0000000	27.0000000
oldpoolno		5914	0	118395.00	20.0194454	5.0000000	28.0000000
waitmin	Wait/before/lockge	5914	0	268103.00	45.3336152	0	985.0000000
lockmin	Wait/lockge/time	5914	0	372938.00	63.0601961	7.0000000	675.0000000
year		5914	0	11836710.00	2001.47	2000.00	2003.00
fly		5914	0	2614.00	0.4420020	0	1.0000000
turnback		5914	0	1507.00	0.2548191	0	1.0000000
exchange		5914	0	1793.00	0.3031789	0	1.0000000
lock		5914	0	112932.00	19.0957051	4.0000000	27.0000000
totmin		5914	0	641041.00	108.3938113	7.0000000	1119.00
month		5914	0	42576.00	7.1991884	2.0000000	12.0000000
day		5914	0	93128.00	15.7470409	1.0000000	31.0000000
sunrise		5914	0	135238944	22867.59	19973.00	27155.00
sunset		5914	0	409591159	69257.89	59760.00	74334.00
sequpstr		5914	0	3810.00	0.6442340	0	1.0000000
seqdstr		5914	0	0	0	0	0
plock		5914	0	118280.00	20.0000000	20.0000000	20.0000000
pempty		5299	615	40361.00	7.6167201	0	50.0000000
pfull		5299	615	23787.00	4.4889602	0	16.0000000
parrtime		5914	0	7.8437319E12	1326298928	1266823800	1388476800
pstrtlcktime		5914	0	7.8437733E12	1326305927	1266823800	1388476800
pdeptime		5914	0	7.8438039E12	1326311104	1266826020	1388479200
birth		5914	0	0	0	0	0
transithrs		5914	0	73052.22	12.3524208	-9.1000000	2501.38
reclock		5914	0	0	0	0	0
i		5914	0	1066037.00	180.2565100	58.0000000	401.0000000
pctpsysdn		5914	0	5746.71	0.9717125	0	91.4920000
pctplckdn		5914	0	3197.61	0.5406853	0	98.0740000
cumdown		5905	9	291120.00	49.3005927	0	39720.00
pctdown		5905	9	2290.09	0.3878224	0	98.0740000
pcttrandn		5892	22	5850.55	0.9929649	0	100.0000000
pctsysdn		5905	9	4932.89	0.8353751	0	89.0200000
pctlckdn		5905	9	2290.09	0.3878224	0	98.0740000
stime		5914	0	260068860	43975.12	60.0000002	86340.00
etime		5914	0	260499540	44047.94	0	86340.00
sdate		5914	0	90784987.00	15350.86	14662.00	16070.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		5914	0	90785241.00	15350.90	14662.00	16070.00
hrsduration		5914	0	6215.63	1.0510033	0.1166667	11.2500000
ndays		5914	0	0	0	0	0
pctday		5914	0	326270.51	55.1691772	0	100.0000000
pctpsysnite		5914	0	269276.75	45.5320844	0	100.0000000
pctplcknite		5914	0	270930.00	45.8116341	0	100.0000000
pcttrannite		5914	0	272612.21	46.0960791	0	100.0000000
pctsysnite		5914	0	263608.28	44.5736015	0	100.0000000
pctlcknite		5914	0	265129.49	44.8308228	0	100.0000000
stage		575	5339	6535.28	11.3657043	8.5400000	27.0700000
flow		565	5349	45394153.10	80343.63	16265.90	263826.81
jan		5914	0	0	0	0	0
feb		5914	0	30.0000000	0.0050727	0	1.0000000
mar		5914	0	586.0000000	0.0990869	0	1.0000000
apr		5914	0	601.0000000	0.1016233	0	1.0000000
may		5914	0	552.0000000	0.0933378	0	1.0000000
jun		5914	0	713.0000000	0.1205614	0	1.0000000
jul		5914	0	757.0000000	0.1280014	0	1.0000000
aug		5914	0	625.0000000	0.1056814	0	1.0000000
sep		5914	0	554.0000000	0.0936760	0	1.0000000
oct		5914	0	648.0000000	0.1095705	0	1.0000000
nov		5914	0	625.0000000	0.1056814	0	1.0000000
dec		5914	0	223.0000000	0.0377071	0	1.0000000
m31day		5914	0	3391.00	0.5733852	0	1.0000000
m30day		5914	0	2493.00	0.4215421	0	1.0000000
qtr1		5914	0	616.0000000	0.1041596	0	1.0000000
qtr2		5914	0	1866.00	0.3155225	0	1.0000000
qtr3		5914	0	1936.00	0.3273588	0	1.0000000
qtr4		5914	0	1496.00	0.2529591	0	1.0000000
psingle		5914	0	1544.00	0.2610754	0	1.0000000
pdouble		5914	0	4162.00	0.7037538	0	1.0000000
pknockout		5914	0	92.0000000	0.0155563	0	1.0000000
pjacknife		5914	0	116.0000000	0.0196145	0	1.0000000
pothtype		5914	0	0	0	0	0
pexchange		5914	0	2225.00	0.3762259	0	1.0000000
pturnback		5914	0	1936.00	0.3273588	0	1.0000000
single		5914	0	5848.00	0.9888400	0	1.0000000
double		5914	0	58.0000000	0.0098072	0	1.0000000
knockout		5914	0	5.0000000	0.000845451	0	1.0000000
jacknife		5914	0	2.0000000	0.000338181	0	1.0000000
othtype		5914	0	1.0000000	0.000169090	0	1.0000000
contthru		5914	0	3810.00	0.6442340	0	1.0000000
return		5914	0	426.0000000	0.0720325	0	1.0000000
contstop		5914	0	1477.00	0.2497464	0	1.0000000
kill		5914	0	201.0000000	0.0339871	0	1.0000000
contsame		5914	0	3810.00	0.6442340	0	1.0000000
contdouble		5914	0	0	0	0	0
contsingle		5914	0	1476.00	0.2495773	0	1.0000000
contko		5914	0	0	0	0	0
contjk		5914	0	1.0000000	0.000169090	0	1.0000000
retdouble		5914	0	50.0000000	0.0084545	0	1.0000000
retsingle		5914	0	370.0000000	0.0625634	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		5914	0	5.0000000	0.000845451	0	1.0000000
retjk		5914	0	1.0000000	0.000169090	0	1.0000000
xkill		5914	0	201.0000000	0.0339871	0	1.0000000
logtrnhrs		5900	14	9617.02	1.6300041	-2.9957323	7.8245992
plockhrs		5914	0	8366.08	1.4146233	0.1147541	12.5245902
loglckhrs		5914	0	911.7298548	0.1541647	-2.1649637	2.5276939
thrusingle		5914	0	580.0000000	0.0980724	0	1.0000000
thruother		5914	0	193.0000000	0.0326344	0	1.0000000
contother		5914	0	1.0000000	0.000169090	0	1.0000000
retother		5914	0	6.0000000	0.0010145	0	1.0000000
thrudoubnite		5914	0	1334.22	0.2256030	0	1.0000000
thrusingnite		5914	0	339.2911600	0.0573708	0	1.0000000
thruothnite		5914	0	90.0542400	0.0152273	0	1.0000000
pdoubnite		5914	0	1867.73	0.3158152	0	1.0000000
psingnite		5914	0	745.8011100	0.1261077	0	1.0000000
pothnite		5914	0	95.7676800	0.0161934	0	1.0000000

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 13:12 Friday, June 24, 2005 4

The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI2OU

pconfig / doutcome Frequency Percent Row Pct Col Pct	1:contsame	3:contsingle	5:contjk	6:retdouble	7:retsingle	8:retko	9:retjk	x:kill	Total
1:double	3037 51.35 72.97 79.71	1069 18.08 25.68 72.43	0 0.00 0.00 0.00	35 0.59 0.84 70.00	9 0.15 0.22 2.43	0 0.00 0.00 0.00	0 0.00 0.00 0.00	12 0.20 0.29 5.97	4162 70.38
2:single	580 9.81 37.56 15.22	394 6.66 25.52 26.69	1 0.02 0.06 100.00	15 0.25 0.97 30.00	359 6.07 23.25 97.03	5 0.08 0.32 100.00	1 0.02 0.06 100.00	189 3.20 12.24 94.03	1544 26.11
3:knockout	83 1.40 90.22 2.18	9 0.15 9.78 0.61	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	92 1.56
4:jacknife	110 1.86 94.83 2.89	4 0.07 3.45 0.27	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.03 1.72 0.54	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	116 1.96
Total	3810 64.42	1476 24.96	1 0.02	50 0.85	370 6.26	5 0.08	1 0.02	201 3.40	5914 100.00

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 13:12 Friday, June 24, 2005 5

The FREQ Procedure

Table 1 of pconfig by nextstep
Controlling for pnewpool=MI20U

pconfig nextstep

Frequency Percent Row Pct Col Pct	1:contth	2:contst	3:return	4:kill	Total
1:double	3037 51.35 72.97 79.71	1069 18.08 25.68 72.38	44 0.74 1.06 10.33	12 0.20 0.29 5.97	4162 70.38
2:single	580 9.81 37.56 15.22	395 6.68 25.58 26.74	380 6.43 24.61 89.20	189 3.20 12.24 94.03	1544 26.11
3:knockout	83 1.40 90.22 2.18	9 0.15 9.78 0.61	0 0.00 0.00 0.00	0 0.00 0.00 0.00	92 1.56
4:jacknife	110 1.86 94.83 2.89	4 0.07 3.45 0.27	2 0.03 1.72 0.47	0 0.00 0.00 0.00	116 1.96
Total	3810 64.42	1477 24.97	426 7.20	201 3.40	5914 100.00

Statistics from water.regfile for regfile 13:12 Friday, June 24, 2005 6

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	85977	0	365397133107	4249940.49	3515664.00	4331559.00
strtlcktime	Start/lockge/time	85977	0	1.1409703E14	1327064545	1262306700	1388533680
arrtime	Arriv/time	85977	0	1.1409675E14	1327061321	1262306700	1388530800
deptime	Leave/lockge/time	85977	0	1.1409725E14	1327067111	1262307720	1388536080
BOW_OVER_SILL	BOW_OVER_SILL	85977	0	1.140971E14	1327065374	1262307000	1388534700
END_OF_ENTRY	END_OF_ENTRY	85977	0	1.1409714E14	1327065848	1262307060	1388535000
START_OF_EXIT	START_OF_EXIT	85977	0	1.140972E14	1327066583	1262307660	1388535600
SIGNAL_DATE	SIGNAL_DATE	0	85977	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	85977	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	74681	11296	464454.00	6.2191722	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	74681	11296	245302.00	3.2846641	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	85977	.	.	.	.
vess_no		85977	0	69288333012	805893.82	2611.00	8888864.00
vss_hp		85271	706	332133565	3895.04	60.0000000	81800.00
frsttime		85977	0	1.1409675E14	1327061321	1262306700	1388530800
lasttime		85977	0	1.1409725E14	1327067111	1262307720	1388536080
newpoolno		85977	0	2150101.00	25.0078626	1.0000000	28.0000000
oldpoolno		85977	0	2153026.00	25.0418833	1.0000000	28.0000000
waitmin	Wait/before/lockge	85977	0	4620512.00	53.7412564	0	7423.00
lockmin	Wait/lockge/time	85977	0	3676735.00	42.7641695	4.0000000	1823.00
year		85977	0	172082972	2001.50	2000.00	2003.00
fly		85977	0	36690.00	0.4267420	0	1.0000000
turnback		85977	0	26770.00	0.3113623	0	1.0000000
exchange		85977	0	22516.00	0.2618840	0	1.0000000
lock		85977	0	2108575.00	24.5248729	1.0000000	27.0000000
totmin		85977	0	8297247.00	96.5054259	4.0000000	7490.00
month		85977	0	613697.00	7.1379206	1.0000000	12.0000000
day		85977	0	1348329.00	15.6824383	1.0000000	31.0000000
sunrise		85276	701	1975511316	23166.09	19414.00	27155.00
sunset		85276	701	5792228885	67923.32	59694.00	75152.00
sequpstr		85977	0	14614.00	0.1699757	0	1.0000000
seqdstr		85977	0	20442.00	0.2377613	0	1.0000000
plock		85977	0	2017136.00	23.4613443	1.0000000	27.0000000
pempty		75036	10941	193639.00	2.5806146	0	50.0000000
pfull		75036	10941	516650.00	6.8853617	0	28.0000000
parrtime		85977	0	1.1407226E14	1326776489	1262304600	1388521920
pstrtlcktime		85977	0	1.1407272E14	1326781774	1262304600	1388521920
pdeptime		85977	0	1.1407299E14	1326784970	1262305620	1388523540
birth		85977	0	0	0	0	0
transithrs		85977	0	6599960.80	76.7642602	-249.0333333	8099.42
reclock		85977	0	0	0	0	0
i		85977	0	19738750.00	229.5817486	58.0000000	401.0000000
pctpsysdn		80261	5716	78589.90	0.9791791	0	98.9510000
pctplckdn		80261	5716	37608.21	0.4685738	0	98.3000000
cumdown		85209	768	3350160.00	39.3169736	0	107520.00
pctdown		85209	768	32044.51	0.3760696	0	98.3000000
pcttrandn		84956	1021	113138.48	1.3317303	0	100.0000000
pctsysdn		85209	768	73645.06	0.8642873	0	98.6320000
pctlckdn		85209	768	32044.51	0.3760696	0	98.3000000
stime		85977	0	3804415920	44249.23	0	86340.00
etime		85977	0	3814808820	44370.11	0	86340.00
sdate		85977	0	1320523426	15359.03	14610.00	16070.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		85977	0	1320525859	15359.06	14610.00	16071.00
hrsduration		85977	0	61278.92	0.7127362	0.0666667	30.3833333
ndays		85977	0	1.0000000	0.000011631	0	1.0000000
pctday		85959	18	4695747.93	54.6277636	0	100.0000000
pctpsysnite		85927	50	3875798.58	45.1057127	0	100.0000000
pctplcknite		85956	21	3886391.89	45.2137359	0	100.0000000
pcttrannite		85411	566	4039538.85	47.2952998	0	100.0000000
pctsysnite		85895	82	3880027.20	45.1717469	0	100.0000000
pctlcknite		85959	18	3900152.07	45.3722364	0	100.0000000
stage		40318	45659	866798.93	21.4990558	8.3500000	33.0800000
flow		8221	77756	677628808	82426.57	16077.99	306262.78
jan		85977	0	3062.00	0.0356142	0	1.0000000
feb		85977	0	3419.00	0.0397664	0	1.0000000
mar		85977	0	6941.00	0.0807309	0	1.0000000
apr		85977	0	7568.00	0.0880235	0	1.0000000
may		85977	0	7240.00	0.0842086	0	1.0000000
jun		85977	0	8513.00	0.0990149	0	1.0000000
jul		85977	0	8681.00	0.1009689	0	1.0000000
aug		85977	0	8038.00	0.0934901	0	1.0000000
sep		85977	0	7730.00	0.0899078	0	1.0000000
oct		85977	0	8626.00	0.1003292	0	1.0000000
nov		85977	0	9385.00	0.1091571	0	1.0000000
dec		85977	0	6774.00	0.0787885	0	1.0000000
m31day		85977	0	49362.00	0.5741303	0	1.0000000
m30day		85977	0	33196.00	0.3861033	0	1.0000000
qtr1		85977	0	13422.00	0.1561115	0	1.0000000
qtr2		85977	0	23321.00	0.2712470	0	1.0000000
qtr3		85977	0	24449.00	0.2843667	0	1.0000000
qtr4		85977	0	24785.00	0.2882748	0	1.0000000
psingle		85977	0	66168.00	0.7696012	0	1.0000000
pdouble		85977	0	15912.00	0.1850728	0	1.0000000
pknockout		85977	0	1445.00	0.0168068	0	1.0000000
pjacknife		85977	0	529.0000000	0.0061528	0	1.0000000
pothtype		85977	0	1923.00	0.0223664	0	1.0000000
pexchange		85977	0	23634.00	0.2748875	0	1.0000000
pturnback		85977	0	27782.00	0.3231329	0	1.0000000
single		85977	0	85952.00	0.9997092	0	1.0000000
double		85977	0	18.0000000	0.000209358	0	1.0000000
knockout		85977	0	5.0000000	0.000058155	0	1.0000000
jacknife		85977	0	2.0000000	0.000023262	0	1.0000000
othtype		85977	0	0	0	0	0
contthru		1544	84433	580.0000000	0.3756477	0	1.0000000
return		1544	84433	380.0000000	0.2461140	0	1.0000000
contstop		1544	84433	395.0000000	0.2558290	0	1.0000000
kill		1544	84433	189.0000000	0.1224093	0	1.0000000
contsame		1544	84433	580.0000000	0.3756477	0	1.0000000
contdouble		1544	84433	0	0	0	0
contsingle		1544	84433	394.0000000	0.2551813	0	1.0000000
contko		1544	84433	0	0	0	0
contjk		1544	84433	1.0000000	0.000647668	0	1.0000000
retdouble		1544	84433	15.0000000	0.0097150	0	1.0000000
retsingle		1544	84433	359.0000000	0.2325130	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1544	84433	5.0000000	0.0032383	0	1.0000000
retjk		1544	84433	1.0000000	0.000647668	0	1.0000000
xkill		1544	84433	189.0000000	0.1224093	0	1.0000000
logtrnhrs		1535	84442	3119.38	2.0321664	-2.9957323	7.8245992
plockhrs		1544	84433	707.0655738	0.4579440	0.1147541	12.5245902
loglckhrs		1544	84433	-1398.26	-0.9056067	-2.1649637	2.5276939
thrusingle		1544	84433	580.0000000	0.3756477	0	1.0000000
thruother		1544	84433	0	0	0	0
contother		1544	84433	1.0000000	0.000647668	0	1.0000000
retother		1544	84433	6.0000000	0.0038860	0	1.0000000
thrudoubnite		1544	84433	0	0	0	0
thrusingnite		1544	84433	339.2911600	0.2197482	0	1.0000000
thruothnite		1544	84433	0	0	0	0
pdoubnite		1544	84433	0	0	0	0
psingnite		1544	84433	745.8011100	0.4830318	0	1.0000000
pothnite		1544	84433	0	0	0	0

Transition models using key variables from stepwise proc transitions to contthru 13:12 Friday, June 24, 2005 9

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 1

Variable psingle Entered: R-Square = 0.1112 and C(p) = 81.7130

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	150.73533	150.73533	739.71	<.0001
Error	5912	1204.73305	0.20378		
Corrected Total	5913	1355.46838			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.73913	0.00683	2387.39130	11715.7	<.0001
psingle	-0.36348	0.01336	150.73533	739.71	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pjacknife Entered: R-Square = 0.1151 and C(p) = 57.7892

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	155.94774	77.97387	384.24	<.0001
Error	5911	1199.52064	0.20293		
Corrected Total	5913	1355.46838			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.73343	0.00691	2288.29337	11276.3	<.0001
psingle	-0.35778	0.01338	145.01000	714.58	<.0001
pjacknife	0.21485	0.04239	5.21241	25.69	<.0001

Bounds on condition number: 1.0071, 4.0285

Stepwise Selection: Step 3

Transition models using key variables from stepwise proc transitions to contthru 13:12 Friday, June 24, 2005 10

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 3

Variable dec Entered: R-Square = 0.1188 and C(p) = 34.2364

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	161.08555	53.69518	265.69	<.0001
Error	5910	1194.38283	0.20210		
Corrected Total	5913	1355.46838			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.73562	0.00691	2292.86214	11345.5	<.0001
dec	-0.15832	0.03140	5.13781	25.42	<.0001
psingle	-0.34326	0.01366	127.55182	631.15	<.0001
pjacknife	0.21402	0.04231	5.17209	25.59	<.0001

Bounds on condition number: 1.0539, 9.3241

Stepwise Selection: Step 4

Variable pknockout Entered: R-Square = 0.1209 and C(p) = 22.4446

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	163.85863	40.96466	203.14	<.0001
Error	5909	1191.60975	0.20166		
Corrected Total	5913	1355.46838			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.73185	0.00697	2221.00368	11013.6	<.0001
dec	-0.15980	0.03137	5.23324	25.95	<.0001
psingle	-0.33933	0.01369	123.89895	614.39	<.0001
pjacknife	0.21781	0.04227	5.35369	26.55	<.0001
pknockout	0.17554	0.04734	2.77308	13.75	0.0002

Transition models using key variables from stepwise proc transitions to contthru 13:12 Friday, June 24, 2005 11

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 4

Bounds on condition number: 1.0603, 16.486

Stepwise Selection: Step 5

Variable nov Entered: R-Square = 0.1221 and C(p) = 16.4771

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	165.46063	33.09213	164.29	<.0001
Error	5908	1190.00775	0.20142		
Corrected Total	5913	1355.46838			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.73631	0.00715	2137.76437	10613.3	<.0001
nov	-0.05424	0.01923	1.60200	7.95	0.0048
dec	-0.16835	0.03150	5.75435	28.57	<.0001
psingle	-0.33383	0.01382	117.53062	583.50	<.0001
pjacknife	0.22323	0.04229	5.61206	27.86	<.0001
pknockout	0.17842	0.04732	2.86366	14.22	0.0002

Bounds on condition number: 1.0818, 25.908

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	psingle		1	0.1112	0.1112	81.7130	739.71	<.0001
2	pjacknife		2	0.0038	0.1151	57.7892	25.69	<.0001
3	dec		3	0.0038	0.1188	34.2364	25.42	<.0001
4	pknockout		4	0.0020	0.1209	22.4446	13.75	0.0002
5	nov		5	0.0012	0.1221	16.4771	7.95	0.0048

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0967 and C(p) = 137.1150

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	98.52321	98.52321	445.56	<.0001
Error	4160	919.87162	0.22112		
Corrected Total	4161	1018.39483			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.89405	0.00904	9696.77074	43852.4	<.0001
pturnback	-0.32246	0.01528	98.52321	445.56	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable sep Entered: R-Square = 0.1090 and C(p) = 81.0668

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	110.95521	55.47760	254.27	<.0001
Error	4159	907.43962	0.21819		
Corrected Total	4161	1018.39483			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.87622	0.00929	8900.06328	40791.0	<.0001
sep	0.20079	0.02660	12.43200	56.98	<.0001
pturnback	-0.31784	0.01519	95.56717	438.01	<.0001

Bounds on condition number: 1.0016, 4.0065

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 13

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable oct Entered: R-Square = 0.1216 and C(p) = 23.0104

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	123.81730	41.27243	191.83	<.0001
Error	4158	894.57753	0.21515		
Corrected Total	4161	1018.39483			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.85304	0.00970	7852.51813	36498.5	<.0001
sep	0.22195	0.02656	15.02970	69.86	<.0001
oct	0.18391	0.02379	12.86209	59.78	<.0001
pturnback	-0.31080	0.01511	91.05221	423.21	<.0001

Bounds on condition number: 1.0139, 9.0947

Stepwise Selection: Step 4

Variable jun Entered: R-Square = 0.1232 and C(p) = 17.5082

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	125.42404	31.35601	145.97	<.0001
Error	4157	892.97079	0.21481		
Corrected Total	4161	1018.39483			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.86278	0.01033	6991.19275	32545.7	<.0001
jun	-0.05857	0.02142	1.60674	7.48	0.0063
sep	0.21226	0.02677	13.50515	62.87	<.0001
oct	0.17421	0.02403	11.29097	52.56	<.0001
pturnback	-0.31098	0.01510	91.15370	424.34	<.0001

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0364, 16.434

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0967	0.0967	137.115	445.56	<.0001
2	sep		2	0.0122	0.1090	81.0668	56.98	<.0001
3	oct		3	0.0126	0.1216	23.0104	59.78	<.0001
4	jun		4	0.0016	0.1232	17.5082	7.48	0.0063

Logarithms of double lockage times using key variables from stepwise proc 15
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.1581 and C(p) = 209.1134

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	33.82566	33.82566	781.13	<.0001
Error	4160	180.14249	0.04330		
Corrected Total	4161	213.96816			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.61557	0.00400	1024.23240	23652.4	<.0001
pturnback	-0.18894	0.00676	33.82566	781.13	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable oct Entered: R-Square = 0.1742 and C(p) = 127.5714

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	37.27175	18.63588	438.64	<.0001
Error	4159	176.69640	0.04249		
Corrected Total	4161	213.96816			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.60460	0.00415	902.92855	21252.7	<.0001
oct	0.09469	0.01051	3.44609	81.11	<.0001
pturnback	-0.18557	0.00671	32.52764	765.62	<.0001

Bounds on condition number: 1.0031, 4.0125

Stepwise Selection: Step 3

Logarithms of double lockage times using key variables from stepwise proc 16
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable sep Entered: R-Square = 0.1924 and C(p) = 35.0508

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	41.17070	13.72357	330.23	<.0001
Error	4158	172.79745	0.04156		
Corrected Total	4161	213.96816			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.59336	0.00426	805.13978	19374.0	<.0001
sep	0.11305	0.01167	3.89895	93.82	<.0001
oct	0.10512	0.01045	4.20259	101.13	<.0001
pturnback	-0.18260	0.00664	31.42732	756.23	<.0001

Bounds on condition number: 1.0139, 9.0947

Stepwise Selection: Step 4

Variable jun Entered: R-Square = 0.1945 and C(p) = 26.0032

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	41.62642	10.40660	251.01	<.0001
Error	4157	172.34174	0.04146		
Corrected Total	4161	213.96816			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.59855	0.00454	721.80606	17410.5	<.0001
jun	-0.03119	0.00941	0.45571	10.99	0.0009
sep	0.10789	0.01176	3.48888	84.15	<.0001
oct	0.09996	0.01056	3.71733	89.66	<.0001
pturnback	-0.18269	0.00663	31.45902	758.81	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0364, 16.434

Stepwise Selection: Step 5

Variable pexchange Entered: R-Square = 0.1959 and C(p) = 21.1405

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	41.90950	8.38190	202.46	<.0001
Error	4156	172.05865	0.04140		
Corrected Total	4161	213.96816			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.58627	0.00653	334.09370	8069.88	<.0001
jun	-0.03250	0.00942	0.49316	11.91	0.0006
sep	0.10912	0.01176	3.56353	86.08	<.0001
oct	0.10029	0.01055	3.74138	90.37	<.0001
pturnback	-0.17034	0.00814	18.13758	438.11	<.0001
pexchange	0.02086	0.00798	0.28309	6.84	0.0090

Bounds on condition number: 1.5159, 30.679

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.1581	0.1581	209.113	781.13	<.0001
2	oct		2	0.0161	0.1742	127.571	81.11	<.0001
3	sep		3	0.0182	0.1924	35.0508	93.82	<.0001
4	jun		4	0.0021	0.1945	26.0032	10.99	0.0009
5	pexchange		5	0.0013	0.1959	21.1405	6.84	0.0090

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 18

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable feb Entered: R-Square = 0.0406 and C(p) = 17.1080

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	13.19604	13.19604	65.27	<.0001
Error	1541	311.53437	0.20216		
Corrected Total	1542	324.73041			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.44998	0.01149	309.99873	1533.40	<.0001
feb	1.05275	0.13030	13.19604	65.27	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pturnback Entered: R-Square = 0.0522 and C(p) = 0.3684

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	16.94773	8.47386	42.40	<.0001
Error	1540	307.78268	0.19986		
Corrected Total	1542	324.73041			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.47834	0.01317	263.73881	1319.63	<.0001
feb	1.04344	0.12958	12.95994	64.85	<.0001
pturnback	-0.11426	0.02637	3.75169	18.77	<.0001

Bounds on condition number: 1.0003, 4.0011

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 19

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	feb		1	0.0406	0.0406	17.1080	65.27	<.0001
2	pturnback		2	0.0116	0.0522	0.3684	18.77	<.0001

Logarithms of single lockage times using key variables from stepwise proc 20
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0407 and C(p) = 56.6449

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	12.78019	12.78019	65.47	<.0001
Error	1542	301.00967	0.19521		
Corrected Total	1543	313.78986			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.85344	0.01296	846.35879	4335.69	<.0001
pturnback	-0.21084	0.02606	12.78019	65.47	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable sep Entered: R-Square = 0.0514 and C(p) = 40.8786

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	16.12960	8.06480	41.75	<.0001
Error	1541	297.66027	0.19316		
Corrected Total	1543	313.78986			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.87219	0.01366	787.87336	4078.85	<.0001
sep	0.13876	0.03332	3.34941	17.34	<.0001
pturnback	-0.20771	0.02593	12.39331	64.16	<.0001

Bounds on condition number: 1.0008, 4.0034

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 21
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.0583 and C(p) = 31.4714

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	18.28016	6.09339	31.75	<.0001
Error	1540	295.50971	0.19189		
Corrected Total	1543	313.78986			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.85677	0.01437	682.18952	3555.12	<.0001
jul	-0.12257	0.03661	2.15056	11.21	0.0008
sep	0.12382	0.03351	2.61937	13.65	0.0002
pturnback	-0.20990	0.02585	12.64703	65.91	<.0001

Bounds on condition number: 1.0189, 9.1168

Stepwise Selection: Step 4

Variable jun Entered: R-Square = 0.0644 and C(p) = 23.2544

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	20.20635	5.05159	26.48	<.0001
Error	1539	293.58352	0.19076		
Corrected Total	1543	313.78986			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.84342	0.01493	608.72620	3191.02	<.0001
jun	-0.12956	0.04077	1.92619	10.10	0.0015
jul	-0.13661	0.03677	2.63291	13.80	0.0002
sep	0.10979	0.03370	2.02435	10.61	0.0011
pturnback	-0.20678	0.02580	12.25661	64.25	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0367, 16.414

Stepwise Selection: Step 5

Variable feb Entered: R-Square = 0.0698 and C(p) = 16.1835

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	21.91644	4.38329	23.10	<.0001
Error	1538	291.87342	0.18977		
Corrected Total	1543	313.78986			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.84808	0.01497	608.85162	3208.29	<.0001
feb	0.37973	0.12650	1.71010	9.01	0.0027
jun	-0.12531	0.04069	1.79965	9.48	0.0021
jul	-0.13224	0.03671	2.46327	12.98	0.0003
sep	0.11417	0.03365	2.18490	11.51	0.0007
pturnback	-0.20546	0.02573	12.09651	63.74	<.0001

Bounds on condition number: 1.0386, 25.562

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0407	0.0407	56.6449	65.47	<.0001
2	sep		2	0.0107	0.0514	40.8786	17.34	<.0001
3	jul		3	0.0069	0.0583	31.4714	11.21	0.0008
4	jun		4	0.0061	0.0644	23.2544	10.10	0.0015
5	feb		5	0.0054	0.0698	16.1835	9.01	0.0027

Logarithms of single lockage times using key variables from stepwise proc 23
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable sep Entered: R-Square = 0.0023 and C(p) = 10.9313

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	15.04441	15.04441	7.02	0.0081
Error	3035	6508.38025	2.14444		
Corrected Total	3036	6523.42466			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.20863	0.02767	49595	23127.3	<.0001
sep	0.26240	0.09907	15.04441	7.02	0.0081

Bounds on condition number: 1, 1

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	sep		1	0.0023	0.0023	10.9313	7.02	0.0081

Logarithms of single lockage times using key variables from stepwise proc 24
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable nov Entered: R-Square = 0.0042 and C(p) = 27.7658

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.83175	0.83175	12.76	0.0004
Error	3034	197.72030	0.06517		
Corrected Total	3035	198.55205			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.40949	0.00481	5596.39706	85876.2	<.0001
nov	-0.06398	0.01791	0.83175	12.76	0.0004

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable mar Entered: R-Square = 0.0084 and C(p) = 16.9402

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	1.66053	0.83026	12.79	<.0001
Error	3033	196.89152	0.06492		
Corrected Total	3035	198.55205			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.41564	0.00510	5002.05683	77053.8	<.0001
mar	-0.05398	0.01511	0.82878	12.77	0.0004
nov	-0.07013	0.01796	0.99019	15.25	<.0001

Bounds on condition number: 1.0093, 4.0371

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 25
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable dec Entered: R-Square = 0.0117 and C(p) = 8.8203

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	2.31448	0.77149	11.92	<.0001
Error	3032	196.23758	0.06472		
Corrected Total	3035	198.55205			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.41762	0.00513	4941.74073	76353.2	<.0001
mar	-0.05597	0.01510	0.88934	13.74	0.0002
nov	-0.07211	0.01794	1.04578	16.16	<.0001
dec	-0.13394	0.04214	0.65395	10.10	0.0015

Bounds on condition number: 1.011, 9.0726

Stepwise Selection: Step 4

Variable sep Entered: R-Square = 0.0139 and C(p) = 3.8937

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	2.76206	0.69052	10.69	<.0001
Error	3031	195.78999	0.06460		
Corrected Total	3035	198.55205			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.41322	0.00539	4437.73718	68700.0	<.0001
mar	-0.05156	0.01518	0.74564	11.54	0.0007
sep	0.04572	0.01737	0.44759	6.93	0.0085
nov	-0.06771	0.01800	0.91392	14.15	0.0002
dec	-0.12953	0.04213	0.61066	9.45	0.0021

Logarithms of single lockage times using key variables from stepwise proc 26
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0235, 16.269

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	nov		1	0.0042	0.0042	27.7658	12.76	0.0004
2	mar		2	0.0042	0.0084	16.9402	12.77	0.0004
3	dec		3	0.0033	0.0117	8.8203	10.10	0.0015
4	sep		4	0.0023	0.0139	3.8937	6.93	0.0085

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Logarithms of single lockage times using key variables from stepwise proc                    27
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                                The REG Procedure
                                  Model: MODEL1
                          Dependent Variable: transithrs

                 No variable met the 0.0100 significance level for entry into the model.
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Logarithms of single lockage times using key variables from stepwise proc 28
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

No variable met the 0.0100 significance level for entry into the model.

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	5870	0	24446910845	4164720.76	3980886.00	4286852.00
strtlcktime	Start/lockge/time	5870	0	7.7907446E12	1327213726	1267403400	1388476800
arrtime	Arriv/time	5870	0	7.790706E12	1327207150	1267403400	1388476800
deptime	Leave/lockge/time	5870	0	7.790779E12	1327219598	1267409580	1388479200
BOW_OVER_SILL	BOW_OVER_SILL	5870	0	7.7907655E12	1327217294	1267407420	1388478000
END_OF_ENTRY	END_OF_ENTRY	5870	0	7.7907689E12	1327217867	1267408080	1388478300
START_OF_EXIT	START_OF_EXIT	5870	0	7.790771E12	1327218229	1267408380	1388478780
SIGNAL_DATE	SIGNAL_DATE	0	5870	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	5870	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	5409	461	62007.00	11.4636717	0	15.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	5409	461	3693.00	0.6827510	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	5870	.	.	.	.
vess_no		5870	0	4311390495	734478.79	11040.00	8888864.00
vss_hp		5851	19	26713781.00	4565.68	75.0000000	81800.00
frsttime		5870	0	7.790706E12	1327207150	1267403400	1388476800
lasttime		5870	0	7.790779E12	1327219598	1267409580	1388479200
newpoolno		5870	0	128252.00	21.8487223	12.0000000	27.0000000
oldpoolno		5870	0	123238.00	20.9945486	13.0000000	26.0000000
waitmin	Wait/before/lockge	5870	0	643368.00	109.6027257	0	5955.00
lockmin	Wait/lockge/time	5870	0	574396.00	97.8528109	8.0000000	653.0000000
year		5870	0	11748621.00	2001.47	2000.00	2003.00
fly		5870	0	1755.00	0.2989779	0	1.0000000
turnback		5870	0	1931.00	0.3289608	0	1.0000000
exchange		5870	0	2184.00	0.3720613	0	1.0000000
lock		5870	0	122810.00	20.9216354	12.0000000	26.0000000
totmin		5870	0	1217764.00	207.4555366	9.0000000	6060.00
month		5870	0	44458.00	7.5737649	1.0000000	12.0000000
day		5870	0	91883.00	15.6529813	1.0000000	31.0000000
sunrise		5870	0	135224398	23036.52	20119.00	27155.00
sunset		5870	0	404860387	68971.11	60000.00	74318.00
sequpstr		5870	0	0	0	0	0
seqdstr		5870	0	4220.00	0.7189097	0	1.0000000
plock		5870	0	117400.00	20.0000000	20.0000000	20.0000000
pempty		5389	481	3185.00	0.5910187	0	50.0000000
pfull		5389	481	60958.00	11.3115606	0	16.0000000
parrtime		5870	0	7.7904241E12	1327159128	1267299900	1388416440
pstrtlcktime		5870	0	7.7904708E12	1327167091	1267301700	1388416440
pdeptime		5870	0	7.7905036E12	1327172668	1267305300	1388417520
birth		5870	0	0	0	0	0
transithrs		5870	0	56226.00	9.5785349	-71.5000000	3171.67
reclock		5870	0	0	0	0	0
i		5870	0	626690.00	106.7614991	101.0000000	295.0000000
pctpsysdn		5870	0	5701.67	0.9713230	0	95.9480000
pctplckdn		5870	0	3863.20	0.6581264	0	95.9480000
cumdown		5869	1	378420.00	64.4777645	0	29400.00
pctdown		5869	1	2262.17	0.3854445	0	84.2110000
pcttrandn		5853	17	3398.31	0.5806091	0	100.0000000
pctsysdn		5869	1	3310.35	0.5640392	0	82.3940000
pctlckdn		5869	1	2262.17	0.3854445	0	84.2110000
stime		5870	0	260046360	44300.91	60.0000002	86340.00
etime		5870	0	257530920	43872.39	60.0000002	86340.00
sdate		5870	0	90167645.00	15360.76	14669.00	16070.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		5870	0	90168073.00	15360.83	14669.00	16070.00
hrsduration		5870	0	9573.27	1.6308802	0.1333333	10.8833333
ndays		5870	0	0	0	0	0
pctday		5870	0	320874.31	54.6634266	0	100.0000000
pctpsysnite		5870	0	264798.18	45.1104233	0	100.0000000
pctplcknite		5870	0	262519.29	44.7221956	0	100.0000000
pcttrannite		5870	0	267162.81	45.5132562	0	100.0000000
pctsysnite		5870	0	264331.74	45.0309612	0	100.0000000
pctlcknite		5870	0	266125.69	45.3365734	0	100.0000000
stage		5806	64	74194.79	12.7789855	8.5800000	31.3100000
flow		5798	72	506593345	87373.81	16077.99	282860.41
jan		5870	0	1.0000000	0.000170358	0	1.0000000
feb		5870	0	13.0000000	0.0022147	0	1.0000000
mar		5870	0	392.0000000	0.0667802	0	1.0000000
apr		5870	0	558.0000000	0.0950596	0	1.0000000
may		5870	0	509.0000000	0.0867121	0	1.0000000
jun		5870	0	705.0000000	0.1201022	0	1.0000000
jul		5870	0	742.0000000	0.1264055	0	1.0000000
aug		5870	0	671.0000000	0.1143101	0	1.0000000
sep		5870	0	551.0000000	0.0938671	0	1.0000000
oct		5870	0	627.0000000	0.1068143	0	1.0000000
nov		5870	0	755.0000000	0.1286201	0	1.0000000
dec		5870	0	346.0000000	0.0589438	0	1.0000000
m31day		5870	0	3288.00	0.5601363	0	1.0000000
m30day		5870	0	2569.00	0.4376491	0	1.0000000
qtr1		5870	0	406.0000000	0.0691652	0	1.0000000
qtr2		5870	0	1772.00	0.3018739	0	1.0000000
qtr3		5870	0	1964.00	0.3345826	0	1.0000000
qtr4		5870	0	1728.00	0.2943782	0	1.0000000
psingle		5870	0	1296.00	0.2207836	0	1.0000000
pdouble		5870	0	4358.00	0.7424191	0	1.0000000
pknockout		5870	0	126.0000000	0.0214651	0	1.0000000
pjacknife		5870	0	86.0000000	0.0146508	0	1.0000000
pothtype		5870	0	4.0000000	0.000681431	0	1.0000000
pexchange		5870	0	2179.00	0.3712095	0	1.0000000
pturnback		5870	0	1952.00	0.3325383	0	1.0000000
single		5870	0	1227.00	0.2090290	0	1.0000000
double		5870	0	4446.00	0.7574106	0	1.0000000
knockout		5870	0	115.0000000	0.0195911	0	1.0000000
jacknife		5870	0	79.0000000	0.0134583	0	1.0000000
othtype		5870	0	3.0000000	0.000511073	0	1.0000000
contthru		5870	0	4220.00	0.7189097	0	1.0000000
return		5870	0	403.0000000	0.0686542	0	1.0000000
contstop		5870	0	1146.00	0.1952300	0	1.0000000
kill		5870	0	101.0000000	0.0172061	0	1.0000000
contsame		5870	0	4220.00	0.7189097	0	1.0000000
contdouble		5870	0	856.0000000	0.1458262	0	1.0000000
contsingle		5870	0	278.0000000	0.0473595	0	1.0000000
contko		5870	0	9.0000000	0.0015332	0	1.0000000
contjk		5870	0	1.0000000	0.000170358	0	1.0000000
retdouble		5870	0	45.0000000	0.0076661	0	1.0000000
retsingle		5870	0	357.0000000	0.0608177	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		5870	0	0	0	0	0
retjk		5870	0	1.0000000	0.000170358	0	1.0000000
xkill		5870	0	103.0000000	0.0175468	0	1.0000000
logtrnhrs		5854	16	5954.19	1.0171155	-4.0943446	8.0620125
plockhrs		5870	0	8944.38	1.5237440	0.1147541	27.6885246
loglckhrs		5870	0	1433.51	0.2442093	-2.1649637	3.3210181
thrusingle		5870	0	500.0000000	0.0851789	0	1.0000000
thruother		5870	0	186.0000000	0.0316865	0	1.0000000
contother		5870	0	12.0000000	0.0020443	0	1.0000000
retother		5870	0	1.0000000	0.000170358	0	1.0000000
thrudoubnite		5870	0	1594.93	0.2717088	0	1.0000000
thrusingnite		5870	0	226.6358000	0.0386092	0	1.0000000
thruothnite		5870	0	75.7076400	0.0128974	0	1.0000000
pdoubnite		5870	0	1993.34	0.3395809	0	1.0000000
psingnite		5870	0	540.4901400	0.0920767	0	1.0000000
pothnite		5870	0	91.3631400	0.0155644	0	1.0000000

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The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI21D

pconfig / doutcome Frequency Percent Row Pct Col Pct	1:contsame	2:contdouble	3:contsingle	4:contko	5:contjk	6:retdouble	7:retsingle	9:retjk	x:kill	Total
1:double	3534 60.20 81.09 83.74	758 12.91 17.39 88.55	6 0.10 0.14 2.16	1 0.02 0.02 11.11	0 0.00 0.00 0.00	40 0.68 0.92 88.89	6 0.10 0.14 1.68	0 0.00 0.00 0.00	13 0.22 0.30 12.62	4358 74.24
2:single	500 8.52 38.58 11.85	75 1.28 5.79 8.76	272 4.63 20.99 97.84	6 0.10 0.46 66.67	0 0.00 0.00 0.00	4 0.07 0.31 8.89	351 5.98 27.08 98.32	1 0.02 0.08 100.00	87 1.48 6.71 84.47	1296 22.08
3:knockout	100 1.70 79.37 2.37	22 0.37 17.46 2.57	0 0.00 0.00 0.00	2 0.03 1.59 22.22	0 0.00 0.00 0.00	1 0.02 0.79 2.22	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02 0.79 0.97	126 2.15
4:jacknife	83 1.41 96.51 1.97	1 0.02 1.16 0.12	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02 1.16 100.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02 1.16 0.97	86 1.47
5:Other	3 0.05 75.00 0.07	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02 25.00 0.97	4 0.07
Total	4220 71.89	856 14.58	278 4.74	9 0.15	1 0.02	45 0.77	357 6.08	1 0.02	103 1.75	5870 100.00

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The FREQ Procedure

Table 1 of pconfig by nextstep
Controlling for pnewpool=MI21D

pconfig nextstep

Frequency Percent Row Pct Col Pct	1:contth	2:contst	3:return	4:kill	Total
1:double	3534 60.20 81.09 83.74	766 13.05 17.58 66.84	46 0.78 1.06 11.41	12 0.20 0.28 11.88	4358 74.24
2:single	500 8.52 38.58 11.85	353 6.01 27.24 30.80	356 6.06 27.47 88.34	87 1.48 6.71 86.14	1296 22.08
3:knockout	100 1.70 79.37 2.37	24 0.41 19.05 2.09	1 0.02 0.79 0.25	1 0.02 0.79 0.99	126 2.15
4:jacknife	83 1.41 96.51 1.97	2 0.03 2.33 0.17	0 0.00 0.00 0.00	1 0.02 1.16 0.99	86 1.47
5:Other	3 0.05 75.00 0.07	1 0.02 25.00 0.09	0 0.00 0.00 0.00	0 0.00 0.00 0.00	4 0.07
Total	4220 71.89	1146 19.52	403 6.87	101 1.72	5870 100.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	85729	0	364407961196	4250696.51	3515664.00	4331559.00
strtlcktime	Start/lockge/time	85729	0	1.1376536E14	1327034777	1262306700	1388533680
arrtime	Arriv/time	85729	0	1.1376509E14	1327031520	1262306700	1388530800
deptime	Leave/lockge/time	85729	0	1.1376558E14	1327037338	1262307720	1388536080
BOW_OVER_SILL	BOW_OVER_SILL	85729	0	1.1376544E14	1327035609	1262307000	1388534700
END_OF_ENTRY	END_OF_ENTRY	85729	0	1.1376548E14	1327036085	1262307060	1388535000
START_OF_EXIT	START_OF_EXIT	85729	0	1.1376554E14	1327036809	1262307660	1388535600
SIGNAL_DATE	SIGNAL_DATE	0	85729	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	85729	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	74581	11148	464732.00	6.2312385	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	74581	11148	245224.00	3.2880224	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	85729	.	.	.	.
vess_no		85729	0	69122944544	806295.94	2611.00	8888864.00
vss_hp		85024	705	331284875	3896.37	60.0000000	81800.00
frsttime		85729	0	1.1376509E14	1327031520	1262306700	1388530800
lasttime		85729	0	1.1376558E14	1327037338	1262307720	1388536080
newpoolno		85729	0	2147602.00	25.0510562	1.0000000	28.0000000
oldpoolno		85729	0	2149231.00	25.0700580	1.0000000	28.0000000
waitmin	Wait/before/lockge	85729	0	4653248.00	54.2785755	0	7423.00
lockmin	Wait/lockge/time	85729	0	3659774.00	42.6900349	4.0000000	1823.00
year		85729	0	171586618	2001.50	2000.00	2003.00
fly		85729	0	36476.00	0.4254803	0	1.0000000
turnback		85729	0	26811.00	0.3127413	0	1.0000000
exchange		85729	0	22441.00	0.2617667	0	1.0000000
lock		85729	0	2105552.00	24.5605571	1.0000000	27.0000000
totmin		85729	0	8313022.00	96.9686104	4.0000000	7490.00
month		85729	0	610730.00	7.1239604	1.0000000	12.0000000
day		85729	0	1344823.00	15.6869087	1.0000000	31.0000000
sunrise		85028	701	1969393823	23161.71	19414.00	27155.00
sunset		85028	701	5776513284	67936.60	59694.00	75152.00
sequpstr		85729	0	14034.00	0.1637019	0	1.0000000
seqdstr		85729	0	20942.00	0.2442814	0	1.0000000
plock		85729	0	2012176.00	23.4713574	1.0000000	27.0000000
pempty		74923	10806	193340.00	2.5805160	0	50.0000000
pfull		74923	10806	516772.00	6.8973746	0	28.0000000
parrtime		85729	0	1.1374063E14	1326746258	1262304600	1388521920
pstrtlcktime		85729	0	1.1374108E14	1326751564	1262304600	1388521920
pdeptime		85729	0	1.1374136E14	1326754764	1262305620	1388523540
birth		85729	0	0	0	0	0
transithrs		85729	0	6590564.80	76.8767255	-249.0333333	8099.42
reclock		85729	0	0	0	0	0
i		85729	0	19628078.00	228.9549394	58.0000000	401.0000000
pctpsysdn		80013	5716	78429.20	0.9802057	0	98.9510000
pctplckdn		80013	5716	37680.92	0.4709349	0	98.3000000
cumdown		84969	760	3308340.00	38.9358472	0	107520.00
pctdown		84969	760	31711.29	0.3732101	0	98.3000000
pcttrandn		84717	1012	113055.04	1.3345024	0	100.0000000
pctsysdn		84969	760	73413.80	0.8640068	0	98.6320000
pctlckdn		84969	760	31711.29	0.3732101	0	98.3000000
stime		85729	0	3796790580	44288.29	0	86340.00
etime		85729	0	3806857020	44405.71	0	86340.00
sdate		85729	0	1316684810	15358.69	14610.00	16070.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		85729	0	1316687235	15358.71	14610.00	16071.00
hrsduration		85729	0	60996.23	0.7115006	0.0666667	30.3833333
ndays		85729	0	1.0000000	0.000011665	0	1.0000000
pctday		85711	18	4687776.13	54.6928181	0	100.0000000
pctpsysnite		85679	50	3855889.42	45.0039032	0	100.0000000
pctplcknite		85708	21	3865860.79	45.1050169	0	100.0000000
pcttrannite		85163	566	4020263.45	47.2066913	0	100.0000000
pctsysnite		85647	82	3862208.39	45.0944970	0	100.0000000
pctlcknite		85711	18	3883323.87	45.3071819	0	100.0000000
stage		41068	44661	876629.98	21.3458162	8.3500000	33.0800000
flow		8973	76756	740260659	82498.68	16077.99	306262.78
jan		85729	0	3062.00	0.0357172	0	1.0000000
feb		85729	0	3418.00	0.0398698	0	1.0000000
mar		85729	0	6981.00	0.0814310	0	1.0000000
apr		85729	0	7598.00	0.0886281	0	1.0000000
may		85729	0	7236.00	0.0844055	0	1.0000000
jun		85729	0	8493.00	0.0990680	0	1.0000000
jul		85729	0	8647.00	0.1008644	0	1.0000000
aug		85729	0	8031.00	0.0936789	0	1.0000000
sep		85729	0	7697.00	0.0897829	0	1.0000000
oct		85729	0	8612.00	0.1004561	0	1.0000000
nov		85729	0	9259.00	0.1080031	0	1.0000000
dec		85729	0	6695.00	0.0780949	0	1.0000000
m31day		85729	0	49264.00	0.5746480	0	1.0000000
m30day		85729	0	33047.00	0.3854822	0	1.0000000
qtr1		85729	0	13461.00	0.1570180	0	1.0000000
qtr2		85729	0	23327.00	0.2721016	0	1.0000000
qtr3		85729	0	24375.00	0.2843262	0	1.0000000
qtr4		85729	0	24566.00	0.2865541	0	1.0000000
psingle		85729	0	65920.00	0.7689347	0	1.0000000
pdouble		85729	0	15912.00	0.1856081	0	1.0000000
pknockout		85729	0	1445.00	0.0168554	0	1.0000000
pjacknife		85729	0	529.0000000	0.0061706	0	1.0000000
pothtype		85729	0	1923.00	0.0224311	0	1.0000000
pexchange		85729	0	23476.00	0.2738397	0	1.0000000
pturnback		85729	0	27798.00	0.3242543	0	1.0000000
single		85729	0	85640.00	0.9989618	0	1.0000000
double		85729	0	79.0000000	0.000921508	0	1.0000000
knockout		85729	0	8.0000000	0.000093317	0	1.0000000
jacknife		85729	0	2.0000000	0.000023329	0	1.0000000
othtype		85729	0	0	0	0	0
contthru		1296	84433	500.0000000	0.3858025	0	1.0000000
return		1296	84433	356.0000000	0.2746914	0	1.0000000
contstop		1296	84433	353.0000000	0.2723765	0	1.0000000
kill		1296	84433	87.0000000	0.0671296	0	1.0000000
contsame		1296	84433	500.0000000	0.3858025	0	1.0000000
contdouble		1296	84433	75.0000000	0.0578704	0	1.0000000
contsingle		1296	84433	272.0000000	0.2098765	0	1.0000000
contko		1296	84433	6.0000000	0.0046296	0	1.0000000
contjk		1296	84433	0	0	0	0
retdouble		1296	84433	4.0000000	0.0030864	0	1.0000000
retsingle		1296	84433	351.0000000	0.2708333	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1296	84433	0	0	0	0
retjk		1296	84433	1.0000000	0.000771605	0	1.0000000
xkill		1296	84433	87.0000000	0.0671296	0	1.0000000
logtrnhrs		1288	84441	1453.61	1.1285779	-4.0943446	8.0620125
plockhrs		1296	84433	585.6721311	0.4519075	0.1147541	10.1147541
loglckhrs		1296	84433	-1188.49	-0.9170472	-2.1649637	2.3139952
thrusingle		1296	84433	500.0000000	0.3858025	0	1.0000000
thruother		1296	84433	0	0	0	0
contother		1296	84433	6.0000000	0.0046296	0	1.0000000
retother		1296	84433	1.0000000	0.000771605	0	1.0000000
thrudoubnite		1296	84433	0	0	0	0
thrusingnite		1296	84433	226.6358000	0.1748733	0	1.0000000
thruothnite		1296	84433	0	0	0	0
pdoubnite		1296	84433	0	0	0	0
psingnite		1296	84433	540.4901400	0.4170449	0	1.0000000
pothnite		1296	84433	0	0	0	0

```
Transition models using key variables from stepwise proc       13:12 Friday, June 24, 2005  37
transitions  to contthru

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 1

Variable psingle Entered: R-Square = 0.1556 and C(p) = 87.5551

Analysis of Variance

                                    Sum of           Mean
Source                   DF       Squares         Square    F Value    Pr > F

Model                     1     184.55044      184.55044    1081.16    <.0001
Error                  5868    1001.65058        0.17070
Corrected Total        5869    1186.20102


                  Parameter     Standard
      Variable     Estimate        Error   Type II SS  F Value  Pr > F

      Intercept     0.81329      0.00611   3025.44819  17724.1  <.0001
      psingle      -0.42749      0.01300    184.55044  1081.16  <.0001

                        Bounds on condition number: 1, 1
------------------------------------------------------------------------------------------------------------------------

                        Stepwise Selection: Step 2

          Variable mar Entered: R-Square = 0.1588 and C(p) = 66.7423

                        Analysis of Variance

                                    Sum of           Mean
Source                   DF       Squares         Square    F Value    Pr > F

Model                     2     188.38857       94.19428     553.85    <.0001
Error                  5867     997.81245        0.17007
Corrected Total        5869    1186.20102


                  Parameter     Standard
      Variable     Estimate        Error   Type II SS  F Value  Pr > F

      Intercept     0.81872      0.00620   2961.98087  17416.0  <.0001
      mar          -0.10301      0.02168      3.83813     22.57  <.0001
      psingle      -0.42092      0.01305    176.90574  1040.18  <.0001

                    Bounds on condition number: 1.0114, 4.0455
------------------------------------------------------------------------------------------------------------------------

                        Stepwise Selection: Step 3
```

Transition models using key variables from stepwise proc transitions to contthru 13:12 Friday, June 24, 2005 38

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 3

Variable sep Entered: R-Square = 0.1620 and C(p) = 46.6295

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	192.10891	64.03630	377.87	<.0001
Error	5866	994.09211	0.16947		
Corrected Total	5869	1186.20102			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.82652	0.00641	2815.41262	16613.4	<.0001
mar	-0.11254	0.02174	4.54128	26.80	<.0001
sep	-0.08688	0.01854	3.72034	21.95	<.0001
psingle	-0.41641	0.01306	172.19528	1016.10	<.0001

Bounds on condition number: 1.0203, 9.1505

Stepwise Selection: Step 4

Variable feb Entered: R-Square = 0.1637 and C(p) = 36.3360

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	194.17722	48.54430	287.00	<.0001
Error	5865	992.02381	0.16914		
Corrected Total	5869	1186.20102			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.82690	0.00641	2817.19838	16655.7	<.0001
feb	-0.40051	0.11453	2.06831	12.23	0.0005
mar	-0.11423	0.02173	4.67644	27.65	<.0001
sep	-0.08829	0.01853	3.84042	22.71	<.0001
psingle	-0.41301	0.01309	168.46582	996.00	<.0001

Transition models using key variables from stepwise proc transitions to contthru 13:12 Friday, June 24, 2005 39

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 4

Bounds on condition number: 1.0225, 16.251

Stepwise Selection: Step 5

Variable oct Entered: R-Square = 0.1653 and C(p) = 26.8232

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	196.11418	39.22284	232.31	<.0001
Error	5864	990.08684	0.16884		
Corrected Total	5869	1186.20102			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.83399	0.00673	2589.01699	15334.0	<.0001
feb	-0.40982	0.11446	2.16439	12.82	0.0003
mar	-0.12234	0.02184	5.29897	31.38	<.0001
sep	-0.09618	0.01866	4.48613	26.57	<.0001
oct	-0.05961	0.01760	1.93697	11.47	0.0007
psingle	-0.41038	0.01310	165.73928	981.63	<.0001

Bounds on condition number: 1.0332, 25.614

Stepwise Selection: Step 6

Variable pjacknife Entered: R-Square = 0.1670 and C(p) = 17.0571

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	198.09376	33.01563	195.90	<.0001
Error	5863	988.10726	0.16853		
Corrected Total	5869	1186.20102			

Transition models using key variables from stepwise proc transitions to contthru 13:12 Friday, June 24, 2005 40

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.83117	0.00678	2533.82338	15034.6	<.0001
feb	-0.40940	0.11436	2.15990	12.82	0.0003
mar	-0.12061	0.02182	5.14767	30.54	<.0001
sep	-0.09672	0.01864	4.53672	26.92	<.0001
oct	-0.06073	0.01759	2.00940	11.92	0.0006
psingle	-0.40755	0.01311	162.82099	966.11	<.0001
pjacknife	0.15325	0.04471	1.97958	11.75	0.0006

Bounds on condition number: 1.0338, 36.799

Stepwise Selection: Step 7

Variable apr Entered: R-Square = 0.1680 and C(p) = 11.9129

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	199.29572	28.47082	169.11	<.0001
Error	5862	986.90530	0.16836		
Corrected Total	5869	1186.20102			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.83749	0.00718	2292.90481	13619.3	<.0001
feb	-0.41647	0.11433	2.23402	13.27	0.0003
mar	-0.12728	0.02195	5.65836	33.61	<.0001
apr	-0.04978	0.01863	1.20196	7.14	0.0076
sep	-0.10330	0.01879	5.08633	30.21	<.0001
oct	-0.06727	0.01775	2.41903	14.37	0.0002
psingle	-0.40666	0.01311	162.00280	962.26	<.0001
pjacknife	0.15265	0.04469	1.96429	11.67	0.0006

Bounds on condition number: 1.0478, 50.589

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Transition models using key variables from stepwise proc transitions to contthru 13:12 Friday, June 24, 2005 41

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	psingle		1	0.1556	0.1556	87.5551	1081.16	<.0001
2	mar		2	0.0032	0.1588	66.7423	22.57	<.0001
3	sep		3	0.0031	0.1620	46.6295	21.95	<.0001
4	feb		4	0.0017	0.1637	36.3360	12.23	0.0005
5	oct		5	0.0016	0.1653	26.8232	11.47	0.0007
6	pjacknife		6	0.0017	0.1670	17.0571	11.75	0.0006
7	apr		7	0.0010	0.1680	11.9129	7.14	0.0076

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 42

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable dec Entered: R-Square = 0.0091 and C(p) = 71.2145

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	14.75733	14.75733	39.88	<.0001
Error	4356	1611.81059	0.37002		
Corrected Total	4357	1626.56792			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.84915	0.00949	14060	37998.8	<.0001
dec	0.25215	0.03993	14.75733	39.88	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pturnback Entered: R-Square = 0.0174 and C(p) = 35.9769

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	28.32049	14.16025	38.58	<.0001
Error	4355	1598.24742	0.36699		
Corrected Total	4357	1626.56792			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.88864	0.01147	9958.06590	27134.3	<.0001
dec	0.25397	0.03976	14.97100	40.79	<.0001
pturnback	-0.11820	0.01944	13.56316	36.96	<.0001

Bounds on condition number: 1.0001, 4.0002

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 43

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable pexchange Entered: R-Square = 0.0210 and C(p) = 21.8340

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	34.20029	11.40010	31.17	<.0001
Error	4354	1592.36762	0.36573		
Corrected Total	4357	1626.56792			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.94314	0.01777	4373.37460	11958.1	<.0001
dec	0.23760	0.03990	12.96632	35.45	<.0001
pturnback	-0.17173	0.02356	19.43495	53.14	<.0001
pexchange	-0.09185	0.02291	5.87980	16.08	<.0001

Bounds on condition number: 1.4849, 11.907

Stepwise Selection: Step 4

Variable feb Entered: R-Square = 0.0231 and C(p) = 14.6583

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	37.54239	9.38560	25.71	<.0001
Error	4353	1589.02553	0.36504		
Corrected Total	4357	1626.56792			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.94156	0.01776	4362.50009	11950.7	<.0001
feb	1.82893	0.60445	3.34210	9.16	0.0025
dec	0.23832	0.03987	13.04375	35.73	<.0001
pturnback	-0.17020	0.02354	19.07973	52.27	<.0001
pexchange	-0.09030	0.02289	5.67926	15.56	<.0001

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 44

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.4856, 19.884

Stepwise Selection: Step 5

Variable jun Entered: R-Square = 0.0248 and C(p) = 9.1856

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	40.26421	8.05284	22.09	<.0001
Error	4352	1586.30371	0.36450		
Corrected Total	4357	1626.56792			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.95041	0.01804	4260.60029	11688.9	<.0001
feb	1.82008	0.60401	3.30975	9.08	0.0026
jun	-0.07451	0.02727	2.72182	7.47	0.0063
dec	0.22853	0.04000	11.89877	32.64	<.0001
pturnback	-0.16938	0.02353	18.89458	51.84	<.0001
pexchange	-0.08721	0.02290	5.28468	14.50	0.0001

Bounds on condition number: 1.4893, 29.975

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	dec		1	0.0091	0.0091	71.2145	39.88	<.0001
2	pturnback		2	0.0083	0.0174	35.9769	36.96	<.0001
3	pexchange		3	0.0036	0.0210	21.8340	16.08	<.0001
4	feb		4	0.0021	0.0231	14.6583	9.16	0.0025
5	jun		5	0.0017	0.0248	9.1856	7.47	0.0063

Logarithms of double lockage times using key variables from stepwise proc 45
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0229 and C(p) = 141.7367

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	3.40940	3.40940	102.24	<.0001
Error	4355	145.22777	0.03335		
Corrected Total	4356	148.63717			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.61937	0.00339	1111.33413	33326.0	<.0001
pturnback	-0.05926	0.00586	3.40940	102.24	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.0390 and C(p) = 69.6277

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	5.80391	2.90196	88.46	<.0001
Error	4354	142.83326	0.03281		
Corrected Total	4356	148.63717			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.65339	0.00521	515.28460	15707.5	<.0001
pturnback	-0.09328	0.00705	5.74953	175.26	<.0001
pexchange	-0.05832	0.00683	2.39451	72.99	<.0001

Bounds on condition number: 1.4692, 5.8767

Stepwise Selection: Step 3

Logarithms of double lockage times using key variables from stepwise proc 46
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable dec Entered: R-Square = 0.0442 and C(p) = 47.7154

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	6.57653	2.19218	67.17	<.0001
Error	4353	142.06064	0.03264		
Corrected Total	4356	148.63717			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.64819	0.00531	486.55828	14909.0	<.0001
dec	0.05812	0.01194	0.77262	23.67	<.0001
pturnback	-0.09151	0.00704	5.51767	169.07	<.0001
pexchange	-0.05487	0.00684	2.09713	64.26	<.0001

Bounds on condition number: 1.4851, 11.907

Stepwise Selection: Step 4

Variable jun Entered: R-Square = 0.0480 and C(p) = 32.3232

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	7.13848	1.78462	54.89	<.0001
Error	4352	141.49869	0.03251		
Corrected Total	4356	148.63717			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.65220	0.00539	476.76399	14663.6	<.0001
jun	-0.03385	0.00814	0.56195	17.28	<.0001
dec	0.05368	0.01197	0.65386	20.11	<.0001
pturnback	-0.09113	0.00702	5.47183	168.29	<.0001
pexchange	-0.05346	0.00684	1.98609	61.09	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.4887, 19.972

Stepwise Selection: Step 5

Variable feb Entered: R-Square = 0.0511 and C(p) = 20.2091

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	7.59452	1.51890	46.86	<.0001
Error	4351	141.04265	0.03242		
Corrected Total	4356	148.63717			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.65160	0.00538	475.45855	14667.3	<.0001
feb	0.67561	0.18013	0.45604	14.07	0.0002
jun	-0.03369	0.00813	0.55652	17.17	<.0001
dec	0.05397	0.01195	0.66081	20.39	<.0001
pturnback	-0.09057	0.00702	5.40157	166.63	<.0001
pexchange	-0.05289	0.00683	1.94311	59.94	<.0001

Bounds on condition number: 1.4895, 29.976

Stepwise Selection: Step 6

Variable oct Entered: R-Square = 0.0535 and C(p) = 11.3383

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	7.94576	1.32429	40.95	<.0001
Error	4350	140.69141	0.03234		
Corrected Total	4356	148.63717			

Logarithms of double lockage times using key variables from stepwise proc 48
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.64775	0.00550	448.71167	13873.6	<.0001
feb	0.67945	0.17993	0.46122	14.26	0.0002
jun	-0.02996	0.00820	0.43183	13.35	0.0003
oct	0.03020	0.00916	0.35124	10.86	0.0010
dec	0.05778	0.01199	0.75045	23.20	<.0001
pturnback	-0.09067	0.00701	5.41363	167.38	<.0001
pexchange	-0.05257	0.00682	1.91894	59.33	<.0001

Bounds on condition number: 1.4898, 42.311

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0229	0.0229	141.737	102.24	<.0001
2	pexchange		2	0.0161	0.0390	69.6277	72.99	<.0001
3	dec		3	0.0052	0.0442	47.7154	23.67	<.0001
4	jun		4	0.0038	0.0480	32.3232	17.28	<.0001
5	feb		5	0.0031	0.0511	20.2091	14.07	0.0002
6	oct		6	0.0024	0.0535	11.3383	10.86	0.0010

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 49

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable feb Entered: R-Square = 0.0117 and C(p) = 20.2720

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	2.13848	2.13848	15.29	<.0001
Error	1293	180.81960	0.13985		
Corrected Total	1294	182.95807			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.44841	0.01044	258.17195	1846.13	<.0001
feb	0.44280	0.11323	2.13848	15.29	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pturnback Entered: R-Square = 0.0203 and C(p) = 10.8368

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	3.71535	1.85767	13.39	<.0001
Error	1292	179.24273	0.13873		
Corrected Total	1294	182.95807			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.47189	0.01251	197.29824	1422.15	<.0001
feb	0.41931	0.11300	1.91034	13.77	0.0002
pturnback	-0.07577	0.02248	1.57687	11.37	0.0008

Bounds on condition number: 1.0038, 4.0153

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 50

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable nov Entered: R-Square = 0.0256 and C(p) = 5.7869

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	4.68750	1.56250	11.32	<.0001
Error	1291	178.27057	0.13809		
Corrected Total	1294	182.95807			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.46400	0.01283	180.48809	1307.06	<.0001
feb	0.42721	0.11277	1.98160	14.35	0.0002
nov	0.09088	0.03425	0.97216	7.04	0.0081
pturnback	-0.08043	0.02249	1.76598	12.79	0.0004

Bounds on condition number: 1.01, 9.0648

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	feb		1	0.0117	0.0117	20.2720	15.29	<.0001
2	pturnback		2	0.0086	0.0203	10.8368	11.37	0.0008
3	nov		3	0.0053	0.0256	5.7869	7.04	0.0081

Logarithms of single lockage times using key variables from stepwise proc 51
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0166 and C(p) = 29.1252

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	4.44398	4.44398	21.85	<.0001
Error	1294	263.19848	0.20340		
Corrected Total	1295	267.64246			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.87806	0.01505	692.35339	3403.92	<.0001
pturnback	-0.12694	0.02716	4.44398	21.85	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable may Entered: R-Square = 0.0236 and C(p) = 21.7183

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	6.31806	3.15903	15.63	<.0001
Error	1293	261.32440	0.20211		
Corrected Total	1295	267.64246			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.86933	0.01527	654.70129	3239.38	<.0001
may	-0.15383	0.05052	1.87407	9.27	0.0024
pturnback	-0.12254	0.02711	4.12915	20.43	<.0001

Bounds on condition number: 1.0029, 4.0114

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 52
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable oct Entered: R-Square = 0.0290 and C(p) = 16.4982

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	7.75646	2.58549	12.85	<.0001
Error	1292	259.88599	0.20115		
Corrected Total	1295	267.64246			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.88402	0.01620	599.12825	2978.51	<.0001
may	-0.14033	0.05065	1.54409	7.68	0.0057
oct	0.10004	0.03741	1.43841	7.15	0.0076
pturnback	-0.11956	0.02707	3.92396	19.51	<.0001

Bounds on condition number: 1.0129, 9.0891

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0166	0.0166	29.1252	21.85	<.0001
2	may		2	0.0070	0.0236	21.7183	9.27	0.0024
3	oct		3	0.0054	0.0290	16.4982	7.15	0.0076

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable aug Entered: R-Square = 0.0082 and C(p) = 13.4403

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	299.93362	299.93362	29.29	<.0001
Error	3531	36152	10.23849		
Corrected Total	3532	36452			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.40015	0.05720	18025	1760.54	<.0001
aug	0.91557	0.16916	299.93362	29.29	<.0001

Bounds on condition number: 1, 1

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	aug		1	0.0082	0.0082	13.4403	29.29	<.0001

Logarithms of single lockage times using key variables from stepwise proc 54
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0425 and C(p) = 276.2569

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	13.21533	13.21533	156.60	<.0001
Error	3531	297.97512	0.08439		
Corrected Total	3532	311.19045			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.86499	0.00527	2271.57883	26918.2	<.0001
jun	-0.17591	0.01406	13.21533	156.60	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable may Entered: R-Square = 0.0648 and C(p) = 189.3965

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	20.17365	10.08683	122.35	<.0001
Error	3530	291.01680	0.08244		
Corrected Total	3532	311.19045			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.88205	0.00553	2095.97138	25423.9	<.0001
may	-0.15142	0.01648	6.95833	84.40	<.0001
jun	-0.19296	0.01402	15.62354	189.51	<.0001

Bounds on condition number: 1.0179, 4.0714

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 55
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.0932 and C(p) = 78.6730

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	29.00060	9.66687	120.89	<.0001
Error	3529	282.18986	0.07996		
Corrected Total	3532	311.19045			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.90961	0.00605	1809.50984	22629.3	<.0001
may	-0.17898	0.01644	9.47438	118.48	<.0001
jun	-0.22052	0.01405	19.69409	246.29	<.0001
jul	-0.14645	0.01394	8.82694	110.39	<.0001

Bounds on condition number: 1.0551, 9.4623

Stepwise Selection: Step 4

Variable apr Entered: R-Square = 0.1061 and C(p) = 29.4202

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	33.01401	8.25350	104.68	<.0001
Error	3528	278.17644	0.07885		
Corrected Total	3532	311.19045			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.92786	0.00653	1593.58205	20210.8	<.0001
apr	-0.11880	0.01665	4.01341	50.90	<.0001
may	-0.19723	0.01653	11.22951	142.42	<.0001
jun	-0.23878	0.01419	22.33807	283.30	<.0001
jul	-0.16470	0.01408	10.79546	136.91	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0911, 17.282

Stepwise Selection: Step 5

Variable dec Entered: R-Square = 0.1086 and C(p) = 21.5265

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	33.78874	6.75775	85.92	<.0001
Error	3527	277.40171	0.07865		
Corrected Total	3532	311.19045			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.92064	0.00691	1395.12358	17738.2	<.0001
apr	-0.11158	0.01679	3.47394	44.17	<.0001
may	-0.19001	0.01667	10.22385	129.99	<.0001
jun	-0.23156	0.01435	20.46802	260.24	<.0001
jul	-0.15748	0.01424	9.61230	122.21	<.0001
dec	0.06519	0.02077	0.77473	9.85	0.0017

Bounds on condition number: 1.1203, 27.394

Stepwise Selection: Step 6

Variable sep Entered: R-Square = 0.1116 and C(p) = 11.3441

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	34.74270	5.79045	73.86	<.0001
Error	3526	276.44775	0.07840		
Corrected Total	3532	311.19045			

Logarithms of single lockage times using key variables from stepwise proc 57
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.91026	0.00752	1150.07016	14668.8	<.0001
apr	-0.10120	0.01702	2.77039	35.34	<.0001
may	-0.17964	0.01690	8.85430	112.93	<.0001
jun	-0.22118	0.01464	17.90249	228.34	<.0001
jul	-0.14710	0.01453	8.03526	102.49	<.0001
sep	0.06622	0.01898	0.95396	12.17	0.0005
dec	0.07557	0.02095	1.02007	13.01	0.0003

Bounds on condition number: 1.1694, 40.599

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun		1	0.0425	0.0425	276.257	156.60	<.0001
2	may		2	0.0224	0.0648	189.396	84.40	<.0001
3	jul		3	0.0284	0.0932	78.6730	110.39	<.0001
4	apr		4	0.0129	0.1061	29.4202	50.90	<.0001
5	dec		5	0.0025	0.1086	21.5265	9.85	0.0017
6	sep		6	0.0031	0.1116	11.3441	12.17	0.0005

Logarithms of single lockage times using key variables from stepwise proc 58
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable may Entered: R-Square = 0.0141 and C(p) = -3.8725

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	60941	60941	7.11	0.0079
Error	498	4269504	8573.30159		
Corrected Total	499	4330445			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	6.94802	4.30778	22303	2.60	0.1074
may	41.66076	15.62594	60941	7.11	0.0079

Bounds on condition number: 1, 1

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	may		1	0.0141	0.0141	-3.8725	7.11	0.0079

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Logarithms of single lockage times using key variables from stepwise proc                    59
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                              The REG Procedure
                                Model: MODEL1
                         Dependent Variable: logtrnhrs

 No variable met the 0.0100 significance level for entry into the model.
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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	5979	0	24786416492	4145578.94	3966964.00	4305942.00
strtlcktime	Start/lockge/time	5979	0	7.9256102E12	1325574541	1267123200	1387131660
arrtime	Arriv/time	5979	0	7.9255667E12	1325567267	1267123200	1387131660
deptime	Leave/lockge/time	5979	0	7.9256417E12	1325579808	1267127700	1387133940
BOW_OVER_SILL	BOW_OVER_SILL	5979	0	7.9256286E12	1325577621	1267126260	1387132560
END_OF_ENTRY	END_OF_ENTRY	5979	0	7.9256315E12	1325578111	1267126620	1387133160
START_OF_EXIT	START_OF_EXIT	5979	0	7.9256343E12	1325578576	1267127100	1387133760
SIGNAL_DATE	SIGNAL_DATE	0	5979	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	5979	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	5481	498	25375.00	4.6296296	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	5481	498	39953.00	7.2893633	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	5979	.	.	.	.
vess_no		5979	0	4663142032	779920.06	2611.00	8888864.00
vss_hp		5959	20	27300626.00	4581.41	75.0000000	81800.00
frsttime		5979	0	7.9255667E12	1325567267	1267123200	1387131660
lasttime		5979	0	7.9256417E12	1325579808	1267127700	1387133940
newpoolno		5979	0	120711.00	20.1891621	12.0000000	27.0000000
oldpoolno		5979	0	125548.00	20.9981602	13.0000000	28.0000000
waitmin	Wait/before/lockge	5979	0	724841.00	121.2311423	0	6206.00
lockmin	Wait/lockge/time	5979	0	524925.00	87.7947817	8.0000000	764.0000000
year		5979	0	11966677.00	2001.45	2000.00	2003.00
fly		5979	0	1721.00	0.2878408	0	1.0000000
turnback		5979	0	2009.00	0.3360094	0	1.0000000
exchange		5979	0	2249.00	0.3761499	0	1.0000000
lock		5979	0	120140.00	20.0936611	12.0000000	27.0000000
totmin		5979	0	1249766.00	209.0259241	9.0000000	6278.00
month		5979	0	42797.00	7.1578859	1.0000000	12.0000000
day		5979	0	94088.00	15.7364108	1.0000000	31.0000000
sunrise		5979	0	137069323	22925.13	19701.00	27155.00
sunset		5979	0	413738711	69198.65	59810.00	74318.00
sequpstr		5979	0	3992.00	0.6676702	0	1.0000000
seqdstr		5979	0	0	0	0	0
plock		5979	0	125559.00	21.0000000	21.0000000	21.0000000
pempty		5464	515	41938.00	7.6753294	0	50.0000000
pfull		5464	515	25077.00	4.5894949	0	28.0000000
parrtime		5979	0	7.925134E12	1325494897	1267101660	1387119960
pstrtlcktime		5979	0	7.9251744E12	1325501663	1267101660	1387119960
pdeptime		5979	0	7.9252063E12	1325506992	1267106880	1387121400
birth		5979	0	0	0	0	0
transithrs		5979	0	100106.33	16.7429894	-53.3833333	2195.03
reclock		5979	0	0	0	0	0
i		5979	0	959699.00	160.5116240	58.0000000	295.0000000
pctpsysdn		5979	0	3409.15	0.5701877	0	93.7500000
pctplckdn		5979	0	2032.31	0.3399073	0	89.7870000
cumdown		5972	7	580620.00	97.2237106	0	41940.00
pctdown		5972	7	3666.06	0.6138742	0	91.4920000
pcttrandn		5964	15	6620.26	1.1100366	0	100.0000000
pctsysdn		5972	7	6190.04	1.0365111	0	91.4920000
pctlckdn		5972	7	3666.06	0.6138742	0	91.4920000
stime		5979	0	264494460	44237.24	60.0000002	86340.00
etime		5979	0	265231560	44360.52	60.0000002	86340.00
sdate		5979	0	91728538.00	15341.79	14665.00	16054.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		5979	0	91728894.00	15341.85	14665.00	16054.00
hrsduration		5979	0	8748.75	1.4632464	0.1333333	12.7333333
ndays		5979	0	0	0	0	0
pctday		5979	0	323595.45	54.1220020	0	100.0000000
pctpsysnite		5979	0	267187.00	44.6875730	0	100.0000000
pctplcknite		5979	0	272201.70	45.5262912	0	100.0000000
pcttrannite		5979	0	274379.34	45.8905061	0	100.0000000
pctsysnite		5979	0	270820.79	45.2953322	0	100.0000000
pctlcknite		5979	0	274304.55	45.8779980	0	100.0000000
stage		5885	94	67174.85	11.4145879	8.3200000	27.1800000
flow		5870	109	519856591	88561.60	16415.00	301297.19
jan		5979	0	15.0000000	0.0025088	0	1.0000000
feb		5979	0	38.0000000	0.0063556	0	1.0000000
mar		5979	0	596.0000000	0.0996822	0	1.0000000
apr		5979	0	630.0000000	0.1053688	0	1.0000000
may		5979	0	574.0000000	0.0960027	0	1.0000000
jun		5979	0	710.0000000	0.1187490	0	1.0000000
jul		5979	0	739.0000000	0.1235993	0	1.0000000
aug		5979	0	625.0000000	0.1045325	0	1.0000000
sep		5979	0	526.0000000	0.0879746	0	1.0000000
oct		5979	0	653.0000000	0.1092156	0	1.0000000
nov		5979	0	645.0000000	0.1078776	0	1.0000000
dec		5979	0	228.0000000	0.0381335	0	1.0000000
m31day		5979	0	3430.00	0.5736745	0	1.0000000
m30day		5979	0	2511.00	0.4199699	0	1.0000000
qtr1		5979	0	649.0000000	0.1085466	0	1.0000000
qtr2		5979	0	1914.00	0.3201204	0	1.0000000
qtr3		5979	0	1890.00	0.3161064	0	1.0000000
qtr4		5979	0	1526.00	0.2552266	0	1.0000000
psingle		5979	0	1444.00	0.2415120	0	1.0000000
pdouble		5979	0	4293.00	0.7180130	0	1.0000000
pknockout		5979	0	109.0000000	0.0182305	0	1.0000000
pjacknife		5979	0	125.0000000	0.0209065	0	1.0000000
pothtype		5979	0	8.0000000	0.0013380	0	1.0000000
pexchange		5979	0	2388.00	0.3993979	0	1.0000000
pturnback		5979	0	1901.00	0.3179461	0	1.0000000
single		5979	0	1514.00	0.2532196	0	1.0000000
double		5979	0	4246.00	0.7101522	0	1.0000000
knockout		5979	0	103.0000000	0.0172270	0	1.0000000
jacknife		5979	0	115.0000000	0.0192340	0	1.0000000
othtype		5979	0	1.0000000	0.000167252	0	1.0000000
contthru		5979	0	3992.00	0.6676702	0	1.0000000
return		5979	0	546.0000000	0.0913196	0	1.0000000
contstop		5979	0	1323.00	0.2212745	0	1.0000000
kill		5979	0	118.0000000	0.0197357	0	1.0000000
contsame		5979	0	3992.00	0.6676702	0	1.0000000
contdouble		5979	0	870.0000000	0.1455093	0	1.0000000
contsingle		5979	0	440.0000000	0.0735909	0	1.0000000
contko		5979	0	12.0000000	0.0020070	0	1.0000000
contjk		5979	0	1.0000000	0.000167252	0	1.0000000
retdouble		5979	0	129.0000000	0.0215755	0	1.0000000
retsingle		5979	0	405.0000000	0.0677371	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		5979	0	11.0000000	0.0018398	0	1.0000000
retjk		5979	0	0	0	0	0
xkill		5979	0	119.0000000	0.0199030	0	1.0000000
logtrnhrs		5971	8	9297.41	1.5570935	-1.7917595	7.6939525
plockhrs		5979	0	8706.08	1.4561100	0.1475410	13.4098361
loglckhrs		5979	0	1136.66	0.1901082	-1.9136493	2.5959885
thrusingle		5979	0	559.0000000	0.0934939	0	1.0000000
thruother		5979	0	206.0000000	0.0344539	0	1.0000000
contother		5979	0	13.0000000	0.0021743	0	1.0000000
retother		5979	0	12.0000000	0.0020070	0	1.0000000
thrudoubnite		5979	0	1450.16	0.2425420	0	1.0000000
thrusingnite		5979	0	253.1197500	0.0423348	0	1.0000000
thruothnite		5979	0	91.2007900	0.0152535	0	1.0000000
pdoubnite		5979	0	1958.33	0.3275344	0	1.0000000
psingnite		5979	0	657.1598100	0.1099113	0	1.0000000
pothnite		5979	0	106.5287300	0.0178171	0	1.0000000

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 13:12 Friday, June 24, 2005 63

The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI21U

pconfig / doutcome Frequency Percent Row Pct Col Pct	1:contsame	2:contdouble	3:contsingle	4:contko	5:contjk	6:retdouble	7:retsingle	8:retko	x:kill	Total
1:double	3227 53.97 75.17 80.84	857 14.33 19.96 98.51	69 1.15 1.61 15.68	11 0.18 0.26 91.67	0 0.00 0.00 0.00	87 1.46 2.03 67.44	24 0.40 0.56 5.93	2 0.03 0.05 18.18	16 0.27 0.37 13.45	4293 71.80
2:single	559 9.35 38.71 14.00	12 0.20 0.83 1.38	361 6.04 25.00 82.05	0 0.00 0.00 0.00	0 0.00 0.00 0.00	39 0.65 2.70 30.23	369 6.17 25.55 91.11	3 0.05 0.21 27.27	101 1.69 6.99 84.87	1444 24.15
3:knockout	86 1.44 78.90 2.15	1 0.02 0.92 0.11	8 0.13 7.34 1.82	1 0.02 0.92 8.33	0 0.00 0.00 0.00	3 0.05 2.75 2.33	8 0.13 7.34 1.98	1 0.02 0.92 9.09	1 0.02 0.92 0.84	109 1.82
4:jacknife	113 1.89 90.40 2.83	0 0.00 0.00 0.00	1 0.02 0.80 0.23	0 0.00 0.00 0.00	1 0.02 0.80 100.00	0 0.00 0.00 0.00	4 0.07 3.20 0.99	5 0.08 4.00 45.45	1 0.02 0.80 0.84	125 2.09
5:Other	7 0.12 87.50 0.18	0 0.00 0.00 0.00	1 0.02 12.50 0.23	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	8 0.13
Total	3992 66.77	870 14.55	440 7.36	12 0.20	1 0.02	129 2.16	405 6.77	11 0.18	119 1.99	5979 100.00

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The FREQ Procedure

Table 1 of pconfig by nextstep
Controlling for pnewpool=MI21U

pconfig nextstep

Frequency Percent Row Pct Col Pct	1:contth	2:contst	3:return	4:kill	Total
1:double	3227 53.97 75.17 80.84	937 15.67 21.83 70.82	113 1.89 2.63 20.70	16 0.27 0.37 13.56	4293 71.80
2:single	559 9.35 38.71 14.00	373 6.24 25.83 28.19	412 6.89 28.53 75.46	100 1.67 6.93 84.75	1444 24.15
3:knockout	86 1.44 78.90 2.15	10 0.17 9.17 0.76	12 0.20 11.01 2.20	1 0.02 0.92 0.85	109 1.82
4:jacknife	113 1.89 90.40 2.83	2 0.03 1.60 0.15	9 0.15 7.20 1.65	1 0.02 0.80 0.85	125 2.09
5:Other	7 0.12 87.50 0.18	1 0.02 12.50 0.08	0 0.00 0.00 0.00	0 0.00 0.00 0.00	8 0.13
Total	3992 66.77	1323 22.13	546 9.13	118 1.97	5979 100.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	85877	0	365010508135	4250387.28	3515664.00	4331559.00
strtlcktime	Start/lockge/time	85877	0	1.1396088E14	1327024470	1262306700	1388533680
arrtime	Arriv/time	85877	0	1.139606E14	1327021203	1262306700	1388530800
deptime	Leave/lockge/time	85877	0	1.139611E14	1327027030	1262307720	1388536080
BOW_OVER_SILL	BOW_OVER_SILL	85877	0	1.1396095E14	1327025301	1262307000	1388534700
END_OF_ENTRY	END_OF_ENTRY	85877	0	1.1396099E14	1327025777	1262307060	1388535000
START_OF_EXIT	START_OF_EXIT	85877	0	1.1396105E14	1327026502	1262307660	1388535600
SIGNAL_DATE	SIGNAL_DATE	0	85877	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	85877	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	74713	11164	464762.00	6.2206309	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	74713	11164	245131.00	3.2809685	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	85877	.	.	.	.
vess_no		85877	0	69500061187	809297.73	2611.00	8888864.00
vss_hp		85172	705	332071610	3898.84	60.0000000	81800.00
frsttime		85877	0	1.139606E14	1327021203	1262306700	1388530800
lasttime		85877	0	1.139611E14	1327027030	1262307720	1388536080
newpoolno		85877	0	2149588.00	25.0310095	1.0000000	28.0000000
oldpoolno		85877	0	2152349.00	25.0631601	1.0000000	28.0000000
waitmin	Wait/before/lockge	85877	0	4675956.00	54.4494568	0	7423.00
lockmin	Wait/lockge/time	85877	0	3664727.00	42.6741386	4.0000000	1823.00
year		85877	0	171882726	2001.50	2000.00	2003.00
fly		85877	0	36481.00	0.4248052	0	1.0000000
turnback		85877	0	26827.00	0.3123886	0	1.0000000
exchange		85877	0	22568.00	0.2627945	0	1.0000000
lock		85877	0	2108030.00	24.5470848	1.0000000	27.0000000
totmin		85877	0	8340683.00	97.1235954	4.0000000	7490.00
month		85877	0	612820.00	7.1360201	1.0000000	12.0000000
day		85877	0	1346830.00	15.6832446	1.0000000	31.0000000
sunrise		85176	701	1973229224	23166.49	19414.00	27155.00
sunset		85176	701	5785232313	67920.92	59694.00	75152.00
sequpstr		85877	0	14593.00	0.1699291	0	1.0000000
seqdstr		85877	0	20442.00	0.2380381	0	1.0000000
plock		85877	0	2016580.00	23.4821896	1.0000000	27.0000000
pempty		75036	10841	193505.00	2.5788288	0	50.0000000
pfull		75036	10841	516713.00	6.8862013	0	28.0000000
parrtime		85877	0	1.1393601E14	1326734913	1262304600	1388521920
pstrtlcktime		85877	0	1.1393647E14	1326740200	1262304600	1388521920
pdeptime		85877	0	1.1393674E14	1326743397	1262305620	1388523540
birth		85877	0	0	0	0	0
transithrs		85877	0	6626974.62	77.1682129	-249.0333333	8099.42
reclock		85877	0	0	0	0	0
i		85877	0	19678448.00	229.1468961	58.0000000	401.0000000
pctpsysdn		80161	5716	78301.90	0.9768079	0	98.9510000
pctplckdn		80161	5716	37584.43	0.4688618	0	98.3000000
cumdown		85110	767	3299100.00	38.7627776	0	107520.00
pctdown		85110	767	31756.12	0.3731186	0	98.3000000
pcttrandn		84863	1014	113046.82	1.3321097	0	100.0000000
pctsysdn		85110	767	73559.43	0.8642865	0	98.6320000
pctlckdn		85110	767	31756.12	0.3731186	0	98.3000000
stime		85877	0	3804910860	44306.52	0	86340.00
etime		85877	0	3816138480	44437.26	0	86340.00
sdate		85877	0	1318947633	15358.57	14610.00	16070.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		85877	0	1318950048	15358.59	14610.00	16071.00
hrsduration		85877	0	61078.78	0.7112356	0.0666667	30.3833333
ndays		85877	0	1.0000000	0.000011645	0	1.0000000
pctday		85859	18	4687736.77	54.5980825	0	100.0000000
pctpsysnite		85827	50	3865606.49	45.0395154	0	100.0000000
pctplcknite		85856	21	3877527.76	45.1631541	0	100.0000000
pcttrannite		85311	566	4028229.42	47.2181713	0	100.0000000
pctsysnite		85795	82	3874885.16	45.1644637	0	100.0000000
pctlcknite		85859	18	3898163.23	45.4019175	0	100.0000000
stage		41188	44689	877271.51	21.2992015	8.3500000	33.0800000
flow		9096	76781	745631399	81973.55	16077.99	306262.78
jan		85877	0	3069.00	0.0357372	0	1.0000000
feb		85877	0	3416.00	0.0397778	0	1.0000000
mar		85877	0	6930.00	0.0806968	0	1.0000000
apr		85877	0	7580.00	0.0882658	0	1.0000000
may		85877	0	7239.00	0.0842950	0	1.0000000
jun		85877	0	8507.00	0.0990603	0	1.0000000
jul		85877	0	8652.00	0.1007487	0	1.0000000
aug		85877	0	8028.00	0.0934825	0	1.0000000
sep		85877	0	7688.00	0.0895234	0	1.0000000
oct		85877	0	8618.00	0.1003528	0	1.0000000
nov		85877	0	9388.00	0.1093191	0	1.0000000
dec		85877	0	6762.00	0.0787405	0	1.0000000
m31day		85877	0	49298.00	0.5740536	0	1.0000000
m30day		85877	0	33163.00	0.3861686	0	1.0000000
qtr1		85877	0	13415.00	0.1562118	0	1.0000000
qtr2		85877	0	23326.00	0.2716210	0	1.0000000
qtr3		85877	0	24368.00	0.2837547	0	1.0000000
qtr4		85877	0	24768.00	0.2884125	0	1.0000000
psingle		85877	0	66068.00	0.7693329	0	1.0000000
pdouble		85877	0	15912.00	0.1852883	0	1.0000000
pknockout		85877	0	1445.00	0.0168264	0	1.0000000
pjacknife		85877	0	529.0000000	0.0061600	0	1.0000000
pothtype		85877	0	1923.00	0.0223925	0	1.0000000
pexchange		85877	0	23634.00	0.2752076	0	1.0000000
pturnback		85877	0	27797.00	0.3236839	0	1.0000000
single		85877	0	85818.00	0.9993130	0	1.0000000
double		85877	0	54.0000000	0.000628806	0	1.0000000
knockout		85877	0	4.0000000	0.000046578	0	1.0000000
jacknife		85877	0	0	0	0	0
othtype		85877	0	1.0000000	0.000011645	0	1.0000000
contthru		1444	84433	559.0000000	0.3871191	0	1.0000000
return		1444	84433	412.0000000	0.2853186	0	1.0000000
contstop		1444	84433	373.0000000	0.2583102	0	1.0000000
kill		1444	84433	100.0000000	0.0692521	0	1.0000000
contsame		1444	84433	559.0000000	0.3871191	0	1.0000000
contdouble		1444	84433	12.0000000	0.0083102	0	1.0000000
contsingle		1444	84433	361.0000000	0.2500000	0	1.0000000
contko		1444	84433	0	0	0	0
contjk		1444	84433	0	0	0	0
retdouble		1444	84433	39.0000000	0.0270083	0	1.0000000
retsingle		1444	84433	369.0000000	0.2555402	0	1.0000000

Statistics from water.regfile for regfile 13:12 Friday, June 24, 2005 67

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1444	84433	3.0000000	0.0020776	0	1.0000000
retjk		1444	84433	0	0	0	0
xkill		1444	84433	101.0000000	0.0699446	0	1.0000000
logtrnhrs		1441	84436	3100.77	2.1518191	-1.7917595	7.6939525
plockhrs		1444	84433	651.6065574	0.4512511	0.1475410	3.8524590
loglckhrs		1444	84433	-1315.42	-0.9109556	-1.9136493	1.3487116
thrusingle		1444	84433	559.0000000	0.3871191	0	1.0000000
thruother		1444	84433	0	0	0	0
contother		1444	84433	0	0	0	0
retother		1444	84433	4.0000000	0.0027701	0	1.0000000
thrudoubnite		1444	84433	0	0	0	0
thrusingnite		1444	84433	253.1197500	0.1752907	0	1.0000000
thruothnite		1444	84433	0	0	0	0
pdoubnite		1444	84433	0	0	0	0
psingnite		1444	84433	657.1598100	0.4550968	0	1.0000000
pothnite		1444	84433	0	0	0	0

Transition models using key variables from stepwise proc transitions to contthru 13:12 Friday, June 24, 2005 68

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 1

Variable psingle Entered: R-Square = 0.1129 and C(p) = 168.0744

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	149.84502	149.84502	761.06	<.0001
Error	5977	1176.81563	0.19689		
Corrected Total	5978	1326.66065			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.75700	0.00659	2598.78479	13199.1	<.0001
psingle	-0.36988	0.01341	149.84502	761.06	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable dec Entered: R-Square = 0.1208 and C(p) = 115.9929

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	160.20529	80.10265	410.38	<.0001
Error	5976	1166.45535	0.19519		
Corrected Total	5978	1326.66065			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.76076	0.00658	2608.51697	13364.0	<.0001
dec	-0.22164	0.03042	10.36028	53.08	<.0001
psingle	-0.35047	0.01361	129.37354	662.81	<.0001

Bounds on condition number: 1.0398, 4.1594

Stepwise Selection: Step 3

Transition models using key variables from stepwise proc transitions to contthru 13:12 Friday, June 24, 2005 69

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.1248 and C(p) = 89.9669

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	165.57417	55.19139	284.02	<.0001
Error	5975	1161.08648	0.19432		
Corrected Total	5978	1326.66065			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.74840	0.00698	2237.09803	11512.2	<.0001
jul	0.09137	0.01738	5.36887	27.63	<.0001
dec	-0.21112	0.03042	9.35931	48.16	<.0001
psingle	-0.34768	0.01359	127.12866	654.21	<.0001

Bounds on condition number: 1.0444, 9.2789

Stepwise Selection: Step 4

Variable jun Entered: R-Square = 0.1282 and C(p) = 68.3822

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	170.09224	42.52306	219.64	<.0001
Error	5974	1156.56841	0.19360		
Corrected Total	5978	1326.66065			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.73540	0.00746	1879.53093	9708.30	<.0001
jun	0.08622	0.01785	4.51807	23.34	<.0001
jul	0.10375	0.01754	6.77472	34.99	<.0001
dec	-0.20036	0.03045	8.38464	43.31	<.0001
psingle	-0.34430	0.01359	124.34166	642.26	<.0001

Transition models using key variables from stepwise proc transitions to contthru 13:12 Friday, June 24, 2005 70

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 4

Bounds on condition number: 1.05, 16.611

Stepwise Selection: Step 5

Variable pjacknife Entered: R-Square = 0.1304 and C(p) = 55.0059

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	173.03784	34.60757	179.18	<.0001
Error	5973	1153.62280	0.19314		
Corrected Total	5978	1326.66065			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.73088	0.00754	1812.82594	9386.09	<.0001
jun	0.08691	0.01783	4.59100	23.77	<.0001
jul	0.10475	0.01752	6.90363	35.74	<.0001
dec	-0.20008	0.03041	8.36115	43.29	<.0001
psingle	-0.33997	0.01362	120.42119	623.49	<.0001
pjacknife	0.15569	0.03987	2.94561	15.25	<.0001

Bounds on condition number: 1.0512, 25.836

Stepwise Selection: Step 6

Variable feb Entered: R-Square = 0.1316 and C(p) = 48.7577

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	174.61793	29.10299	150.87	<.0001
Error	5972	1152.04271	0.19291		
Corrected Total	5978	1326.66065			

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The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.73274	0.00757	1808.64326	9375.71	<.0001
feb	-0.20484	0.07157	1.58009	8.19	0.0042
jun	0.08510	0.01783	4.39539	22.78	<.0001
jul	0.10293	0.01752	6.65699	34.51	<.0001
dec	-0.20188	0.03040	8.50859	44.11	<.0001
psingle	-0.34003	0.01361	120.47007	624.50	<.0001
pjacknife	0.15425	0.03985	2.89104	14.99	0.0001

Bounds on condition number: 1.0512, 37.039

Stepwise Selection: Step 7

Variable nov Entered: R-Square = 0.1329 and C(p) = 41.8369

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	176.32687	25.18955	130.75	<.0001
Error	5971	1150.33378	0.19265		
Corrected Total	5978	1326.66065			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.73977	0.00792	1679.84465	8719.51	<.0001
feb	-0.21325	0.07158	1.70983	8.88	0.0029
jun	0.07696	0.01802	3.51264	18.23	<.0001
jul	0.09476	0.01772	5.50673	28.58	<.0001
nov	-0.05647	0.01896	1.70894	8.87	0.0029
dec	-0.21281	0.03060	9.31882	48.37	<.0001
psingle	-0.33421	0.01374	114.02232	591.85	<.0001
pjacknife	0.15910	0.03985	3.07035	15.94	<.0001

Bounds on condition number: 1.0737, 51.357

Stepwise Selection: Step 8

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The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 8

Variable oct Entered: R-Square = 0.1342 and C(p) = 34.8816

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	178.04242	22.25530	115.67	<.0001
Error	5970	1148.61822	0.19240		
Corrected Total	5978	1326.66065			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.74945	0.00855	1476.74740	7675.47	<.0001
feb	-0.22342	0.07161	1.87258	9.73	0.0018
jun	0.06681	0.01833	2.55571	13.28	0.0003
jul	0.08460	0.01804	4.23302	22.00	<.0001
oct	-0.05675	0.01901	1.71556	8.92	0.0028
nov	-0.06720	0.01929	2.33581	12.14	0.0005
dec	-0.22392	0.03080	10.16706	52.84	<.0001
psingle	-0.33212	0.01375	112.30269	583.70	<.0001
pjacknife	0.16503	0.03988	3.29548	17.13	<.0001

Bounds on condition number: 1.1123, 68.538

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	psingle		1	0.1129	0.1129	168.074	761.06	<.0001
2	dec		2	0.0078	0.1208	115.993	53.08	<.0001
3	jul		3	0.0040	0.1248	89.9669	27.63	<.0001
4	jun		4	0.0034	0.1282	68.3822	23.34	<.0001
5	pjacknife		5	0.0022	0.1304	55.0059	15.25	<.0001
6	feb		6	0.0012	0.1316	48.7577	8.19	0.0042
7	nov		7	0.0013	0.1329	41.8369	8.87	0.0029
8	oct		8	0.0013	0.1342	34.8816	8.92	0.0028

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.1193 and C(p) = 134.5612

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	137.49811	137.49811	581.02	<.0001
Error	4291	1015.46406	0.23665		
Corrected Total	4292	1152.96217			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.93222	0.00906	10764	45483.3	<.0001
pturnback	-0.38106	0.01581	137.49811	581.02	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable oct Entered: R-Square = 0.1275 and C(p) = 95.3372

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	146.96142	73.48071	313.35	<.0001
Error	4290	1006.00075	0.23450		
Corrected Total	4292	1152.96217			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.91480	0.00943	9676.31300	41263.8	<.0001
oct	0.15449	0.02432	9.46332	40.36	<.0001
pturnback	-0.37658	0.01575	134.00935	571.47	<.0001

Bounds on condition number: 1.002, 4.0081

Stepwise Selection: Step 3

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable sep Entered: R-Square = 0.1364 and C(p) = 52.5272

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	157.24791	52.41597	225.78	<.0001
Error	4289	995.71426	0.23216		
Corrected Total	4292	1152.96217			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.89733	0.00974	8810.42577	37950.6	<.0001
sep	0.18157	0.02728	10.28648	44.31	<.0001
oct	0.17094	0.02432	11.46553	49.39	<.0001
pturnback	-0.37271	0.01568	131.09429	564.68	<.0001

Bounds on condition number: 1.0125, 9.082

Stepwise Selection: Step 4

Variable feb Entered: R-Square = 0.1415 and C(p) = 29.0009

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	163.10768	40.77692	176.64	<.0001
Error	4288	989.85449	0.23084		
Corrected Total	4292	1152.96217			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.89313	0.00975	8707.05902	37718.5	<.0001
feb	0.45145	0.08960	5.85977	25.38	<.0001
sep	0.18539	0.02721	10.71580	46.42	<.0001
oct	0.17477	0.02427	11.97424	51.87	<.0001
pturnback	-0.37133	0.01564	130.08052	563.50	<.0001

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0135, 16.125

Stepwise Selection: Step 5

Variable pexchange Entered: R-Square = 0.1434 and C(p) = 21.0630

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	165.38899	33.07780	143.59	<.0001
Error	4287	987.57318	0.23036		
Corrected Total	4292	1152.96217			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.92866	0.01491	3853.80684	16729.2	<.0001
feb	0.42633	0.08987	5.18444	22.51	<.0001
sep	0.17990	0.02724	10.04823	43.62	<.0001
oct	0.17291	0.02425	11.71363	50.85	<.0001
pturnback	-0.40621	0.01916	103.55204	449.51	<.0001
pexchange	-0.05777	0.01836	2.28132	9.90	0.0017

Bounds on condition number: 1.5107, 30.3

Stepwise Selection: Step 6

Variable aug Entered: R-Square = 0.1452 and C(p) = 14.1401

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	167.43732	27.90622	121.36	<.0001
Error	4286	985.52485	0.22994		
Corrected Total	4292	1152.96217			

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.92001	0.01518	3680.09338	16004.5	<.0001
feb	0.43513	0.08983	5.39491	23.46	<.0001
aug	0.07130	0.02389	2.04833	8.91	0.0029
sep	0.18932	0.02740	10.98063	47.75	<.0001
oct	0.18246	0.02444	12.81972	55.75	<.0001
pturnback	-0.40658	0.01914	103.73323	451.13	<.0001
pexchange	-0.05967	0.01835	2.43160	10.57	0.0012

Bounds on condition number: 1.5126, 42.751

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.1193	0.1193	134.561	581.02	<.0001
2	oct		2	0.0082	0.1275	95.3372	40.36	<.0001
3	sep		3	0.0089	0.1364	52.5272	44.31	<.0001
4	feb		4	0.0051	0.1415	29.0009	25.38	<.0001
5	pexchange		5	0.0020	0.1434	21.0630	9.90	0.0017
6	aug		6	0.0018	0.1452	14.1401	8.91	0.0029

Logarithms of double lockage times using key variables from stepwise proc 77
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.2117 and C(p) = 215.9002

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	47.28149	47.28149	1152.69	<.0001
Error	4291	176.01056	0.04102		
Corrected Total	4292	223.29204			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.63696	0.00377	1169.68022	28515.9	<.0001
pturnback	-0.22346	0.00658	47.28149	1152.69	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable oct Entered: R-Square = 0.2256 and C(p) = 138.8263

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	50.37098	25.18549	624.83	<.0001
Error	4290	172.92107	0.04031		
Corrected Total	4292	223.29204			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.62701	0.00391	1037.54492	25740.5	<.0001
oct	0.08827	0.01008	3.08949	76.65	<.0001
pturnback	-0.22089	0.00653	46.10996	1143.94	<.0001

Bounds on condition number: 1.002, 4.0081

Stepwise Selection: Step 3

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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable sep Entered: R-Square = 0.2416 and C(p) = 49.0061

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	53.95847	17.98616	455.57	<.0001
Error	4289	169.33357	0.03948		
Corrected Total	4292	223.29204			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.61669	0.00402	930.77122	23575.2	<.0001
sep	0.10723	0.01125	3.58750	90.87	<.0001
oct	0.09798	0.01003	3.76737	95.42	<.0001
pturnback	-0.21861	0.00647	45.10061	1142.34	<.0001

Bounds on condition number: 1.0125, 9.082

Stepwise Selection: Step 4

Variable aug Entered: R-Square = 0.2449 and C(p) = 32.5767

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	54.67853	13.66963	347.63	<.0001
Error	4288	168.61352	0.03932		
Corrected Total	4292	223.29204			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.61093	0.00423	820.78498	20873.3	<.0001
aug	0.04222	0.00987	0.72005	18.31	<.0001
sep	0.11287	0.01130	3.92071	99.71	<.0001
oct	0.10363	0.01010	4.14195	105.33	<.0001
pturnback	-0.21816	0.00646	44.90331	1141.93	<.0001

Logarithms of double lockage times using key variables from stepwise proc 79
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.03, 16.35

Stepwise Selection: Step 5

Variable pexchange Entered: R-Square = 0.2474 and C(p) = 20.3000

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	55.23633	11.04727	281.81	<.0001
Error	4287	168.05571	0.03920		
Corrected Total	4292	223.29204			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.62813	0.00622	400.32108	10211.9	<.0001
aug	0.04363	0.00986	0.76781	19.59	<.0001
sep	0.11045	0.01130	3.74257	95.47	<.0001
oct	0.10300	0.01008	4.09115	104.36	<.0001
pturnback	-0.23530	0.00789	34.89440	890.14	<.0001
pexchange	-0.02847	0.00755	0.55780	14.23	0.0002

Bounds on condition number: 1.5025, 30.461

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.2117	0.2117	215.900	1152.69	<.0001
2	oct		2	0.0138	0.2256	138.826	76.65	<.0001
3	sep		3	0.0161	0.2416	49.0061	90.87	<.0001
4	aug		4	0.0032	0.2449	32.5767	18.31	<.0001
5	pexchange		5	0.0025	0.2474	20.3000	14.23	0.0002

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0445 and C(p) = 130.0227

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	3.84673	3.84673	66.96	<.0001
Error	1437	82.55529	0.05745		
Corrected Total	1438	86.40202			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.48416	0.00742	244.49515	4255.81	<.0001
pturnback	-0.11577	0.01415	3.84673	66.96	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.1002 and C(p) = 40.7467

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	8.66156	4.33078	80.00	<.0001
Error	1436	77.74046	0.05414		
Corrected Total	1438	86.40202			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.55789	0.01063	149.08478	2753.85	<.0001
pturnback	-0.18949	0.01580	7.78414	143.79	<.0001
pexchange	-0.13634	0.01446	4.81483	88.94	<.0001

Bounds on condition number: 1.324, 5.2961

Stepwise Selection: Step 3

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable feb Entered: R-Square = 0.1155 and C(p) = 17.8207

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	9.97641	3.32547	62.44	<.0001
Error	1435	76.42561	0.05326		
Corrected Total	1438	86.40202			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.55227	0.01060	144.43536	2711.98	<.0001
feb	0.38451	0.07739	1.31485	24.69	<.0001
pturnback	-0.18485	0.01570	7.38065	138.58	<.0001
pexchange	-0.13140	0.01437	4.45104	83.57	<.0001

Bounds on condition number: 1.3304, 10.994

Stepwise Selection: Step 4

Variable sep Entered: R-Square = 0.1202 and C(p) = 12.0610

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	10.38573	2.59643	48.98	<.0001
Error	1434	76.01629	0.05301		
Corrected Total	1438	86.40202			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.54528	0.01088	133.26394	2513.94	<.0001
feb	0.39122	0.07724	1.35982	25.65	<.0001
sep	0.05413	0.01948	0.40933	7.72	0.0055
pturnback	-0.18498	0.01567	7.39125	139.43	<.0001
pexchange	-0.12874	0.01437	4.25364	80.24	<.0001

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.3363, 18.715

Stepwise Selection: Step 5

Variable oct Entered: R-Square = 0.1260 and C(p) = 4.6257

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	10.88345	2.17669	41.30	<.0001
Error	1433	75.51857	0.05270		
Corrected Total	1438	86.40202			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.53739	0.01114	122.56068	2325.65	<.0001
feb	0.39909	0.07706	1.41350	26.82	<.0001
sep	0.06196	0.01959	0.52723	10.00	0.0016
oct	0.05799	0.01887	0.49772	9.44	0.0022
pturnback	-0.18502	0.01562	7.39436	140.31	<.0001
pexchange	-0.12848	0.01433	4.23624	80.38	<.0001

Bounds on condition number: 1.3364, 28.576

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0445	0.0445	130.023	66.96	<.0001
2	pexchange		2	0.0557	0.1002	40.7467	88.94	<.0001
3	feb		3	0.0152	0.1155	17.8207	24.69	<.0001
4	sep		4	0.0047	0.1202	12.0610	7.72	0.0055
5	oct		5	0.0058	0.1260	4.6257	9.44	0.0022

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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0388 and C(p) = 181.7850

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	12.27678	12.27678	58.14	<.0001
Error	1442	304.49012	0.21116		
Corrected Total	1443	316.76689			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.85418	0.01420	763.91145	3617.72	<.0001
pturnback	-0.20652	0.02708	12.27678	58.14	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.1314 and C(p) = 27.4122

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	41.63577	20.81789	109.03	<.0001
Error	1441	275.13112	0.19093		
Corrected Total	1443	316.76689			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.67183	0.01997	216.19832	1132.34	<.0001
pturnback	-0.38887	0.02966	32.82643	171.93	<.0001
pexchange	-0.33613	0.02711	29.35899	153.77	<.0001

Bounds on condition number: 1.326, 5.3041

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 84
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable sep Entered: R-Square = 0.1394 and C(p) = 16.0229

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	44.14962	14.71654	77.73	<.0001
Error	1440	272.61728	0.18932		
Corrected Total	1443	316.76689			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.68890	0.02043	215.36430	1137.58	<.0001
sep	0.13407	0.03679	2.51385	13.28	0.0003
pturnback	-0.38935	0.02953	32.90805	173.82	<.0001
pexchange	-0.32967	0.02705	28.12172	148.54	<.0001

Bounds on condition number: 1.3317, 10.992

Stepwise Selection: Step 4

Variable oct Entered: R-Square = 0.1452 and C(p) = 8.1880

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	45.99612	11.49903	61.11	<.0001
Error	1439	270.77077	0.18817		
Corrected Total	1443	316.76689			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.70379	0.02091	213.16224	1132.84	<.0001
sep	0.14902	0.03699	3.05420	16.23	<.0001
oct	0.11105	0.03545	1.84651	9.81	0.0018
pturnback	-0.38957	0.02944	32.94480	175.08	<.0001
pexchange	-0.32966	0.02697	28.11886	149.44	<.0001

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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.3317, 18.792

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0388	0.0388	181.785	58.14	<.0001
2	pexchange		2	0.0927	0.1314	27.4122	153.77	<.0001
3	sep		3	0.0079	0.1394	16.0229	13.28	0.0003
4	oct		4	0.0058	0.1452	8.1880	9.81	0.0018

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable aug Entered: R-Square = 0.0128 and C(p) = 2.1219

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	702.82450	702.82450	41.94	<.0001
Error	3225	54049	16.75949		
Corrected Total	3226	54752			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.64494	0.07613	38422	2292.55	<.0001
aug	1.53004	0.23627	702.82450	41.94	<.0001

Bounds on condition number: 1, 1

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	aug		1	0.0128	0.0128	2.1219	41.94	<.0001

Logarithms of single lockage times using key variables from stepwise proc 87
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0086 and C(p) = 43.4651

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	3.36881	3.36881	28.02	<.0001
Error	3224	387.60981	0.12023		
Corrected Total	3225	390.97862			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.25413	0.00660	4344.21900	36133.7	<.0001
jun	-0.09209	0.01740	3.36881	28.02	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable sep Entered: R-Square = 0.0121 and C(p) = 33.9291

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	4.73813	2.36907	19.77	<.0001
Error	3223	386.24049	0.11984		
Corrected Total	3225	390.97862			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.24706	0.00691	3901.91623	32559.7	<.0001
jun	-0.08502	0.01749	2.83030	23.62	<.0001
sep	0.07719	0.02283	1.36932	11.43	0.0007

Bounds on condition number: 1.0145, 4.058

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 88
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable oct Entered: R-Square = 0.0163 and C(p) = 22.1971

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	6.36811	2.12270	17.78	<.0001
Error	3222	384.61051	0.11937		
Corrected Total	3225	390.97862			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.23774	0.00734	3390.32761	28401.8	<.0001
jun	-0.07570	0.01764	2.19779	18.41	<.0001
sep	0.08651	0.02293	1.69921	14.23	0.0002
oct	0.07901	0.02138	1.62998	13.65	0.0002

Bounds on condition number: 1.0357, 9.277

Stepwise Selection: Step 4

Variable aug Entered: R-Square = 0.0205 and C(p) = 10.3869

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	8.00738	2.00184	16.84	<.0001
Error	3221	382.97124	0.11890		
Corrected Total	3225	390.97862			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.22625	0.00796	2823.91426	23750.7	<.0001
jun	-0.06420	0.01788	1.53355	12.90	0.0003
aug	0.07594	0.02045	1.63927	13.79	0.0002
sep	0.09801	0.02309	2.14158	18.01	<.0001
oct	0.09051	0.02156	2.09465	17.62	<.0001

Logarithms of single lockage times using key variables from stepwise proc 89
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0677, 16.883

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun		1	0.0086	0.0086	43.4651	28.02	<.0001
2	sep		2	0.0035	0.0121	33.9291	11.43	0.0007
3	oct		3	0.0042	0.0163	22.1971	13.65	0.0002
4	aug		4	0.0042	0.0205	10.3869	13.79	0.0002

Logarithms of single lockage times using key variables from stepwise proc 90
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0303 and C(p) = -5.7124

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	4825.74191	4825.74191	17.39	<.0001
Error	557	154592	277.54383		
Corrected Total	558	159418			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.49851	0.74134	10220	36.82	<.0001
jun	9.94593	2.38522	4825.74191	17.39	<.0001

Bounds on condition number: 1, 1

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun		1	0.0303	0.0303	-5.7124	17.39	<.0001

Logarithms of single lockage times using key variables from stepwise proc 91
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

No variable met the 0.0100 significance level for entry into the model.

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	6018	0	25193070095	4186286.16	3698474.00	4328174.00
strtlcktime	Start/lockge/time	6018	0	7.9831724E12	1326549094	1267026420	1387119960
arrtime	Arriv/time	6018	0	7.983106E12	1326538047	1267026420	1387119960
deptime	Leave/lockge/time	6018	0	7.9832112E12	1326555540	1267028280	1387121400
BOW_OVER_SILL	BOW_OVER_SILL	6018	0	7.9831952E12	1326552870	1267027200	1387120500
END_OF_ENTRY	END_OF_ENTRY	6018	0	7.9831988E12	1326553478	1267027500	1387120800
START_OF_EXIT	START_OF_EXIT	6018	0	7.9832014E12	1326553898	1267028160	1387121100
SIGNAL_DATE	SIGNAL_DATE	0	6018	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	6018	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	5633	385	63800.00	11.3261140	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	5633	385	3812.00	0.6767264	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	6018	.	.	.	.
vess_no		6018	0	4592482486	763124.37	65506.00	8888864.00
vss_hp		5996	22	27390115.00	4568.06	75.0000000	81800.00
frsttime		6018	0	7.983106E12	1326538047	1267026420	1387119960
lasttime		6018	0	7.9832112E12	1326555540	1267028280	1387121400
newpoolno		6018	0	137054.00	22.7740113	7.0000000	27.0000000
oldpoolno		6018	0	132334.00	21.9896976	6.0000000	28.0000000
waitmin	Wait/before/lockge	6018	0	1108068.00	184.1256231	0	2871.00
lockmin	Wait/lockge/time	6018	0	646458.00	107.4207378	9.0000000	1087.00
year		6018	0	12044735.00	2001.45	2000.00	2003.00
fly		6018	0	1340.00	0.2226653	0	1.0000000
turnback		6018	0	2245.00	0.3730475	0	1.0000000
exchange		6018	0	2433.00	0.4042871	0	1.0000000
lock		6018	0	131685.00	21.8818544	6.0000000	27.0000000
totmin		6018	0	1754526.00	291.5463609	10.0000000	2892.00
month		6018	0	45271.00	7.5225989	1.0000000	12.0000000
day		6018	0	94574.00	15.7151878	1.0000000	31.0000000
sunrise		6016	2	138528846	23026.74	20156.00	27112.00
sunset		6016	2	414056258	68825.84	60091.00	74316.00
sequpstr		6018	0	0	0	0	0
seqdstr		6018	0	4580.00	0.7610502	0	1.0000000
plock		6018	0	126378.00	21.0000000	21.0000000	21.0000000
pempty		5635	383	3331.00	0.5911269	0	50.0000000
pfull		5635	383	63501.00	11.2690328	0	28.0000000
parrtime		6018	0	7.9827624E12	1326480956	1267016400	1387098660
pstrtlcktime		6018	0	7.9828033E12	1326487753	1267016400	1387098720
pdeptime		6018	0	7.9828387E12	1326493641	1267017600	1387100400
birth		6018	0	0	0	0	0
transithrs		6018	0	74232.05	12.3350033	-45.0333333	5802.60
reclock		6018	0	0	0	0	0
i		6018	0	1127358.00	187.3310070	58.0000000	401.0000000
pctpsysdn		6018	0	3779.48	0.6280291	0	82.3940000
pctplckdn		6018	0	2828.44	0.4699962	0	85.2380000
cumdown		6014	4	1180500.00	196.2919854	0	59880.00
pctdown		6014	4	5546.52	0.9222680	0	95.2250000
pcttrandn		5992	26	7689.86	1.2833541	0	100.0000000
pctsysdn		6014	4	8362.97	1.3905845	0	95.2250000
pctlckdn		6014	4	5546.52	0.9222680	0	95.2250000
stime		6018	0	273307380	45414.99	0	86340.00
etime		6018	0	271659660	45141.19	0	86340.00
sdate		6018	0	92394666.00	15353.05	14664.00	16054.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		6018	0	92395134.00	15353.13	14664.00	16054.00
hrsduration		6018	0	10774.30	1.7903456	0.1500000	18.1166667
ndays		6018	0	0	0	0	0
pctday		6018	0	329837.49	54.8084897	0	100.0000000
pctpsysnite		6018	0	269884.67	44.8462404	0	100.0000000
pctplcknite		6018	0	273676.51	45.4763225	0	100.0000000
pcttrannite		6016	2	274944.75	45.7022515	0	100.0000000
pctsysnite		6018	0	269149.53	44.7240828	0	100.0000000
pctlcknite		6018	0	271962.51	45.1915103	0	100.0000000
stage		5961	57	82150.06	13.7812548	10.0800000	32.7800000
flow		5941	77	571318641	96165.40	16415.00	306262.78
jan		6018	0	17.0000000	0.0028249	0	1.0000000
feb		6018	0	28.0000000	0.0046527	0	1.0000000
mar		6018	0	418.0000000	0.0694583	0	1.0000000
apr		6018	0	588.0000000	0.0977069	0	1.0000000
may		6018	0	526.0000000	0.0874045	0	1.0000000
jun		6018	0	726.0000000	0.1206381	0	1.0000000
jul		6018	0	728.0000000	0.1209704	0	1.0000000
aug		6018	0	675.0000000	0.1121635	0	1.0000000
sep		6018	0	525.0000000	0.0872383	0	1.0000000
oct		6018	0	634.0000000	0.1053506	0	1.0000000
nov		6018	0	791.0000000	0.1314390	0	1.0000000
dec		6018	0	362.0000000	0.0601529	0	1.0000000
m31day		6018	0	3360.00	0.5583250	0	1.0000000
m30day		6018	0	2630.00	0.4370223	0	1.0000000
qtr1		6018	0	463.0000000	0.0769359	0	1.0000000
qtr2		6018	0	1840.00	0.3057494	0	1.0000000
qtr3		6018	0	1928.00	0.3203722	0	1.0000000
qtr4		6018	0	1787.00	0.2969425	0	1.0000000
psingle		6018	0	1279.00	0.2125291	0	1.0000000
pdouble		6018	0	4531.00	0.7529079	0	1.0000000
pknockout		6018	0	126.0000000	0.0209372	0	1.0000000
pjacknife		6018	0	78.0000000	0.0129611	0	1.0000000
pothtype		6018	0	4.0000000	0.000664673	0	1.0000000
pexchange		6018	0	2260.00	0.3755400	0	1.0000000
pturnback		6018	0	2010.00	0.3339980	0	1.0000000
single		6018	0	1249.00	0.2075440	0	1.0000000
double		6018	0	4542.00	0.7547358	0	1.0000000
knockout		6018	0	145.0000000	0.0240944	0	1.0000000
jacknife		6018	0	77.0000000	0.0127949	0	1.0000000
othtype		6018	0	5.0000000	0.000830841	0	1.0000000
contthru		6018	0	4580.00	0.7610502	0	1.0000000
return		6018	0	623.0000000	0.1035228	0	1.0000000
contstop		6018	0	718.0000000	0.1193087	0	1.0000000
kill		6018	0	97.0000000	0.0161183	0	1.0000000
contsame		6018	0	4580.00	0.7610502	0	1.0000000
contdouble		6018	0	354.0000000	0.0588235	0	1.0000000
contsingle		6018	0	350.0000000	0.0581589	0	1.0000000
contko		6018	0	13.0000000	0.0021602	0	1.0000000
contjk		6018	0	1.0000000	0.000166168	0	1.0000000
retdouble		6018	0	76.0000000	0.0126288	0	1.0000000
retsingle		6018	0	545.0000000	0.0905616	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		6018	0	2.0000000	0.000332336	0	1.0000000
retjk		6018	0	0	0	0	0
xkill		6018	0	97.0000000	0.0161183	0	1.0000000
logtrnhrs		5997	21	7419.16	1.2371448	-2.9957323	8.6660614
plockhrs		6018	0	9681.69	1.6087884	0.1311475	10.7049180
loglckhrs		6018	0	1822.48	0.3028388	-2.0314323	2.3707033
thrusingle		6018	0	274.0000000	0.0455301	0	1.0000000
thruother		6018	0	193.0000000	0.0320705	0	1.0000000
contother		6018	0	14.0000000	0.0023264	0	1.0000000
retother		6018	0	2.0000000	0.000332336	0	1.0000000
thrudoubnite		6016	2	1872.83	0.3113085	0	1.0000000
thrusingnite		6016	2	112.8086900	0.0187514	0	1.0000000
thruothnite		6016	2	84.4059500	0.0140302	0	1.0000000
pdoubnite		6018	0	2084.08	0.3463071	0	1.0000000
psingnite		6018	0	571.7216900	0.0950019	0	1.0000000
pothnite		6018	0	80.9674200	0.0134542	0	1.0000000

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The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI22D

pconfig doutcome

Frequency Percent Row Pct Col Pct	1:contsame	2:contdouble	3:contsingle	4:contko	5:contjk	6:retdouble	7:retsingle	8:retko	x:kill	Total
1:double	4113 68.34 90.77 89.80	319 5.30 7.04 90.11	7 0.12 0.15 2.00	2 0.03 0.04 15.38	0 0.00 0.00 0.00	70 1.16 1.54 92.11	4 0.07 0.09 0.73	1 0.02 0.02 50.00	15 0.25 0.33 15.46	4531 75.29
2:single	274 4.55 21.42 5.98	30 0.50 2.35 8.47	341 5.67 26.66 97.43	8 0.13 0.63 61.54	0 0.00 0.00 0.00	6 0.10 0.47 7.89	538 8.94 42.06 98.72	1 0.02 0.08 50.00	81 1.35 6.33 83.51	1279 21.25
3:knockout	115 1.91 91.27 2.51	5 0.08 3.97 1.41	2 0.03 1.59 0.57	3 0.05 2.38 23.08	1 0.02 0.79 100.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	126 2.09
4:jacknife	76 1.26 97.44 1.66	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02 1.28 0.18	0 0.00 0.00 0.00	1 0.02 1.28 1.03	78 1.30
5:Other	2 0.03 50.00 0.04	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.03 50.00 0.37	0 0.00 0.00 0.00	0 0.00 0.00 0.00	4 0.07
Total	4580 76.11	354 5.88	350 5.82	13 0.22	1 0.02	76 1.26	545 9.06	2 0.03	97 1.61	6018 100.00

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 13:12 Friday, June 24, 2005 96

The FREQ Procedure

Table 1 of pconfig by nextstep
Controlling for pnewpool=MI22D

pconfig nextstep

Frequency Percent Row Pct Col Pct	1:contth	2:contst	3:return	4:kill	Total
1:double	4113 68.34 90.77 89.80	328 5.45 7.24 45.68	75 1.25 1.66 12.04	15 0.25 0.33 15.46	4531 75.29
2:single	274 4.55 21.42 5.98	379 6.30 29.63 52.79	545 9.06 42.61 87.48	81 1.35 6.33 83.51	1279 21.25
3:knockout	115 1.91 91.27 2.51	11 0.18 8.73 1.53	0 0.00 0.00 0.00	0 0.00 0.00 0.00	126 2.09
4:jacknife	76 1.26 97.44 1.66	0 0.00 0.00 0.00	1 0.02 1.28 0.16	1 0.02 1.28 1.03	78 1.30
5:Other	2 0.03 50.00 0.04	0 0.00 0.00 0.00	2 0.03 50.00 0.32	0 0.00 0.00 0.00	4 0.07
Total	4580 76.11	718 11.93	623 10.35	97 1.61	6018 100.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	85712	0	364360192709	4250982.27	3515664.00	4331559.00
strtlcktime	Start/lockge/time	85712	0	1.137393E14	1326993904	1262306700	1388533680
arrtime	Arriv/time	85712	0	1.1373902E14	1326990620	1262306700	1388530800
deptime	Leave/lockge/time	85712	0	1.1373952E14	1326996468	1262307720	1388536080
BOW_OVER_SILL	BOW_OVER_SILL	85712	0	1.1373937E14	1326994738	1262307000	1388534700
END_OF_ENTRY	END_OF_ENTRY	85712	0	1.1373941E14	1326995214	1262307060	1388535000
START_OF_EXIT	START_OF_EXIT	85712	0	1.1373948E14	1326995939	1262307660	1388535600
SIGNAL_DATE	SIGNAL_DATE	0	85712	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	85712	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	74637	11075	464559.00	6.2242453	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	74637	11075	244995.00	3.2824872	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	85712	.	.	.	.
vess_no		85712	0	69328105871	808849.47	2611.00	8888864.00
vss_hp		85004	708	331181509	3896.07	60.0000000	81800.00
frsttime		85712	0	1.1373902E14	1326990620	1262306700	1388530800
lasttime		85712	0	1.1373952E14	1326996468	1262307720	1388536080
newpoolno		85712	0	2148095.00	25.0617766	1.0000000	28.0000000
oldpoolno		85712	0	2150119.00	25.0853906	1.0000000	28.0000000
waitmin	Wait/before/lockge	85712	0	4692155.00	54.7432682	0	7423.00
lockmin	Wait/lockge/time	85712	0	3662850.00	42.7343896	4.0000000	1823.00
year		85712	0	171552505	2001.50	2000.00	2003.00
fly		85712	0	36357.00	0.4241763	0	1.0000000
turnback		85712	0	26851.00	0.3132700	0	1.0000000
exchange		85712	0	22503.00	0.2625420	0	1.0000000
lock		85712	0	2106251.00	24.5735836	1.0000000	27.0000000
totmin		85712	0	8355005.00	97.4776577	4.0000000	7490.00
month		85712	0	610314.00	7.1205199	1.0000000	12.0000000
day		85712	0	1344850.00	15.6903351	1.0000000	31.0000000
sunrise		85009	703	1968891208	23160.97	19414.00	27155.00
sunset		85009	703	5775001097	67934.00	59694.00	75152.00
sequpstr		85712	0	14034.00	0.1637344	0	1.0000000
seqdstr		85712	0	20716.00	0.2416931	0	1.0000000
plock		85712	0	2013115.00	23.4869680	1.0000000	27.0000000
pempty		75006	10706	193363.00	2.5779671	0	50.0000000
pfull		75006	10706	516691.00	6.8886622	0	28.0000000
parrtime		85712	0	1.1371451E14	1326704691	1262304600	1388521920
pstrtlcktime		85712	0	1.1371497E14	1326709997	1262304600	1388521920
pdeptime		85712	0	1.1371524E14	1326713197	1262305620	1388523540
birth		85712	0	0	0	0	0
transithrs		85712	0	6605118.75	77.0617737	-249.0333333	8099.42
reclock		85712	0	0	0	0	0
i		85712	0	19664273.00	229.4226363	58.0000000	401.0000000
pctpsysdn		79996	5716	78195.55	0.9774932	0	98.9510000
pctplckdn		79996	5716	37415.49	0.4677170	0	98.3000000
cumdown		84949	763	3459840.00	40.7284371	0	107520.00
pctdown		84949	763	32248.08	0.3796170	0	98.3000000
pcttrandn		84697	1015	113236.72	1.3369626	0	100.0000000
pctsysdn		84949	763	74098.21	0.8722670	0	98.6320000
pctlckdn		84949	763	32248.08	0.3796170	0	98.3000000
stime		85712	0	3800903640	44345.06	0	86340.00
etime		85712	0	3812191440	44476.75	0	86340.00
sdate		85712	0	1316383109	15358.21	14610.00	16070.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		85712	0	1316385522	15358.24	14610.00	16071.00
hrsduration		85712	0	61047.50	0.7122398	0.0666667	30.3833333
ndays		85712	0	1.0000000	0.000011667	0	1.0000000
pctday		85694	18	4690288.06	54.7329809	0	100.0000000
pctpsysnite		85662	50	3855680.76	45.0103986	0	100.0000000
pctplcknite		85691	21	3868983.94	45.1504119	0	100.0000000
pcttrannite		85144	568	4019110.35	47.2036826	0	100.0000000
pctsysnite		85630	82	3856938.07	45.0419020	0	100.0000000
pctlcknite		85694	18	3879111.94	45.2670191	0	100.0000000
stage		41058	44654	877971.46	21.3836880	8.3500000	33.0800000
flow		8953	76759	747018067	83437.74	16077.99	306262.78
jan		85712	0	3072.00	0.0358410	0	1.0000000
feb		85712	0	3423.00	0.0399361	0	1.0000000
mar		85712	0	6992.00	0.0815755	0	1.0000000
apr		85712	0	7609.00	0.0887740	0	1.0000000
may		85712	0	7244.00	0.0845156	0	1.0000000
jun		85712	0	8503.00	0.0992043	0	1.0000000
jul		85712	0	8620.00	0.1005693	0	1.0000000
aug		85712	0	8031.00	0.0936975	0	1.0000000
sep		85712	0	7658.00	0.0893457	0	1.0000000
oct		85712	0	8607.00	0.1004177	0	1.0000000
nov		85712	0	9270.00	0.1081529	0	1.0000000
dec		85712	0	6683.00	0.0779704	0	1.0000000
m31day		85712	0	49249.00	0.5745870	0	1.0000000
m30day		85712	0	33040.00	0.3854769	0	1.0000000
qtr1		85712	0	13487.00	0.1573525	0	1.0000000
qtr2		85712	0	23356.00	0.2724939	0	1.0000000
qtr3		85712	0	24309.00	0.2836126	0	1.0000000
qtr4		85712	0	24560.00	0.2865410	0	1.0000000
psingle		85712	0	65903.00	0.7688888	0	1.0000000
pdouble		85712	0	15912.00	0.1856450	0	1.0000000
pknockout		85712	0	1445.00	0.0168588	0	1.0000000
pjacknife		85712	0	529.0000000	0.0061718	0	1.0000000
pothtype		85712	0	1923.00	0.0224356	0	1.0000000
pexchange		85712	0	23513.00	0.2743256	0	1.0000000
pturnback		85712	0	27820.00	0.3245753	0	1.0000000
single		85712	0	85662.00	0.9994167	0	1.0000000
double		85712	0	38.0000000	0.000443345	0	1.0000000
knockout		85712	0	10.0000000	0.000116670	0	1.0000000
jacknife		85712	0	0	0	0	0
othtype		85712	0	2.0000000	0.000023334	0	1.0000000
contthru		1279	84433	274.0000000	0.2142299	0	1.0000000
return		1279	84433	545.0000000	0.4261142	0	1.0000000
contstop		1279	84433	379.0000000	0.2963253	0	1.0000000
kill		1279	84433	81.0000000	0.0633307	0	1.0000000
contsame		1279	84433	274.0000000	0.2142299	0	1.0000000
contdouble		1279	84433	30.0000000	0.0234558	0	1.0000000
contsingle		1279	84433	341.0000000	0.2666145	0	1.0000000
contko		1279	84433	8.0000000	0.0062549	0	1.0000000
contjk		1279	84433	0	0	0	0
retdouble		1279	84433	6.0000000	0.0046912	0	1.0000000
retsingle		1279	84433	538.0000000	0.4206411	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1279	84433	1.0000000	0.000781861	0	1.0000000
retjk		1279	84433	0	0	0	0
xkill		1279	84433	81.0000000	0.0633307	0	1.0000000
logtrnhrs		1272	84440	2143.55	1.6851769	-2.9957323	8.6660614
plockhrs		1279	84433	589.2295082	0.4606955	0.1311475	3.7377049
loglckhrs		1279	84433	-1131.62	-0.8847687	-2.0314323	1.3184718
thrusingle		1279	84433	274.0000000	0.2142299	0	1.0000000
thruother		1279	84433	0	0	0	0
contother		1279	84433	8.0000000	0.0062549	0	1.0000000
retother		1279	84433	1.0000000	0.000781861	0	1.0000000
thrudoubnite		1277	84435	0	0	0	0
thrusingnite		1277	84435	112.8086900	0.0883388	0	1.0000000
thruothnite		1277	84435	0	0	0	0
pdoubnite		1279	84433	0	0	0	0
psingnite		1279	84433	571.7216900	0.4470068	0	1.0000000
pothnite		1279	84433	0	0	0	0

Transition models using key variables from stepwise proc transitions to contthru 13:12 Friday, June 24, 2005 100

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 1

Variable psingle Entered: R-Square = 0.4438 and C(p) = 41.6027

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	485.65213	485.65213	4799.57	<.0001
Error	6016	608.73803	0.10119		
Corrected Total	6017	1094.39016			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.90863	0.00462	3912.56299	38666.8	<.0001
psingle	-0.69440	0.01002	485.65213	4799.57	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable apr Entered: R-Square = 0.4453 and C(p) = 26.8161

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	487.33960	243.66980	2414.42	<.0001
Error	6015	607.05056	0.10092		
Corrected Total	6017	1094.39016			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.91405	0.00480	3658.09281	36246.5	<.0001
apr	-0.05640	0.01379	1.68747	16.72	<.0001
psingle	-0.69395	0.01001	484.96456	4805.30	<.0001

Bounds on condition number: 1.0001, 4.0005

Stepwise Selection: Step 3

Transition models using key variables from stepwise proc transitions to contthru 13:12 Friday, June 24, 2005 101

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 3

Variable pothtype Entered: R-Square = 0.4459 and C(p) = 21.9883

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	488.02596	162.67532	1613.44	<.0001
Error	6014	606.36420	0.10083		
Corrected Total	6017	1094.39016			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.91442	0.00480	3657.77917	36278.3	<.0001
apr	-0.05670	0.01379	1.70535	16.91	<.0001
psingle	-0.69430	0.01001	485.36430	4813.91	<.0001
pothtype	-0.41442	0.15884	0.68636	6.81	0.0091

Bounds on condition number: 1.0003, 9.0022

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	psingle		1	0.4438	0.4438	41.6027	4799.57	<.0001
2	apr		2	0.0015	0.4453	26.8161	16.72	<.0001
3	pothtype		3	0.0006	0.4459	21.9883	6.81	0.0091

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 102

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0518 and C(p) = 585.1288

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	53.25692	53.25692	247.22	<.0001
Error	4529	975.66677	0.21543		
Corrected Total	4530	1028.92369			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.03245	0.00843	12525	58139.4	<.0001
pturnback	-0.23042	0.01465	53.25692	247.22	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.1231 and C(p) = 202.7555

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	126.61585	63.30793	317.69	<.0001
Error	4528	902.30783	0.19927		
Corrected Total	4530	1028.92369			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.21357	0.01244	6306.18006	31645.9	<.0001
pturnback	-0.41154	0.01696	117.28056	588.54	<.0001
pexchange	-0.31471	0.01640	73.35894	368.13	<.0001

Bounds on condition number: 1.4486, 5.7943

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 103

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable feb Entered: R-Square = 0.1427 and C(p) = 98.6980

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	146.85728	48.95243	251.24	<.0001
Error	4527	882.06641	0.19485		
Corrected Total	4530	1028.92369			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.20447	0.01234	6221.58356	31930.8	<.0001
feb	1.30236	0.12778	20.24142	103.88	<.0001
pturnback	-0.40417	0.01679	112.90792	579.47	<.0001
pexchange	-0.30634	0.01624	69.33536	355.85	<.0001

Bounds on condition number: 1.4523, 11.719

Stepwise Selection: Step 4

Variable dec Entered: R-Square = 0.1484 and C(p) = 70.3641

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	152.64660	38.16165	197.11	<.0001
Error	4526	876.27709	0.19361		
Corrected Total	4530	1028.92369			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.19064	0.01255	5894.51390	30445.4	<.0001
feb	1.31477	0.12739	20.62264	106.52	<.0001
dec	0.14988	0.02741	5.78932	29.90	<.0001
pturnback	-0.39986	0.01676	110.26596	569.53	<.0001
pexchange	-0.29802	0.01626	65.04325	335.95	<.0001

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 104

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.4651, 19.727

Stepwise Selection: Step 5

Variable oct Entered: R-Square = 0.1541 and C(p) = 41.2387

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	158.58698	31.71740	164.90	<.0001
Error	4525	870.33670	0.19234		
Corrected Total	4530	1028.92369			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.17606	0.01279	5571.61451	28967.6	<.0001
feb	1.32877	0.12700	21.05568	109.47	<.0001
oct	0.12193	0.02194	5.94038	30.88	<.0001
dec	0.16311	0.02742	6.80486	35.38	<.0001
pturnback	-0.39761	0.01671	108.96552	566.53	<.0001
pexchange	-0.29554	0.01621	63.91574	332.31	<.0001

Bounds on condition number: 1.4662, 29.751

Stepwise Selection: Step 6

Variable nov Entered: R-Square = 0.1577 and C(p) = 23.8600

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	162.28548	27.04758	141.19	<.0001
Error	4524	866.63821	0.19156		
Corrected Total	4530	1028.92369			

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 105

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.16315	0.01309	5228.19566	27292.1	<.0001
feb	1.34204	0.12678	21.46619	112.06	<.0001
oct	0.13561	0.02212	7.20223	37.60	<.0001
nov	0.08481	0.01930	3.69849	19.31	<.0001
dec	0.17678	0.02754	7.89149	41.19	<.0001
pturnback	-0.39954	0.01668	109.94843	573.95	<.0001
pexchange	-0.29595	0.01618	64.09201	334.57	<.0001

Bounds on condition number: 1.4663, 42.106

Stepwise Selection: Step 7

Variable jun Entered: R-Square = 0.1591 and C(p) = 18.4611

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	163.69758	23.38537	122.25	<.0001
Error	4523	865.22611	0.19129		
Corrected Total	4530	1028.92369			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.17230	0.01351	4944.80508	25849.1	<.0001
feb	1.33266	0.12674	21.15156	110.57	<.0001
jun	-0.05450	0.02006	1.41211	7.38	0.0066
oct	0.12568	0.02240	6.02101	31.48	<.0001
nov	0.07482	0.01963	2.77816	14.52	0.0001
dec	0.16706	0.02775	6.93105	36.23	<.0001
pturnback	-0.39902	0.01667	109.64838	573.19	<.0001
pexchange	-0.29429	0.01618	63.28360	330.82	<.0001

Bounds on condition number: 1.4684, 57.205

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 106

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0518	0.0518	585.129	247.22	<.0001
2	pexchange		2	0.0713	0.1231	202.755	368.13	<.0001
3	feb		3	0.0197	0.1427	98.6980	103.88	<.0001
4	dec		4	0.0056	0.1484	70.3641	29.90	<.0001
5	oct		5	0.0058	0.1541	41.2387	30.88	<.0001
6	nov		6	0.0036	0.1577	23.8600	19.31	<.0001
7	jun		7	0.0014	0.1591	18.4611	7.38	0.0066

Logarithms of double lockage times using key variables from stepwise proc 107
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0852 and C(p) = 854.8528

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	14.14072	14.14072	421.57	<.0001
Error	4529	151.91794	0.03354		
Corrected Total	4530	166.05866			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.68985	0.00333	1442.90449	43016.1	<.0001
pturnback	-0.11873	0.00578	14.14072	421.57	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.1994 and C(p) = 184.5830

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	33.11743	16.55871	563.99	<.0001
Error	4528	132.94123	0.02936		
Corrected Total	4530	166.05866			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.78197	0.00478	786.96963	26804.3	<.0001
pturnback	-0.21085	0.00651	30.78608	1048.58	<.0001
pexchange	-0.16006	0.00630	18.97671	646.35	<.0001

Bounds on condition number: 1.4486, 5.7943

Stepwise Selection: Step 3

Logarithms of double lockage times using key variables from stepwise proc 108
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable feb Entered: R-Square = 0.2076 and C(p) = 138.6261

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	34.47114	11.49038	395.30	<.0001
Error	4527	131.58751	0.02907		
Corrected Total	4530	166.05866			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.77961	0.00476	778.13239	26770.1	<.0001
feb	0.33680	0.04935	1.35372	46.57	<.0001
pturnback	-0.20895	0.00648	30.17597	1038.14	<.0001
pexchange	-0.15790	0.00627	18.42034	633.71	<.0001

Bounds on condition number: 1.4523, 11.719

Stepwise Selection: Step 4

Variable jun Entered: R-Square = 0.2144 and C(p) = 100.5538

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	35.60230	8.90057	308.79	<.0001
Error	4526	130.45636	0.02882		
Corrected Total	4530	166.05866			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.78479	0.00482	765.27490	26550.1	<.0001
feb	0.33137	0.04915	1.31001	45.45	<.0001
jun	-0.04726	0.00754	1.13115	39.24	<.0001
pturnback	-0.20838	0.00646	30.00673	1041.04	<.0001
pexchange	-0.15601	0.00625	17.93938	622.38	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.4557, 19.654

Stepwise Selection: Step 5

Variable jul Entered: R-Square = 0.2199 and C(p) = 70.0452

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	36.51995	7.30399	255.14	<.0001
Error	4525	129.53871	0.02863		
Corrected Total	4530	166.05866			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.78958	0.00487	751.30513	26244.3	<.0001
feb	0.32600	0.04899	1.26743	44.27	<.0001
jun	-0.05394	0.00761	1.43802	50.23	<.0001
jul	-0.04247	0.00750	0.91765	32.05	<.0001
pturnback	-0.20629	0.00645	29.31096	1023.88	<.0001
pexchange	-0.15325	0.00625	17.20528	601.01	<.0001

Bounds on condition number: 1.4646, 29.913

Stepwise Selection: Step 6

Variable may Entered: R-Square = 0.2242 and C(p) = 46.8163

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	37.23210	6.20535	217.91	<.0001
Error	4524	128.82656	0.02848		
Corrected Total	4530	166.05866			

Logarithms of double lockage times using key variables from stepwise proc 110
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.79478	0.00497	727.90373	25561.8	<.0001
feb	0.32072	0.04888	1.22613	43.06	<.0001
may	-0.04434	0.00887	0.71216	25.01	<.0001
jun	-0.05951	0.00767	1.71357	60.18	<.0001
jul	-0.04804	0.00756	1.14882	40.34	<.0001
pturnback	-0.20620	0.00643	29.28436	1028.38	<.0001
pexchange	-0.15249	0.00624	17.02439	597.85	<.0001

Bounds on condition number: 1.4654, 42.404

Stepwise Selection: Step 7

Variable dec Entered: R-Square = 0.2271 and C(p) = 31.5709

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	37.71890	5.38841	189.90	<.0001
Error	4523	128.33975	0.02837		
Corrected Total	4530	166.05866			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.78950	0.00512	673.78444	23745.8	<.0001
feb	0.32566	0.04880	1.26339	44.53	<.0001
may	-0.04021	0.00891	0.57851	20.39	<.0001
jun	-0.05547	0.00772	1.46515	51.64	<.0001
jul	-0.04404	0.00761	0.94992	33.48	<.0001
dec	0.04420	0.01067	0.48680	17.16	<.0001
pturnback	-0.20514	0.00642	28.93935	1019.89	<.0001
pexchange	-0.15045	0.00624	16.46916	580.41	<.0001

Bounds on condition number: 1.4746, 57.194

Stepwise Selection: Step 8

Logarithms of double lockage times using key variables from stepwise proc 111
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 8

Variable oct Entered: R-Square = 0.2295 and C(p) = 19.9373

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	38.10375	4.76297	168.33	<.0001
Error	4522	127.95491	0.02830		
Corrected Total	4530	166.05866			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.78386	0.00534	609.60089	21543.6	<.0001
feb	0.33123	0.04876	1.30572	46.15	<.0001
may	-0.03476	0.00902	0.42065	14.87	0.0001
jun	-0.05003	0.00785	1.14956	40.63	<.0001
jul	-0.03861	0.00774	0.70377	24.87	<.0001
oct	0.03220	0.00873	0.38485	13.60	0.0002
dec	0.04968	0.01076	0.60318	21.32	<.0001
pturnback	-0.20478	0.00642	28.83193	1018.94	<.0001
pexchange	-0.15024	0.00624	16.42347	580.41	<.0001

Bounds on condition number: 1.4747, 75.087

Stepwise Selection: Step 9

Variable nov Entered: R-Square = 0.2312 and C(p) = 11.9636

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	38.38528	4.26503	151.03	<.0001
Error	4521	127.67337	0.02824		
Corrected Total	4530	166.05866			

Logarithms of double lockage times using key variables from stepwise proc 112
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 9

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.77731	0.00572	520.73222	18439.5	<.0001
feb	0.33797	0.04876	1.35682	48.05	<.0001
may	-0.02769	0.00928	0.25131	8.90	0.0029
jun	-0.04293	0.00816	0.78199	27.69	<.0001
jul	-0.03148	0.00806	0.43096	15.26	<.0001
oct	0.03925	0.00900	0.53674	19.01	<.0001
nov	0.02526	0.00800	0.28153	9.97	0.0016
dec	0.05667	0.01097	0.75284	26.66	<.0001
pturnback	-0.20561	0.00641	29.01724	1027.52	<.0001
pexchange	-0.15090	0.00623	16.54864	586.00	<.0001

Bounds on condition number: 1.4764, 98.674

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0852	0.0852	854.853	421.57	<.0001
2	pexchange		2	0.1143	0.1994	184.583	646.35	<.0001
3	feb		3	0.0082	0.2076	138.626	46.57	<.0001
4	jun		4	0.0068	0.2144	100.554	39.24	<.0001
5	jul		5	0.0055	0.2199	70.0452	32.05	<.0001
6	may		6	0.0043	0.2242	46.8163	25.01	<.0001
7	dec		7	0.0029	0.2271	31.5709	17.16	<.0001
8	oct		8	0.0023	0.2295	19.9373	13.60	0.0002
9	nov		9	0.0017	0.2312	11.9636	9.97	0.0016

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 113

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0234 and C(p) = 117.9423

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.99488	1.99488	30.53	<.0001
Error	1277	83.43796	0.06534		
Corrected Total	1278	85.43284			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.48831	0.00872	204.82639	3134.82	<.0001
pturnback	-0.08410	0.01522	1.99488	30.53	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.0597 and C(p) = 68.0464

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	5.10347	2.55174	40.53	<.0001
Error	1276	80.32936	0.06295		
Corrected Total	1278	85.43284			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.55097	0.01236	125.07039	1986.69	<.0001
pturnback	-0.14676	0.01740	4.47931	71.15	<.0001
pexchange	-0.12041	0.01714	3.10859	49.38	<.0001

Bounds on condition number: 1.3563, 5.4251

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 114

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0234	0.0234	117.942	30.53	<.0001
2	pexchange		2	0.0364	0.0597	68.0464	49.38	<.0001

Logarithms of single lockage times using key variables from stepwise proc 115
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0296 and C(p) = 126.9253

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	7.54865	7.54865	38.96	<.0001
Error	1275	247.05536	0.19377		
Corrected Total	1276	254.60401			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.82924	0.01503	590.00072	3044.87	<.0001
pturnback	-0.16375	0.02624	7.54865	38.96	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.0870 and C(p) = 46.2284

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	22.14279	11.07140	60.68	<.0001
Error	1274	232.46122	0.18247		
Corrected Total	1276	254.60401			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.69355	0.02104	198.17642	1086.10	<.0001
pturnback	-0.29944	0.02964	18.62700	102.08	<.0001
pexchange	-0.26105	0.02919	14.59414	79.98	<.0001

Bounds on condition number: 1.3552, 5.4208

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 116
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable aug Entered: R-Square = 0.0926 and C(p) = 40.1341

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	23.57126	7.85709	43.29	<.0001
Error	1273	231.03275	0.18149		
Corrected Total	1276	254.60401			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.70217	0.02121	198.87080	1095.79	<.0001
aug	0.10763	0.03836	1.42847	7.87	0.0051
pturnback	-0.30495	0.02962	19.23363	105.98	<.0001
pexchange	-0.26473	0.02914	14.97875	82.53	<.0001

Bounds on condition number: 1.3612, 11.171

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0296	0.0296	126.925	38.96	<.0001
2	pexchange		2	0.0573	0.0870	46.2284	79.98	<.0001
3	aug		3	0.0056	0.0926	40.1341	7.87	0.0051

Logarithms of single lockage times using key variables from stepwise proc 117
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable feb Entered: R-Square = 0.0883 and C(p) = 154.3400

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1407.78795	1407.78795	398.09	<.0001
Error	4110	14534	3.53635		
Corrected Total	4111	15942			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.05570	0.02937	38283	10825.6	<.0001
feb	10.84707	0.54365	1407.78795	398.09	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jun Entered: R-Square = 0.1038 and C(p) = 83.9834

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	1654.52062	827.26031	237.91	<.0001
Error	4109	14288	3.47716		
Corrected Total	4111	15942			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.15084	0.03124	35383	10175.7	<.0001
feb	10.75194	0.53920	1382.59554	397.62	<.0001
jun	-0.72770	0.08639	246.73267	70.96	<.0001

Bounds on condition number: 1.0004, 4.0018

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 118
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 3

Variable dec Entered: R-Square = 0.1093 and C(p) = 60.2677

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	1742.21013	580.73671	168.01	<.0001
Error	4108	14200	3.45666		
Corrected Total	4111	15942			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.10729	0.03232	31949	9242.82	<.0001
feb	10.79548	0.53768	1393.45650	403.12	<.0001
jun	-0.68416	0.08657	215.91320	62.46	<.0001
dec	0.60859	0.12083	87.68950	25.37	<.0001

Bounds on condition number: 1.0105, 9.0645

Stepwise Selection: Step 4

Variable may Entered: R-Square = 0.1130 and C(p) = 44.9961

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	1801.10552	450.27638	130.77	<.0001
Error	4107	14141	3.44316		
Corrected Total	4111	15942			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.15441	0.03421	29274	8502.02	<.0001
feb	10.74836	0.53675	1380.69645	401.00	<.0001
may	-0.42485	0.10272	58.89539	17.11	<.0001
jun	-0.73128	0.08714	242.46207	70.42	<.0001
dec	0.56147	0.12113	73.97623	21.48	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0281, 16.292

Stepwise Selection: Step 5

Variable apr Entered: R-Square = 0.1163 and C(p) = 31.5003

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	1853.94535	370.78907	108.07	<.0001
Error	4106	14088	3.43113		
Corrected Total	4111	15942			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.20532	0.03653	26415	7698.53	<.0001
feb	10.69746	0.53597	1366.84699	398.37	<.0001
apr	-0.40370	0.10287	52.83983	15.40	<.0001
may	-0.47576	0.10336	72.69237	21.19	<.0001
jun	-0.78219	0.08795	271.36120	79.09	<.0001
dec	0.51056	0.12161	60.47334	17.62	<.0001

Bounds on condition number: 1.051, 25.828

Stepwise Selection: Step 6

Variable jul Entered: R-Square = 0.1210 and C(p) = 11.4352

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	1929.18653	321.53109	94.19	<.0001
Error	4105	14013	3.41364		
Corrected Total	4111	15942			

Logarithms of single lockage times using key variables from stepwise proc 120
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.29611	0.04125	21794	6384.36	<.0001
feb	10.60667	0.53495	1341.98854	393.13	<.0001
apr	-0.49449	0.10442	76.55939	22.43	<.0001
may	-0.56655	0.10490	99.58000	29.17	<.0001
jun	-0.87298	0.08984	322.34884	94.43	<.0001
jul	-0.41313	0.08800	75.24119	22.04	<.0001
dec	0.41977	0.12284	39.86528	11.68	0.0006

Bounds on condition number: 1.1056, 38.539

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	feb		1	0.0883	0.0883	154.340	398.09	<.0001
2	jun		2	0.0155	0.1038	83.9834	70.96	<.0001
3	dec		3	0.0055	0.1093	60.2677	25.37	<.0001
4	may		4	0.0037	0.1130	44.9961	17.11	<.0001
5	apr		5	0.0033	0.1163	31.5003	15.40	<.0001
6	jul		6	0.0047	0.1210	11.4352	22.04	<.0001

Logarithms of single lockage times using key variables from stepwise proc 121
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0689 and C(p) = 622.5362

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	25.51278	25.51278	303.91	<.0001
Error	4109	344.94483	0.08395		
Corrected Total	4110	370.45761			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.09624	0.00485	4297.40834	51190.9	<.0001
jun	-0.23414	0.01343	25.51278	303.91	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable feb Entered: R-Square = 0.1053 and C(p) = 439.6102

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	39.00020	19.50010	241.68	<.0001
Error	4108	331.45741	0.08069		
Corrected Total	4110	370.45761			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.09267	0.00476	4255.18696	52737.7	<.0001
feb	1.06195	0.08214	13.48743	167.16	<.0001
jun	-0.23058	0.01317	24.73125	306.51	<.0001

Bounds on condition number: 1.0004, 4.0018

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 122
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.1294 and C(p) = 318.8367

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	47.95459	15.98486	203.56	<.0001
Error	4107	322.50302	0.07853		
Corrected Total	4110	370.45761			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.11443	0.00512	3724.62048	47432.2	<.0001
feb	1.04019	0.08106	12.93227	164.69	<.0001
jun	-0.25233	0.01315	28.90768	368.13	<.0001
jul	-0.13724	0.01285	8.95439	114.03	<.0001

Bounds on condition number: 1.0251, 9.1535

Stepwise Selection: Step 4

Variable may Entered: R-Square = 0.1611 and C(p) = 160.1271

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	59.67581	14.91895	197.11	<.0001
Error	4106	310.78180	0.07569		
Corrected Total	4110	370.45761			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.13777	0.00536	3407.20607	45015.5	<.0001
feb	1.01685	0.07960	12.35145	163.19	<.0001
may	-0.19076	0.01533	11.72122	154.86	<.0001
jun	-0.27568	0.01305	33.79062	446.44	<.0001
jul	-0.16058	0.01276	11.99469	158.47	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0477, 16.535

Stepwise Selection: Step 5

Variable apr Entered: R-Square = 0.1817 and C(p) = 57.1829

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	67.32983	13.46597	182.36	<.0001
Error	4105	303.12778	0.07384		
Corrected Total	4110	370.45761			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.15962	0.00571	3040.40331	41173.6	<.0001
feb	0.99500	0.07865	11.81768	160.04	<.0001
apr	-0.15497	0.01522	7.65402	103.65	<.0001
may	-0.21261	0.01529	14.27269	193.28	<.0001
jun	-0.29752	0.01306	38.29629	518.61	<.0001
jul	-0.18243	0.01278	15.04371	203.72	<.0001

Bounds on condition number: 1.0781, 26.369

Stepwise Selection: Step 6

Variable dec Entered: R-Square = 0.1864 and C(p) = 35.3186

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	69.07035	11.51173	156.76	<.0001
Error	4104	301.38725	0.07344		
Corrected Total	4110	370.45761			

Logarithms of single lockage times using key variables from stepwise proc 124
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.14973	0.00605	2651.67445	36107.9	<.0001
feb	1.00490	0.07846	12.04574	164.03	<.0001
apr	-0.14508	0.01532	6.58997	89.74	<.0001
may	-0.20272	0.01539	12.74911	173.61	<.0001
jun	-0.28763	0.01319	34.94211	475.81	<.0001
jul	-0.17253	0.01291	13.12292	178.70	<.0001
dec	0.08771	0.01802	1.74052	23.70	<.0001

Bounds on condition number: 1.1055, 38.538

Stepwise Selection: Step 7

Variable sep Entered: R-Square = 0.1898 and C(p) = 20.1085

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	70.32556	10.04651	137.34	<.0001
Error	4103	300.13205	0.07315		
Corrected Total	4110	370.45761			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.13853	0.00662	2166.02159	29610.9	<.0001
feb	1.01610	0.07836	12.30109	168.16	<.0001
apr	-0.13388	0.01552	5.44148	74.39	<.0001
may	-0.19152	0.01559	11.03704	150.88	<.0001
jun	-0.27643	0.01344	30.96672	423.34	<.0001
jul	-0.16133	0.01316	10.99026	150.24	<.0001
sep	0.06707	0.01619	1.25520	17.16	<.0001
dec	0.09891	0.01818	2.16447	29.59	<.0001

Bounds on condition number: 1.1542, 53.991

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Logarithms of single lockage times using key variables from stepwise proc 125
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun		1	0.0689	0.0689	622.536	303.91	<.0001
2	feb		2	0.0364	0.1053	439.610	167.16	<.0001
3	jul		3	0.0242	0.1294	318.837	114.03	<.0001
4	may		4	0.0316	0.1611	160.127	154.86	<.0001
5	apr		5	0.0207	0.1817	57.1829	103.65	<.0001
6	dec		6	0.0047	0.1864	35.3186	23.70	<.0001
7	sep		7	0.0034	0.1898	20.1085	17.16	<.0001

Logarithms of single lockage times using key variables from stepwise proc 126
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable jul Entered: R-Square = 0.0286 and C(p) = -4.1488

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	941.77714	941.77714	8.00	0.0050
Error	272	32006	117.66757		
Corrected Total	273	32947			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.55786	0.68881	3139.28033	26.68	<.0001
jul	6.32611	2.23610	941.77714	8.00	0.0050

Bounds on condition number: 1, 1

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jul		1	0.0286	0.0286	-4.1488	8.00	0.0050

Logarithms of single lockage times using key variables from stepwise proc 127
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

No variable met the 0.0100 significance level for entry into the model.

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 13:12 Friday, June 24, 2005 128

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	5756	0	23990257707	4167869.65	4052116.00	4298138.00
strtlcktime	Start/lockge/time	5756	0	7.6299052E12	1325556843	1267013820	1387104960
arrtime	Arriv/time	5756	0	7.629863E12	1325549519	1267013820	1387104960
deptime	Leave/lockge/time	5756	0	7.6299371E12	1325562392	1267014900	1387106700
BOW_OVER_SILL	BOW_OVER_SILL	5756	0	7.6299242E12	1325560141	1267014180	1387105800
END_OF_ENTRY	END_OF_ENTRY	5756	0	7.6299275E12	1325560711	1267014240	1387106100
START_OF_EXIT	START_OF_EXIT	5756	0	7.6299295E12	1325561062	1267014780	1387106400
SIGNAL_DATE	SIGNAL_DATE	0	5756	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	5756	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	5368	388	25936.00	4.8315946	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	5368	388	40664.00	7.5752608	0	48.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	5756	.	.	.	.
vess_no		5756	0	4328034117	751916.98	2611.00	8888846.00
vss_hp		5733	23	26983179.00	4706.64	75.0000000	81800.00
frsttime		5756	0	7.629863E12	1325549519	1267013820	1387104960
lasttime		5756	0	7.6299371E12	1325562392	1267014900	1387106700
newpoolno		5756	0	121788.00	21.1584434	15.0000000	28.0000000
oldpoolno		5756	0	126612.00	21.9965254	16.0000000	28.0000000
waitmin	Wait/before/lockge	5756	0	702618.00	122.0670605	0	5414.00
lockmin	Wait/lockge/time	5756	0	532289.00	92.4755038	9.0000000	1823.00
year		5756	0	11520366.00	2001.45	2000.00	2003.00
fly		5756	0	1578.00	0.2741487	0	1.0000000
turnback		5756	0	1877.00	0.3260945	0	1.0000000
exchange		5756	0	2301.00	0.3997568	0	1.0000000
lock		5756	0	121322.00	21.0774844	15.0000000	27.0000000
totmin		5756	0	1234907.00	214.5425643	14.0000000	5526.00
month		5756	0	40998.00	7.1226546	1.0000000	12.0000000
day		5756	0	90944.00	15.7998610	1.0000000	31.0000000
sunrise		5756	0	131801210	22898.06	20142.00	27112.00
sunset		5756	0	398348904	69205.86	59998.00	74308.00
sequpstr		5756	0	4452.00	0.7734538	0	1.0000000
seqdstr		5756	0	0	0	0	0
plock		5756	0	126632.00	22.0000000	22.0000000	22.0000000
pempty		5373	383	42424.00	7.8957752	0	48.0000000
pfull		5373	383	24941.00	4.6419133	0	28.0000000
parrtime		5756	0	7.6294863E12	1325484074	1267002300	1386932400
pstrtlcktime		5756	0	7.6295581E12	1325496538	1267002300	1386932400
pdeptime		5756	0	7.6295931E12	1325502623	1267003500	1386938100
birth		5756	0	0	0	0	0
transithrs		5756	0	74982.53	13.0268473	-24.6166667	6019.10
reclock		5756	0	0	0	0	0
i		5756	0	629395.00	109.3458999	58.0000000	383.0000000
pctpsysdn		5756	0	7633.94	1.3262587	0	98.1960000
pctplckdn		5756	0	4147.13	0.7204877	0	98.1960000
cumdown		5755	1	494700.00	85.9600348	0	107520.00
pctdown		5755	1	2186.43	0.3799180	0	98.3000000
pcttrandn		5737	19	3577.16	0.6235243	0	100.0000000
pctsysdn		5755	1	3556.42	0.6179712	0	98.3000000
pctlckdn		5755	1	2186.43	0.3799180	0	98.3000000
stime		5756	0	254088840	44143.30	60.0000002	86340.00
etime		5756	0	256650180	44588.29	60.0000002	86340.00
sdate		5756	0	88306147.00	15341.58	14664.00	16054.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		5756	0	88306487.00	15341.64	14664.00	16054.00
hrsduration		5756	0	8871.48	1.5412584	0.1500000	30.3833333
ndays		5756	0	1.0000000	0.000173732	0	1.0000000
pctday		5756	0	324754.06	56.4200936	0	100.0000000
pctpsysnite		5756	0	254900.53	44.2843176	0	100.0000000
pctplcknite		5756	0	252352.36	43.8416192	0	100.0000000
pcttrannite		5756	0	256243.84	44.5176927	0	100.0000000
pctsysnite		5756	0	245393.69	42.6326779	0	100.0000000
pctlcknite		5756	0	250845.94	43.5799064	0	100.0000000
stage		5702	54	74163.72	13.0066152	8.8500000	27.3400000
flow		5692	64	515830326	90623.74	16077.99	288497.84
jan		5756	0	19.0000000	0.0033009	0	1.0000000
feb		5756	0	50.0000000	0.0086866	0	1.0000000
mar		5756	0	574.0000000	0.0997220	0	1.0000000
apr		5756	0	599.0000000	0.1040653	0	1.0000000
may		5756	0	545.0000000	0.0946838	0	1.0000000
jun		5756	0	702.0000000	0.1219597	0	1.0000000
jul		5756	0	717.0000000	0.1245657	0	1.0000000
aug		5756	0	615.0000000	0.1068450	0	1.0000000
sep		5756	0	506.0000000	0.0879083	0	1.0000000
oct		5756	0	607.0000000	0.1054552	0	1.0000000
nov		5756	0	603.0000000	0.1047603	0	1.0000000
dec		5756	0	219.0000000	0.0380473	0	1.0000000
m31day		5756	0	3296.00	0.5726199	0	1.0000000
m30day		5756	0	2410.00	0.4186935	0	1.0000000
qtr1		5756	0	643.0000000	0.1117095	0	1.0000000
qtr2		5756	0	1846.00	0.3207088	0	1.0000000
qtr3		5756	0	1838.00	0.3193190	0	1.0000000
qtr4		5756	0	1429.00	0.2482627	0	1.0000000
psingle		5756	0	1176.00	0.2043085	0	1.0000000
pdouble		5756	0	4327.00	0.7517373	0	1.0000000
pknockout		5756	0	114.0000000	0.0198054	0	1.0000000
pjacknife		5756	0	136.0000000	0.0236275	0	1.0000000
pothtype		5756	0	3.0000000	0.000521195	0	1.0000000
pexchange		5756	0	2401.00	0.4171300	0	1.0000000
pturnback		5756	0	2243.00	0.3896803	0	1.0000000
single		5756	0	1225.00	0.2128214	0	1.0000000
double		5756	0	4287.00	0.7447880	0	1.0000000
knockout		5756	0	112.0000000	0.0194580	0	1.0000000
jacknife		5756	0	124.0000000	0.0215427	0	1.0000000
othtype		5756	0	8.0000000	0.0013899	0	1.0000000
contthru		5756	0	4452.00	0.7734538	0	1.0000000
return		5756	0	442.0000000	0.0767894	0	1.0000000
contstop		5756	0	797.0000000	0.1384642	0	1.0000000
kill		5756	0	65.0000000	0.0112926	0	1.0000000
contsame		5756	0	4452.00	0.7734538	0	1.0000000
contdouble		5756	0	331.0000000	0.0575052	0	1.0000000
contsingle		5756	0	460.0000000	0.0799166	0	1.0000000
contko		5756	0	5.0000000	0.000868659	0	1.0000000
contjk		5756	0	1.0000000	0.000173732	0	1.0000000
retdouble		5756	0	77.0000000	0.0133773	0	1.0000000
retsingle		5756	0	360.0000000	0.0625434	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		5756	0	5.0000000	0.000868659	0	1.0000000
retjk		5756	0	0	0	0	0
xkill		5756	0	65.0000000	0.0112926	0	1.0000000
logtrnhrs		5738	18	9260.56	1.6139009	-4.0943446	8.7026930
plockhrs		5756	0	9568.31	1.6623196	0.1475410	14.5409836
loglckhrs		5756	0	1987.08	0.3452182	-1.9136493	2.6769711
thrusingle		5756	0	356.0000000	0.0618485	0	1.0000000
thruother		5756	0	227.0000000	0.0394371	0	1.0000000
contother		5756	0	6.0000000	0.0010424	0	1.0000000
retother		5756	0	5.0000000	0.000868659	0	1.0000000
thrudoubnite		5756	0	1700.41	0.2954159	0	1.0000000
thrusingnite		5756	0	167.0689400	0.0290252	0	1.0000000
thruothnite		5756	0	111.6980100	0.0194055	0	1.0000000
pdoubnite		5756	0	1907.14	0.3313313	0	1.0000000
psingnite		5756	0	489.9853200	0.0851260	0	1.0000000
pothnite		5756	0	126.3955900	0.0219589	0	1.0000000

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 13:12 Friday, June 24, 2005 131

The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI22U

pconfig / doutcome Frequency Percent Row Pct Col Pct	1:contsame	2:contdouble	3:contsingle	4:contko	5:contjk	6:retdouble	7:retsingle	8:retko	x:kill	Total
1:double	3869 67.22 89.42 86.90	327 5.68 7.56 98.79	26 0.45 0.60 5.65	5 0.09 0.12 100.00	0 0.00 0.00 0.00	68 1.18 1.57 88.31	12 0.21 0.28 3.33	1 0.02 0.02 20.00	19 0.33 0.44 29.23	4327 75.17
2:single	356 6.18 30.27 8.00	3 0.05 0.26 0.91	430 7.47 36.56 93.48	0 0.00 0.00 0.00	0 0.00 0.00 0.00	7 0.12 0.60 9.09	334 5.80 28.40 92.78	0 0.00 0.00 0.00	46 0.80 3.91 70.77	1176 20.43
3:knockout	100 1.74 87.72 2.25	1 0.02 0.88 0.30	2 0.03 1.75 0.43	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.03 1.75 2.60	8 0.14 7.02 2.22	1 0.02 0.88 20.00	0 0.00 0.00 0.00	114 1.98
4:jacknife	124 2.15 91.18 2.79	0 0.00 0.00 0.00	2 0.03 1.47 0.43	0 0.00 0.00 0.00	1 0.02 0.74 100.00	0 0.00 0.00 0.00	6 0.10 4.41 1.67	3 0.05 2.21 60.00	0 0.00 0.00 0.00	136 2.36
5:Other	3 0.05 100.00 0.07	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.05
Total	4452 77.35	331 5.75	460 7.99	5 0.09	1 0.02	77 1.34	360 6.25	5 0.09	65 1.13	5756 100.00

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 13:12 Friday, June 24, 2005 132

The FREQ Procedure

Table 1 of pconfig by nextstep
Controlling for pnewpool=MI22U

pconfig nextstep

Frequency Percent Row Pct Col Pct	1:contth	2:contst	3:return	4:kill	Total
1:double	3869 67.22 89.42 86.90	358 6.22 8.27 44.92	81 1.41 1.87 18.33	19 0.33 0.44 29.23	4327 75.17
2:single	356 6.18 30.27 8.00	433 7.52 36.82 54.33	341 5.92 29.00 77.15	46 0.80 3.91 70.77	1176 20.43
3:knockout	100 1.74 87.72 2.25	3 0.05 2.63 0.38	11 0.19 9.65 2.49	0 0.00 0.00 0.00	114 1.98
4:jacknife	124 2.15 91.18 2.79	3 0.05 2.21 0.38	9 0.16 6.62 2.04	0 0.00 0.00 0.00	136 2.36
5:Other	3 0.05 100.00 0.07	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.05
Total	4452 77.35	797 13.85	442 7.68	65 1.13	5756 100.00

Statistics from water.regfile for regfile 13:12 Friday, June 24, 2005 133

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	85609	0	363924841672	4251011.48	3515664.00	4331559.00
strtlcktime	Start/lockge/time	85609	0	1.1360638E14	1327037821	1262306700	1388533680
arrtime	Arriv/time	85609	0	1.136061E14	1327034551	1262306700	1388530800
deptime	Leave/lockge/time	85609	0	1.136066E14	1327040384	1262307720	1388536080
BOW_OVER_SILL	BOW_OVER_SILL	85609	0	1.1360645E14	1327038653	1262307000	1388534700
END_OF_ENTRY	END_OF_ENTRY	85609	0	1.1360649E14	1327039130	1262307060	1388535000
START_OF_EXIT	START_OF_EXIT	85609	0	1.1360655E14	1327039854	1262307660	1388535600
SIGNAL_DATE	SIGNAL_DATE	0	85609	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	85609	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	74536	11073	464445.00	6.2311500	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	74536	11073	244568.00	3.2812064	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	85609	.	.	.	.
vess_no		85609	0	69127276579	807476.74	2611.00	8888864.00
vss_hp		84900	709	331491033	3904.49	60.0000000	81800.00
frsttime		85609	0	1.136061E14	1327034551	1262306700	1388530800
lasttime		85609	0	1.136066E14	1327040384	1262307720	1388536080
newpoolno		85609	0	2145251.00	25.0587088	1.0000000	28.0000000
oldpoolno		85609	0	2147894.00	25.0895817	1.0000000	28.0000000
waitmin	Wait/before/lockge	85609	0	4666186.00	54.5057879	0	7423.00
lockmin	Wait/lockge/time	85609	0	3657113.00	42.7187912	4.0000000	1823.00
year		85609	0	171346375	2001.50	2000.00	2003.00
fly		85609	0	36345.00	0.4245465	0	1.0000000
turnback		85609	0	26778.00	0.3127942	0	1.0000000
exchange		85609	0	22485.00	0.2626476	0	1.0000000
lock		85609	0	2103768.00	24.5741452	1.0000000	27.0000000
totmin		85609	0	8323299.00	97.2245792	4.0000000	7490.00
month		85609	0	610716.00	7.1337827	1.0000000	12.0000000
day		85609	0	1343175.00	15.6896471	1.0000000	31.0000000
sunrise		84908	701	1966900649	23165.08	19414.00	27155.00
sunset		84908	701	5766948462	67919.97	59694.00	75152.00
sequpstr		85609	0	14390.00	0.1680898	0	1.0000000
seqdstr		85609	0	20442.00	0.2387833	0	1.0000000
plock		85609	0	2012128.00	23.5036970	1.0000000	27.0000000
pempty		74900	10709	193234.00	2.5798932	0	50.0000000
pfull		74900	10709	516476.00	6.8955407	0	28.0000000
parrtime		85609	0	1.1358161E14	1326748521	1262304600	1388521920
pstrtlcktime		85609	0	1.1358207E14	1326753852	1262304600	1388521920
pdeptime		85609	0	1.1358235E14	1326757059	1262305620	1388523540
birth		85609	0	0	0	0	0
transithrs		85609	0	6598842.75	77.0811801	-249.0333333	8099.42
reclock		85609	0	0	0	0	0
i		85609	0	19622320.00	229.2086112	58.0000000	401.0000000
pctpsysdn		79893	5716	79296.08	0.9925285	0	98.9510000
pctplckdn		79893	5716	38166.50	0.4777202	0	98.3000000
cumdown		84849	760	3416220.00	40.2623484	0	107520.00
pctdown		84849	760	31919.68	0.3761940	0	98.3000000
pcttrandn		84603	1006	112843.11	1.3337956	0	100.0000000
pctsysdn		84849	760	73515.66	0.8664293	0	98.6320000
pctlckdn		84849	760	31919.68	0.3761940	0	98.3000000
stime		85609	0	3790553760	44277.51	0	86340.00
etime		85609	0	3802015740	44411.40	0	86340.00
sdate		85609	0	1314844795	15358.72	14610.00	16070.00

Statistics from water.regfile for regfile 13:12 Friday, June 24, 2005 134

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		85609	0	1314847202	15358.75	14610.00	16071.00
hrsduration		85609	0	60951.88	0.7119799	0.0666667	30.3833333
ndays		85609	0	2.0000000	0.000023362	0	1.0000000
pctday		85591	18	4689569.66	54.7904530	0	100.0000000
pctpsysnite		85559	50	3850521.49	45.0042835	0	100.0000000
pctplcknite		85588	21	3860810.31	45.1092479	0	100.0000000
pcttrannite		85043	566	4012877.03	47.1864472	0	100.0000000
pctsysnite		85527	82	3846684.89	44.9762635	0	100.0000000
pctlcknite		85591	18	3869530.34	45.2095470	0	100.0000000
stage		40957	44652	876012.12	21.3885812	8.3500000	33.0800000
flow		8866	76743	730413390	82383.64	16077.99	306262.78
jan		85609	0	3073.00	0.0358958	0	1.0000000
feb		85609	0	3423.00	0.0399841	0	1.0000000
mar		85609	0	6904.00	0.0806457	0	1.0000000
apr		85609	0	7544.00	0.0881216	0	1.0000000
may		85609	0	7205.00	0.0841617	0	1.0000000
jun		85609	0	8496.00	0.0992419	0	1.0000000
jul		85609	0	8626.00	0.1007604	0	1.0000000
aug		85609	0	8017.00	0.0936467	0	1.0000000
sep		85609	0	7663.00	0.0895116	0	1.0000000
oct		85609	0	8562.00	0.1000128	0	1.0000000
nov		85609	0	9349.00	0.1092058	0	1.0000000
dec		85609	0	6747.00	0.0788118	0	1.0000000
m31day		85609	0	49134.00	0.5739350	0	1.0000000
m30day		85609	0	33052.00	0.3860809	0	1.0000000
qtr1		85609	0	13400.00	0.1565256	0	1.0000000
qtr2		85609	0	23245.00	0.2715252	0	1.0000000
qtr3		85609	0	24306.00	0.2839187	0	1.0000000
qtr4		85609	0	24658.00	0.2880305	0	1.0000000
psingle		85609	0	65800.00	0.7686108	0	1.0000000
pdouble		85609	0	15912.00	0.1858683	0	1.0000000
pknockout		85609	0	1445.00	0.0168791	0	1.0000000
pjacknife		85609	0	529.0000000	0.0061793	0	1.0000000
pothtype		85609	0	1923.00	0.0224626	0	1.0000000
pexchange		85609	0	23590.00	0.2755551	0	1.0000000
pturnback		85609	0	27755.00	0.3242066	0	1.0000000
single		85609	0	85592.00	0.9998014	0	1.0000000
double		85609	0	13.0000000	0.000151853	0	1.0000000
knockout		85609	0	1.0000000	0.000011681	0	1.0000000
jacknife		85609	0	0	0	0	0
othtype		85609	0	3.0000000	0.000035043	0	1.0000000
contthru		1176	84433	356.0000000	0.3027211	0	1.0000000
return		1176	84433	341.0000000	0.2899660	0	1.0000000
contstop		1176	84433	433.0000000	0.3681973	0	1.0000000
kill		1176	84433	46.0000000	0.0391156	0	1.0000000
contsame		1176	84433	356.0000000	0.3027211	0	1.0000000
contdouble		1176	84433	3.0000000	0.0025510	0	1.0000000
contsingle		1176	84433	430.0000000	0.3656463	0	1.0000000
contko		1176	84433	0	0	0	0
contjk		1176	84433	0	0	0	0
retdouble		1176	84433	7.0000000	0.0059524	0	1.0000000
retsingle		1176	84433	334.0000000	0.2840136	0	1.0000000

SAS Program Output from “fitmodx.sas” for Tows Only (cont.)

Statistics from water.regfile for regfile 13:12 Friday, June 24, 2005 135

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1176	84433	0	0	0	0
retjk		1176	84433	0	0	0	0
xkill		1176	84433	46.0000000	0.0391156	0	1.0000000
logtrnhrs		1174	84435	2297.24	1.9567596	-4.0943446	8.7026930
plockhrs		1176	84433	647.8852459	0.5509228	0.1475410	14.5409836
loglckhrs		1176	84433	-895.7139592	-0.7616615	-1.9136493	2.6769711
thrusingle		1176	84433	356.0000000	0.3027211	0	1.0000000
thruother		1176	84433	0	0	0	0
contother		1176	84433	0	0	0	0
retother		1176	84433	0	0	0	0
thrudoubnite		1176	84433	0	0	0	0
thrusingnite		1176	84433	167.0689400	0.1420654	0	1.0000000
thruothnite		1176	84433	0	0	0	0
pdoubnite		1176	84433	0	0	0	0
psingnite		1176	84433	489.9853200	0.4166542	0	1.0000000
pothnite		1176	84433	0	0	0	0

Transition models using key variables from stepwise proc transitions to contthru 13:12 Friday, June 24, 2005 136

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 1

Variable psingle Entered: R-Square = 0.3247 and C(p) = 4.5270

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	327.50004	327.50004	2766.82	<.0001
Error	5754	681.08369	0.11837		
Corrected Total	5755	1008.58374			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.89432	0.00508	3663.14760	30947.4	<.0001
psingle	-0.59160	0.01125	327.50004	2766.82	<.0001

Bounds on condition number: 1, 1

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	psingle		1	0.3247	0.3247	4.5270	2766.82	<.0001

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 137

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.1029 and C(p) = 191.5421

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	161.26486	161.26486	496.10	<.0001
Error	4325	1405.89912	0.32506		
Corrected Total	4326	1567.16398			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.13987	0.01128	11699	35991.2	<.0001
pturnback	-0.39259	0.01763	161.26486	496.10	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable sep Entered: R-Square = 0.1167 and C(p) = 124.2168

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	182.85382	91.42691	285.58	<.0001
Error	4324	1384.31016	0.32015		
Corrected Total	4326	1567.16398			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.11640	0.01155	10744	33559.9	<.0001
sep	0.26068	0.03174	21.58896	67.43	<.0001
pturnback	-0.38619	0.01751	155.73933	486.46	<.0001

Bounds on condition number: 1.002, 4.0079

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 138

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable oct Entered: R-Square = 0.1298 and C(p) = 60.3997

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	203.35031	67.78344	214.86	<.0001
Error	4323	1363.81367	0.31548		
Corrected Total	4326	1567.16398			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.08791	0.01200	9549.69610	30270.5	<.0001
sep	0.28685	0.03168	25.86700	81.99	<.0001
oct	0.22711	0.02818	20.49648	64.97	<.0001
pturnback	-0.37928	0.01740	149.85129	475.00	<.0001

Bounds on condition number: 1.0126, 9.089

Stepwise Selection: Step 4

Variable pexchange Entered: R-Square = 0.1360 and C(p) = 30.9411

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	213.14700	53.28675	170.09	<.0001
Error	4322	1354.01698	0.31328		
Corrected Total	4326	1567.16398			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.18307	0.02080	3451.53699	11017.2	<.0001
sep	0.27371	0.03166	23.42145	74.76	<.0001
oct	0.22832	0.02808	20.71541	66.12	<.0001
pturnback	-0.47368	0.02420	120.00765	383.06	<.0001
pexchange	-0.13509	0.02416	9.79669	31.27	<.0001

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 139

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.9563, 23.756

Stepwise Selection: Step 5

Variable feb Entered: R-Square = 0.1378 and C(p) = 23.9060

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	215.96069	43.19214	138.12	<.0001
Error	4321	1351.20329	0.31271		
Corrected Total	4326	1567.16398			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.17559	0.02093	3379.24440	10806.5	<.0001
feb	0.29026	0.09676	2.81369	9.00	0.0027
sep	0.27716	0.03165	23.98316	76.70	<.0001
oct	0.23107	0.02807	21.19392	67.78	<.0001
pturnback	-0.46896	0.02423	117.13042	374.57	<.0001
pexchange	-0.12851	0.02423	8.79323	28.12	<.0001

Bounds on condition number: 1.9679, 34.879

Stepwise Selection: Step 6

Variable jun Entered: R-Square = 0.1395 and C(p) = 17.6188

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	218.54143	36.42357	116.67	<.0001
Error	4320	1348.62255	0.31218		
Corrected Total	4326	1567.16398			

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 140

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.18431	0.02113	3336.22703	10686.8	<.0001
feb	0.27973	0.09675	2.60958	8.36	0.0039
jun	-0.07399	0.02573	2.58074	8.27	0.0041
sep	0.26572	0.03187	21.70072	69.51	<.0001
oct	0.21921	0.02835	18.67037	59.81	<.0001
pturnback	-0.46512	0.02425	114.87012	367.96	<.0001
pexchange	-0.12467	0.02425	8.24993	26.43	<.0001

Bounds on condition number: 1.9739, 48.407

Stepwise Selection: Step 7

Variable jul Entered: R-Square = 0.1417 and C(p) = 8.4590

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	222.01678	31.71668	101.84	<.0001
Error	4319	1345.14720	0.31145		
Corrected Total	4326	1567.16398			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.19590	0.02139	3282.96054	10540.9	<.0001
feb	0.26494	0.09674	2.33590	7.50	0.0062
jun	-0.09169	0.02624	3.80151	12.21	0.0005
jul	-0.08656	0.02591	3.47535	11.16	0.0008
sep	0.24928	0.03221	18.65408	59.89	<.0001
oct	0.20203	0.02878	15.35138	49.29	<.0001
pturnback	-0.45832	0.02430	110.75371	355.61	<.0001
pexchange	-0.11780	0.02431	7.31338	23.48	<.0001

Bounds on condition number: 1.9881, 65.033

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 141

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.1029	0.1029	191.542	496.10	<.0001
2	sep		2	0.0138	0.1167	124.217	67.43	<.0001
3	oct		3	0.0131	0.1298	60.3997	64.97	<.0001
4	pexchange		4	0.0063	0.1360	30.9411	31.27	<.0001
5	feb		5	0.0018	0.1378	23.9060	9.00	0.0027
6	jun		6	0.0016	0.1395	17.6188	8.27	0.0041
7	jul		7	0.0022	0.1417	8.4590	11.16	0.0008

Logarithms of double lockage times using key variables from stepwise proc 142
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.1841 and C(p) = 280.0594

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	46.59333	46.59333	975.86	<.0001
Error	4325	206.50037	0.04775		
Corrected Total	4326	253.09370			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.73697	0.00432	1387.67506	29063.8	<.0001
pturnback	-0.21102	0.00676	46.59333	975.86	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable sep Entered: R-Square = 0.2009 and C(p) = 187.1425

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	50.85145	25.42572	543.61	<.0001
Error	4324	202.24225	0.04677		
Corrected Total	4326	253.09370			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.72655	0.00442	1266.18866	27071.5	<.0001
sep	0.11577	0.01213	4.25812	91.04	<.0001
pturnback	-0.20818	0.00669	45.25646	967.60	<.0001

Bounds on condition number: 1.002, 4.0079

Stepwise Selection: Step 3

Logarithms of double lockage times using key variables from stepwise proc 143
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable oct Entered: R-Square = 0.2182 and C(p) = 91.6098

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	55.22691	18.40897	402.20	<.0001
Error	4323	197.86678	0.04577		
Corrected Total	4326	253.09370			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.71338	0.00457	1114.83592	24357.0	<.0001
sep	0.12786	0.01207	5.13953	112.29	<.0001
oct	0.10493	0.01073	4.37547	95.60	<.0001
pturnback	-0.20499	0.00663	43.77249	956.34	<.0001

Bounds on condition number: 1.0126, 9.089

Stepwise Selection: Step 4

Variable pexchange Entered: R-Square = 0.2268 and C(p) = 45.1014

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	57.40308	14.35077	316.95	<.0001
Error	4322	195.69062	0.04528		
Corrected Total	4326	253.09370			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.75823	0.00791	416.37189	9195.94	<.0001
sep	0.12167	0.01203	4.62804	102.21	<.0001
oct	0.10550	0.01067	4.42315	97.69	<.0001
pturnback	-0.24948	0.00920	33.28980	735.23	<.0001
pexchange	-0.06367	0.00918	2.17616	48.06	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.9563, 23.756

Stepwise Selection: Step 5

Variable aug Entered: R-Square = 0.2293 and C(p) = 32.9126

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	58.03961	11.60792	257.15	<.0001
Error	4321	195.05409	0.04514		
Corrected Total	4326	253.09370			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.75304	0.00801	398.47507	8827.35	<.0001
aug	0.03976	0.01059	0.63653	14.10	0.0002
sep	0.12691	0.01210	4.96812	110.06	<.0001
oct	0.11078	0.01075	4.79329	106.18	<.0001
pturnback	-0.24915	0.00919	33.20003	735.47	<.0001
pexchange	-0.06409	0.00917	2.20452	48.84	<.0001

Bounds on condition number: 1.9564, 34.997

Stepwise Selection: Step 6

Variable feb Entered: R-Square = 0.2310 and C(p) = 25.2473

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	58.47321	9.74553	216.32	<.0001
Error	4320	194.62049	0.04505		
Corrected Total	4326	253.09370			

Logarithms of double lockage times using key variables from stepwise proc 145
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.74994	0.00807	389.14347	8637.84	<.0001
feb	0.11402	0.03675	0.43360	9.62	0.0019
aug	0.04099	0.01058	0.67559	15.00	0.0001
sep	0.12842	0.01209	5.07919	112.74	<.0001
oct	0.11202	0.01075	4.89453	108.64	<.0001
pturnback	-0.24729	0.00920	32.56512	722.85	<.0001
pexchange	-0.06152	0.00920	2.01469	44.72	<.0001

Bounds on condition number: 1.9681, 48.238

Stepwise Selection: Step 7

Variable jul Entered: R-Square = 0.2323 and C(p) = 20.0209

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	58.79740	8.39963	186.71	<.0001
Error	4319	194.29630	0.04499		
Corrected Total	4326	253.09370			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.75351	0.00817	382.46832	8501.86	<.0001
feb	0.10963	0.03676	0.40006	8.89	0.0029
jul	-0.02630	0.00980	0.32419	7.21	0.0073
aug	0.03592	0.01074	0.50299	11.18	0.0008
sep	0.12359	0.01222	4.60155	102.29	<.0001
oct	0.10698	0.01090	4.33200	96.30	<.0001
pturnback	-0.24555	0.00921	31.95188	710.26	<.0001
pexchange	-0.05967	0.00922	1.88507	41.90	<.0001

Bounds on condition number: 1.9791, 64.593

Stepwise Selection: Step 8

Logarithms of double lockage times using key variables from stepwise proc 146
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 8

Variable jun Entered: R-Square = 0.2343 and C(p) = 11.0242

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	59.29073	7.41134	165.13	<.0001
Error	4318	193.80297	0.04488		
Corrected Total	4326	253.09370			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.75942	0.00836	370.80023	8261.56	<.0001
feb	0.10267	0.03678	0.34971	7.79	0.0053
jun	-0.03382	0.01020	0.49333	10.99	0.0009
jul	-0.03429	0.01008	0.51967	11.58	0.0007
aug	0.02810	0.01099	0.29349	6.54	0.0106
sep	0.11605	0.01242	3.92138	87.37	<.0001
oct	0.09919	0.01114	3.55800	79.27	<.0001
pturnback	-0.24334	0.00923	31.21236	695.42	<.0001
pexchange	-0.05731	0.00924	1.72819	38.50	<.0001

Bounds on condition number: 1.991, 84.749

Stepwise Selection: Step 9

Variable aug Removed: R-Square = 0.2331 and C(p) = 15.5662

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	58.99724	8.42818	187.54	<.0001
Error	4319	194.09646	0.04494		
Corrected Total	4326	253.09370			

Logarithms of double lockage times using key variables from stepwise proc 147
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 9

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.76446	0.00812	397.87784	8853.51	<.0001
feb	0.09742	0.03675	0.31585	7.03	0.0081
jun	-0.03943	0.00997	0.70283	15.64	<.0001
jul	-0.03991	0.00984	0.73885	16.44	<.0001
sep	0.11055	0.01224	3.66860	81.63	<.0001
oct	0.09360	0.01093	3.29509	73.32	<.0001
pturnback	-0.24295	0.00923	31.12240	692.53	<.0001
pexchange	-0.05642	0.00923	1.67732	37.32	<.0001

Bounds on condition number: 1.9881, 65.033

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.1841	0.1841	280.059	975.86	<.0001
2	sep		2	0.0168	0.2009	187.143	91.04	<.0001
3	oct		3	0.0173	0.2182	91.6098	95.60	<.0001
4	pexchange		4	0.0086	0.2268	45.1014	48.06	<.0001
5	aug		5	0.0025	0.2293	32.9126	14.10	0.0002
6	feb		6	0.0017	0.2310	25.2473	9.62	0.0019
7	jul		7	0.0013	0.2323	20.0209	7.21	0.0073
8	jun		8	0.0019	0.2343	11.0242	10.99	0.0009
9		aug	7	0.0012	0.2331	15.5662	6.54	0.0106

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 148

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0182 and C(p) = 200.5529

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	8.69803	8.69803	21.68	<.0001
Error	1173	470.50507	0.40111		
Corrected Total	1174	479.20310			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.60788	0.02212	303.00170	755.40	<.0001
pturnback	-0.18737	0.04024	8.69803	21.68	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.0617 and C(p) = 141.6941

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	29.57535	14.78767	38.55	<.0001
Error	1172	449.62775	0.38364		
Corrected Total	1174	479.20310			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.81962	0.03594	199.51626	520.06	<.0001
pturnback	-0.39911	0.04871	25.75907	67.14	<.0001
pexchange	-0.33198	0.04500	20.87732	54.42	<.0001

Bounds on condition number: 1.532, 6.1281

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 149

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable feb Entered: R-Square = 0.0700 and C(p) = 132.1508

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	33.53522	11.17841	29.37	<.0001
Error	1171	445.66788	0.38059		
Corrected Total	1174	479.20310			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.79918	0.03635	183.92386	483.26	<.0001
feb	0.50593	0.15685	3.95987	10.40	0.0013
pturnback	-0.38437	0.04873	23.68126	62.22	<.0001
pexchange	-0.31154	0.04527	18.02513	47.36	<.0001

Bounds on condition number: 1.5627, 12.385

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0182	0.0182	200.553	21.68	<.0001
2	pexchange		2	0.0436	0.0617	141.694	54.42	<.0001
3	feb		3	0.0083	0.0700	132.151	10.40	0.0013

Logarithms of single lockage times using key variables from stepwise proc 150
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0697 and C(p) = 207.8360

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	20.89720	20.89720	87.93	<.0001
Error	1174	279.01438	0.23766		
Corrected Total	1175	299.91157			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.67401	0.01701	372.96643	1569.32	<.0001
pturnback	-0.29038	0.03097	20.89720	87.93	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.1983 and C(p) = 18.9953

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	59.48679	29.74340	145.11	<.0001
Error	1173	240.42478	0.20497		
Corrected Total	1175	299.91157			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.38603	0.02627	44.25934	215.94	<.0001
pturnback	-0.57835	0.03560	54.09007	263.90	<.0001
pexchange	-0.45119	0.03288	38.58960	188.27	<.0001

Bounds on condition number: 1.5326, 6.1304

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 151
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable jun Entered: R-Square = 0.2031 and C(p) = 13.9959

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	60.90212	20.30071	99.55	<.0001
Error	1172	239.00946	0.20393		
Corrected Total	1175	299.91157			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.37925	0.02633	42.30823	207.46	<.0001
jun	-0.11855	0.04500	1.41533	6.94	0.0085
pturnback	-0.57345	0.03556	53.03136	260.04	<.0001
pexchange	-0.44440	0.03290	37.20742	182.45	<.0001

Bounds on condition number: 1.5421, 12.255

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0697	0.0697	207.836	87.93	<.0001
2	pexchange		2	0.1287	0.1983	18.9953	188.27	<.0001
3	jun		3	0.0047	0.2031	13.9959	6.94	0.0085

Logarithms of single lockage times using key variables from stepwise proc 152
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable jul Entered: R-Square = 0.0074 and C(p) = 96.8739

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	196.45210	196.45210	28.98	<.0001
Error	3867	26215	6.77911		
Corrected Total	3868	26411			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.64944	0.04505	72202	10650.6	<.0001
jul	0.65588	0.12184	196.45210	28.98	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable feb Entered: R-Square = 0.0100 and C(p) = 88.7349

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	263.53919	131.76960	19.48	<.0001
Error	3866	26148	6.76351		
Corrected Total	3868	26411			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.63618	0.04520	71167	10522.2	<.0001
feb	1.52762	0.48504	67.08709	9.92	0.0016
jul	0.66915	0.12177	204.23344	30.20	<.0001

Bounds on condition number: 1.0012, 4.0048

All variables left in the model are significant at the 0.0100 level.

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 2

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jul		1	0.0074	0.0074	96.8739	28.98	<.0001
2	feb		2	0.0025	0.0100	88.7349	9.92	0.0016

Logarithms of single lockage times using key variables from stepwise proc 154
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable mar Entered: R-Square = 0.0049 and C(p) = 150.2660

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.42872	1.42872	19.17	<.0001
Error	3867	288.18517	0.07452		
Corrected Total	3868	289.61389			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.51194	0.00466	7854.56666	105396	<.0001
mar	-0.06095	0.01392	1.42872	19.17	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable nov Entered: R-Square = 0.0108 and C(p) = 128.4859

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	3.13548	1.56774	21.16	<.0001
Error	3866	286.47841	0.07410		
Corrected Total	3868	289.61389			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.51874	0.00486	7249.59923	97832.7	<.0001
mar	-0.06776	0.01395	1.74730	23.58	<.0001
nov	-0.07980	0.01663	1.70676	23.03	<.0001

Bounds on condition number: 1.0104, 4.0417

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 155
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable apr Entered: R-Square = 0.0148 and C(p) = 114.4298

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	4.28786	1.42929	19.36	<.0001
Error	3865	285.32603	0.07382		
Corrected Total	3868	289.61389			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.52655	0.00523	6280.32158	85072.7	<.0001
mar	-0.07557	0.01407	2.13026	28.86	<.0001
apr	-0.05477	0.01386	1.15238	15.61	<.0001
nov	-0.08761	0.01671	2.02829	27.48	<.0001

Bounds on condition number: 1.0312, 9.2602

Stepwise Selection: Step 4

Variable feb Entered: R-Square = 0.0184 and C(p) = 101.8857

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	5.33172	1.33293	18.12	<.0001
Error	3864	284.28217	0.07357		
Corrected Total	3868	289.61389			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.52450	0.00525	6196.04479	84217.4	<.0001
feb	0.19075	0.05064	1.04386	14.19	0.0002
mar	-0.07351	0.01405	2.01307	27.36	<.0001
apr	-0.05272	0.01385	1.06597	14.49	0.0001
nov	-0.08556	0.01669	1.93230	26.26	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0328, 16.377

Stepwise Selection: Step 5

Variable jun Entered: R-Square = 0.0205 and C(p) = 95.5890

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	5.92720	1.18544	16.14	<.0001
Error	3863	283.68669	0.07344		
Corrected Total	3868	289.61389			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.53182	0.00584	5044.92131	68697.4	<.0001
feb	0.18343	0.05066	0.96278	13.11	0.0003
mar	-0.08083	0.01427	2.35505	32.07	<.0001
apr	-0.06004	0.01407	1.33647	18.20	<.0001
jun	-0.03783	0.01328	0.59547	8.11	0.0044
nov	-0.09288	0.01688	2.22431	30.29	<.0001

Bounds on condition number: 1.0746, 26.331

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	mar		1	0.0049	0.0049	150.266	19.17	<.0001
2	nov		2	0.0059	0.0108	128.486	23.03	<.0001
3	apr		3	0.0040	0.0148	114.430	15.61	<.0001
4	feb		4	0.0036	0.0184	101.886	14.19	0.0002
5	jun		5	0.0021	0.0205	95.5890	8.11	0.0044

Logarithms of single lockage times using key variables from stepwise proc 157
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

No variable met the 0.0100 significance level for entry into the model.

Logarithms of single lockage times using key variables from stepwise proc 158
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable nov Entered: R-Square = 0.0366 and C(p) = 20.7676

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	4.30855	4.30855	13.44	0.0003
Error	354	113.46377	0.32052		
Corrected Total	355	117.77232			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.54519	0.03377	670.91905	2093.23	<.0001
nov	-0.26978	0.07358	4.30855	13.44	0.0003

Bounds on condition number: 1, 1

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	nov		1	0.0366	0.0366	20.7676	13.44	0.0003

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	5800	0	24469894722	4218947.37	3750091.00	4331083.00
strtlcktime	Start/lockge/time	5800	0	7.6943397E12	1326610294	1267044900	1387015500
arrtime	Arriv/time	5800	0	7.69427E12	1326598270	1267038000	1387014900
deptime	Leave/lockge/time	5800	0	7.6943774E12	1326616799	1267046700	1387017900
BOW_OVER_SILL	BOW_OVER_SILL	5800	0	7.6943614E12	1326614040	1267045200	1387016100
END_OF_ENTRY	END_OF_ENTRY	5800	0	7.6943646E12	1326614579	1267045500	1387016880
START_OF_EXIT	START_OF_EXIT	5800	0	7.6943681E12	1326615194	1267046220	1387017480
SIGNAL_DATE	SIGNAL_DATE	0	5800	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	5800	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	5532	268	65927.00	11.9173897	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	5532	268	3286.00	0.5939986	0	48.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	5800	.	.	.	.
vess_no		5800	0	4333030926	747074.30	2611.00	8888846.00
vss_hp		5771	29	27089676.00	4694.10	75.0000000	81800.00
frsttime		5800	0	7.69427E12	1326598270	1267038000	1387014900
lasttime		5800	0	7.6943774E12	1326616799	1267046700	1387017900
newpoolno		5800	0	144271.00	24.8743103	7.0000000	28.0000000
oldpoolno		5800	0	138957.00	23.9581034	8.0000000	28.0000000
waitmin	Wait/before/lockge	5800	0	1162353.00	200.4056897	0	3434.00
lockmin	Wait/lockge/time	5800	0	628746.00	108.4044828	9.0000000	790.0000000
year		5800	0	11608431.00	2001.45	2000.00	2003.00
fly		5800	0	1154.00	0.1989655	0	1.0000000
turnback		5800	0	2402.00	0.4141379	0	1.0000000
exchange		5800	0	2243.00	0.3867241	0	1.0000000
lock		5800	0	138714.00	23.9162069	7.0000000	27.0000000
totmin		5800	0	1791099.00	308.8101724	11.0000000	3510.00
month		5800	0	43594.00	7.5162069	1.0000000	12.0000000
day		5800	0	91811.00	15.8294828	1.0000000	31.0000000
sunrise		5799	1	133037499	22941.46	20128.00	26978.00
sunset		5799	1	398854323	68779.85	59999.00	74161.00
sequpstr		5800	0	0	0	0	0
seqdstr		5800	0	4618.00	0.7962069	0	1.0000000
plock		5800	0	127600.00	22.0000000	22.0000000	22.0000000
pempty		5530	270	2567.00	0.4641953	0	48.0000000
pfull		5530	270	64660.00	11.6925859	0	28.0000000
parrtime		5800	0	7.6939821E12	1326548637	1267013820	1386989940
pstrtlcktime		5800	0	7.6940499E12	1326560332	1267013820	1386989940
pdeptime		5800	0	7.6940888E12	1326567041	1267014900	1386994800
birth		5800	0	0	0	0	0
transithrs		5800	0	50313.85	8.6748017	-20.6666667	3604.90
reclock		5800	0	0	0	0	0
i		5800	0	1688968.00	291.2013793	101.0000000	401.0000000
pctpsysdn		5800	0	8516.28	1.4683243	0	98.3000000
pctplckdn		5800	0	5715.65	0.9854564	0	98.3000000
cumdown		5797	3	1043460.00	180.0000000	0	41940.00
pctdown		5797	3	5019.39	0.8658606	0	95.7530000
pcttrandn		5778	22	10460.34	1.8103745	0	100.0000000
pctsysdn		5797	3	9195.30	1.5862167	0	92.5830000
pctlckdn		5797	3	5019.39	0.8658606	0	95.7530000
stime		5800	0	260127180	44849.51	60.0000002	86340.00
etime		5800	0	258626340	44590.75	60.0000002	86340.00
sdate		5800	0	89051847.00	15353.77	14664.00	16053.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		5800	0	89052301.00	15353.85	14664.00	16053.00
hrsduration		5800	0	10479.10	1.8067414	0.1500000	13.1666667
ndays		5800	0	0	0	0	0
pctday		5800	0	315052.03	54.3193157	0	100.0000000
pctpsysnite		5800	0	247721.40	42.7105859	0	100.0000000
pctplcknite		5800	0	250431.47	43.1778400	0	100.0000000
pcttrannite		5799	1	259837.26	44.8072535	0	100.0000000
pctsysnite		5800	0	262111.65	45.1916645	0	100.0000000
pctlcknite		5800	0	264947.97	45.6806843	0	100.0000000
stage		5792	8	150970.73	26.0653885	12.2300000	32.5700000
flow		237	5563	22925212.86	96730.86	17514.61	280143.91
jan		5800	0	23.0000000	0.0039655	0	1.0000000
feb		5800	0	33.0000000	0.0056897	0	1.0000000
mar		5800	0	378.0000000	0.0651724	0	1.0000000
apr		5800	0	574.0000000	0.0989655	0	1.0000000
may		5800	0	495.0000000	0.0853448	0	1.0000000
jun		5800	0	707.0000000	0.1218966	0	1.0000000
jul		5800	0	724.0000000	0.1248276	0	1.0000000
aug		5800	0	663.0000000	0.1143103	0	1.0000000
sep		5800	0	512.0000000	0.0882759	0	1.0000000
oct		5800	0	589.0000000	0.1015517	0	1.0000000
nov		5800	0	736.0000000	0.1268966	0	1.0000000
dec		5800	0	366.0000000	0.0631034	0	1.0000000
m31day		5800	0	3238.00	0.5582759	0	1.0000000
m30day		5800	0	2529.00	0.4360345	0	1.0000000
qtr1		5800	0	434.0000000	0.0748276	0	1.0000000
qtr2		5800	0	1776.00	0.3062069	0	1.0000000
qtr3		5800	0	1899.00	0.3274138	0	1.0000000
qtr4		5800	0	1691.00	0.2915517	0	1.0000000
psingle		5800	0	1024.00	0.1765517	0	1.0000000
pdouble		5800	0	4546.00	0.7837931	0	1.0000000
pknockout		5800	0	147.0000000	0.0253448	0	1.0000000
pjacknife		5800	0	78.0000000	0.0134483	0	1.0000000
pothtype		5800	0	5.0000000	0.000862069	0	1.0000000
pexchange		5800	0	2347.00	0.4046552	0	1.0000000
pturnback		5800	0	2238.00	0.3858621	0	1.0000000
single		5800	0	936.0000000	0.1613793	0	1.0000000
double		5800	0	4610.00	0.7948276	0	1.0000000
knockout		5800	0	171.0000000	0.0294828	0	1.0000000
jacknife		5800	0	79.0000000	0.0136207	0	1.0000000
othtype		5800	0	4.0000000	0.000689655	0	1.0000000
contthru		5800	0	4618.00	0.7962069	0	1.0000000
return		5800	0	224.0000000	0.0386207	0	1.0000000
contstop		5800	0	897.0000000	0.1546552	0	1.0000000
kill		5800	0	61.0000000	0.0105172	0	1.0000000
contsame		5800	0	4618.00	0.7962069	0	1.0000000
contdouble		5800	0	605.0000000	0.1043103	0	1.0000000
contsingle		5800	0	237.0000000	0.0408621	0	1.0000000
contko		5800	0	54.0000000	0.0093103	0	1.0000000
contjk		5800	0	0	0	0	0
retdouble		5800	0	80.0000000	0.0137931	0	1.0000000
retsingle		5800	0	138.0000000	0.0237931	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		5800	0	3.0000000	0.000517241	0	1.0000000
retjk		5800	0	2.0000000	0.000344828	0	1.0000000
xkill		5800	0	63.0000000	0.0108621	0	1.0000000
logtrnhrs		5781	19	8377.65	1.4491702	-4.0943446	8.1900493
plockhrs		5800	0	10630.75	1.8328886	0.1639344	29.8852459
loglckhrs		5800	0	2670.23	0.4603843	-1.8082888	3.3973649
thrusingle		5800	0	518.0000000	0.0893103	0	1.0000000
thruother		5800	0	201.0000000	0.0346552	0	1.0000000
contother		5800	0	55.0000000	0.0094828	0	1.0000000
retother		5800	0	6.0000000	0.0010345	0	1.0000000
thrudoubnite		5799	1	1804.28	0.3111370	0	1.0000000
thrusingnite		5799	1	186.5387400	0.0321674	0	1.0000000
thruothnite		5799	1	91.9904100	0.0158632	0	1.0000000
pdoubnite		5800	0	2104.08	0.3627731	0	1.0000000
psingnite		5800	0	296.6843600	0.0511525	0	1.0000000
pothnite		5800	0	103.5463700	0.0178528	0	1.0000000

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The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI24D

pconfig / doutcome Frequency Percent Row Pct Col Pct	1:contsame	2:contdouble	3:contsingle	4:contko	6:retdouble	7:retsingle	8:retko	9:retjk	x:kill	Total
1:double	3899 67.22 85.77 84.43	534 9.21 11.75 88.26	4 0.07 0.09 1.69	0 0.00 0.00 0.00	79 1.36 1.74 98.75	10 0.17 0.22 7.25	0 0.00 0.00 0.00	1 0.02 0.02 50.00	19 0.33 0.42 30.16	4546 78.38
2:single	518 8.93 50.59 11.22	52 0.90 5.08 8.60	233 4.02 22.75 98.31	49 0.84 4.79 90.74	1 0.02 0.10 1.25	126 2.17 12.30 91.30	2 0.03 0.20 66.67	0 0.00 0.00 0.00	43 0.74 4.20 68.25	1024 17.66
3:knockout	121 2.09 82.31 2.62	18 0.31 12.24 2.98	0 0.00 0.00 0.00	4 0.07 2.72 7.41	0 0.00 0.00 0.00	1 0.02 0.68 0.72	1 0.02 0.68 33.33	1 0.02 0.68 50.00	1 0.02 0.68 1.59	147 2.53
4:jacknife	76 1.31 97.44 1.65	1 0.02 1.28 0.17	0 0.00 0.00 0.00	1 0.02 1.28 1.85	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	78 1.34
5:Other	4 0.07 80.00 0.09	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02 20.00 0.72	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5 0.09
Total	4618 79.62	605 10.43	237 4.09	54 0.93	80 1.38	138 2.38	3 0.05	2 0.03	63 1.09	5800 100.00

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 13:12 Friday, June 24, 2005 163

The FREQ Procedure

Table 1 of pconfig by nextstep
Controlling for pnewpool=MI24D

pconfig nextstep

Frequency Percent Row Pct Col Pct	1:contth	2:contst	3:return	4:kill	Total
1:double	3899 67.22 85.77 84.43	539 9.29 11.86 60.09	90 1.55 1.98 40.18	18 0.31 0.40 29.51	4546 78.38
2:single	518 8.93 50.59 11.22	334 5.76 32.62 37.24	130 2.24 12.70 58.04	42 0.72 4.10 68.85	1024 17.66
3:knockout	121 2.09 82.31 2.62	22 0.38 14.97 2.45	3 0.05 2.04 1.34	1 0.02 0.68 1.64	147 2.53
4:jacknife	76 1.31 97.44 1.65	2 0.03 2.56 0.22	0 0.00 0.00 0.00	0 0.00 0.00 0.00	78 1.34
5:Other	4 0.07 80.00 0.09	0 0.00 0.00 0.00	1 0.02 20.00 0.45	0 0.00 0.00 0.00	5 0.09
Total	4618 79.62	897 15.47	224 3.86	61 1.05	5800 100.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	85457	0	363334429228	4251663.75	3515664.00	4331559.00
strtlcktime	Start/lockge/time	85457	0	1.1340177E14	1327003838	1262306700	1388533680
arrtime	Arriv/time	85457	0	1.1340149E14	1327000549	1262306700	1388530800
deptime	Leave/lockge/time	85457	0	1.1340199E14	1327006406	1262307720	1388536080
BOW_OVER_SILL	BOW_OVER_SILL	85457	0	1.1340184E14	1327004669	1262307000	1388534700
END_OF_ENTRY	END_OF_ENTRY	85457	0	1.1340188E14	1327005146	1262307060	1388535000
START_OF_EXIT	START_OF_EXIT	85457	0	1.1340194E14	1327005875	1262307660	1388535600
SIGNAL_DATE	SIGNAL_DATE	0	85457	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	85457	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	74503	10954	465181.00	6.2437888	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	74503	10954	244373.00	3.2800424	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	85457	.	.	.	.
vess_no		85457	0	69032277196	807801.32	2611.00	8888864.00
vss_hp		84742	715	330615040	3901.43	60.0000000	81800.00
frsttime		85457	0	1.1340149E14	1327000549	1262306700	1388530800
lasttime		85457	0	1.1340199E14	1327006406	1262307720	1388536080
newpoolno		85457	0	2145047.00	25.1008928	1.0000000	28.0000000
oldpoolno		85457	0	2146486.00	25.1177317	1.0000000	28.0000000
waitmin	Wait/before/lockge	85457	0	4684503.00	54.8170776	0	7423.00
lockmin	Wait/lockge/time	85457	0	3658376.00	42.8095533	4.0000000	1823.00
year		85457	0	171042164	2001.50	2000.00	2003.00
fly		85457	0	36224.00	0.4238857	0	1.0000000
turnback		85457	0	26797.00	0.3135729	0	1.0000000
exchange		85457	0	22434.00	0.2625180	0	1.0000000
lock		85457	0	2103038.00	24.6093123	1.0000000	27.0000000
totmin		85457	0	8342879.00	97.6266309	4.0000000	7490.00
month		85457	0	608314.00	7.1183636	1.0000000	12.0000000
day		85457	0	1341202.00	15.6944662	1.0000000	31.0000000
sunrise		84755	702	1962844170	23159.04	19414.00	27155.00
sunset		84755	702	5757808993	67934.74	59694.00	75152.00
sequpstr		85457	0	14034.00	0.1642229	0	1.0000000
seqdstr		85457	0	20960.00	0.2452696	0	1.0000000
plock		85457	0	2008784.00	23.5063716	1.0000000	27.0000000
pempty		74861	10596	192668.00	2.5736765	0	50.0000000
pfull		74861	10596	516932.00	6.9052243	0	28.0000000
parrtime		85457	0	1.1337709E14	1326715088	1262304600	1388521920
pstrtlcktime		85457	0	1.1337755E14	1326720434	1262304600	1388521920
pdeptime		85457	0	1.1337782E14	1326723647	1262305620	1388523540
birth		85457	0	0	0	0	0
transithrs		85457	0	6573116.20	76.9172356	-249.0333333	8099.42
reclock		85457	0	0	0	0	0
i		85457	0	19756464.00	231.1860234	58.0000000	401.0000000
pctpsysdn		79741	5716	79113.62	0.9921322	0	98.9510000
pctplckdn		79741	5716	38242.91	0.4795891	0	98.3000000
cumdown		84696	761	3445320.00	40.6786625	0	107520.00
pctdown		84696	761	32194.74	0.3801211	0	98.3000000
pcttrandn		84448	1009	113884.24	1.3485723	0	100.0000000
pctsysdn		84696	761	74496.13	0.8795708	0	98.6320000
pctlckdn		84696	761	32194.74	0.3801211	0	98.3000000
stime		85457	0	3785955540	44302.46	0	86340.00
etime		85457	0	3797234100	44434.44	0	86340.00
sdate		85457	0	1312476632	15358.33	14610.00	16070.00

Statistics from water.regfile for regfile 13:12 Friday, June 24, 2005 165

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		85457	0	1312479042	15358.36	14610.00	16071.00
hrsduration		85457	0	60972.93	0.7134926	0.0666667	30.3833333
ndays		85457	0	1.0000000	0.000011702	0	1.0000000
pctday		85439	18	4676336.89	54.7330480	0	100.0000000
pctpsysnite		85407	50	3829162.49	44.8342934	0	100.0000000
pctplcknite		85436	21	3841480.21	44.9632498	0	100.0000000
pcttrannite		84890	567	3999412.04	47.1128760	0	100.0000000
pctsysnite		85375	82	3846028.84	45.0486541	0	100.0000000
pctlcknite		85439	18	3867563.11	45.2669520	0	100.0000000
stage		40813	44644	886226.16	21.7143106	8.3500000	33.0800000
flow		7845	77612	649332139	82770.19	16077.99	306262.78
jan		85457	0	3078.00	0.0360181	0	1.0000000
feb		85457	0	3427.00	0.0401020	0	1.0000000
mar		85457	0	6951.00	0.0813392	0	1.0000000
apr		85457	0	7584.00	0.0887464	0	1.0000000
may		85457	0	7217.00	0.0844518	0	1.0000000
jun		85457	0	8492.00	0.0993716	0	1.0000000
jul		85457	0	8608.00	0.1007290	0	1.0000000
aug		85457	0	8009.00	0.0937196	0	1.0000000
sep		85457	0	7643.00	0.0894368	0	1.0000000
oct		85457	0	8559.00	0.1001556	0	1.0000000
nov		85457	0	9217.00	0.1078554	0	1.0000000
dec		85457	0	6672.00	0.0780744	0	1.0000000
m31day		85457	0	49094.00	0.5744878	0	1.0000000
m30day		85457	0	32936.00	0.3854102	0	1.0000000
qtr1		85457	0	13456.00	0.1574593	0	1.0000000
qtr2		85457	0	23293.00	0.2725698	0	1.0000000
qtr3		85457	0	24260.00	0.2838855	0	1.0000000
qtr4		85457	0	24448.00	0.2860854	0	1.0000000
psingle		85457	0	65648.00	0.7681992	0	1.0000000
pdouble		85457	0	15912.00	0.1861989	0	1.0000000
pknockout		85457	0	1445.00	0.0169091	0	1.0000000
pjacknife		85457	0	529.0000000	0.0061902	0	1.0000000
pothtype		85457	0	1923.00	0.0225025	0	1.0000000
pexchange		85457	0	23443.00	0.2743251	0	1.0000000
pturnback		85457	0	27804.00	0.3253566	0	1.0000000
single		85457	0	85349.00	0.9987362	0	1.0000000
double		85457	0	55.0000000	0.000643599	0	1.0000000
knockout		85457	0	52.0000000	0.000608493	0	1.0000000
jacknife		85457	0	0	0	0	0
othtype		85457	0	1.0000000	0.000011702	0	1.0000000
contthru		1024	84433	518.0000000	0.5058594	0	1.0000000
return		1024	84433	130.0000000	0.1269531	0	1.0000000
contstop		1024	84433	334.0000000	0.3261719	0	1.0000000
kill		1024	84433	42.0000000	0.0410156	0	1.0000000
contsame		1024	84433	518.0000000	0.5058594	0	1.0000000
contdouble		1024	84433	52.0000000	0.0507813	0	1.0000000
contsingle		1024	84433	233.0000000	0.2275391	0	1.0000000
contko		1024	84433	49.0000000	0.0478516	0	1.0000000
contjk		1024	84433	0	0	0	0
retdouble		1024	84433	1.0000000	0.000976563	0	1.0000000
retsingle		1024	84433	126.0000000	0.1230469	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1024	84433	2.0000000	0.0019531	0	1.0000000
retjk		1024	84433	0	0	0	0
xkill		1024	84433	43.0000000	0.0419922	0	1.0000000
logtrnhrs		1020	84437	1578.48	1.5475260	-4.0943446	7.3991432
plockhrs		1024	84433	646.9180328	0.6317559	0.1639344	29.8852459
loglckhrs		1024	84433	-680.7543302	-0.6647992	-1.8082888	3.3973649
thrusingle		1024	84433	518.0000000	0.5058594	0	1.0000000
thruother		1024	84433	0	0	0	0
contother		1024	84433	49.0000000	0.0478516	0	1.0000000
retother		1024	84433	3.0000000	0.0029297	0	1.0000000
thrudoubnite		1023	84434	0	0	0	0
thrusingnite		1023	84434	186.5387400	0.1823448	0	1.0000000
thruothnite		1023	84434	0	0	0	0
pdoubnite		1024	84433	0	0	0	0
psingnite		1024	84433	296.6843600	0.2897308	0	1.0000000
pothnite		1024	84433	0	0	0	0

Transition models using key variables from stepwise proc transitions to contthru 13:12 Friday, June 24, 2005 167

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 1

Variable psingle Entered: R-Square = 0.1114 and C(p) = 44.3458

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	104.83345	104.83345	726.82	<.0001
Error	5798	836.28310	0.14424		
Corrected Total	5799	941.11655			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.85846	0.00550	3519.68174	24402.2	<.0001
psingle	-0.35260	0.01308	104.83345	726.82	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable mar Entered: R-Square = 0.1137 and C(p) = 30.8828

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	107.04760	53.52380	372.00	<.0001
Error	5797	834.06895	0.14388		
Corrected Total	5799	941.11655			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.86274	0.00560	3419.70135	23767.8	<.0001
mar	-0.07955	0.02028	2.21415	15.39	<.0001
psingle	-0.34748	0.01313	100.80526	700.62	<.0001

Bounds on condition number: 1.01, 4.0399

Stepwise Selection: Step 3

Transition models using key variables from stepwise proc transitions to contthru 13:12 Friday, June 24, 2005 168

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 3

Variable nov Entered: R-Square = 0.1156 and C(p) = 20.6862

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	108.79404	36.26468	252.53	<.0001
Error	5796	832.32251	0.14360		
Corrected Total	5799	941.11655			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.85528	0.00599	2931.54588	20414.3	<.0001
mar	-0.07275	0.02035	1.83450	12.77	0.0004
nov	0.05245	0.01504	1.74644	12.16	0.0005
psingle	-0.34543	0.01313	99.42225	692.34	<.0001

Bounds on condition number: 1.0194, 9.1308

Stepwise Selection: Step 4

Variable pjacknife Entered: R-Square = 0.1166 and C(p) = 15.9898

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	109.75291	27.43823	191.26	<.0001
Error	5795	831.36365	0.14346		
Corrected Total	5799	941.11655			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.85350	0.00602	2881.18918	20083.3	<.0001
mar	-0.07182	0.02035	1.78735	12.46	0.0004
nov	0.05174	0.01504	1.69886	11.84	0.0006
psingle	-0.34370	0.01314	98.17107	684.30	<.0001
pjacknife	0.11183	0.04326	0.95886	6.68	0.0098

Transition models using key variables from stepwise proc transitions to contthru 13:12 Friday, June 24, 2005 169

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 4

Bounds on condition number: 1.0197, 16.202

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	psingle		1	0.1114	0.1114	44.3458	726.82	<.0001
2	mar		2	0.0024	0.1137	30.8828	15.39	<.0001
3	nov		3	0.0019	0.1156	20.6862	12.16	0.0005
4	pjacknife		4	0.0010	0.1166	15.9898	6.68	0.0098

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 170

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0385 and C(p) = 412.6049

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	74.05304	74.05304	181.86	<.0001
Error	4544	1850.29561	0.40720		
Corrected Total	4545	1924.34865			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.22836	0.01204	13943	34242.6	<.0001
pturnback	-0.26264	0.01948	74.05304	181.86	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.0844 and C(p) = 177.9228

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	162.44188	81.22094	209.42	<.0001
Error	4543	1761.90677	0.38783		
Corrected Total	4545	1924.34865			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.47967	0.02038	5742.96781	14808.0	<.0001
pturnback	-0.51395	0.02527	160.47432	413.78	<.0001
pexchange	-0.37656	0.02494	88.38884	227.91	<.0001

Bounds on condition number: 1.7671, 7.0683

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 171

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable oct Entered: R-Square = 0.0883 and C(p) = 160.1184

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	169.83785	56.61262	146.56	<.0001
Error	4542	1754.51080	0.38629		
Corrected Total	4545	1924.34865			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.46479	0.02062	5519.85093	14289.5	<.0001
oct	0.13495	0.03084	7.39596	19.15	<.0001
pturnback	-0.51227	0.02522	159.38854	412.62	<.0001
pexchange	-0.37450	0.02490	87.39118	226.23	<.0001

Bounds on condition number: 1.7677, 13.607

Stepwise Selection: Step 4

Variable jun Entered: R-Square = 0.0907 and C(p) = 149.4287

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	174.57681	43.64420	113.27	<.0001
Error	4541	1749.77184	0.38533		
Corrected Total	4545	1924.34865			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.47439	0.02077	5466.42129	14186.4	<.0001
jun	-0.09814	0.02798	4.73896	12.30	0.0005
oct	0.12131	0.03105	5.88268	15.27	<.0001
pturnback	-0.50760	0.02522	156.05932	405.00	<.0001
pexchange	-0.36871	0.02492	84.33924	218.88	<.0001

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 172

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.7755, 22.34

Stepwise Selection: Step 5

Variable jul Entered: R-Square = 0.0939 and C(p) = 134.9416

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	180.73391	36.14678	94.12	<.0001
Error	4540	1743.61474	0.38406		
Corrected Total	4545	1924.34865			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.48670	0.02097	5402.27056	14066.4	<.0001
jun	-0.11810	0.02838	6.65081	17.32	<.0001
jul	-0.11094	0.02771	6.15710	16.03	<.0001
oct	0.10218	0.03136	4.07649	10.61	0.0011
pturnback	-0.49855	0.02528	149.34470	388.86	<.0001
pexchange	-0.36006	0.02497	79.82380	207.84	<.0001

Bounds on condition number: 1.7889, 33.633

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0385	0.0385	412.605	181.86	<.0001
2	pexchange		2	0.0459	0.0844	177.923	227.91	<.0001
3	oct		3	0.0038	0.0883	160.118	19.15	<.0001
4	jun		4	0.0025	0.0907	149.429	12.30	0.0005
5	jul		5	0.0032	0.0939	134.942	16.03	<.0001

Logarithms of double lockage times using key variables from stepwise proc 173
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0751 and C(p) = 510.9617

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	15.94741	15.94741	368.94	<.0001
Error	4544	196.41362	0.04322		
Corrected Total	4545	212.36103			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.77422	0.00392	1683.15699	38939.6	<.0001
pturnback	-0.12188	0.00635	15.94741	368.94	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.1508 and C(p) = 99.3537

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	32.02477	16.01238	403.38	<.0001
Error	4543	180.33627	0.03970		
Corrected Total	4545	212.36103			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.88140	0.00652	725.59354	18279.0	<.0001
pturnback	-0.22906	0.00808	31.87637	803.02	<.0001
pexchange	-0.16060	0.00798	16.07735	405.02	<.0001

Bounds on condition number: 1.7671, 7.0683

Stepwise Selection: Step 3

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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.1553 and C(p) = 77.0582

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	32.96916	10.98972	278.25	<.0001
Error	4542	179.39188	0.03950		
Corrected Total	4545	212.36103			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.88467	0.00654	723.33938	18314.1	<.0001
jul	-0.04241	0.00867	0.94439	23.91	<.0001
pturnback	-0.22589	0.00809	30.79991	779.82	<.0001
pexchange	-0.15765	0.00798	15.40255	389.98	<.0001

Bounds on condition number: 1.7785, 13.69

Stepwise Selection: Step 4

Variable jun Entered: R-Square = 0.1612 and C(p) = 46.4416

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	34.23699	8.55925	218.20	<.0001
Error	4541	178.12404	0.03923		
Corrected Total	4545	212.36103			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.88947	0.00657	719.11768	18332.8	<.0001
jun	-0.05099	0.00897	1.26784	32.32	<.0001
jul	-0.05020	0.00875	1.29069	32.90	<.0001
pturnback	-0.22279	0.00808	29.82477	760.34	<.0001
pexchange	-0.15399	0.00798	14.60049	372.22	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.7889, 22.553

Stepwise Selection: Step 5

Variable dec Entered: R-Square = 0.1626 and C(p) = 40.6781

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	34.53877	6.90775	176.36	<.0001
Error	4540	177.82226	0.03917		
Corrected Total	4545	212.36103			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.88512	0.00675	673.61199	17198.1	<.0001
jun	-0.04831	0.00901	1.12470	28.71	<.0001
jul	-0.04752	0.00880	1.14246	29.17	<.0001
dec	0.03428	0.01235	0.30178	7.70	0.0055
pturnback	-0.22145	0.00809	29.35985	749.59	<.0001
pexchange	-0.15156	0.00802	13.97703	356.85	<.0001

Bounds on condition number: 1.8103, 33.637

Stepwise Selection: Step 6

Variable oct Entered: R-Square = 0.1643 and C(p) = 33.6415

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	34.89003	5.81500	148.72	<.0001
Error	4539	177.47100	0.03910		
Corrected Total	4545	212.36103			

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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.88057	0.00691	634.56447	16229.6	<.0001
jun	-0.04389	0.00913	0.90435	23.13	<.0001
jul	-0.04310	0.00891	0.91424	23.38	<.0001
oct	0.03021	0.01008	0.35126	8.98	0.0027
dec	0.03875	0.01243	0.38015	9.72	0.0018
pturnback	-0.22140	0.00808	29.34713	750.58	<.0001
pexchange	-0.15132	0.00802	13.93006	356.28	<.0001

Bounds on condition number: 1.8105, 47.135

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0751	0.0751	510.962	368.94	<.0001
2	pexchange		2	0.0757	0.1508	99.3537	405.02	<.0001
3	jul		3	0.0044	0.1553	77.0582	23.91	<.0001
4	jun		4	0.0060	0.1612	46.4416	32.32	<.0001
5	dec		5	0.0014	0.1626	40.6781	7.70	0.0055
6	oct		6	0.0017	0.1643	33.6415	8.98	0.0027

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pexchange Entered: R-Square = 0.0118 and C(p) = 68.6662

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	6.12477	6.12477	12.10	0.0005
Error	1016	514.29855	0.50620		
Corrected Total	1017	520.42332			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.66430	0.02801	284.63748	562.30	<.0001
pexchange	-0.16098	0.04628	6.12477	12.10	0.0005

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pturnback Entered: R-Square = 0.0359 and C(p) = 44.2658

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	18.66572	9.33286	18.88	<.0001
Error	1015	501.75760	0.49434		
Corrected Total	1017	520.42332			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.84484	0.04529	172.01506	347.97	<.0001
pturnback	-0.28823	0.05723	12.54095	25.37	<.0001
pexchange	-0.34152	0.05811	17.07637	34.54	<.0001

Bounds on condition number: 1.6142, 6.4569

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pexchange		1	0.0118	0.0118	68.6662	12.10	0.0005
2	pturnback		2	0.0241	0.0359	44.2658	25.37	<.0001

Logarithms of single lockage times using key variables from stepwise proc 179
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pexchange Entered: R-Square = 0.0376 and C(p) = 169.9134

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	9.03182	9.03182	39.64	<.0001
Error	1016	231.48211	0.22784		
Corrected Total	1017	240.51392			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.59154	0.01879	225.70137	990.63	<.0001
pexchange	-0.19549	0.03105	9.03182	39.64	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pturnback Entered: R-Square = 0.1511 and C(p) = 32.2823

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	36.33289	18.16644	90.31	<.0001
Error	1015	204.18104	0.20116		
Corrected Total	1017	240.51392			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.32517	0.02889	25.48227	126.67	<.0001
pturnback	-0.42528	0.03651	27.30107	135.72	<.0001
pexchange	-0.46187	0.03707	31.23117	155.25	<.0001

Bounds on condition number: 1.6142, 6.4569

All variables left in the model are significant at the 0.0100 level.

Logarithms of single lockage times using key variables from stepwise proc 180
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 2

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pexchange		1	0.0376	0.0376	169.913	39.64	<.0001
2	pturnback		2	0.1135	0.1511	32.2823	135.72	<.0001

Logarithms of single lockage times using key variables from stepwise proc 181
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable feb Entered: R-Square = 0.0273 and C(p) = 301.4816

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	206.09007	206.09007	109.26	<.0001
Error	3897	7350.57262	1.88621		
Corrected Total	3898	7556.66268			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.93779	0.02202	60303	31970.6	<.0001
feb	4.54555	0.43486	206.09007	109.26	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jun Entered: R-Square = 0.0504 and C(p) = 203.8331

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	380.63472	190.31736	103.33	<.0001
Error	3896	7176.02797	1.84190		
Corrected Total	3898	7556.66268			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.02037	0.02336	54568	29625.7	<.0001
feb	4.46296	0.42981	198.59223	107.82	<.0001
jun	-0.62605	0.06431	174.54465	94.76	<.0001

Bounds on condition number: 1.0004, 4.0016

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 182
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.0674 and C(p) = 132.3951

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	509.26910	169.75637	93.82	<.0001
Error	3895	7047.39359	1.80934		
Corrected Total	3898	7556.66268			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.10517	0.02524	47861	26452.1	<.0001
feb	4.37816	0.42611	191.01055	105.57	<.0001
jun	-0.71086	0.06453	219.56598	121.35	<.0001
jul	-0.53412	0.06335	128.63438	71.09	<.0001

Bounds on condition number: 1.0253, 9.1547

Stepwise Selection: Step 4

Variable may Entered: R-Square = 0.0817 and C(p) = 72.5062

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	617.67381	154.41845	86.66	<.0001
Error	3894	6938.98888	1.78197		
Corrected Total	3898	7556.66268			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.17913	0.02678	43383	24345.8	<.0001
feb	4.30420	0.42298	184.51857	103.55	<.0001
may	-0.59004	0.07565	108.40471	60.83	<.0001
jun	-0.78482	0.06474	261.89115	146.97	<.0001
jul	-0.60808	0.06358	163.01738	91.48	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0486, 16.547

Stepwise Selection: Step 5

Variable sep Entered: R-Square = 0.0877 and C(p) = 48.7196

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	662.84175	132.56835	74.86	<.0001
Error	3893	6893.82093	1.77082		
Corrected Total	3898	7556.66268			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.12840	0.02853	37087	20943.4	<.0001
feb	4.35493	0.42178	188.78679	106.61	<.0001
may	-0.53931	0.07608	88.98575	50.25	<.0001
jun	-0.73409	0.06531	223.70703	126.33	<.0001
jul	-0.55735	0.06417	133.59481	75.44	<.0001
sep	0.40915	0.08101	45.16794	25.51	<.0001

Bounds on condition number: 1.075, 26.294

Stepwise Selection: Step 6

Variable dec Entered: R-Square = 0.0920 and C(p) = 32.1758

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	695.32320	115.88720	65.74	<.0001
Error	3892	6861.33949	1.76293		
Corrected Total	3898	7556.66268			

Logarithms of single lockage times using key variables from stepwise proc 184
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.08548	0.03017	32331	18339.2	<.0001
feb	4.39785	0.42096	192.41737	109.15	<.0001
may	-0.49639	0.07656	74.10138	42.03	<.0001
jun	-0.69117	0.06593	193.75396	109.90	<.0001
jul	-0.51443	0.06480	111.10374	63.02	<.0001
sep	0.45207	0.08145	54.30937	30.81	<.0001
dec	0.39074	0.09103	32.48145	18.42	<.0001

Bounds on condition number: 1.1012, 38.399

Stepwise Selection: Step 7

Variable oct Entered: R-Square = 0.0939 and C(p) = 26.1631

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	709.35816	101.33688	57.58	<.0001
Error	3891	6847.30452	1.75978		
Corrected Total	3898	7556.66268			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.04440	0.03347	25697	14602.4	<.0001
feb	4.43893	0.42083	195.79512	111.26	<.0001
may	-0.45531	0.07787	60.16620	34.19	<.0001
jun	-0.65008	0.06746	163.43112	92.87	<.0001
jul	-0.47335	0.06636	89.54402	50.88	<.0001
sep	0.49316	0.08267	62.62794	35.59	<.0001
oct	0.21744	0.07700	14.03497	7.98	0.0048
dec	0.43182	0.09210	38.68163	21.98	<.0001

Bounds on condition number: 1.1568, 54.093

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Logarithms of single lockage times using key variables from stepwise proc 185
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	feb		1	0.0273	0.0273	301.482	109.26	<.0001
2	jun		2	0.0231	0.0504	203.833	94.76	<.0001
3	jul		3	0.0170	0.0674	132.395	71.09	<.0001
4	may		4	0.0143	0.0817	72.5062	60.83	<.0001
5	sep		5	0.0060	0.0877	48.7196	25.51	<.0001
6	dec		6	0.0043	0.0920	32.1758	18.42	<.0001
7	oct		7	0.0019	0.0939	26.1631	7.98	0.0048

Logarithms of single lockage times using key variables from stepwise proc 186
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0406 and C(p) = 370.7106

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	11.72636	11.72636	165.11	<.0001
Error	3897	276.77514	0.07102		
Corrected Total	3898	288.50150			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.35328	0.00458	6201.01882	87310.5	<.0001
jun	-0.16224	0.01263	11.72636	165.11	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jul Entered: R-Square = 0.0680 and C(p) = 250.9444

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	19.62700	9.81350	142.20	<.0001
Error	3896	268.87450	0.06901		
Corrected Total	3898	288.50150			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.37423	0.00492	5382.24373	77988.9	<.0001
jun	-0.18319	0.01260	14.58906	211.40	<.0001
jul	-0.13233	0.01237	7.90064	114.48	<.0001

Bounds on condition number: 1.0247, 4.099

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 187
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable may Entered: R-Square = 0.0927 and C(p) = 143.0483

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	26.75747	8.91916	132.73	<.0001
Error	3895	261.74403	0.06720		
Corrected Total	3898	288.50150			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.39313	0.00519	4840.36462	72029.2	<.0001
may	-0.15129	0.01469	7.13047	106.11	<.0001
jun	-0.20209	0.01257	17.37603	258.57	<.0001
jul	-0.15123	0.01234	10.09027	150.15	<.0001

Bounds on condition number: 1.0479, 9.4001

Stepwise Selection: Step 4

Variable feb Entered: R-Square = 0.1033 and C(p) = 98.0147

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	29.80918	7.45230	112.18	<.0001
Error	3894	258.69232	0.06643		
Corrected Total	3898	288.50150			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.39091	0.00517	4805.60779	72337.0	<.0001
feb	0.55353	0.08167	3.05171	45.94	<.0001
may	-0.14907	0.01461	6.91931	104.15	<.0001
jun	-0.19987	0.01250	16.98478	255.67	<.0001
jul	-0.14901	0.01228	9.78930	147.35	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0486, 16.547

Stepwise Selection: Step 5

Variable sep Entered: R-Square = 0.1109 and C(p) = 66.1072

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	32.00923	6.40185	97.17	<.0001
Error	3893	256.49227	0.06589		
Corrected Total	3898	288.50150			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.37971	0.00550	4142.24059	62870.3	<.0001
feb	0.56473	0.08136	3.17462	48.18	<.0001
may	-0.13787	0.01467	5.81574	88.27	<.0001
jun	-0.18867	0.01260	14.77707	224.28	<.0001
jul	-0.13782	0.01238	8.16825	123.98	<.0001
sep	0.09030	0.01563	2.20005	33.39	<.0001

Bounds on condition number: 1.075, 26.294

Stepwise Selection: Step 6

Variable dec Entered: R-Square = 0.1161 and C(p) = 45.1535

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	33.49855	5.58309	85.21	<.0001
Error	3892	255.00295	0.06552		
Corrected Total	3898	288.50150			

Logarithms of single lockage times using key variables from stepwise proc 189
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.37052	0.00582	3638.32433	55530.2	<.0001
feb	0.57392	0.08115	3.27693	50.01	<.0001
may	-0.12868	0.01476	4.97991	76.01	<.0001
jun	-0.17948	0.01271	13.06507	199.41	<.0001
jul	-0.12863	0.01249	6.94586	106.01	<.0001
sep	0.09949	0.01570	2.63038	40.15	<.0001
dec	0.08367	0.01755	1.48932	22.73	<.0001

Bounds on condition number: 1.1012, 38.399

Stepwise Selection: Step 7

Variable apr Entered: R-Square = 0.1198 and C(p) = 30.7161

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	34.56507	4.93787	75.66	<.0001
Error	3891	253.93643	0.06526		
Corrected Total	3898	288.50150			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.38189	0.00645	2996.17487	45909.6	<.0001
feb	0.56256	0.08104	3.14465	48.18	<.0001
apr	-0.05982	0.01480	1.06652	16.34	<.0001
may	-0.14005	0.01500	5.69107	87.20	<.0001
jun	-0.19084	0.01299	14.08042	215.75	<.0001
jul	-0.13999	0.01278	7.82939	119.97	<.0001
sep	0.08813	0.01592	1.99946	30.64	<.0001
dec	0.07230	0.01774	1.08430	16.61	<.0001

Bounds on condition number: 1.1572, 54.108

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Logarithms of single lockage times using key variables from stepwise proc 190
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun		1	0.0406	0.0406	370.711	165.11	<.0001
2	jul		2	0.0274	0.0680	250.944	114.48	<.0001
3	may		3	0.0247	0.0927	143.048	106.11	<.0001
4	feb		4	0.0106	0.1033	98.0147	45.94	<.0001
5	sep		5	0.0076	0.1109	66.1072	33.39	<.0001
6	dec		6	0.0052	0.1161	45.1535	22.73	<.0001
7	apr		7	0.0037	0.1198	30.7161	16.34	<.0001

Logarithms of single lockage times using key variables from stepwise proc 191
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable may Entered: R-Square = 0.0233 and C(p) = -7.4726

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	9582.71210	9582.71210	12.31	0.0005
Error	516	401748	778.58181		
Corrected Total	517	411331			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.64241	1.26963	6408.02867	8.23	0.0043
may	17.13569	4.88438	9582.71210	12.31	0.0005

Bounds on condition number: 1, 1

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	may		1	0.0233	0.0233	-7.4726	12.31	0.0005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

No variable met the 0.0100 significance level for entry into the model.

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	5987	0	25091386443	4190978.19	3616291.00	4328554.00
strtlcktime	Start/lockge/time	5987	0	7.9359367E12	1325528101	1262656500	1386997320
arrtime	Arriv/time	5987	0	7.9358646E12	1325516045	1262644500	1386996420
deptime	Leave/lockge/time	5987	0	7.9359726E12	1325534098	1262658900	1387007100
BOW_OVER_SILL	BOW_OVER_SILL	5987	0	7.9359578E12	1325531620	1262657280	1387002600
END_OF_ENTRY	END_OF_ENTRY	5987	0	7.9359613E12	1325532204	1262657700	1387003380
START_OF_EXIT	START_OF_EXIT	5987	0	7.9359637E12	1325532609	1262658480	1387004160
SIGNAL_DATE	SIGNAL_DATE	0	5987	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	5987	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	5568	419	26637.00	4.7839440	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	5568	419	41894.00	7.5240661	0	17.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	5987	.	.	.	.
vess_no		5987	0	3994098773	667128.57	2611.00	8888846.00
vss_hp		5964	23	27734834.00	4650.37	75.0000000	8800.00
frsttime		5987	0	7.9358646E12	1325516045	1262644500	1386996420
lasttime		5987	0	7.9359726E12	1325534098	1262658900	1387007100
newpoolno		5987	0	133064.00	22.2254886	3.0000000	28.0000000
oldpoolno		5987	0	138123.00	23.0704861	4.0000000	28.0000000
waitmin	Wait/before/lockge	5987	0	1203012.00	200.9373643	0	3805.00
lockmin	Wait/lockge/time	5987	0	598319.00	99.9363621	8.0000000	887.0000000
year		5987	0	11982712.00	2001.46	2000.00	2003.00
fly		5987	0	1231.00	0.2056122	0	1.0000000
turnback		5987	0	2284.00	0.3814932	0	1.0000000
exchange		5987	0	2472.00	0.4128946	0	1.0000000
lock		5987	0	132600.00	22.1479873	3.0000000	27.0000000
totmin		5987	0	1801331.00	300.8737264	10.0000000	3900.00
month		5987	0	42448.00	7.0900284	1.0000000	12.0000000
day		5987	0	94454.00	15.7765158	1.0000000	31.0000000
sunrise		5985	2	136883234	22871.05	19392.00	27046.00
sunset		5985	2	413878384	69152.61	59910.00	74992.00
sequpstr		5987	0	4123.00	0.6886588	0	1.0000000
seqdstr		5987	0	0	0	0	0
plock		5987	0	143688.00	24.0000000	24.0000000	24.0000000
pempty		5567	420	44687.00	8.0271241	0	17.0000000
pfull		5567	420	25948.00	4.6610383	0	28.0000000
parrtime		5987	0	7.9355077E12	1325456431	1262586600	1386897300
pstrtlcktime		5987	0	7.9355816E12	1325468786	1262586600	1386897300
pdeptime		5987	0	7.9356142E12	1325474223	1262589600	1386903300
birth		5987	0	0	0	0	0
transithrs		5987	0	69553.27	11.6173821	-249.0333333	4115.92
reclock		5987	0	0	0	0	0
i		5987	0	1230563.00	205.5391682	58.0000000	401.0000000
pctpsysdn		5987	0	8188.62	1.3677336	0	94.9670000
pctplckdn		5987	0	2776.04	0.4636785	0	80.2860000
cumdown		5982	5	822180.00	137.4423270	0	52260.00
pctdown		5982	5	4619.07	0.7721615	0	98.1960000
pcttrandn		5940	47	8694.32	1.4636902	0	100.0000000
pctsysdn		5982	5	7934.68	1.3264266	0	98.1960000
pctlckdn		5982	5	4619.07	0.7721615	0	98.1960000
stime		5987	0	262458480	43838.06	0	86340.00
etime		5987	0	262242420	43801.97	0	86340.00
sdate		5987	0	91848082.00	15341.25	14614.00	16053.00

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 13:12 Friday, June 24, 2005 194

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		5987	0	91848500.00	15341.32	14614.00	16053.00
hrsduration		5987	0	9971.98	1.6656060	0.1333333	14.7833333
ndays		5987	0	0	0	0	0
pctday		5987	0	338156.52	56.4817977	0	100.0000000
pctpsysnite		5986	1	259547.28	43.3590518	0	100.0000000
pctplcknite		5987	0	261553.85	43.6869634	0	100.0000000
pcttrannite		5987	0	267936.29	44.7530124	0	100.0000000
pctsysnite		5986	1	262653.43	43.8779536	0	100.0000000
pctlcknite		5987	0	260543.48	43.5182023	0	100.0000000
stage		5932	55	88358.84	14.8952866	9.2700000	32.8400000
flow		5452	535	544076009	99793.84	17865.30	306262.78
jan		5987	0	28.0000000	0.0046768	0	1.0000000
feb		5987	0	62.0000000	0.0103558	0	1.0000000
mar		5987	0	589.0000000	0.0983798	0	1.0000000
apr		5987	0	623.0000000	0.1040588	0	1.0000000
may		5987	0	602.0000000	0.1005512	0	1.0000000
jun		5987	0	727.0000000	0.1214298	0	1.0000000
jul		5987	0	732.0000000	0.1222649	0	1.0000000
aug		5987	0	623.0000000	0.1040588	0	1.0000000
sep		5987	0	526.0000000	0.0878570	0	1.0000000
oct		5987	0	624.0000000	0.1042258	0	1.0000000
nov		5987	0	629.0000000	0.1050610	0	1.0000000
dec		5987	0	222.0000000	0.0370803	0	1.0000000
m31day		5987	0	3420.00	0.5712377	0	1.0000000
m30day		5987	0	2505.00	0.4184065	0	1.0000000
qtr1		5987	0	679.0000000	0.1134124	0	1.0000000
qtr2		5987	0	1952.00	0.3260398	0	1.0000000
qtr3		5987	0	1881.00	0.3141807	0	1.0000000
qtr4		5987	0	1475.00	0.2463671	0	1.0000000
psingle		5987	0	1267.00	0.2116252	0	1.0000000
pdouble		5987	0	4457.00	0.7444463	0	1.0000000
pknockout		5987	0	124.0000000	0.0207115	0	1.0000000
pjacknife		5987	0	136.0000000	0.0227159	0	1.0000000
pothtype		5987	0	3.0000000	0.000501086	0	1.0000000
pexchange		5987	0	2410.00	0.4025388	0	1.0000000
pturnback		5987	0	2334.00	0.3898447	0	1.0000000
single		5987	0	1308.00	0.2184734	0	1.0000000
double		5987	0	4411.00	0.7367630	0	1.0000000
knockout		5987	0	131.0000000	0.0218807	0	1.0000000
jacknife		5987	0	135.0000000	0.0225489	0	1.0000000
othtype		5987	0	2.0000000	0.000334057	0	1.0000000
contthru		5987	0	4123.00	0.6886588	0	1.0000000
return		5987	0	452.0000000	0.0754969	0	1.0000000
contstop		5987	0	1340.00	0.2238183	0	1.0000000
kill		5987	0	72.0000000	0.0120261	0	1.0000000
contsame		5987	0	4123.00	0.6886588	0	1.0000000
contdouble		5987	0	881.0000000	0.1471522	0	1.0000000
contsingle		5987	0	450.0000000	0.0751629	0	1.0000000
contko		5987	0	8.0000000	0.0013362	0	1.0000000
contjk		5987	0	1.0000000	0.000167029	0	1.0000000
retdouble		5987	0	175.0000000	0.0292300	0	1.0000000
retsingle		5987	0	257.0000000	0.0429263	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		5987	0	20.0000000	0.0033406	0	1.0000000
retjk		5987	0	0	0	0	0
xkill		5987	0	72.0000000	0.0120261	0	1.0000000
logtrnhrs		5943	44	10147.32	1.7074410	-4.0943446	8.3226169
plockhrs		5987	0	8892.48	1.4852974	0.1311475	11.4754098
loglckhrs		5987	0	1482.00	0.2475363	-2.0314323	2.4402065
thrusingle		5987	0	541.0000000	0.0903625	0	1.0000000
thruother		5987	0	241.0000000	0.0402539	0	1.0000000
contother		5987	0	9.0000000	0.0015033	0	1.0000000
retother		5987	0	20.0000000	0.0033406	0	1.0000000
thrudoubnite		5987	0	1503.34	0.2511009	0	1.0000000
thrusingnite		5987	0	255.7334300	0.0427148	0	1.0000000
thruothnite		5987	0	118.3899700	0.0197745	0	1.0000000
pdoubnite		5987	0	2007.93	0.3353814	0	1.0000000
psingnite		5987	0	488.4049700	0.0815776	0	1.0000000
pothnite		5987	0	119.2048700	0.0199106	0	1.0000000

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 13:12 Friday, June 24, 2005 196

The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI24U

pconfig / doutcome Frequency Percent Row Pct Col Pct	1:contsame	2:contdouble	3:contsingle	4:contko	5:contjk	6:retdouble	7:retsingle	8:retko	x:kill	Total
1:double	3341 55.80 74.96 81.03	875 14.61 19.63 99.32	52 0.87 1.17 11.56	5 0.08 0.11 62.50	1 0.02 0.02 100.00	142 2.37 3.19 81.14	14 0.23 0.31 5.45	4 0.07 0.09 20.00	23 0.38 0.52 31.94	4457 74.44
2:single	541 9.04 42.70 13.12	5 0.08 0.39 0.57	394 6.58 31.10 87.56	2 0.03 0.16 25.00	0 0.00 0.00 0.00	31 0.52 2.45 17.71	232 3.88 18.31 90.27	14 0.23 1.10 70.00	48 0.80 3.79 66.67	1267 21.16
3:knockout	106 1.77 85.48 2.57	1 0.02 0.81 0.11	4 0.07 3.23 0.89	1 0.02 0.81 12.50	0 0.00 0.00 0.00	2 0.03 1.61 1.14	8 0.13 6.45 3.11	2 0.03 1.61 10.00	0 0.00 0.00 0.00	124 2.07
4:jacknife	133 2.22 97.79 3.23	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.03 1.47 0.78	0 0.00 0.00 0.00	1 0.02 0.74 1.39	136 2.27
5:Other	2 0.03 66.67 0.05	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02 33.33 0.39	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.05
Total	4123 68.87	881 14.72	450 7.52	8 0.13	1 0.02	175 2.92	257 4.29	20 0.33	72 1.20	5987 100.00

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 13:12 Friday, June 24, 2005 197

The FREQ Procedure

Table 1 of pconfig by nextstep
Controlling for pnewpool=MI24U

pconfig nextstep

Frequency Percent Row Pct Col Pct	1:contth	2:contst	3:return	4:kill	Total
1:double	3341 55.80 74.96 81.03	933 15.58 20.93 69.63	160 2.67 3.59 35.40	23 0.38 0.52 31.94	4457 74.44
2:single	541 9.04 42.70 13.12	401 6.70 31.65 29.93	277 4.63 21.86 61.28	48 0.80 3.79 66.67	1267 21.16
3:knockout	106 1.77 85.48 2.57	6 0.10 4.84 0.45	12 0.20 9.68 2.65	0 0.00 0.00 0.00	124 2.07
4:jacknife	133 2.22 97.79 3.23	0 0.00 0.00 0.00	2 0.03 1.47 0.44	1 0.02 0.74 1.39	136 2.27
5:Other	2 0.03 66.67 0.05	0 0.00 0.00 0.00	1 0.02 33.33 0.22	0 0.00 0.00 0.00	3 0.05
Total	4123 68.87	1340 22.38	452 7.55	72 1.20	5987 100.00

Statistics from water.regfile for regfile 13:12 Friday, June 24, 2005 198

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	85700	0	364333645640	4251267.74	3515664.00	4331559.00
strtlcktime	Start/lockge/time	85700	0	1.1372726E14	1327039254	1262306700	1388533680
arrtime	Arriv/time	85700	0	1.1372698E14	1327035971	1262306700	1388530800
deptime	Leave/lockge/time	85700	0	1.1372748E14	1327041818	1262307720	1388536080
BOW_OVER_SILL	BOW_OVER_SILL	85700	0	1.1372734E14	1327040086	1262307000	1388534700
END_OF_ENTRY	END_OF_ENTRY	85700	0	1.1372738E14	1327040562	1262307060	1388535000
START_OF_EXIT	START_OF_EXIT	85700	0	1.1372744E14	1327041287	1262307660	1388535600
SIGNAL_DATE	SIGNAL_DATE	0	85700	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	85700	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	74601	11099	464425.00	6.2254527	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	74601	11099	244702.00	3.2801437	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	85700	.	.	.	.
vess_no		85700	0	68712425589	801778.59	2611.00	8888864.00
vss_hp		84991	709	331462548	3899.97	60.0000000	81800.00
frsttime		85700	0	1.1372698E14	1327035971	1262306700	1388530800
lasttime		85700	0	1.1372748E14	1327041818	1262307720	1388536080
newpoolno		85700	0	2148576.00	25.0708985	1.0000000	28.0000000
oldpoolno		85700	0	2151460.00	25.1045508	1.0000000	28.0000000
waitmin	Wait/before/lockge	85700	0	4687853.00	54.7007351	0	7423.00
lockmin	Wait/lockge/time	85700	0	3662631.00	42.7378180	4.0000000	1823.00
year		85700	0	171528526	2001.50	2000.00	2003.00
fly		85700	0	36355.00	0.4242124	0	1.0000000
turnback		85700	0	26784.00	0.3125321	0	1.0000000
exchange		85700	0	22560.00	0.2632439	0	1.0000000
lock		85700	0	2107168.00	24.5877246	1.0000000	27.0000000
totmin		85700	0	8350484.00	97.4385531	4.0000000	7490.00
month		85700	0	611247.00	7.1324037	1.0000000	12.0000000
day		85700	0	1344317.00	15.6863127	1.0000000	31.0000000
sunrise		84998	702	1968924810	23164.37	19414.00	27155.00
sunset		84998	702	5773071688	67920.09	59694.00	75152.00
sequpstr		85700	0	14575.00	0.1700700	0	1.0000000
seqdstr		85700	0	20442.00	0.2385298	0	1.0000000
plock		85700	0	2016664.00	23.5316686	1.0000000	27.0000000
pempty		74954	10746	193170.00	2.5771807	0	50.0000000
pfull		74954	10746	516502.00	6.8909198	0	28.0000000
parrtime		85700	0	1.1370255E14	1326750924	1262304600	1388521920
pstrtlcktime		85700	0	1.1370301E14	1326756238	1262304600	1388521920
pdeptime		85700	0	1.1370328E14	1326759439	1262305620	1388523540
birth		85700	0	0	0	0	0
transithrs		85700	0	6582996.90	76.8144329	-249.0333333	8099.42
reclock		85700	0	0	0	0	0
i		85700	0	19745669.00	230.4045391	58.0000000	401.0000000
pctpsysdn		79984	5716	78769.63	0.9848174	0	98.9510000
pctplckdn		79984	5716	37590.93	0.4699807	0	98.3000000
cumdown		84939	761	3448980.00	40.6053756	0	107520.00
pctdown		84939	761	32721.22	0.3852320	0	98.3000000
pcttrandn		84671	1029	114513.45	1.3524518	0	100.0000000
pctsysdn		84939	761	74784.12	0.8804451	0	98.6320000
pctlckdn		84939	761	32721.22	0.3852320	0	98.3000000
stime		85700	0	3793224960	44261.67	0	86340.00
etime		85700	0	3803894820	44386.17	0	86340.00
sdate		85700	0	1316243875	15358.74	14610.00	16070.00

Statistics from water.regfile for regfile 13:12 Friday, June 24, 2005 199

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		85700	0	1316246295	15358.77	14610.00	16071.00
hrsduration		85700	0	61043.85	0.7122970	0.0666667	30.3833333
ndays		85700	0	1.0000000	0.000011669	0	1.0000000
pctday		85682	18	4691060.90	54.7496663	0	100.0000000
pctpsysnite		85650	50	3851679.90	44.9699930	0	100.0000000
pctplcknite		85679	21	3860652.27	45.0594927	0	100.0000000
pcttrannite		85134	566	4014507.18	47.1551575	0	100.0000000
pctsysnite		85617	83	3856687.22	45.0458112	0	100.0000000
pctlcknite		85682	18	3877139.10	45.2503337	0	100.0000000
stage		41049	44651	881945.43	21.4851867	8.3500000	33.0800000
flow		8661	77039	718859843	82999.64	16077.99	306262.78
jan		85700	0	3078.00	0.0359160	0	1.0000000
feb		85700	0	3425.00	0.0399650	0	1.0000000
mar		85700	0	6910.00	0.0806301	0	1.0000000
apr		85700	0	7571.00	0.0883431	0	1.0000000
may		85700	0	7222.00	0.0842707	0	1.0000000
jun		85700	0	8504.00	0.0992299	0	1.0000000
jul		85700	0	8629.00	0.1006884	0	1.0000000
aug		85700	0	8015.00	0.0935239	0	1.0000000
sep		85700	0	7666.00	0.0894516	0	1.0000000
oct		85700	0	8573.00	0.1000350	0	1.0000000
nov		85700	0	9360.00	0.1092182	0	1.0000000
dec		85700	0	6747.00	0.0787281	0	1.0000000
m31day		85700	0	49174.00	0.5737923	0	1.0000000
m30day		85700	0	33101.00	0.3862427	0	1.0000000
qtr1		85700	0	13413.00	0.1565111	0	1.0000000
qtr2		85700	0	23297.00	0.2718436	0	1.0000000
qtr3		85700	0	24310.00	0.2836639	0	1.0000000
qtr4		85700	0	24680.00	0.2879813	0	1.0000000
psingle		85700	0	65891.00	0.7688565	0	1.0000000
pdouble		85700	0	15912.00	0.1856709	0	1.0000000
pknockout		85700	0	1445.00	0.0168611	0	1.0000000
pjacknife		85700	0	529.0000000	0.0061727	0	1.0000000
pothtype		85700	0	1923.00	0.0224387	0	1.0000000
pexchange		85700	0	23605.00	0.2754376	0	1.0000000
pturnback		85700	0	27782.00	0.3241774	0	1.0000000
single		85700	0	85645.00	0.9993582	0	1.0000000
double		85700	0	38.0000000	0.000443407	0	1.0000000
knockout		85700	0	16.0000000	0.000186698	0	1.0000000
jacknife		85700	0	0	0	0	0
othtype		85700	0	1.0000000	0.000011669	0	1.0000000
contthru		1267	84433	541.0000000	0.4269929	0	1.0000000
return		1267	84433	277.0000000	0.2186267	0	1.0000000
contstop		1267	84433	401.0000000	0.3164957	0	1.0000000
kill		1267	84433	48.0000000	0.0378848	0	1.0000000
contsame		1267	84433	541.0000000	0.4269929	0	1.0000000
contdouble		1267	84433	5.0000000	0.0039463	0	1.0000000
contsingle		1267	84433	394.0000000	0.3109708	0	1.0000000
contko		1267	84433	2.0000000	0.0015785	0	1.0000000
contjk		1267	84433	0	0	0	0
retdouble		1267	84433	31.0000000	0.0244672	0	1.0000000
retsingle		1267	84433	232.0000000	0.1831097	0	1.0000000

Statistics from water.regfile for regfile 13:12 Friday, June 24, 2005 200

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1267	84433	14.0000000	0.0110497	0	1.0000000
retjk		1267	84433	0	0	0	0
xkill		1267	84433	48.0000000	0.0378848	0	1.0000000
logtrnhrs		1244	84456	2105.26	1.6923307	-4.0943446	8.3226169
plockhrs		1267	84433	599.8852459	0.4734690	0.1311475	1.6393443
loglckhrs		1267	84433	-1039.96	-0.8208045	-2.0314323	0.4942963
thrusingle		1267	84433	541.0000000	0.4269929	0	1.0000000
thruother		1267	84433	0	0	0	0
contother		1267	84433	2.0000000	0.0015785	0	1.0000000
retother		1267	84433	14.0000000	0.0110497	0	1.0000000
thrudoubnite		1267	84433	0	0	0	0
thrusingnite		1267	84433	255.7334300	0.2018417	0	1.0000000
thruothnite		1267	84433	0	0	0	0
pdoubnite		1267	84433	0	0	0	0
psingnite		1267	84433	488.4049700	0.3854814	0	1.0000000
pothnite		1267	84433	0	0	0	0

```
                    Transition models using key variables from stepwise proc       13:12 Friday, June 24, 2005 201
                                    transitions  to contthru

                                       The REG Procedure
                                         Model: MODEL1
                                 Dependent Variable: contsame

                                   Stepwise Selection: Step 1

                      Variable psingle Entered: R-Square = 0.0857 and C(p) = 70.4567


                                     Analysis of Variance

                                            Sum of           Mean
                 Source                  DF        Squares         Square    F Value    Pr > F

                 Model                    1      110.03682      110.03682     561.14    <.0001
                 Error                 5985     1173.62311        0.19609
                 Corrected Total       5986     1283.65993


                                Parameter     Standard
                      Variable     Estimate        Error   Type II SS  F Value  Pr > F

                      Intercept     0.75890      0.00645   2718.37373  13862.6  <.0001
                      psingle      -0.33191      0.01401    110.03682   561.14  <.0001

                                   Bounds on condition number: 1, 1
-------------------------------------------------------------------------------------------------------------------------------

                                   Stepwise Selection: Step 2


                      Variable pjacknife Entered: R-Square = 0.0910 and C(p) = 37.8014


                                     Analysis of Variance

                                            Sum of           Mean
                 Source                  DF        Squares         Square    F Value    Pr > F

                 Model                    2      116.75566       58.37783     299.37    <.0001
                 Error                 5984     1166.90427        0.19500
                 Corrected Total       5986     1283.65993


                                Parameter     Standard
                      Variable     Estimate        Error   Type II SS  F Value  Pr > F

                      Intercept     0.75240      0.00652   2595.02640  13307.6  <.0001
                      psingle      -0.32541      0.01402    105.11005   539.01  <.0001
                      pjacknife     0.22554      0.03842      6.71884    34.45  <.0001

                               Bounds on condition number: 1.0063, 4.0251
-------------------------------------------------------------------------------------------------------------------------------

                                   Stepwise Selection: Step 3
```

Transition models using key variables from stepwise proc transitions to contthru 13:12 Friday, June 24, 2005 202

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 3

Variable mar Entered: R-Square = 0.0925 and C(p) = 29.4283

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	118.76675	39.58892	203.33	<.0001
Error	5983	1164.89318	0.19470		
Corrected Total	5986	1283.65993			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.74569	0.00684	2311.52638	11872.2	<.0001
mar	0.06166	0.01919	2.01109	10.33	0.0013
psingle	-0.32259	0.01403	102.89321	528.47	<.0001
pjacknife	0.22772	0.03840	6.84713	35.17	<.0001

Bounds on condition number: 1.0102, 9.0627

Stepwise Selection: Step 4

Variable dec Entered: R-Square = 0.0938 and C(p) = 23.0384

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	120.39336	30.09834	154.78	<.0001
Error	5982	1163.26657	0.19446		
Corrected Total	5986	1283.65993			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.74755	0.00687	2302.72392	11841.6	<.0001
mar	0.05868	0.01920	1.81612	9.34	0.0023
dec	-0.08906	0.03079	1.62661	8.36	0.0038
psingle	-0.31470	0.01429	94.35355	485.21	<.0001
pjacknife	0.23066	0.03839	7.02036	36.10	<.0001

Transition models using key variables from stepwise proc transitions to contthru 13:12 Friday, June 24, 2005 203

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 4

Bounds on condition number: 1.0484, 16.42

Stepwise Selection: Step 5

Variable pknockout Entered: R-Square = 0.0948 and C(p) = 18.1519

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	121.72849	24.34570	125.32	<.0001
Error	5981	1161.93144	0.19427		
Corrected Total	5986	1283.65993			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.74474	0.00695	2231.35959	11485.8	<.0001
mar	0.05837	0.01919	1.79665	9.25	0.0024
dec	-0.08953	0.03078	1.64371	8.46	0.0036
psingle	-0.31183	0.01432	92.09562	474.06	<.0001
pjacknife	0.23351	0.03839	7.18918	37.01	<.0001
pknockout	0.10520	0.04013	1.33512	6.87	0.0088

Bounds on condition number: 1.0546, 25.593

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	psingle		1	0.0857	0.0857	70.4567	561.14	<.0001
2	pjacknife		2	0.0052	0.0910	37.8014	34.45	<.0001
3	mar		3	0.0016	0.0925	29.4283	10.33	0.0013
4	dec		4	0.0013	0.0938	23.0384	8.36	0.0038
5	pknockout		5	0.0010	0.0948	18.1519	6.87	0.0088

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 204

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0695 and C(p) = 258.5531

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	57.61301	57.61301	332.59	<.0001
Error	4454	771.54109	0.17322		
Corrected Total	4455	829.15410			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.88118	0.00813	9268.19036	53504.0	<.0001
pturnback	-0.23100	0.01267	57.61301	332.59	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable oct Entered: R-Square = 0.0858 and C(p) = 177.9873

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	71.13646	35.56823	208.95	<.0001
Error	4453	758.01764	0.17023		
Corrected Total	4455	829.15410			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.86064	0.00838	8382.02405	49240.5	<.0001
oct	0.18174	0.02039	13.52345	79.44	<.0001
pturnback	-0.22639	0.01257	55.24158	324.52	<.0001

Bounds on condition number: 1.0017, 4.0068

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 205

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable sep Entered: R-Square = 0.0979 and C(p) = 118.8919

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	81.14327	27.04776	160.98	<.0001
Error	4452	748.01083	0.16802		
Corrected Total	4455	829.15410			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.84287	0.00864	7639.19906	45466.9	<.0001
sep	0.17477	0.02265	10.00681	59.56	<.0001
oct	0.19783	0.02036	15.85663	94.38	<.0001
pturnback	-0.22164	0.01250	52.81923	314.37	<.0001

Bounds on condition number: 1.0126, 9.0872

Stepwise Selection: Step 4

Variable nov Entered: R-Square = 0.1111 and C(p) = 53.9372

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	92.10976	23.02744	139.06	<.0001
Error	4451	737.04434	0.16559		
Corrected Total	4455	829.15410			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.82475	0.00886	7017.39541	42377.9	<.0001
sep	0.19281	0.02259	12.06254	72.85	<.0001
oct	0.21588	0.02034	18.65630	112.67	<.0001
nov	0.18525	0.02276	10.96650	66.23	<.0001
pturnback	-0.22143	0.01241	52.71937	318.37	<.0001

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 206

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0245, 16.284

Stepwise Selection: Step 5

Variable aug Entered: R-Square = 0.1157 and C(p) = 32.4377

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	95.95876	19.19175	116.48	<.0001
Error	4450	733.19534	0.16476		
Corrected Total	4455	829.15410			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.80985	0.00936	6154.35153	37352.8	<.0001
aug	0.09747	0.02017	3.84899	23.36	<.0001
sep	0.20706	0.02273	13.67668	83.01	<.0001
oct	0.23009	0.02050	20.75800	125.99	<.0001
nov	0.19933	0.02289	12.49085	75.81	<.0001
pturnback	-0.21947	0.01239	51.73343	313.99	<.0001

Bounds on condition number: 1.046, 25.866

Stepwise Selection: Step 6

Variable mar Entered: R-Square = 0.1179 and C(p) = 23.5195

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	97.74704	16.29117	99.10	<.0001
Error	4449	731.40706	0.16440		
Corrected Total	4455	829.15410			

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 207

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.79846	0.00997	5348.05204	32531.1	<.0001
mar	0.06687	0.02027	1.78828	10.88	0.0010
aug	0.10895	0.02044	4.66969	28.40	<.0001
sep	0.21853	0.02297	14.88460	90.54	<.0001
oct	0.24157	0.02077	22.23798	135.27	<.0001
nov	0.21082	0.02313	13.65551	83.06	<.0001
pturnback	-0.21970	0.01237	51.84280	315.35	<.0001

Bounds on condition number: 1.0767, 38.159

Stepwise Selection: Step 7

Variable dec Entered: R-Square = 0.1198 and C(p) = 16.0669

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	99.29528	14.18504	86.45	<.0001
Error	4448	729.85882	0.16409		
Corrected Total	4455	829.15410			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.79289	0.01013	5144.91281	31354.8	<.0001
mar	0.07159	0.02031	2.03832	12.42	0.0004
aug	0.11379	0.02048	5.06390	30.86	<.0001
sep	0.22345	0.02300	15.48756	94.39	<.0001
oct	0.24646	0.02081	23.01314	140.25	<.0001
nov	0.21558	0.02316	14.21563	86.63	<.0001
dec	0.14530	0.04730	1.54824	9.44	0.0021
pturnback	-0.21781	0.01238	50.83010	309.78	<.0001

Bounds on condition number: 1.0831, 51.87

Stepwise Selection: Step 8

Variable apr Entered: R-Square = 0.1211 and C(p) = 11.2168

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 208

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 8

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	100.41727	12.55216	76.60	<.0001
Error	4447	728.73683	0.16387		
Corrected Total	4455	829.15410			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.78037	0.01119	4145.59891	25297.9	<.0001
mar	0.08362	0.02081	2.64502	16.14	<.0001
apr	0.05351	0.02045	1.12199	6.85	0.0089
aug	0.12589	0.02099	5.89689	35.98	<.0001
sep	0.23560	0.02345	16.54227	100.95	<.0001
oct	0.25859	0.02131	24.13504	147.28	<.0001
nov	0.22763	0.02360	15.24563	93.03	<.0001
dec	0.15754	0.04750	1.80249	11.00	0.0009
pturnback	-0.21669	0.01237	50.24515	306.61	<.0001

Bounds on condition number: 1.1449, 70.531

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0695	0.0695	258.553	332.59	<.0001
2	oct		2	0.0163	0.0858	177.987	79.44	<.0001
3	sep		3	0.0121	0.0979	118.892	59.56	<.0001
4	nov		4	0.0132	0.1111	53.9372	66.23	<.0001
5	aug		5	0.0046	0.1157	32.4377	23.36	<.0001
6	mar		6	0.0022	0.1179	23.5195	10.88	0.0010
7	dec		7	0.0019	0.1198	16.0669	9.44	0.0021
8	apr		8	0.0014	0.1211	11.2168	6.85	0.0089

Logarithms of double lockage times using key variables from stepwise proc 209
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0989 and C(p) = 406.6468

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	19.16368	19.16368	488.87	<.0001
Error	4454	174.59504	0.03920		
Corrected Total	4455	193.75871			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.61181	0.00387	980.31240	25008.2	<.0001
pturnback	-0.13323	0.00603	19.16368	488.87	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable oct Entered: R-Square = 0.1226 and C(p) = 280.9823

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	23.75129	11.87564	311.06	<.0001
Error	4453	170.00743	0.03818		
Corrected Total	4455	193.75871			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.59984	0.00397	871.16759	22818.5	<.0001
oct	0.10585	0.00966	4.58761	120.16	<.0001
pturnback	-0.13054	0.00595	18.36748	481.10	<.0001

Bounds on condition number: 1.0017, 4.0068

Stepwise Selection: Step 3

Logarithms of double lockage times using key variables from stepwise proc 210
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable sep Entered: R-Square = 0.1401 and C(p) = 188.3473

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	27.15199	9.05066	241.85	<.0001
Error	4452	166.60673	0.03742		
Corrected Total	4455	193.75871			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.58949	0.00408	781.63765	20886.6	<.0001
sep	0.10188	0.01069	3.40070	90.87	<.0001
oct	0.11523	0.00961	5.37988	143.76	<.0001
pturnback	-0.12777	0.00590	17.55379	469.07	<.0001

Bounds on condition number: 1.0126, 9.0872

Stepwise Selection: Step 4

Variable nov Entered: R-Square = 0.1589 and C(p) = 89.0324

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	30.79273	7.69818	210.26	<.0001
Error	4451	162.96598	0.03661		
Corrected Total	4455	193.75871			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.57905	0.00417	706.63714	19300.0	<.0001
sep	0.11228	0.01062	4.09041	111.72	<.0001
oct	0.12563	0.00956	6.31833	172.57	<.0001
nov	0.10674	0.01070	3.64074	99.44	<.0001
pturnback	-0.12765	0.00584	17.52062	478.53	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0245, 16.284

Stepwise Selection: Step 5

Variable aug Entered: R-Square = 0.1666 and C(p) = 49.5159

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	32.28462	6.45692	177.94	<.0001
Error	4450	161.47409	0.03629		
Corrected Total	4455	193.75871			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.56977	0.00439	609.94878	16809.3	<.0001
aug	0.06068	0.00946	1.49189	41.11	<.0001
sep	0.12115	0.01067	4.68198	129.03	<.0001
oct	0.13448	0.00962	7.09089	195.42	<.0001
nov	0.11550	0.01074	4.19410	115.58	<.0001
pturnback	-0.12643	0.00581	17.16838	473.14	<.0001

Bounds on condition number: 1.046, 25.866

Stepwise Selection: Step 6

Variable mar Entered: R-Square = 0.1691 and C(p) = 38.2873

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	32.75999	5.46000	150.88	<.0001
Error	4449	160.99872	0.03619		
Corrected Total	4455	193.75871			

Logarithms of double lockage times using key variables from stepwise proc 212
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.56389	0.00468	525.76446	14528.8	<.0001
mar	0.03447	0.00951	0.47537	13.14	0.0003
aug	0.06660	0.00959	1.74503	48.22	<.0001
sep	0.12706	0.01078	5.03214	139.06	<.0001
oct	0.14040	0.00974	7.51164	207.57	<.0001
nov	0.12143	0.01085	4.53023	125.19	<.0001
pturnback	-0.12655	0.00580	17.20081	475.32	<.0001

Bounds on condition number: 1.0767, 38.159

Stepwise Selection: Step 7

Variable dec Entered: R-Square = 0.1713 and C(p) = 28.2723

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	33.19175	4.74168	131.35	<.0001
Error	4448	160.56696	0.03610		
Corrected Total	4455	193.75871			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.56096	0.00475	503.64818	13952.0	<.0001
mar	0.03697	0.00953	0.54357	15.06	0.0001
aug	0.06916	0.00961	1.87048	51.82	<.0001
sep	0.12966	0.01079	5.21482	144.46	<.0001
oct	0.14298	0.00976	7.74526	214.56	<.0001
nov	0.12394	0.01086	4.69873	130.16	<.0001
dec	0.07673	0.02219	0.43176	11.96	0.0005
pturnback	-0.12555	0.00580	16.88913	467.86	<.0001

Bounds on condition number: 1.0831, 51.87

Stepwise Selection: Step 8

Logarithms of double lockage times using key variables from stepwise proc 213
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 8

Variable apr Entered: R-Square = 0.1740 and C(p) = 15.8994

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	33.70824	4.21353	117.07	<.0001
Error	4447	160.05048	0.03599		
Corrected Total	4455	193.75871			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.55246	0.00525	399.17835	11091.2	<.0001
mar	0.04513	0.00975	0.77047	21.41	<.0001
apr	0.03631	0.00958	0.51649	14.35	0.0002
aug	0.07737	0.00983	2.22714	61.88	<.0001
sep	0.13790	0.01099	5.66756	157.47	<.0001
oct	0.15121	0.00999	8.25252	229.30	<.0001
nov	0.13212	0.01106	5.13572	142.70	<.0001
dec	0.08504	0.02226	0.52516	14.59	0.0001
pturnback	-0.12479	0.00580	16.66407	463.01	<.0001

Bounds on condition number: 1.1449, 70.531

Stepwise Selection: Step 9

Variable pexchange Entered: R-Square = 0.1755 and C(p) = 9.4335

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	34.01246	3.77916	105.18	<.0001
Error	4446	159.74626	0.03593		
Corrected Total	4455	193.75871			

Logarithms of double lockage times using key variables from stepwise proc 214
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 9

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.56859	0.00763	199.62325	5555.84	<.0001
mar	0.04169	0.00982	0.64784	18.03	<.0001
apr	0.03636	0.00958	0.51786	14.41	0.0001
aug	0.07768	0.00983	2.24503	62.48	<.0001
sep	0.13661	0.01099	5.55294	154.55	<.0001
oct	0.15110	0.00998	8.23964	229.32	<.0001
nov	0.13249	0.01105	5.16430	143.73	<.0001
dec	0.08538	0.02224	0.52934	14.73	0.0001
pturnback	-0.14049	0.00792	11.31234	314.84	<.0001
pexchange	-0.02325	0.00799	0.30422	8.47	0.0036

Bounds on condition number: 1.8957, 104.45

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0989	0.0989	406.647	488.87	<.0001
2	oct		2	0.0237	0.1226	280.982	120.16	<.0001
3	sep		3	0.0176	0.1401	188.347	90.87	<.0001
4	nov		4	0.0188	0.1589	89.0324	99.44	<.0001
5	aug		5	0.0077	0.1666	49.5159	41.11	<.0001
6	mar		6	0.0025	0.1691	38.2873	13.14	0.0003
7	dec		7	0.0022	0.1713	28.2723	11.96	0.0005
8	apr		8	0.0027	0.1740	15.8994	14.35	0.0002
9	pexchange		9	0.0016	0.1755	9.4335	8.47	0.0036

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0249 and C(p) = 140.0598

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.15049	1.15049	32.34	<.0001
Error	1265	45.00222	0.03557		
Corrected Total	1266	46.15271			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.49327	0.00634	215.33111	6052.90	<.0001
pturnback	-0.06566	0.01155	1.15049	32.34	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.0649 and C(p) = 84.6015

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	2.99343	1.49671	43.83	<.0001
Error	1264	43.15929	0.03415		
Corrected Total	1266	46.15271			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.55022	0.00993	104.74977	3067.79	<.0001
pturnback	-0.12262	0.01371	2.72979	79.95	<.0001
pexchange	-0.09352	0.01273	1.84294	53.97	<.0001

Bounds on condition number: 1.4697, 5.8787

Stepwise Selection: Step 3

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable may Entered: R-Square = 0.0780 and C(p) = 67.7297

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	3.59873	1.19958	35.60	<.0001
Error	1263	42.55399	0.03369		
Corrected Total	1266	46.15271			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.55629	0.00997	104.86752	3112.46	<.0001
may	-0.09535	0.02250	0.60530	17.97	<.0001
pturnback	-0.12119	0.01363	2.66507	79.10	<.0001
pexchange	-0.09622	0.01266	1.94601	57.76	<.0001

Bounds on condition number: 1.4734, 11.852

Stepwise Selection: Step 4

Variable jul Entered: R-Square = 0.0910 and C(p) = 51.0404

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	4.19817	1.04954	31.57	<.0001
Error	1262	41.95454	0.03324		
Corrected Total	1266	46.15271			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.56215	0.01000	105.04640	3159.81	<.0001
may	-0.10312	0.02242	0.70319	21.15	<.0001
jul	-0.07750	0.01825	0.59945	18.03	<.0001
pturnback	-0.11672	0.01358	2.45683	73.90	<.0001
pexchange	-0.09621	0.01258	1.94553	58.52	<.0001

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.4795, 19.924

Stepwise Selection: Step 5

Variable jun Entered: R-Square = 0.1063 and C(p) = 30.9129

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	4.90790	0.98158	30.01	<.0001
Error	1261	41.24481	0.03271		
Corrected Total	1266	46.15271			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.56891	0.01003	105.33466	3220.45	<.0001
may	-0.11284	0.02234	0.83471	25.52	<.0001
jun	-0.08201	0.01761	0.70973	21.70	<.0001
jul	-0.08739	0.01823	0.75193	22.99	<.0001
pturnback	-0.11052	0.01353	2.18146	66.69	<.0001
pexchange	-0.09491	0.01248	1.89230	57.85	<.0001

Bounds on condition number: 1.494, 30.243

Stepwise Selection: Step 6

Variable apr Entered: R-Square = 0.1212 and C(p) = 11.4903

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	5.59502	0.93250	28.97	<.0001
Error	1260	40.55770	0.03219		
Corrected Total	1266	46.15271			

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 218

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.57800	0.01014	104.63285	3250.61	<.0001
apr	-0.08967	0.01941	0.68712	21.35	<.0001
may	-0.12212	0.02225	0.96964	30.12	<.0001
jun	-0.09114	0.01758	0.86542	26.89	<.0001
jul	-0.09657	0.01819	0.90723	28.18	<.0001
pturnback	-0.10923	0.01343	2.13001	66.17	<.0001
pexchange	-0.09624	0.01238	1.94468	60.41	<.0001

Bounds on condition number: 1.4946, 42.673

Stepwise Selection: Step 7

Variable mar Entered: R-Square = 0.1262 and C(p) = 6.3110

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	5.82528	0.83218	25.98	<.0001
Error	1259	40.32743	0.03203		
Corrected Total	1266	46.15271			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.58379	0.01034	102.08794	3187.13	<.0001
mar	-0.05649	0.02107	0.23027	7.19	0.0074
apr	-0.09506	0.01946	0.76398	23.85	<.0001
may	-0.12778	0.02230	1.05212	32.85	<.0001
jun	-0.09660	0.01765	0.95932	29.95	<.0001
jul	-0.10209	0.01826	1.00109	31.25	<.0001
pturnback	-0.10842	0.01340	2.09761	65.49	<.0001
pexchange	-0.09798	0.01237	2.01015	62.76	<.0001

Bounds on condition number: 1.4953, 57.425

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 219

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0249	0.0249	140.060	32.34	<.0001
2	pexchange		2	0.0399	0.0649	84.6015	53.97	<.0001
3	may		3	0.0131	0.0780	67.7297	17.97	<.0001
4	jul		4	0.0130	0.0910	51.0404	18.03	<.0001
5	jun		5	0.0154	0.1063	30.9129	21.70	<.0001
6	apr		6	0.0149	0.1212	11.4903	21.35	<.0001
7	mar		7	0.0050	0.1262	6.3110	7.19	0.0074

Logarithms of single lockage times using key variables from stepwise proc 220
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0277 and C(p) = 181.6408

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	5.01972	5.01972	35.99	<.0001
Error	1264	176.27362	0.13946		
Corrected Total	1265	181.29334			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.77846	0.01256	535.69729	3841.31	<.0001
pturnback	-0.13718	0.02287	5.01972	35.99	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.0678 and C(p) = 124.0749

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	12.29292	6.14646	45.93	<.0001
Error	1263	169.00042	0.13381		
Corrected Total	1265	181.29334			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.66535	0.01967	153.17007	1144.69	<.0001
pturnback	-0.25029	0.02715	11.37348	85.00	<.0001
pexchange	-0.18585	0.02521	7.27320	54.36	<.0001

Bounds on condition number: 1.4692, 5.8767

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 221
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable may Entered: R-Square = 0.0863 and C(p) = 98.6502

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	15.64157	5.21386	39.72	<.0001
Error	1262	165.65177	0.13126		
Corrected Total	1265	181.29334			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.65099	0.01968	143.56982	1093.77	<.0001
may	-0.22586	0.04472	3.34865	25.51	<.0001
pturnback	-0.24691	0.02690	11.06184	84.27	<.0001
pexchange	-0.19265	0.02500	7.79284	59.37	<.0001

Bounds on condition number: 1.4735, 11.853

Stepwise Selection: Step 4

Variable jun Entered: R-Square = 0.1029 and C(p) = 75.9022

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	18.66338	4.66585	36.18	<.0001
Error	1261	162.62995	0.12897		
Corrected Total	1265	181.29334			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.63867	0.01968	135.88079	1053.59	<.0001
may	-0.24380	0.04448	3.87463	30.04	<.0001
jun	-0.16807	0.03472	3.02182	23.43	<.0001
pturnback	-0.23538	0.02677	9.97282	77.33	<.0001
pexchange	-0.19000	0.02479	7.57562	58.74	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.4818, 19.943

Stepwise Selection: Step 5

Variable jul Entered: R-Square = 0.1227 and C(p) = 48.6403

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	22.23637	4.44727	35.23	<.0001
Error	1260	159.05697	0.12624		
Corrected Total	1265	181.29334			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.62267	0.01970	126.14498	999.28	<.0001
may	-0.26524	0.04419	4.54805	36.03	<.0001
jun	-0.18951	0.03459	3.78996	30.02	<.0001
jul	-0.19050	0.03581	3.57298	28.30	<.0001
pturnback	-0.22290	0.02659	8.87357	70.29	<.0001
pexchange	-0.18964	0.02453	7.54707	59.79	<.0001

Bounds on condition number: 1.4935, 30.243

Stepwise Selection: Step 6

Variable apr Entered: R-Square = 0.1464 and C(p) = 15.3522

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	26.54517	4.42419	35.99	<.0001
Error	1259	154.74817	0.12291		
Corrected Total	1265	181.29334			

Logarithms of single lockage times using key variables from stepwise proc 223
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.59991	0.01981	112.67991	916.74	<.0001
apr	-0.22454	0.03792	4.30880	35.06	<.0001
may	-0.28853	0.04378	5.33832	43.43	<.0001
jun	-0.21237	0.03435	4.69914	38.23	<.0001
jul	-0.21348	0.03555	4.43375	36.07	<.0001
pturnback	-0.21967	0.02624	8.61493	70.09	<.0001
pexchange	-0.19298	0.02421	7.81107	63.55	<.0001

Bounds on condition number: 1.4941, 42.673

Stepwise Selection: Step 7

Variable mar Entered: R-Square = 0.1538 and C(p) = 6.4418

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	27.87737	3.98248	32.66	<.0001
Error	1258	153.41596	0.12195		
Corrected Total	1265	181.29334			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.58598	0.02018	102.82427	843.15	<.0001
mar	-0.13587	0.04111	1.33221	10.92	0.0010
apr	-0.23751	0.03798	4.76937	39.11	<.0001
may	-0.30221	0.04381	5.80414	47.59	<.0001
jun	-0.22551	0.03444	5.22804	42.87	<.0001
jul	-0.22677	0.03563	4.93920	40.50	<.0001
pturnback	-0.21773	0.02614	8.45908	69.36	<.0001
pexchange	-0.19718	0.02415	8.13208	66.68	<.0001

Bounds on condition number: 1.4949, 57.424

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Logarithms of single lockage times using key variables from stepwise proc 224
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0277	0.0277	181.641	35.99	<.0001
2	pexchange		2	0.0401	0.0678	124.075	54.36	<.0001
3	may		3	0.0185	0.0863	98.6502	25.51	<.0001
4	jun		4	0.0167	0.1029	75.9022	23.43	<.0001
5	jul		5	0.0197	0.1227	48.6403	28.30	<.0001
6	apr		6	0.0238	0.1464	15.3522	35.06	<.0001
7	mar		7	0.0073	0.1538	6.4418	10.92	0.0010

Logarithms of single lockage times using key variables from stepwise proc 225
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable may Entered: R-Square = 0.0057 and C(p) = 3.4170

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1657.94578	1657.94578	19.04	<.0001
Error	3339	290808	87.09424		
Corrected Total	3340	292466			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	5.31347	0.17188	83231	955.64	<.0001
may	2.18657	0.50116	1657.94578	19.04	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable mar Entered: R-Square = 0.0079 and C(p) = -2.0971

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	2312.09448	1156.04724	13.30	<.0001
Error	3338	290154	86.92436		
Corrected Total	3340	292466			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	5.13008	0.18427	67373	775.08	<.0001
mar	1.39337	0.50792	654.14870	7.53	0.0061
may	2.36996	0.50511	1913.59613	22.01	<.0001

Bounds on condition number: 1.0178, 4.0713

All variables left in the model are significant at the 0.0100 level.

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 2

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	may		1	0.0057	0.0057	3.4170	19.04	<.0001
2	mar		2	0.0022	0.0079	-2.0971	7.53	0.0061

Logarithms of single lockage times using key variables from stepwise proc 227
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable feb Entered: R-Square = 0.0045 and C(p) = 50.2554

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.56544	1.56544	15.21	<.0001
Error	3337	343.37815	0.10290		
Corrected Total	3338	344.94359			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.60580	0.00558	8527.38031	82870.4	<.0001
feb	0.22225	0.05698	1.56544	15.21	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable nov Entered: R-Square = 0.0087 and C(p) = 38.2409

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	2.98698	1.49349	14.57	<.0001
Error	3336	341.95661	0.10250		
Corrected Total	3338	344.94359			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.61170	0.00579	7945.99395	77518.1	<.0001
feb	0.21634	0.05689	1.48223	14.46	0.0001
nov	-0.07872	0.02114	1.42154	13.87	0.0002

Bounds on condition number: 1.0008, 4.0031

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 228
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable may Entered: R-Square = 0.0114 and C(p) = 30.9744

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	3.92691	1.30897	12.80	<.0001
Error	3335	341.01668	0.10225		
Corrected Total	3338	344.94359			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.60497	0.00619	6867.43001	67160.6	<.0001
feb	0.22307	0.05687	1.57348	15.39	<.0001
may	0.05239	0.01728	0.93993	9.19	0.0024
nov	-0.07199	0.02123	1.17586	11.50	0.0007

Bounds on condition number: 1.0124, 9.0795

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	feb		1	0.0045	0.0045	50.2554	15.21	<.0001
2	nov		2	0.0041	0.0087	38.2409	13.87	0.0002
3	may		3	0.0027	0.0114	30.9744	9.19	0.0024

Logarithms of single lockage times using key variables from stepwise proc 229
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable may Entered: R-Square = 0.0429 and C(p) = -5.9867

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	6700.65397	6700.65397	24.14	<.0001
Error	539	149622	277.59240		
Corrected Total	540	156323			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.75194	0.73418	11629	41.89	<.0001
may	16.45383	3.34898	6700.65397	24.14	<.0001

Bounds on condition number: 1, 1

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	may		1	0.0429	0.0429	-5.9867	24.14	<.0001

Logarithms of single lockage times using key variables from stepwise proc 230
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

No variable met the 0.0100 significance level for entry into the model.

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 13:12 Friday, June 24, 2005 231

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	6037	0	25620357611	4243888.95	3754803.00	4314561.00
strtlcktime	Start/lockge/time	6037	0	8.0079871E12	1326484525	1262962200	1387100460
arrtime	Arriv/time	6037	0	8.0079251E12	1326474257	1262962200	1387100460
deptime	Leave/lockge/time	6037	0	8.0080242E12	1326490677	1262964060	1387107360
BOW_OVER_SILL	BOW_OVER_SILL	6036	1	8.0066691E12	1326485935	1262963220	1387104240
END_OF_ENTRY	END_OF_ENTRY	6036	1	8.0066717E12	1326486369	1262963340	1387105140
START_OF_EXIT	START_OF_EXIT	6036	1	8.0066753E12	1326486963	1262963940	1387106040
SIGNAL_DATE	SIGNAL_DATE	0	6037	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	6037	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	5747	290	66906.00	11.6419001	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	5747	290	3726.00	0.6483383	0	25.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	6037	.	.	.	.
vess_no		6037	0	4043002414	669703.89	2611.00	8888846.00
vss_hp		6010	27	27930949.00	4647.41	75.0000000	8800.00
frsttime		6037	0	8.0079251E12	1326474257	1262962200	1387100460
lasttime		6037	0	8.0080242E12	1326490677	1262964060	1387107360
newpoolno		6037	0	156321.00	25.8938214	8.0000000	28.0000000
oldpoolno		6037	0	150846.00	24.9869140	9.0000000	28.0000000
waitmin	Wait/before/lockge	6037	0	1033079.00	171.1245652	0	2562.00
lockmin	Wait/lockge/time	6037	0	619008.00	102.5356965	4.0000000	1698.00
year		6037	0	12082764.00	2001.45	2000.00	2003.00
fly		6037	0	1042.00	0.1726023	0	1.0000000
turnback		6037	0	2208.00	0.3657446	0	1.0000000
exchange		6037	0	2787.00	0.4616531	0	1.0000000
lock		6037	0	150565.00	24.9403677	8.0000000	27.0000000
totmin		6037	0	1652087.00	273.6602617	4.0000000	2605.00
month		6037	0	45249.00	7.4952791	1.0000000	12.0000000
day		6037	0	94971.00	15.7314892	1.0000000	31.0000000
sunrise		6036	1	138330353	22917.55	20114.00	26937.00
sunset		6036	1	414497756	68670.93	59489.00	74028.00
sequpstr		6037	0	0	0	0	0
seqdstr		6037	0	5399.00	0.8943184	0	1.0000000
plock		6037	0	144888.00	24.0000000	24.0000000	24.0000000
pempty		5741	296	2770.00	0.4824943	0	25.0000000
pfull		5741	296	67804.00	11.8104860	0	28.0000000
parrtime		6037	0	8.0076425E12	1326427441	1262946600	1387014900
pstrtlcktime		6037	0	8.0077136E12	1326439218	1262946600	1387015500
pdeptime		6037	0	8.0077523E12	1326445637	1262947800	1387017900
birth		6037	0	0	0	0	0
transithrs		6037	0	47994.88	7.9501215	-30.4000000	3292.63
reclock		6037	0	0	0	0	0
i		6037	0	2384460.00	394.9743250	58.0000000	401.0000000
pctpsysdn		6037	0	9556.41	1.5829730	0	92.5830000
pctplckdn		6037	0	5598.84	0.9274212	0	95.7530000
cumdown		6034	3	846900.00	140.3546569	0	95160.00
pctdown		6034	3	5055.57	0.8378479	0	93.4040000
pcttrandn		5994	43	15143.98	2.5265232	0	100.0000000
pctsysdn		6034	3	11716.19	1.9416956	0	96.1060000
pctlckdn		6034	3	5055.57	0.8378479	0	93.4040000
stime		6037	0	263918100	43716.76	0	86340.00
etime		6037	0	263647380	43671.92	60.0000002	86340.00
sdate		6037	0	92681981.00	15352.32	14617.00	16054.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		6037	0	92682414.00	15352.40	14617.00	16054.00
hrsduration		6037	0	10316.80	1.7089283	0.0666667	28.3000000
ndays		6037	0	1.0000000	0.000165645	0	1.0000000
pctday		6037	0	323423.70	53.5735803	0	100.0000000
pctpsysnite		6037	0	271254.69	44.9320336	0	100.0000000
pctplcknite		6037	0	274366.10	45.4474247	0	100.0000000
pcttrannite		6036	1	280393.13	46.4534680	0	100.0000000
pctsysnite		6037	0	278424.88	46.1197419	0	100.0000000
pctlcknite		6037	0	280276.30	46.4264197	0	100.0000000
stage		6027	10	157495.51	26.1316592	9.8500000	33.0800000
flow		15	6022	1538974.87	102598.32	47443.35	255649.80
jan		6037	0	29.0000000	0.0048037	0	1.0000000
feb		6037	0	45.0000000	0.0074540	0	1.0000000
mar		6037	0	393.0000000	0.0650986	0	1.0000000
apr		6037	0	606.0000000	0.1003810	0	1.0000000
may		6037	0	538.0000000	0.0891171	0	1.0000000
jun		6037	0	719.0000000	0.1190989	0	1.0000000
jul		6037	0	738.0000000	0.1222461	0	1.0000000
aug		6037	0	673.0000000	0.1114792	0	1.0000000
sep		6037	0	542.0000000	0.0897797	0	1.0000000
oct		6037	0	602.0000000	0.0997184	0	1.0000000
nov		6037	0	749.0000000	0.1240682	0	1.0000000
dec		6037	0	403.0000000	0.0667550	0	1.0000000
m31day		6037	0	3376.00	0.5592182	0	1.0000000
m30day		6037	0	2616.00	0.4333278	0	1.0000000
qtr1		6037	0	467.0000000	0.0773563	0	1.0000000
qtr2		6037	0	1863.00	0.3085970	0	1.0000000
qtr3		6037	0	1953.00	0.3235051	0	1.0000000
qtr4		6037	0	1754.00	0.2905417	0	1.0000000
psingle		6037	0	1052.00	0.1742587	0	1.0000000
pdouble		6037	0	4717.00	0.7813484	0	1.0000000
pknockout		6037	0	188.0000000	0.0311413	0	1.0000000
pjacknife		6037	0	77.0000000	0.0127547	0	1.0000000
pothtype		6037	0	3.0000000	0.000496936	0	1.0000000
pexchange		6037	0	2328.00	0.3856220	0	1.0000000
pturnback		6037	0	2444.00	0.4048368	0	1.0000000
single		6037	0	1051.00	0.1740931	0	1.0000000
double		6037	0	4712.00	0.7805201	0	1.0000000
knockout		6037	0	193.0000000	0.0319695	0	1.0000000
jacknife		6037	0	78.0000000	0.0129203	0	1.0000000
othtype		6037	0	3.0000000	0.000496936	0	1.0000000
contthru		6037	0	5399.00	0.8943184	0	1.0000000
return		6037	0	265.0000000	0.0438960	0	1.0000000
contstop		6037	0	323.0000000	0.0535034	0	1.0000000
kill		6037	0	50.0000000	0.0082823	0	1.0000000
contsame		6037	0	5399.00	0.8943184	0	1.0000000
contdouble		6037	0	67.0000000	0.0110982	0	1.0000000
contsingle		6037	0	247.0000000	0.0409144	0	1.0000000
contko		6037	0	7.0000000	0.0011595	0	1.0000000
contjk		6037	0	2.0000000	0.000331290	0	1.0000000
retdouble		6037	0	102.0000000	0.0168958	0	1.0000000
retsingle		6037	0	160.0000000	0.0265032	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		6037	0	2.0000000	0.000331290	0	1.0000000
retjk		6037	0	0	0	0	0
xkill		6037	0	51.0000000	0.0084479	0	1.0000000
logtrnhrs		5997	40	8780.31	1.4641178	-3.4011974	8.0994429
plockhrs		6037	0	10587.03	1.7536910	0.1311475	12.9508197
loglckhrs		6037	0	2491.79	0.4127524	-2.0314323	2.5611591
thrusingle		6037	0	617.0000000	0.1022031	0	1.0000000
thruother		6037	0	259.0000000	0.0429021	0	1.0000000
contother		6037	0	9.0000000	0.0014908	0	1.0000000
retother		6037	0	3.0000000	0.000496936	0	1.0000000
thrudoubnite		6036	1	2095.24	0.3471232	0	1.0000000
thrusingnite		6036	1	321.0073500	0.0531821	0	1.0000000
thruothnite		6036	1	120.6238800	0.0199841	0	1.0000000
pdoubnite		6037	0	2214.33	0.3667927	0	1.0000000
psingnite		6037	0	396.5626300	0.0656887	0	1.0000000
pothnite		6037	0	132.7708200	0.0219928	0	1.0000000

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 13:12 Friday, June 24, 2005 234

The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI25D

pconfig / doutcome Frequency Percent Row Pct Col Pct	1:contsame	2:contdouble	3:contsingle	4:contko	5:contjk	6:retdouble	7:retsingle	8:retko	x:kill	Total
1:double	4523 74.92 95.89 83.77	64 1.06 1.36 95.52	1 0.02 0.02 0.40	0 0.00 0.00 0.00	0 0.00 0.00 0.00	99 1.64 2.10 97.06	4 0.07 0.08 2.50	2 0.03 0.04 100.00	24 0.40 0.51 47.06	4717 78.13
2:single	617 10.22 58.65 11.43	3 0.05 0.29 4.48	246 4.07 23.38 99.60	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.05 0.29 2.94	156 2.58 14.83 97.50	0 0.00 0.00 0.00	27 0.45 2.57 52.94	1052 17.43
3:knockout	183 3.03 97.34 3.39	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5 0.08 2.66 71.43	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	188 3.11
4:jacknife	73 1.21 94.81 1.35	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.03 2.60 28.57	2 0.03 2.60 100.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	77 1.28
5:Other	3 0.05 100.00 0.06	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.05
Total	5399 89.43	67 1.11	247 4.09	7 0.12	2 0.03	102 1.69	160 2.65	2 0.03	51 0.84	6037 100.00

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 13:12 Friday, June 24, 2005 235

The FREQ Procedure

Table 1 of pconfig by nextstep
Controlling for pnewpool=MI25D

pconfig nextstep

Frequency Percent Row Pct Col Pct	1:contth	2:contst	3:return	4:kill	Total
1:double	4523 74.92 95.89 83.77	65 1.08 1.38 20.12	105 1.74 2.23 39.62	24 0.40 0.51 48.00	4717 78.13
2:single	617 10.22 58.65 11.43	249 4.12 23.67 77.09	160 2.65 15.21 60.38	26 0.43 2.47 52.00	1052 17.43
3:knockout	183 3.03 97.34 3.39	5 0.08 2.66 1.55	0 0.00 0.00 0.00	0 0.00 0.00 0.00	188 3.11
4:jacknife	73 1.21 94.81 1.35	4 0.07 5.19 1.24	0 0.00 0.00 0.00	0 0.00 0.00 0.00	77 1.28
5:Other	3 0.05 100.00 0.06	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.05
Total	5399 89.43	323 5.35	265 4.39	50 0.83	6037 100.00

Statistics from water.regfile for regfile 13:12 Friday, June 24, 2005 236

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	85485	0	363478864753	4251960.75	3515664.00	4331559.00
strtlcktime	Start/lockge/time	85485	0	1.1343949E14	1327010457	1262306700	1388533680
arrtime	Arriv/time	85485	0	1.1343921E14	1327007179	1262306700	1388530800
deptime	Leave/lockge/time	85485	0	1.1343971E14	1327013017	1262307720	1388536080
BOW_OVER_SILL	BOW_OVER_SILL	85484	1	1.1343822E14	1327011134	1262307000	1388534700
END_OF_ENTRY	END_OF_ENTRY	85484	1	1.1343826E14	1327011609	1262307060	1388535000
START_OF_EXIT	START_OF_EXIT	85484	1	1.1343832E14	1327012336	1262307660	1388535600
SIGNAL_DATE	SIGNAL_DATE	0	85485	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	85485	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	74502	10983	464293.00	6.2319535	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	74502	10983	244287.00	3.2789321	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	85485	.	.	.	.
vess_no		85485	0	68632724504	802862.78	2611.00	8888864.00
vss_hp		84772	713	330423018	3897.78	60.0000000	81800.00
frsttime		85485	0	1.1343921E14	1327007179	1262306700	1388530800
lasttime		85485	0	1.1343971E14	1327013017	1262307720	1388536080
newpoolno		85485	0	2146878.00	25.1140902	1.0000000	28.0000000
oldpoolno		85485	0	2148331.00	25.1310873	1.0000000	28.0000000
waitmin	Wait/before/lockge	85485	0	4669167.00	54.6197228	0	7423.00
lockmin	Wait/lockge/time	85485	0	3647935.00	42.6733930	4.0000000	1823.00
year		85485	0	171098235	2001.50	2000.00	2003.00
fly		85485	0	36299.00	0.4246242	0	1.0000000
turnback		85485	0	26790.00	0.3133883	0	1.0000000
exchange		85485	0	22395.00	0.2619758	0	1.0000000
lock		85485	0	2104862.00	24.6225888	1.0000000	27.0000000
totmin		85485	0	8317102.00	97.2931158	4.0000000	7490.00
month		85485	0	608387.00	7.1168860	1.0000000	12.0000000
day		85485	0	1341476.00	15.6925309	1.0000000	31.0000000
sunrise		84783	702	1963511721	23159.26	19414.00	27155.00
sunset		84783	702	5759416796	67931.27	59694.00	75152.00
sequpstr		85485	0	14034.00	0.1641692	0	1.0000000
seqdstr		85485	0	21059.00	0.2463473	0	1.0000000
plock		85485	0	2011504.00	23.5304907	1.0000000	27.0000000
pempty		74863	10622	192472.00	2.5709897	0	50.0000000
pfull		74863	10622	516849.00	6.9039312	0	28.0000000
parrtime		85485	0	1.1341482E14	1326721897	1262304600	1388521920
pstrtlcktime		85485	0	1.1341528E14	1326727213	1262304600	1388521920
pdeptime		85485	0	1.1341555E14	1326730421	1262305620	1388523540
birth		85485	0	0	0	0	0
transithrs		85485	0	6571868.45	76.8774458	-249.0333333	8099.42
reclock		85485	0	0	0	0	0
i		85485	0	19868482.00	232.4206820	58.0000000	401.0000000
pctpsysdn		79769	5716	79584.70	0.9976895	0	98.9510000
pctplckdn		79769	5716	38503.57	0.4826884	0	98.3000000
cumdown		84724	761	3310800.00	39.0774751	0	107520.00
pctdown		84724	761	32104.23	0.3789272	0	98.3000000
pcttrandn		84466	1019	114565.58	1.3563514	0	100.0000000
pctsysdn		84724	761	74403.14	0.8781826	0	98.6320000
pctlckdn		84724	761	32104.23	0.3789272	0	98.3000000
stime		85485	0	3783305700	44256.95	0	86340.00
etime		85485	0	3793871400	44380.55	0	86340.00
sdate		85485	0	1312913259	15358.41	14610.00	16070.00

Statistics from water.regfile for regfile 13:12 Friday, June 24, 2005 237

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		85485	0	1312915670	15358.43	14610.00	16071.00
hrsduration		85485	0	60798.92	0.7112232	0.0666667	30.3833333
ndays		85485	0	1.0000000	0.000011698	0	1.0000000
pctday		85467	18	4673539.70	54.6823885	0	100.0000000
pctpsysnite		85435	50	3839232.20	44.9374635	0	100.0000000
pctplcknite		85464	21	3851468.04	45.0653847	0	100.0000000
pcttrannite		84918	567	4009780.05	47.2194358	0	100.0000000
pctsysnite		85403	82	3852770.71	45.1128264	0	100.0000000
pctlcknite		85467	18	3873160.30	45.3176115	0	100.0000000
stage		40840	44645	888457.37	21.7545879	8.3500000	33.0800000
flow		7705	77780	636594496	82620.96	16077.99	306262.78
jan		85485	0	3081.00	0.0360414	0	1.0000000
feb		85485	0	3432.00	0.0401474	0	1.0000000
mar		85485	0	6963.00	0.0814529	0	1.0000000
apr		85485	0	7604.00	0.0889513	0	1.0000000
may		85485	0	7228.00	0.0845528	0	1.0000000
jun		85485	0	8481.00	0.0992104	0	1.0000000
jul		85485	0	8594.00	0.1005323	0	1.0000000
aug		85485	0	7996.00	0.0935369	0	1.0000000
sep		85485	0	7652.00	0.0895128	0	1.0000000
oct		85485	0	8554.00	0.1000643	0	1.0000000
nov		85485	0	9223.00	0.1078903	0	1.0000000
dec		85485	0	6677.00	0.0781073	0	1.0000000
m31day		85485	0	49093.00	0.5742879	0	1.0000000
m30day		85485	0	32960.00	0.3855647	0	1.0000000
qtr1		85485	0	13476.00	0.1576417	0	1.0000000
qtr2		85485	0	23313.00	0.2727145	0	1.0000000
qtr3		85485	0	24242.00	0.2835819	0	1.0000000
qtr4		85485	0	24454.00	0.2860619	0	1.0000000
psingle		85485	0	65676.00	0.7682751	0	1.0000000
pdouble		85485	0	15912.00	0.1861379	0	1.0000000
pknockout		85485	0	1445.00	0.0169036	0	1.0000000
pjacknife		85485	0	529.0000000	0.0061882	0	1.0000000
pothtype		85485	0	1923.00	0.0224952	0	1.0000000
pexchange		85485	0	23471.00	0.2745628	0	1.0000000
pturnback		85485	0	27737.00	0.3244663	0	1.0000000
single		85485	0	85475.00	0.9998830	0	1.0000000
double		85485	0	6.0000000	0.000070188	0	1.0000000
knockout		85485	0	2.0000000	0.000023396	0	1.0000000
jacknife		85485	0	0	0	0	0
othtype		85485	0	2.0000000	0.000023396	0	1.0000000
contthru		1052	84433	617.0000000	0.5865019	0	1.0000000
return		1052	84433	160.0000000	0.1520913	0	1.0000000
contstop		1052	84433	249.0000000	0.2366920	0	1.0000000
kill		1052	84433	26.0000000	0.0247148	0	1.0000000
contsame		1052	84433	617.0000000	0.5865019	0	1.0000000
contdouble		1052	84433	3.0000000	0.0028517	0	1.0000000
contsingle		1052	84433	246.0000000	0.2338403	0	1.0000000
contko		1052	84433	0	0	0	0
contjk		1052	84433	0	0	0	0
retdouble		1052	84433	3.0000000	0.0028517	0	1.0000000
retsingle		1052	84433	156.0000000	0.1482890	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1052	84433	0	0	0	0
retjk		1052	84433	0	0	0	0
xkill		1052	84433	27.0000000	0.0256654	0	1.0000000
logtrnhrs		1038	84447	1608.62	1.5497346	-3.4011974	8.0994429
plockhrs		1052	84433	560.3606557	0.5326622	0.1311475	11.9672131
loglckhrs		1052	84433	-813.7155049	-0.7734938	-2.0314323	2.4821707
thrusingle		1052	84433	617.0000000	0.5865019	0	1.0000000
thruother		1052	84433	0	0	0	0
contother		1052	84433	0	0	0	0
retother		1052	84433	1.0000000	0.000950570	0	1.0000000
thrudoubnite		1051	84434	0	0	0	0
thrusingnite		1051	84434	321.0073500	0.3054304	0	1.0000000
thruothnite		1051	84434	0	0	0	0
pdoubnite		1052	84433	0	0	0	0
psingnite		1052	84433	396.5626300	0.3769607	0	1.0000000
pothnite		1052	84433	0	0	0	0

Transition models using key variables from stepwise proc transitions to contthru 13:12 Friday, June 24, 2005 239

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 1

Variable psingle Entered: R-Square = 0.2116 and C(p) = 37.2438

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	120.71339	120.71339	1619.40	<.0001
Error	6035	449.86173	0.07454		
Corrected Total	6036	570.57512			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.95928	0.00387	4587.26660	61539.3	<.0001
psingle	-0.37278	0.00926	120.71339	1619.40	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable mar Entered: R-Square = 0.2138 and C(p) = 22.1756

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	121.97830	60.98915	820.35	<.0001
Error	6034	448.59682	0.07434		
Corrected Total	6036	570.57512			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.96236	0.00393	4450.35008	59860.9	<.0001
mar	-0.05906	0.01432	1.26491	17.01	<.0001
psingle	-0.36839	0.00931	116.35183	1565.03	<.0001

Bounds on condition number: 1.0132, 4.0529

All variables left in the model are significant at the 0.0100 level.

Transition models using key variables from stepwise proc transitions to contthru 13:12 Friday, June 24, 2005 240

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 2

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	psingle		1	0.2116	0.2116	37.2438	1619.40	<.0001
2	mar		2	0.0022	0.2138	22.1756	17.01	<.0001

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 241

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0159 and C(p) = 178.6349

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	28.52090	28.52090	76.38	<.0001
Error	4715	1760.53899	0.37339		
Corrected Total	4716	1789.05989			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.13279	0.01169	12432	33294.3	<.0001
pturnback	-0.15752	0.01802	28.52090	76.38	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jun Entered: R-Square = 0.0269 and C(p) = 126.0300

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	48.17363	24.08681	65.22	<.0001
Error	4714	1740.88626	0.36930		
Corrected Total	4716	1789.05989			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.15795	0.01213	11697	31672.6	<.0001
jun	-0.19429	0.02663	19.65273	53.22	<.0001
pturnback	-0.15898	0.01793	29.05108	78.66	<.0001

Bounds on condition number: 1.0001, 4.0005

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 242

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.0346 and C(p) = 89.6922

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	61.97172	20.65724	56.37	<.0001
Error	4713	1727.08817	0.36645		
Corrected Total	4716	1789.05989			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.17962	0.01258	10993	29998.8	<.0001
jun	-0.21885	0.02683	24.38057	66.53	<.0001
jul	-0.16092	0.02623	13.79810	37.65	<.0001
pturnback	-0.15186	0.01789	26.39624	72.03	<.0001

Bounds on condition number: 1.0272, 9.1633

Stepwise Selection: Step 4

Variable may Entered: R-Square = 0.0427 and C(p) = 51.8590

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	76.30801	19.07700	52.48	<.0001
Error	4712	1712.75188	0.36349		
Corrected Total	4716	1789.05989			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.20540	0.01319	10164	27963.7	<.0001
may	-0.19435	0.03095	14.33628	39.44	<.0001
jun	-0.24303	0.02700	29.45490	81.03	<.0001
jul	-0.18472	0.02639	17.80680	48.99	<.0001
pturnback	-0.15579	0.01783	27.74524	76.33	<.0001

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 243

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0488, 16.547

Stepwise Selection: Step 5

Variable dec Entered: R-Square = 0.0462 and C(p) = 36.3399

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	82.61328	16.52266	45.61	<.0001
Error	4711	1706.44661	0.36223		
Corrected Total	4716	1789.05989			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.19072	0.01363	9361.12162	25843.3	<.0001
may	-0.17888	0.03111	11.97301	33.05	<.0001
jun	-0.22745	0.02721	25.31365	69.88	<.0001
jul	-0.16893	0.02662	14.59057	40.28	<.0001
dec	0.14801	0.03548	6.30528	17.41	<.0001
pturnback	-0.15801	0.01781	28.51592	78.72	<.0001

Bounds on condition number: 1.0705, 26.184

Stepwise Selection: Step 6

Variable oct Entered: R-Square = 0.0488 and C(p) = 25.4328

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	87.25866	14.54311	40.25	<.0001
Error	4710	1701.80123	0.36132		
Corrected Total	4716	1789.05989			

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 244

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.17240	0.01454	8067.88489	22329.1	<.0001
may	-0.16039	0.03150	9.36692	25.92	<.0001
jun	-0.20893	0.02766	20.61409	57.05	<.0001
jul	-0.15036	0.02708	11.13660	30.82	<.0001
oct	0.11029	0.03076	4.64537	12.86	0.0003
dec	0.16657	0.03581	7.81824	21.64	<.0001
pturnback	-0.15850	0.01779	28.69111	79.41	<.0001

Bounds on condition number: 1.1111, 38.713

Stepwise Selection: Step 7

Variable sep Entered: R-Square = 0.0512 and C(p) = 15.5386

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	91.53948	13.07707	36.28	<.0001
Error	4709	1697.52041	0.36048		
Corrected Total	4716	1789.05989			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.15246	0.01563	6835.27862	18961.4	<.0001
may	-0.14062	0.03198	6.96879	19.33	<.0001
jun	-0.18919	0.02822	16.20578	44.96	<.0001
jul	-0.13067	0.02765	8.05092	22.33	<.0001
sep	0.11511	0.03340	4.28083	11.88	0.0006
oct	0.13003	0.03125	6.23974	17.31	<.0001
dec	0.18628	0.03622	9.53428	26.45	<.0001
pturnback	-0.15802	0.01777	28.51398	79.10	<.0001

Bounds on condition number: 1.1607, 54.302

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 245

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0159	0.0159	178.635	76.38	<.0001
2	jun		2	0.0110	0.0269	126.030	53.22	<.0001
3	jul		3	0.0077	0.0346	89.6922	37.65	<.0001
4	may		4	0.0080	0.0427	51.8590	39.44	<.0001
5	dec		5	0.0035	0.0462	36.3399	17.41	<.0001
6	oct		6	0.0026	0.0488	25.4328	12.86	0.0003
7	sep		7	0.0024	0.0512	15.5386	11.88	0.0006

Logarithms of double lockage times using key variables from stepwise proc 246
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0372 and C(p) = 361.3745

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	6.80366	6.80366	181.93	<.0001
Error	4714	176.28736	0.03740		
Corrected Total	4715	183.09102			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.73374	0.00370	1471.37471	39345.2	<.0001
pturnback	-0.07694	0.00570	6.80366	181.93	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jun Entered: R-Square = 0.0597 and C(p) = 244.3640

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	10.93899	5.46949	149.74	<.0001
Error	4713	172.15204	0.03653		
Corrected Total	4715	183.09102			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.74528	0.00381	1395.15973	38195.2	<.0001
jun	-0.08912	0.00838	4.13532	113.21	<.0001
pturnback	-0.07761	0.00564	6.92138	189.49	<.0001

Bounds on condition number: 1.0001, 4.0005

Stepwise Selection: Step 3

Logarithms of double lockage times using key variables from stepwise proc 247
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.0756 and C(p) = 162.6371

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	13.84829	4.61610	128.52	<.0001
Error	4712	169.24273	0.03592		
Corrected Total	4715	183.09102			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.75523	0.00394	1319.82691	36746.2	<.0001
jun	-0.10041	0.00840	5.13159	142.87	<.0001
jul	-0.07389	0.00821	2.90930	81.00	<.0001
pturnback	-0.07434	0.00560	6.32269	176.03	<.0001

Bounds on condition number: 1.0272, 9.1635

Stepwise Selection: Step 4

Variable may Entered: R-Square = 0.0922 and C(p) = 77.3496

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	16.88132	4.22033	119.62	<.0001
Error	4711	166.20970	0.03528		
Corrected Total	4715	183.09102			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.76709	0.00411	1229.68142	34853.7	<.0001
may	-0.08939	0.00964	3.03303	85.97	<.0001
jun	-0.11153	0.00841	6.20306	175.82	<.0001
jul	-0.08485	0.00822	3.75641	106.47	<.0001
pturnback	-0.07614	0.00556	6.62476	187.77	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0489, 16.548

Stepwise Selection: Step 5

Variable dec Entered: R-Square = 0.0978 and C(p) = 49.7046

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	17.91141	3.58228	102.15	<.0001
Error	4710	165.17961	0.03507		
Corrected Total	4715	183.09102			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.76116	0.00424	1130.01526	32221.7	<.0001
may	-0.08314	0.00968	2.58628	73.75	<.0001
jun	-0.10523	0.00847	5.41807	154.49	<.0001
jul	-0.07846	0.00828	3.14714	89.74	<.0001
dec	0.05983	0.01104	1.03009	29.37	<.0001
pturnback	-0.07704	0.00554	6.77631	193.22	<.0001

Bounds on condition number: 1.0705, 26.185

Stepwise Selection: Step 6

Variable oct Entered: R-Square = 0.1014 and C(p) = 32.6914

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	18.57207	3.09535	88.60	<.0001
Error	4709	164.51895	0.03494		
Corrected Total	4715	183.09102			

Logarithms of double lockage times using key variables from stepwise proc 249
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.75425	0.00452	972.47299	27834.9	<.0001
may	-0.07617	0.00980	2.11270	60.47	<.0001
jun	-0.09825	0.00860	4.55887	130.49	<.0001
jul	-0.07146	0.00842	2.51576	72.01	<.0001
oct	0.04163	0.00957	0.66066	18.91	<.0001
dec	0.06682	0.01113	1.25805	36.01	<.0001
pturnback	-0.07721	0.00553	6.80536	194.79	<.0001

Bounds on condition number: 1.1111, 38.711

Stepwise Selection: Step 7

Variable apr Entered: R-Square = 0.1037 and C(p) = 22.5215

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	18.99494	2.71356	77.85	<.0001
Error	4708	164.09608	0.03485		
Corrected Total	4715	183.09102			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.76121	0.00494	828.11559	23759.1	<.0001
apr	-0.03418	0.00981	0.42287	12.13	0.0005
may	-0.08299	0.00998	2.41125	69.18	<.0001
jun	-0.10505	0.00881	4.95570	142.18	<.0001
jul	-0.07822	0.00863	2.86167	82.10	<.0001
oct	0.03484	0.00976	0.44430	12.75	0.0004
dec	0.06005	0.01129	0.98601	28.29	<.0001
pturnback	-0.07763	0.00553	6.87648	197.29	<.0001

Bounds on condition number: 1.1701, 54.726

Stepwise Selection: Step 8

Logarithms of double lockage times using key variables from stepwise proc 250
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 8

Variable aug Entered: R-Square = 0.1057 and C(p) = 14.2183

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	19.35296	2.41912	69.54	<.0001
Error	4707	163.73806	0.03479		
Corrected Total	4715	183.09102			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.77032	0.00569	637.04379	18313.2	<.0001
apr	-0.04332	0.01021	0.62641	18.01	<.0001
may	-0.09213	0.01037	2.74720	78.97	<.0001
jun	-0.11419	0.00925	5.30009	152.36	<.0001
jul	-0.08737	0.00908	3.21834	92.52	<.0001
aug	-0.03063	0.00955	0.35801	10.29	0.0013
oct	0.02570	0.01016	0.22262	6.40	0.0114
dec	0.05090	0.01163	0.66582	19.14	<.0001
pturnback	-0.07754	0.00552	6.86072	197.23	<.0001

Bounds on condition number: 1.2982, 77.466

Stepwise Selection: Step 9

Variable oct Removed: R-Square = 0.1045 and C(p) = 18.6251

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	19.13033	2.73290	78.47	<.0001
Error	4708	163.96069	0.03483		
Corrected Total	4715	183.09102			

Logarithms of double lockage times using key variables from stepwise proc 251
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 9

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.77708	0.00503	831.34621	23871.4	<.0001
apr	-0.05010	0.00986	0.89969	25.83	<.0001
may	-0.09890	0.01002	3.39267	97.42	<.0001
jun	-0.12097	0.00886	6.49273	186.43	<.0001
jul	-0.09416	0.00868	4.09433	117.57	<.0001
aug	-0.03741	0.00917	0.57969	16.65	<.0001
dec	0.04412	0.01133	0.52825	15.17	<.0001
pturnback	-0.07749	0.00552	6.85162	196.74	<.0001

Bounds on condition number: 1.1851, 55.364

Stepwise Selection: Step 10

Variable mar Entered: R-Square = 0.1058 and C(p) = 13.7286

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	19.36997	2.42125	69.61	<.0001
Error	4707	163.72105	0.03478		
Corrected Total	4715	183.09102			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.78223	0.00540	731.02533	21017.1	<.0001
mar	-0.03400	0.01295	0.23964	6.89	0.0087
apr	-0.05488	0.01002	1.04382	30.01	<.0001
may	-0.10370	0.01018	3.60957	103.78	<.0001
jun	-0.12572	0.00904	6.73144	193.53	<.0001
jul	-0.09881	0.00886	4.32837	124.44	<.0001
aug	-0.04214	0.00934	0.70823	20.36	<.0001
dec	0.03943	0.01146	0.41177	11.84	0.0006
pturnback	-0.07848	0.00553	6.99517	201.11	<.0001

Bounds on condition number: 1.2345, 74.152

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Logarithms of double lockage times using key variables from stepwise proc 252
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0372	0.0372	361.374	181.93	<.0001
2	jun		2	0.0226	0.0597	244.364	113.21	<.0001
3	jul		3	0.0159	0.0756	162.637	81.00	<.0001
4	may		4	0.0166	0.0922	77.3496	85.97	<.0001
5	dec		5	0.0056	0.0978	49.7046	29.37	<.0001
6	oct		6	0.0036	0.1014	32.6914	18.91	<.0001
7	apr		7	0.0023	0.1037	22.5215	12.13	0.0005
8	aug		8	0.0020	0.1057	14.2183	10.29	0.0013
9		oct	7	0.0012	0.1045	18.6251	6.40	0.0114
10	mar		8	0.0013	0.1058	13.7286	6.89	0.0087

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 253

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable apr Entered: R-Square = 0.0065 and C(p) = 75.2209

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	2.92419	2.92419	6.87	0.0089
Error	1050	447.06961	0.42578		
Corrected Total	1051	449.99380			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.55229	0.02147	281.83745	661.93	<.0001
apr	-0.16128	0.06154	2.92419	6.87	0.0089

Bounds on condition number: 1, 1

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	apr		1	0.0065	0.0065	75.2209	6.87	0.0089

Logarithms of single lockage times using key variables from stepwise proc 254
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable apr Entered: R-Square = 0.0382 and C(p) = 97.7467

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	8.05758	8.05758	41.63	<.0001
Error	1049	203.05279	0.19357		
Corrected Total	1050	211.11037			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.73969	0.01448	505.01191	2608.96	<.0001
apr	-0.26773	0.04150	8.05758	41.63	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jun Entered: R-Square = 0.0549 and C(p) = 79.7957

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	11.59644	5.79822	30.46	<.0001
Error	1048	199.51393	0.19038		
Corrected Total	1050	211.11037			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.71859	0.01517	427.04370	2243.16	<.0001
apr	-0.28883	0.04144	9.24673	48.57	<.0001
jun	-0.20284	0.04705	3.53886	18.59	<.0001

Bounds on condition number: 1.0141, 4.0566

Stepwise Selection: Step 3

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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable may Entered: R-Square = 0.0720 and C(p) = 61.4392

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	15.20724	5.06908	27.09	<.0001
Error	1047	195.90313	0.18711		
Corrected Total	1050	211.11037			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.69742	0.01579	364.79769	1949.65	<.0001
apr	-0.31000	0.04137	10.50747	56.16	<.0001
may	-0.22739	0.05176	3.61080	19.30	<.0001
jun	-0.22401	0.04689	4.27059	22.82	<.0001

Bounds on condition number: 1.0281, 9.2248

Stepwise Selection: Step 4

Variable jul Entered: R-Square = 0.0879 and C(p) = 44.5742

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	18.55347	4.63837	25.20	<.0001
Error	1046	192.55691	0.18409		
Corrected Total	1050	211.11037			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.67499	0.01653	307.08387	1668.13	<.0001
apr	-0.33243	0.04137	11.88757	64.58	<.0001
may	-0.24982	0.05161	4.31297	23.43	<.0001
jun	-0.24644	0.04681	5.10333	27.72	<.0001
jul	-0.22135	0.05192	3.34623	18.18	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.045, 16.592

Stepwise Selection: Step 5

Variable mar Entered: R-Square = 0.0976 and C(p) = 35.0500

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	20.59760	4.11952	22.60	<.0001
Error	1045	190.51277	0.18231		
Corrected Total	1050	211.11037			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.64769	0.01836	226.94814	1244.86	<.0001
mar	-0.13838	0.04132	2.04414	11.21	0.0008
apr	-0.35973	0.04197	13.39509	73.47	<.0001
may	-0.27713	0.05201	5.17682	28.40	<.0001
jun	-0.27374	0.04729	6.10964	33.51	<.0001
jul	-0.24865	0.05230	4.12011	22.60	<.0001

Bounds on condition number: 1.0882, 26.804

Stepwise Selection: Step 6

Variable aug Entered: R-Square = 0.1040 and C(p) = 29.3604

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	21.96157	3.66026	20.20	<.0001
Error	1044	189.14880	0.18118		
Corrected Total	1050	211.11037			

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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.62319	0.02036	169.71647	936.74	<.0001
mar	-0.16287	0.04215	2.70487	14.93	0.0001
apr	-0.38423	0.04278	14.61588	80.67	<.0001
may	-0.30162	0.05261	5.95581	32.87	<.0001
jun	-0.29824	0.04798	7.00087	38.64	<.0001
jul	-0.27315	0.05290	4.83025	26.66	<.0001
aug	-0.12742	0.04644	1.36397	7.53	0.0062

Bounds on condition number: 1.1393, 40.065

Stepwise Selection: Step 7

Variable pturnback Entered: R-Square = 0.1103 and C(p) = 23.9077

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	23.28352	3.32622	18.47	<.0001
Error	1043	187.82685	0.18008		
Corrected Total	1050	211.11037			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.59600	0.02265	124.73275	692.64	<.0001
mar	-0.17508	0.04227	3.08998	17.16	<.0001
apr	-0.38746	0.04267	14.85138	82.47	<.0001
may	-0.31189	0.05259	6.33511	35.18	<.0001
jun	-0.29668	0.04784	6.92695	38.47	<.0001
jul	-0.27008	0.05275	4.72009	26.21	<.0001
aug	-0.13029	0.04631	1.42528	7.91	0.0050
pturnback	-0.07667	0.02830	1.32195	7.34	0.0069

Bounds on condition number: 1.1524, 54.016

Stepwise Selection: Step 8

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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 8

Variable pexchange Entered: R-Square = 0.1196 and C(p) = 14.8609

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	25.24299	3.15537	17.69	<.0001
Error	1042	185.86738	0.17838		
Corrected Total	1050	211.11037			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.54183	0.02784	67.56145	378.76	<.0001
mar	-0.17285	0.04207	3.01122	16.88	<.0001
apr	-0.37466	0.04264	13.77208	77.21	<.0001
may	-0.30929	0.05234	6.22862	34.92	<.0001
jun	-0.28089	0.04785	6.14755	34.46	<.0001
jul	-0.25202	0.05278	4.06608	22.80	<.0001
aug	-0.11028	0.04649	1.00396	5.63	0.0179
pturnback	-0.13792	0.03369	2.99019	16.76	<.0001
pexchange	-0.10742	0.03241	1.95947	10.99	0.0010

Bounds on condition number: 1.4645, 77.37

Stepwise Selection: Step 9

Variable aug Removed: R-Square = 0.1148 and C(p) = 18.5209

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	24.23902	3.46272	19.33	<.0001
Error	1043	186.87135	0.17917		
Corrected Total	1050	211.11037			

Logarithms of single lockage times using key variables from stepwise proc 259
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 9

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.55816	0.02704	76.36662	426.23	<.0001
mar	-0.15157	0.04119	2.42571	13.54	0.0002
apr	-0.35257	0.04170	12.80672	71.48	<.0001
may	-0.28802	0.05168	5.56453	31.06	<.0001
jun	-0.25862	0.04702	5.42003	30.25	<.0001
jul	-0.22956	0.05204	3.48596	19.46	<.0001
pturnback	-0.14210	0.03371	3.18286	17.76	<.0001
pexchange	-0.11740	0.03221	2.38078	13.29	0.0003

Bounds on condition number: 1.4524, 58.028

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	apr		1	0.0382	0.0382	97.7467	41.63	<.0001
2	jun		2	0.0168	0.0549	79.7957	18.59	<.0001
3	may		3	0.0171	0.0720	61.4392	19.30	<.0001
4	jul		4	0.0159	0.0879	44.5742	18.18	<.0001
5	mar		5	0.0097	0.0976	35.0500	11.21	0.0008
6	aug		6	0.0065	0.1040	29.3604	7.53	0.0062
7	pturnback		7	0.0063	0.1103	23.9077	7.34	0.0069
8	pexchange		8	0.0093	0.1196	14.8609	10.99	0.0010
9		aug	7	0.0048	0.1148	18.5209	5.63	0.0179

Logarithms of single lockage times using key variables from stepwise proc 260
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0316 and C(p) = 452.2999

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	357.46533	357.46533	147.53	<.0001
Error	4521	10955	2.42304		
Corrected Total	4522	11312			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.48832	0.02477	79553	32831.7	<.0001
jun	-0.84456	0.06953	357.46533	147.53	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jul Entered: R-Square = 0.0536 and C(p) = 341.4447

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	606.14884	303.07442	127.96	<.0001
Error	4520	10706	2.36856		
Corrected Total	4522	11312			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.59454	0.02659	70697	29847.9	<.0001
jun	-0.95078	0.06952	442.96291	187.02	<.0001
jul	-0.69909	0.06823	248.68351	104.99	<.0001

Bounds on condition number: 1.0227, 4.0909

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 261
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 3

Variable may Entered: R-Square = 0.0783 and C(p) = 216.6073

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	885.64295	295.21432	127.95	<.0001
Error	4519	10426	2.30723		
Corrected Total	4522	11312			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.70274	0.02803	64954	28152.3	<.0001
may	-0.87952	0.07991	279.49411	121.14	<.0001
jun	-1.05898	0.06932	538.46670	233.38	<.0001
jul	-0.80729	0.06805	324.69837	140.73	<.0001

Bounds on condition number: 1.0445, 9.374

Stepwise Selection: Step 4

Variable apr Entered: R-Square = 0.0983 and C(p) = 115.8799

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	1112.00916	278.00229	123.14	<.0001
Error	4518	10200	2.25764		
Corrected Total	4522	11312			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.81834	0.03003	58111	25739.5	<.0001
apr	-0.78232	0.07813	226.36621	100.27	<.0001
may	-0.99512	0.07989	350.32297	155.17	<.0001
jun	-1.17458	0.06954	644.18557	285.34	<.0001
jul	-0.92289	0.06830	412.22426	182.59	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0753, 17.072

Stepwise Selection: Step 5

Variable feb Entered: R-Square = 0.1042 and C(p) = 87.7380

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	1178.42869	235.68574	105.06	<.0001
Error	4517	10134	2.24344		
Corrected Total	4522	11312			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.80487	0.03004	57394	25582.9	<.0001
feb	1.98337	0.36451	66.41953	29.61	<.0001
apr	-0.76885	0.07792	218.41700	97.36	<.0001
may	-0.98165	0.07967	340.57347	151.81	<.0001
jun	-1.16111	0.06936	628.69256	280.24	<.0001
jul	-0.90942	0.06813	399.74969	178.19	<.0001

Bounds on condition number: 1.0767, 26.379

Stepwise Selection: Step 6

Variable dec Entered: R-Square = 0.1084 and C(p) = 67.9310

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	1226.48173	204.41362	91.53	<.0001
Error	4516	10086	2.23329		
Corrected Total	4522	11312			

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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.75181	0.03208	48998	21939.8	<.0001
feb	2.03642	0.36387	69.95129	31.32	<.0001
apr	-0.71579	0.07858	185.30241	82.97	<.0001
may	-0.92859	0.08031	298.57338	133.69	<.0001
jun	-1.10806	0.07014	557.32743	249.55	<.0001
jul	-0.85637	0.06893	344.70869	154.35	<.0001
dec	0.41739	0.08998	48.05304	21.52	<.0001

Bounds on condition number: 1.1072, 38.683

Stepwise Selection: Step 7

Variable sep Entered: R-Square = 0.1143 and C(p) = 39.8899

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	1292.67918	184.66845	83.22	<.0001
Error	4515	10019	2.21913		
Corrected Total	4522	11312			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.67237	0.03513	39252	17688.1	<.0001
feb	2.11587	0.36300	75.39439	33.97	<.0001
apr	-0.63635	0.07967	141.57018	63.80	<.0001
may	-0.84915	0.08137	241.69117	108.91	<.0001
jun	-1.02861	0.07142	460.35041	207.45	<.0001
jul	-0.77692	0.07023	271.54869	122.37	<.0001
sep	0.46343	0.08485	66.19745	29.83	<.0001
dec	0.49683	0.09087	66.34206	29.90	<.0001

Bounds on condition number: 1.1568, 54.285

Stepwise Selection: Step 8

Logarithms of single lockage times using key variables from stepwise proc 264
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 8

Variable oct Entered: R-Square = 0.1164 and C(p) = 31.1013

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	1316.45259	164.55657	74.31	<.0001
Error	4514	9995.58282	2.21435		
Corrected Total	4522	11312			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.60632	0.04047	28687	12955.0	<.0001
feb	2.18191	0.36317	79.92752	36.10	<.0001
apr	-0.57030	0.08210	106.85515	48.26	<.0001
may	-0.78310	0.08374	193.64848	87.45	<.0001
jun	-0.96257	0.07413	373.33093	168.60	<.0001
jul	-0.71088	0.07300	210.01008	94.84	<.0001
sep	0.52947	0.08712	81.78448	36.93	<.0001
oct	0.26625	0.08126	23.77341	10.74	0.0011
dec	0.56287	0.09298	81.15040	36.65	<.0001

Bounds on condition number: 1.2523, 75.212

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun		1	0.0316	0.0316	452.300	147.53	<.0001
2	jul		2	0.0220	0.0536	341.445	104.99	<.0001
3	may		3	0.0247	0.0783	216.607	121.14	<.0001
4	apr		4	0.0200	0.0983	115.880	100.27	<.0001
5	feb		5	0.0059	0.1042	87.7380	29.61	<.0001
6	dec		6	0.0042	0.1084	67.9310	21.52	<.0001
7	sep		7	0.0059	0.1143	39.8899	29.83	<.0001
8	oct		8	0.0021	0.1164	31.1013	10.74	0.0011

Logarithms of single lockage times using key variables from stepwise proc 265
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0568 and C(p) = 723.6888

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	18.90483	18.90483	271.99	<.0001
Error	4520	314.16036	0.06950		
Corrected Total	4521	333.06519			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.46047	0.00420	8420.96587	121157	<.0001
jun	-0.19423	0.01178	18.90483	271.99	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jul Entered: R-Square = 0.0936 and C(p) = 521.2380

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	31.15858	15.57929	233.19	<.0001
Error	4519	301.90661	0.06681		
Corrected Total	4521	333.06519			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.48405	0.00447	7373.68716	110371	<.0001
jun	-0.21781	0.01168	23.24596	347.95	<.0001
jul	-0.15519	0.01146	12.25375	183.42	<.0001

Bounds on condition number: 1.0227, 4.091

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 266
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable may Entered: R-Square = 0.1390 and C(p) = 270.8181

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	46.28735	15.42912	243.08	<.0001
Error	4518	286.77783	0.06347		
Corrected Total	4521	333.06519			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.50924	0.00465	6687.59352	105359	<.0001
may	-0.20463	0.01325	15.12878	238.34	<.0001
jun	-0.24299	0.01150	28.34944	446.63	<.0001
jul	-0.18037	0.01129	16.20746	255.34	<.0001

Bounds on condition number: 1.0446, 9.3742

Stepwise Selection: Step 4

Variable apr Entered: R-Square = 0.1676 and C(p) = 113.8190

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	55.81695	13.95424	227.35	<.0001
Error	4517	277.24824	0.06138		
Corrected Total	4521	333.06519			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.53293	0.00495	5881.74339	95826.9	<.0001
apr	-0.16067	0.01289	9.52960	155.26	<.0001
may	-0.22833	0.01317	18.44283	300.48	<.0001
jun	-0.26669	0.01147	33.20867	541.04	<.0001
jul	-0.20406	0.01126	20.15410	328.36	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0752, 17.071

Stepwise Selection: Step 5

Variable mar Entered: R-Square = 0.1725 and C(p) = 88.7111

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	57.44166	11.48833	188.23	<.0001
Error	4516	275.62352	0.06103		
Corrected Total	4521	333.06519			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.54100	0.00518	5402.37526	88516.1	<.0001
mar	-0.08854	0.01716	1.62471	26.62	<.0001
apr	-0.16874	0.01295	10.35728	169.70	<.0001
may	-0.23639	0.01323	19.49271	319.38	<.0001
jun	-0.27475	0.01154	34.60085	566.92	<.0001
jul	-0.21213	0.01134	21.36473	350.05	<.0001

Bounds on condition number: 1.0961, 26.92

Stepwise Selection: Step 6

Variable nov Entered: R-Square = 0.1767 and C(p) = 67.1280

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	58.85511	9.80919	161.51	<.0001
Error	4515	274.21007	0.06073		
Corrected Total	4521	333.06519			

Logarithms of single lockage times using key variables from stepwise proc 268
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.55583	0.00601	4066.62191	66958.9	<.0001
mar	-0.10338	0.01739	2.14547	35.33	<.0001
apr	-0.18357	0.01328	11.60136	191.02	<.0001
may	-0.25122	0.01355	20.88187	343.83	<.0001
jun	-0.28959	0.01191	35.87781	590.75	<.0001
jul	-0.22696	0.01172	22.77391	374.98	<.0001
nov	-0.05672	0.01176	1.41345	23.27	<.0001

Bounds on condition number: 1.1771, 41.232

Stepwise Selection: Step 7

Variable aug Entered: R-Square = 0.1815 and C(p) = 42.6093

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	60.44451	8.63493	142.98	<.0001
Error	4514	272.62067	0.06039		
Corrected Total	4521	333.06519			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.57645	0.00722	2880.35077	47692.3	<.0001
mar	-0.12400	0.01780	2.92947	48.51	<.0001
apr	-0.20419	0.01384	13.14360	217.63	<.0001
may	-0.27185	0.01410	22.46227	371.93	<.0001
jun	-0.31021	0.01254	36.94087	611.66	<.0001
jul	-0.24759	0.01236	24.23374	401.26	<.0001
aug	-0.06650	0.01296	1.58940	26.32	<.0001
nov	-0.07734	0.01239	2.35169	38.94	<.0001

Bounds on condition number: 1.3163, 61.803

Stepwise Selection: Step 8

Logarithms of single lockage times using key variables from stepwise proc 269
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 8

Variable feb Entered: R-Square = 0.1841 and C(p) = 30.1843

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	61.30908	7.66363	127.27	<.0001
Error	4513	271.75611	0.06022		
Corrected Total	4521	333.06519			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.57312	0.00726	2826.11654	46932.8	<.0001
feb	0.22719	0.05996	0.86456	14.36	0.0002
mar	-0.12067	0.01780	2.76736	45.96	<.0001
apr	-0.20086	0.01385	12.66683	210.36	<.0001
may	-0.26851	0.01410	21.82974	362.52	<.0001
jun	-0.30688	0.01256	35.97411	597.41	<.0001
jul	-0.24425	0.01237	23.46663	389.71	<.0001
aug	-0.06317	0.01297	1.42750	23.71	<.0001
nov	-0.07401	0.01241	2.14258	35.58	<.0001

Bounds on condition number: 1.323, 79.027

Stepwise Selection: Step 9

Variable oct Entered: R-Square = 0.1861 and C(p) = 21.0875

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	61.97416	6.88602	114.61	<.0001
Error	4512	271.09103	0.06008		
Corrected Total	4521	333.06519			

Logarithms of single lockage times using key variables from stepwise proc 270
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 9

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.59244	0.00929	1764.95935	29375.7	<.0001
feb	0.20787	0.06017	0.71704	11.93	0.0006
mar	-0.13999	0.01870	3.36546	56.01	<.0001
apr	-0.22018	0.01500	12.94073	215.38	<.0001
may	-0.28783	0.01524	21.44114	356.86	<.0001
jun	-0.32620	0.01382	33.47136	557.09	<.0001
jul	-0.26357	0.01366	22.38480	372.57	<.0001
aug	-0.08248	0.01420	2.02721	33.74	<.0001
oct	-0.04947	0.01487	0.66508	11.07	0.0009
nov	-0.09333	0.01369	2.79386	46.50	<.0001

Bounds on condition number: 1.615, 117.36

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun		1	0.0568	0.0568	723.689	271.99	<.0001
2	jul		2	0.0368	0.0936	521.238	183.42	<.0001
3	may		3	0.0454	0.1390	270.818	238.34	<.0001
4	apr		4	0.0286	0.1676	113.819	155.26	<.0001
5	mar		5	0.0049	0.1725	88.7111	26.62	<.0001
6	nov		6	0.0042	0.1767	67.1280	23.27	<.0001
7	aug		7	0.0048	0.1815	42.6093	26.32	<.0001
8	feb		8	0.0026	0.1841	30.1843	14.36	0.0002
9	oct		9	0.0020	0.1861	21.0875	11.07	0.0009

Logarithms of single lockage times using key variables from stepwise proc 271
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable oct Entered: R-Square = 0.0203 and C(p) = -6.2419

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	2163.15363	2163.15363	12.75	0.0004
Error	614	104191	169.69231		
Corrected Total	615	106354			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.03734	0.56006	8818.35423	51.97	<.0001
oct	5.73066	1.60506	2163.15363	12.75	0.0004

Bounds on condition number: 1, 1

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	oct		1	0.0203	0.0203	-6.2419	12.75	0.0004

Logarithms of single lockage times using key variables from stepwise proc 272
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

No variable met the 0.0100 significance level for entry into the model.

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	6773	0	28606376022	4223590.14	3746981.00	4318260.00
strtlcktime	Start/lockge/time	6773	0	8.9764997E12	1325335848	1262306700	1387287000
arrtime	Arriv/time	6773	0	8.9764277E12	1325325223	1262306700	1387287000
deptime	Leave/lockge/time	6773	0	8.9765332E12	1325340790	1262307720	1387288080
BOW_OVER_SILL	BOW_OVER_SILL	6773	0	8.9765176E12	1325338497	1262307000	1387287300
END_OF_ENTRY	END_OF_ENTRY	6773	0	8.9765211E12	1325339001	1262307060	1387287360
START_OF_EXIT	START_OF_EXIT	6773	0	8.9765246E12	1325339525	1262307660	1387287960
SIGNAL_DATE	SIGNAL_DATE	0	6773	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	6773	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	5615	1158	26989.00	4.8065895	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	5615	1158	43907.00	7.8195904	0	27.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	6773	.	.	.	.
vess_no		6773	0	4690295925	692499.03	2611.00	8888846.00
vss_hp		6749	24	28465361.00	4217.72	75.0000000	8800.00
frsttime		6773	0	8.9764277E12	1325325223	1262306700	1387287000
lasttime		6773	0	8.9765332E12	1325340790	1262307720	1387288080
newpoolno		6773	0	163971.00	24.2095083	9.0000000	28.0000000
oldpoolno		6773	0	169782.00	25.0674738	8.0000000	28.0000000
waitmin	Wait/before/lockge	6773	0	1199387.00	177.0835671	0	7242.00
lockmin	Wait/lockge/time	6773	0	557816.00	82.3587775	5.0000000	700.0000000
year		6773	0	13555823.00	2001.45	2000.00	2003.00
fly		6773	0	1691.00	0.2496678	0	1.0000000
turnback		6773	0	2518.00	0.3717703	0	1.0000000
exchange		6773	0	2564.00	0.3785619	0	1.0000000
lock		6773	0	163490.00	24.1384911	8.0000000	27.0000000
totmin		6773	0	1757203.00	259.4423446	6.0000000	7305.00
month		6773	0	47925.00	7.0758896	1.0000000	12.0000000
day		6773	0	106828.00	15.7726266	1.0000000	31.0000000
sunrise		6772	1	154399825	22799.74	20114.00	27112.00
sunset		6772	1	467446801	69026.40	59853.00	74161.00
sequpstr		6773	0	5218.00	0.7704119	0	1.0000000
seqdstr		6773	0	0	0	0	0
plock		6773	0	169325.00	25.0000000	25.0000000	25.0000000
pempty		5625	1148	44829.00	7.9696000	0	27.0000000
pfull		5625	1148	26218.00	4.6609778	0	28.0000000
parrtime		6773	0	8.975985E12	1325259851	1262304600	1387285200
pstrtlcktime		6773	0	8.9760656E12	1325271763	1262304600	1387285200
pdeptime		6773	0	8.9760991E12	1325276700	1262305620	1387286520
birth		6773	0	0	0	0	0
transithrs		6773	0	91291.47	13.4787342	-203.5166667	4959.87
reclock		6773	0	0	0	0	0
i		6773	0	2103863.00	310.6249815	58.0000000	401.0000000
pctpsysdn		6773	0	13700.42	2.0227995	0	98.9510000
pctplckdn		6773	0	5089.42	0.7514270	0	86.9570000
cumdown		6770	3	424020.00	62.6322009	0	33720.00
pctdown		6770	3	3032.11	0.4478747	0	80.2860000
pcttrandn		6746	27	13307.63	1.9726691	0	100.0000000
pctsysdn		6770	3	8792.06	1.2986792	0	94.9670000
pctlckdn		6770	3	3032.11	0.4478747	0	80.2860000
stime		6773	0	296046240	43709.77	0	86340.00
etime		6773	0	294177600	43433.87	60.0000002	86340.00
sdate		6773	0	103891246	15339.03	14610.00	16056.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		6773	0	103891655	15339.09	14610.00	16056.00
hrsduration		6773	0	9296.93	1.3726463	0.0833333	11.6666667
ndays		6773	0	0	0	0	0
pctday		6773	0	381748.23	56.3632411	0	100.0000000
pctpsysnite		6773	0	297854.71	43.9767772	0	100.0000000
pctplcknite		6773	0	298459.97	44.0661410	0	100.0000000
pcttrannite		6772	1	305174.92	45.0642237	0	100.0000000
pctsysnite		6773	0	293572.61	43.3445455	0	100.0000000
pctlcknite		6773	0	295551.77	43.6367589	0	100.0000000
stage		6761	12	178477.04	26.3980240	9.9200000	33.2700000
flow		39	6734	3319834.69	85123.97	27348.58	253106.08
jan		6773	0	28.0000000	0.0041341	0	1.0000000
feb		6773	0	83.0000000	0.0122545	0	1.0000000
mar		6773	0	680.0000000	0.1003986	0	1.0000000
apr		6773	0	689.0000000	0.1017274	0	1.0000000
may		6773	0	696.0000000	0.1027610	0	1.0000000
jun		6773	0	822.0000000	0.1213642	0	1.0000000
jul		6773	0	831.0000000	0.1226930	0	1.0000000
aug		6773	0	711.0000000	0.1049756	0	1.0000000
sep		6773	0	575.0000000	0.0848959	0	1.0000000
oct		6773	0	678.0000000	0.1001034	0	1.0000000
nov		6773	0	697.0000000	0.1029086	0	1.0000000
dec		6773	0	283.0000000	0.0417836	0	1.0000000
m31day		6773	0	3907.00	0.5768493	0	1.0000000
m30day		6773	0	2783.00	0.4108962	0	1.0000000
qtr1		6773	0	791.0000000	0.1167872	0	1.0000000
qtr2		6773	0	2207.00	0.3258527	0	1.0000000
qtr3		6773	0	2117.00	0.3125646	0	1.0000000
qtr4		6773	0	1658.00	0.2447955	0	1.0000000
psingle		6773	0	2030.00	0.2997195	0	1.0000000
pdouble		6773	0	4473.00	0.6604164	0	1.0000000
pknockout		6773	0	131.0000000	0.0193415	0	1.0000000
pjacknife		6773	0	139.0000000	0.0205227	0	1.0000000
pothtype		6773	0	0	0	0	0
pexchange		6773	0	2599.00	0.3837295	0	1.0000000
pturnback		6773	0	2519.00	0.3719179	0	1.0000000
single		6773	0	2041.00	0.3013436	0	1.0000000
double		6773	0	4470.00	0.6599734	0	1.0000000
knockout		6773	0	124.0000000	0.0183080	0	1.0000000
jacknife		6773	0	136.0000000	0.0200797	0	1.0000000
othtype		6773	0	2.0000000	0.000295290	0	1.0000000
contthru		6773	0	5218.00	0.7704119	0	1.0000000
return		6773	0	454.0000000	0.0670309	0	1.0000000
contstop		6773	0	429.0000000	0.0633397	0	1.0000000
kill		6773	0	672.0000000	0.0992175	0	1.0000000
contsame		6773	0	5218.00	0.7704119	0	1.0000000
contdouble		6773	0	63.0000000	0.0093016	0	1.0000000
contsingle		6773	0	364.0000000	0.0537428	0	1.0000000
contko		6773	0	1.0000000	0.000147645	0	1.0000000
contjk		6773	0	1.0000000	0.000147645	0	1.0000000
retdouble		6773	0	114.0000000	0.0168315	0	1.0000000
retsingle		6773	0	338.0000000	0.0499040	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		6773	0	2.0000000	0.000295290	0	1.0000000
retjk		6773	0	0	0	0	0
xkill		6773	0	672.0000000	0.0992175	0	1.0000000
logtrnhrs		6748	25	13544.88	2.0072443	-4.0943446	8.5091341
plockhrs		6773	0	9136.62	1.3489773	0.0983607	11.8360656
loglckhrs		6773	0	236.5201703	0.0349210	-2.3191144	2.4711513
thrusingle		6773	0	693.0000000	0.1023180	0	1.0000000
thruother		6773	0	263.0000000	0.0388307	0	1.0000000
contother		6773	0	2.0000000	0.000295290	0	1.0000000
retother		6773	0	2.0000000	0.000295290	0	1.0000000
thrudoubnite		6772	1	1882.54	0.2779891	0	1.0000000
thrusingnite		6772	1	346.0596400	0.0511015	0	1.0000000
thruothnite		6772	1	118.5717200	0.0175091	0	1.0000000
pdoubnite		6773	0	1997.01	0.2948491	0	1.0000000
psingnite		6773	0	856.8996300	0.1265170	0	1.0000000
pothnite		6773	0	130.6868500	0.0192953	0	1.0000000

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The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI25U

pconfig / doutcome Frequency Percent Row Pct Col Pct	1:contsame	2:contdouble	3:contsingle	4:contko	5:contjk	6:retdouble	7:retsingle	8:retko	x:kill	Total
1:double	4262 62.93 95.28 81.68	61 0.90 1.36 96.83	3 0.04 0.07 0.82	0 0.00 0.00 0.00	0 0.00 0.00 0.00	103 1.52 2.30 90.35	11 0.16 0.25 3.25	0 0.00 0.00 0.00	33 0.49 0.74 4.91	4473 66.04
2:single	693 10.23 34.14 13.28	2 0.03 0.10 3.17	361 5.33 17.78 99.18	0 0.00 0.00 0.00	0 0.00 0.00 0.00	7 0.10 0.34 6.14	327 4.83 16.11 96.75	2 0.03 0.10 100.00	638 9.42 31.43 94.94	2030 29.97
3:knockout	125 1.85 95.42 2.40	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.01 0.76 100.00	0 0.00 0.00 0.00	4 0.06 3.05 3.51	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.01 0.76 0.15	131 1.93
4:jacknife	138 2.04 99.28 2.64	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.01 0.72 100.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	139 2.05
Total	5218 77.04	63 0.93	364 5.37	1 0.01	1 0.01	114 1.68	338 4.99	2 0.03	672 9.92	6773 100.00

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 13:12 Friday, June 24, 2005 277

The FREQ Procedure

Table 1 of pconfig by nextstep
Controlling for pnewpool=MI25U

pconfig nextstep

Frequency Percent Row Pct Col Pct	1:contth	2:contst	3:return	4:kill	Total
1:double	4262 62.93 95.28 81.68	64 0.94 1.43 14.92	114 1.68 2.55 25.11	33 0.49 0.74 4.91	4473 66.04
2:single	693 10.23 34.14 13.28	363 5.36 17.88 84.62	336 4.96 16.55 74.01	638 9.42 31.43 94.94	2030 29.97
3:knockout	125 1.85 95.42 2.40	1 0.01 0.76 0.23	4 0.06 3.05 0.88	1 0.01 0.76 0.15	131 1.93
4:jacknife	138 2.04 99.28 2.64	1 0.01 0.72 0.23	0 0.00 0.00 0.00	0 0.00 0.00 0.00	139 2.05
Total	5218 77.04	429 6.33	454 6.70	672 9.92	6773 100.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	86463	0	367606433951	4251603.97	3515664.00	4331559.00
strtlcktime	Start/lockge/time	86463	0	1.1473819E14	1327020689	1262306700	1388533680
arrtime	Arriv/time	86463	0	1.1473791E14	1327017437	1262306700	1388530800
deptime	Leave/lockge/time	86463	0	1.1473841E14	1327023235	1262307720	1388536080
BOW_OVER_SILL	BOW_OVER_SILL	86463	0	1.1473826E14	1327021511	1262307000	1388534700
END_OF_ENTRY	END_OF_ENTRY	86463	0	1.147383E14	1327021985	1262307060	1388535000
START_OF_EXIT	START_OF_EXIT	86463	0	1.1473836E14	1327022709	1262307660	1388535600
SIGNAL_DATE	SIGNAL_DATE	0	86463	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	86463	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	74627	11836	464208.00	6.2203760	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	74627	11836	245037.00	3.2834899	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	86463	.	.	.	.
vess_no		86463	0	69384030961	802470.78	2611.00	8888864.00
vss_hp		85752	711	332021275	3871.88	60.0000000	81800.00
frsttime		86463	0	1.1473791E14	1327017437	1262306700	1388530800
lasttime		86463	0	1.1473841E14	1327023235	1262307720	1388536080
newpoolno		86463	0	2169779.00	25.0948845	1.0000000	28.0000000
oldpoolno		86463	0	2173286.00	25.1354452	1.0000000	28.0000000
waitmin	Wait/before/lockge	86463	0	4686712.00	54.2048275	0	7423.00
lockmin	Wait/lockge/time	86463	0	3669093.00	42.4354117	4.0000000	1823.00
year		86463	0	173055623	2001.50	2000.00	2003.00
fly		86463	0	36768.00	0.4252455	0	1.0000000
turnback		86463	0	26968.00	0.3119022	0	1.0000000
exchange		86463	0	22726.00	0.2628408	0	1.0000000
lock		86463	0	2128301.00	24.6151649	1.0000000	27.0000000
totmin		86463	0	8355805.00	96.6402392	4.0000000	7490.00
month		86463	0	616660.00	7.1320681	1.0000000	12.0000000
day		86463	0	1356035.00	15.6834137	1.0000000	31.0000000
sunrise		85762	701	1986178547	23159.19	19414.00	27155.00
sunset		85762	701	5825605613	67927.59	59694.00	75152.00
sequpstr		86463	0	14727.00	0.1703272	0	1.0000000
seqdstr		86463	0	20442.00	0.2364248	0	1.0000000
plock		86463	0	2037006.00	23.5592797	1.0000000	27.0000000
pempty		74989	11474	193261.00	2.5771913	0	50.0000000
pfull		74989	11474	516635.00	6.8894771	0	28.0000000
parrtime		86463	0	1.1471341E14	1326734038	1262304600	1388521920
pstrtlcktime		86463	0	1.1471386E14	1326739310	1262304600	1388521920
pdeptime		86463	0	1.1471414E14	1326742489	1262305620	1388523540
birth		86463	0	0	0	0	0
transithrs		86463	0	6603557.97	76.3743794	-249.0333333	8099.42
reclock		86463	0	0	0	0	0
i		86463	0	20159974.00	233.1630177	58.0000000	401.0000000
pctpsysdn		80747	5716	81159.78	1.0051120	0	98.9510000
pctplckdn		80747	5716	38307.91	0.4744190	0	98.3000000
cumdown		85702	761	3310500.00	38.6280367	0	107520.00
pctdown		85702	761	32034.68	0.3737915	0	98.3000000
pcttrandn		85448	1015	115189.13	1.3480612	0	100.0000000
pctsysdn		85702	761	74429.16	0.8684647	0	98.6320000
pctlckdn		85702	761	32034.68	0.3737915	0	98.3000000
stime		86463	0	3823249620	44218.33	0	86340.00
etime		86463	0	3834220800	44345.22	0	86340.00
sdate		86463	0	1327944058	15358.52	14610.00	16070.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		86463	0	1327946479	15358.55	14610.00	16071.00
hrsduration		86463	0	61151.55	0.7072569	0.0666667	30.3833333
ndays		86463	0	1.0000000	0.000011566	0	1.0000000
pctday		86445	18	4737310.78	54.8014435	0	100.0000000
pctpsysnite		86413	50	3888228.23	44.9958713	0	100.0000000
pctplcknite		86442	21	3897501.74	45.0880560	0	100.0000000
pcttrannite		85897	566	4054837.35	47.2058087	0	100.0000000
pctsysnite		86381	82	3887960.88	45.0094451	0	100.0000000
pctlcknite		86445	18	3907189.22	45.1985565	0	100.0000000
stage		41817	44646	913851.62	21.8535911	8.3500000	33.0800000
flow		7734	78729	638793570	82595.50	16077.99	306262.78
jan		86463	0	3075.00	0.0355643	0	1.0000000
feb		86463	0	3442.00	0.0398089	0	1.0000000
mar		86463	0	6990.00	0.0808438	0	1.0000000
apr		86463	0	7633.00	0.0882805	0	1.0000000
may		86463	0	7312.00	0.0845680	0	1.0000000
jun		86463	0	8606.00	0.0995339	0	1.0000000
jul		86463	0	8720.00	0.1008524	0	1.0000000
aug		86463	0	8111.00	0.0938089	0	1.0000000
sep		86463	0	7711.00	0.0891827	0	1.0000000
oct		86463	0	8624.00	0.0997421	0	1.0000000
nov		86463	0	9432.00	0.1090871	0	1.0000000
dec		86463	0	6807.00	0.0787273	0	1.0000000
m31day		86463	0	49639.00	0.5741068	0	1.0000000
m30day		86463	0	33382.00	0.3860842	0	1.0000000
qtr1		86463	0	13507.00	0.1562171	0	1.0000000
qtr2		86463	0	23551.00	0.2723824	0	1.0000000
qtr3		86463	0	24542.00	0.2838440	0	1.0000000
qtr4		86463	0	24863.00	0.2875565	0	1.0000000
psingle		86463	0	66654.00	0.7708962	0	1.0000000
pdouble		86463	0	15912.00	0.1840325	0	1.0000000
pknockout		86463	0	1445.00	0.0167124	0	1.0000000
pjacknife		86463	0	529.0000000	0.0061182	0	1.0000000
pothtype		86463	0	1923.00	0.0222407	0	1.0000000
pexchange		86463	0	23758.00	0.2747765	0	1.0000000
pturnback		86463	0	27939.00	0.3231324	0	1.0000000
single		86463	0	86442.00	0.9997571	0	1.0000000
double		86463	0	16.0000000	0.000185050	0	1.0000000
knockout		86463	0	4.0000000	0.000046263	0	1.0000000
jacknife		86463	0	0	0	0	0
othtype		86463	0	1.0000000	0.000011566	0	1.0000000
contthru		2030	84433	693.0000000	0.3413793	0	1.0000000
return		2030	84433	336.0000000	0.1655172	0	1.0000000
contstop		2030	84433	363.0000000	0.1788177	0	1.0000000
kill		2030	84433	638.0000000	0.3142857	0	1.0000000
contsame		2030	84433	693.0000000	0.3413793	0	1.0000000
contdouble		2030	84433	2.0000000	0.000985222	0	1.0000000
contsingle		2030	84433	361.0000000	0.1778325	0	1.0000000
contko		2030	84433	0	0	0	0
contjk		2030	84433	0	0	0	0
retdouble		2030	84433	7.0000000	0.0034483	0	1.0000000
retsingle		2030	84433	327.0000000	0.1610837	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		2030	84433	2.0000000	0.000985222	0	1.0000000
retjk		2030	84433	0	0	0	0
xkill		2030	84433	638.0000000	0.3142857	0	1.0000000
logtrnhrs		2020	84443	4435.05	2.1955692	-4.0943446	8.5091341
plockhrs		2030	84433	751.5901639	0.3702415	0.0983607	5.0327869
loglckhrs		2030	84433	-2269.27	-1.1178655	-2.3191144	1.6159739
thrusingle		2030	84433	693.0000000	0.3413793	0	1.0000000
thruother		2030	84433	0	0	0	0
contother		2030	84433	0	0	0	0
retother		2030	84433	2.0000000	0.000985222	0	1.0000000
thrudoubnite		2030	84433	0	0	0	0
thrusingnite		2030	84433	346.0596400	0.1704727	0	1.0000000
thruothnite		2030	84433	0	0	0	0
pdoubnite		2030	84433	0	0	0	0
psingnite		2030	84433	856.8996300	0.4221180	0	1.0000000
pothnite		2030	84433	0	0	0	0

Transition models using key variables from stepwise proc transitions to contthru 13:12 Friday, June 24, 2005 281

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 1

Variable psingle Entered: R-Square = 0.4454 and C(p) = 9.6203

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	533.58623	533.58623	5437.82	<.0001
Error	6771	664.40432	0.09812		
Corrected Total	6772	1197.99055			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.95404	0.00455	4317.01982	43995.1	<.0001
psingle	-0.61266	0.00831	533.58623	5437.82	<.0001

Bounds on condition number: 1, 1

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	psingle		1	0.4454	0.4454	9.6203	5437.82	<.0001

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 282

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0838 and C(p) = 207.6366

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	125.96300	125.96300	409.09	<.0001
Error	4470	1376.37018	0.30791		
Corrected Total	4471	1502.33319			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.93695	0.01086	9792.14564	31801.7	<.0001
pturnback	-0.34046	0.01683	125.96300	409.09	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable oct Entered: R-Square = 0.0957 and C(p) = 148.9000

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	143.84208	71.92104	236.60	<.0001
Error	4469	1358.49111	0.30398		
Corrected Total	4471	1502.33319			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.91350	0.01122	8846.18618	29101.1	<.0001
oct	0.20891	0.02724	17.87908	58.82	<.0001
pturnback	-0.33540	0.01674	122.06299	401.55	<.0001

Bounds on condition number: 1.0016, 4.0062

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 283

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable sep Entered: R-Square = 0.1059 and C(p) = 98.9678

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	159.12940	53.04313	176.44	<.0001
Error	4468	1343.20379	0.30063		
Corrected Total	4471	1502.33319			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.89157	0.01157	8033.75581	26723.3	<.0001
sep	0.21516	0.03017	15.28732	50.85	<.0001
oct	0.22878	0.02723	21.21802	70.58	<.0001
pturnback	-0.32967	0.01666	117.64669	391.34	<.0001

Bounds on condition number: 1.0125, 9.0858

Stepwise Selection: Step 4

Variable feb Entered: R-Square = 0.1135 and C(p) = 62.4579

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	170.46558	42.61640	142.93	<.0001
Error	4467	1331.86760	0.29816		
Corrected Total	4471	1502.33319			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.88442	0.01158	7893.24100	26473.4	<.0001
feb	0.48926	0.07935	11.33618	38.02	<.0001
sep	0.22174	0.03007	16.21590	54.39	<.0001
oct	0.23534	0.02714	22.41634	75.18	<.0001
pturnback	-0.32800	0.01660	116.43168	390.50	<.0001

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0138, 16.138

Stepwise Selection: Step 5

Variable jun Entered: R-Square = 0.1172 and C(p) = 45.3456

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	176.09167	35.21833	118.59	<.0001
Error	4466	1326.24151	0.29696		
Corrected Total	4471	1502.33319			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.90143	0.01220	7211.77051	24285.0	<.0001
feb	0.47207	0.07929	10.52706	35.45	<.0001
jun	-0.10783	0.02477	5.62609	18.95	<.0001
sep	0.20454	0.03027	13.56385	45.68	<.0001
oct	0.21814	0.02737	18.85806	63.50	<.0001
pturnback	-0.32748	0.01657	116.05471	390.80	<.0001

Bounds on condition number: 1.037, 25.566

Stepwise Selection: Step 6

Variable jul Entered: R-Square = 0.1208 and C(p) = 28.8860

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	181.52566	30.25428	102.27	<.0001
Error	4465	1320.80753	0.29581		
Corrected Total	4471	1502.33319			

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.92240	0.01312	6346.72903	21455.2	<.0001
feb	0.45093	0.07929	9.56812	32.35	<.0001
jun	-0.12901	0.02521	7.74416	26.18	<.0001
jul	-0.10595	0.02472	5.43398	18.37	<.0001
sep	0.18341	0.03061	10.62242	35.91	<.0001
oct	0.19699	0.02776	14.89395	50.35	<.0001
pturnback	-0.32701	0.01653	115.71876	391.19	<.0001

Bounds on condition number: 1.0808, 37.803

Stepwise Selection: Step 7

Variable may Entered: R-Square = 0.1236 and C(p) = 16.5488

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	185.74611	26.53516	89.97	<.0001
Error	4464	1316.58708	0.29493		
Corrected Total	4471	1502.33319			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.94288	0.01418	5537.68993	18776.0	<.0001
feb	0.42945	0.07937	8.63388	29.27	<.0001
may	-0.10220	0.02702	4.22045	14.31	0.0002
jun	-0.15073	0.02582	10.04906	34.07	<.0001
jul	-0.12767	0.02534	7.48495	25.38	<.0001
sep	0.16196	0.03108	8.00756	27.15	<.0001
oct	0.17550	0.02830	11.34471	38.47	<.0001
pturnback	-0.32419	0.01653	113.49467	384.81	<.0001

Bounds on condition number: 1.1392, 53.406

Stepwise Selection: Step 8

Variable dec Entered: R-Square = 0.1251 and C(p) = 11.2166

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 8

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	187.90447	23.48806	79.75	<.0001
Error	4463	1314.42872	0.29452		
Corrected Total	4471	1502.33319			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.94995	0.01441	5394.74415	18317.3	<.0001
feb	0.42257	0.07936	8.35080	28.35	<.0001
may	-0.10901	0.02711	4.76043	16.16	<.0001
jun	-0.15757	0.02593	10.87701	36.93	<.0001
jul	-0.13451	0.02545	8.22630	27.93	<.0001
sep	0.15507	0.03116	7.29203	24.76	<.0001
oct	0.16862	0.02839	10.38883	35.27	<.0001
dec	-0.17199	0.06353	2.15836	7.33	0.0068
pturnback	-0.32472	0.01652	113.85214	386.57	<.0001

Bounds on condition number: 1.1505, 69.623

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0838	0.0838	207.637	409.09	<.0001
2	oct		2	0.0119	0.0957	148.900	58.82	<.0001
3	sep		3	0.0102	0.1059	98.9678	50.85	<.0001
4	feb		4	0.0075	0.1135	62.4579	38.02	<.0001
5	jun		5	0.0037	0.1172	45.3456	18.95	<.0001
6	jul		6	0.0036	0.1208	28.8860	18.37	<.0001
7	may		7	0.0028	0.1236	16.5488	14.31	0.0002
8	dec		8	0.0014	0.1251	11.2166	7.33	0.0068

Logarithms of double lockage times using key variables from stepwise proc 287
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.1464 and C(p) = 301.8956

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	40.57173	40.57173	766.91	<.0001
Error	4470	236.47586	0.05290		
Corrected Total	4471	277.04758			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.63142	0.00450	1040.58913	19669.8	<.0001
pturnback	-0.19322	0.00698	40.57173	766.91	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable oct Entered: R-Square = 0.1618 and C(p) = 218.3028

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	44.81514	22.40757	431.20	<.0001
Error	4469	232.23245	0.05197		
Corrected Total	4471	277.04758			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.62000	0.00464	928.70468	17871.7	<.0001
oct	0.10178	0.01126	4.24341	81.66	<.0001
pturnback	-0.19076	0.00692	39.48344	759.81	<.0001

Bounds on condition number: 1.0016, 4.0062

Stepwise Selection: Step 3

Logarithms of double lockage times using key variables from stepwise proc 288
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable sep Entered: R-Square = 0.1788 and C(p) = 125.2749

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	49.52631	16.50877	324.19	<.0001
Error	4468	227.52127	0.05092		
Corrected Total	4471	277.04758			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.60782	0.00476	829.51848	16289.9	<.0001
sep	0.11944	0.01242	4.71118	92.52	<.0001
oct	0.11281	0.01121	5.15866	101.30	<.0001
pturnback	-0.18757	0.00686	38.08661	747.93	<.0001

Bounds on condition number: 1.0125, 9.0858

Stepwise Selection: Step 4

Variable jun Entered: R-Square = 0.1861 and C(p) = 86.1031

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	51.56747	12.89187	255.40	<.0001
Error	4467	225.48011	0.05048		
Corrected Total	4471	277.04758			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.61790	0.00500	771.03760	15275.1	<.0001
jun	-0.06487	0.01020	2.04116	40.44	<.0001
sep	0.10924	0.01247	3.87539	76.78	<.0001
oct	0.10260	0.01127	4.18071	82.82	<.0001
pturnback	-0.18722	0.00683	37.94228	751.68	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0345, 16.404

Stepwise Selection: Step 5

Variable jul Entered: R-Square = 0.1925 and C(p) = 52.5549

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	53.32984	10.66597	212.92	<.0001
Error	4466	223.71775	0.05009		
Corrected Total	4471	277.04758			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.62962	0.00536	691.72745	13808.7	<.0001
jun	-0.07672	0.01036	2.74892	54.88	<.0001
jul	-0.06022	0.01015	1.76237	35.18	<.0001
sep	0.09742	0.01258	3.00456	59.98	<.0001
oct	0.09077	0.01141	3.17240	63.33	<.0001
pturnback	-0.18692	0.00680	37.81642	754.92	<.0001

Bounds on condition number: 1.0766, 26.384

Stepwise Selection: Step 6

Variable may Entered: R-Square = 0.1970 and C(p) = 29.1980

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	54.58695	9.09783	182.60	<.0001
Error	4465	222.46063	0.04982		
Corrected Total	4471	277.04758			

Logarithms of double lockage times using key variables from stepwise proc 290
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.64053	0.00577	614.47611	12333.1	<.0001
may	-0.05563	0.01108	1.25711	25.23	<.0001
jun	-0.08832	0.01058	3.46957	69.64	<.0001
jul	-0.07182	0.01039	2.38251	47.82	<.0001
sep	0.08597	0.01275	2.26527	45.47	<.0001
oct	0.07930	0.01160	2.32753	46.72	<.0001
pturnback	-0.18534	0.00679	37.10198	744.67	<.0001

Bounds on condition number: 1.1325, 39.519

Stepwise Selection: Step 7

Variable dec Entered: R-Square = 0.1994 and C(p) = 17.8669

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	55.24786	7.89255	158.85	<.0001
Error	4464	221.79972	0.04969		
Corrected Total	4471	277.04758			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.64434	0.00585	601.97696	12115.5	<.0001
may	-0.05931	0.01111	1.41691	28.52	<.0001
jun	-0.09201	0.01062	3.73120	75.10	<.0001
jul	-0.07551	0.01042	2.60872	52.50	<.0001
sep	0.08226	0.01277	2.06051	41.47	<.0001
oct	0.07559	0.01163	2.09861	42.24	<.0001
dec	-0.09513	0.02608	0.66091	13.30	0.0003
pturnback	-0.18563	0.00678	37.21134	748.93	<.0001

Bounds on condition number: 1.1433, 53.588

Stepwise Selection: Step 8

Logarithms of double lockage times using key variables from stepwise proc 291
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 8

Variable pexchange Entered: R-Square = 0.2016 and C(p) = 7.6680

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	55.85264	6.98158	140.87	<.0001
Error	4463	221.19494	0.04956		
Corrected Total	4471	277.04758			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.66619	0.00856	299.99441	6052.92	<.0001
may	-0.05828	0.01110	1.36709	27.58	<.0001
jun	-0.08925	0.01063	3.49202	70.46	<.0001
jul	-0.07242	0.01044	2.38275	48.08	<.0001
sep	0.08184	0.01276	2.03941	41.15	<.0001
oct	0.07719	0.01163	2.18488	44.08	<.0001
dec	-0.09371	0.02605	0.64124	12.94	0.0003
pturnback	-0.20857	0.00944	24.21793	488.64	<.0001
pexchange	-0.03312	0.00948	0.60478	12.20	0.0005

Bounds on condition number: 1.952, 84.56

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.1464	0.1464	301.896	766.91	<.0001
2	oct		2	0.0153	0.1618	218.303	81.66	<.0001
3	sep		3	0.0170	0.1788	125.275	92.52	<.0001
4	jun		4	0.0074	0.1861	86.1031	40.44	<.0001
5	jul		5	0.0064	0.1925	52.5549	35.18	<.0001
6	may		6	0.0045	0.1970	29.1980	25.23	<.0001
7	dec		7	0.0024	0.1994	17.8669	13.30	0.0003
8	pexchange		8	0.0022	0.2016	7.6680	12.20	0.0005

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0108 and C(p) = 85.1077

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.32896	1.32896	22.20	<.0001
Error	2028	121.39529	0.05986		
Corrected Total	2029	122.72425			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.37921	0.00575	259.98692	4343.28	<.0001
jun	-0.08198	0.01740	1.32896	22.20	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable feb Entered: R-Square = 0.0190 and C(p) = 69.7152

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	2.32908	1.16454	19.61	<.0001
Error	2027	120.39517	0.05940		
Corrected Total	2029	122.72425			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.37590	0.00579	250.52988	4217.98	<.0001
feb	0.17070	0.04160	1.00012	16.84	<.0001
jun	-0.07868	0.01735	1.22135	20.56	<.0001

Bounds on condition number: 1.0022, 4.0086

Stepwise Selection: Step 3

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.0255 and C(p) = 57.8053

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	3.12894	1.04298	17.67	<.0001
Error	2026	119.59531	0.05903		
Corrected Total	2029	122.72425			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.38352	0.00613	231.07328	3914.49	<.0001
feb	0.16309	0.04152	0.91060	15.43	<.0001
jun	-0.08630	0.01742	1.44852	24.54	<.0001
jul	-0.06685	0.01816	0.79986	13.55	0.0002

Bounds on condition number: 1.0165, 9.1123

Stepwise Selection: Step 4

Variable apr Entered: R-Square = 0.0314 and C(p) = 47.1346

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	3.85755	0.96439	16.43	<.0001
Error	2025	118.86670	0.05870		
Corrected Total	2029	122.72425			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.39069	0.00644	215.83653	3676.97	<.0001
feb	0.15591	0.04146	0.83022	14.14	0.0002
apr	-0.07181	0.02038	0.72861	12.41	0.0004
jun	-0.09347	0.01749	1.67640	28.56	<.0001
jul	-0.07403	0.01822	0.96855	16.50	<.0001

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0305, 16.367

Stepwise Selection: Step 5

Variable may Entered: R-Square = 0.0388 and C(p) = 33.3108

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	4.76746	0.95349	16.36	<.0001
Error	2024	117.95678	0.05828		
Corrected Total	2029	122.72425			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.39979	0.00682	200.26760	3436.36	<.0001
feb	0.14682	0.04137	0.73392	12.59	0.0004
apr	-0.08090	0.02044	0.91310	15.67	<.0001
may	-0.07986	0.02021	0.90992	15.61	<.0001
jun	-0.10256	0.01758	1.98384	34.04	<.0001
jul	-0.08312	0.01830	1.20181	20.62	<.0001

Bounds on condition number: 1.0484, 25.908

Stepwise Selection: Step 6

Variable aug Entered: R-Square = 0.0424 and C(p) = 27.7485

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	5.20232	0.86705	14.93	<.0001
Error	2023	117.52192	0.05809		
Corrected Total	2029	122.72425			

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.40836	0.00750	172.42901	2968.16	<.0001
feb	0.13824	0.04142	0.64699	11.14	0.0009
apr	-0.08947	0.02064	1.09116	18.78	<.0001
may	-0.08843	0.02042	1.08950	18.75	<.0001
jun	-0.11114	0.01783	2.25741	38.86	<.0001
jul	-0.09169	0.01854	1.42075	24.46	<.0001
aug	-0.04905	0.01793	0.43486	7.49	0.0063

Bounds on condition number: 1.0819, 38.293

Stepwise Selection: Step 7

Variable pturnback Entered: R-Square = 0.0456 and C(p) = 22.9458

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	5.59350	0.79907	13.79	<.0001
Error	2022	117.13075	0.05793		
Corrected Total	2029	122.72425			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.41606	0.00805	154.75149	2671.44	<.0001
feb	0.13415	0.04140	0.60841	10.50	0.0012
apr	-0.08953	0.02062	1.09245	18.86	<.0001
may	-0.08652	0.02041	1.04146	17.98	<.0001
jun	-0.10902	0.01782	2.16759	37.42	<.0001
jul	-0.08813	0.01857	1.30541	22.54	<.0001
aug	-0.04882	0.01790	0.43070	7.44	0.0065
pturnback	-0.03159	0.01215	0.39117	6.75	0.0094

Bounds on condition number: 1.0841, 51.82

Stepwise Selection: Step 8

Variable pexchange Entered: R-Square = 0.0503 and C(p) = 14.8701

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 8

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	6.17288	0.77161	13.38	<.0001
Error	2021	116.55137	0.05767		
Corrected Total	2029	122.72425			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.43557	0.01012	106.86271	1853.00	<.0001
feb	0.11907	0.04158	0.47302	8.20	0.0042
apr	-0.09328	0.02060	1.18217	20.50	<.0001
may	-0.09263	0.02045	1.18307	20.51	<.0001
jun	-0.10937	0.01778	2.18133	37.82	<.0001
jul	-0.08849	0.01852	1.31586	22.82	<.0001
aug	-0.04681	0.01788	0.39542	6.86	0.0089
pturnback	-0.05027	0.01348	0.80155	13.90	0.0002
pexchange	-0.04005	0.01264	0.57939	10.05	0.0015

Bounds on condition number: 1.2629, 71.459

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun		1	0.0108	0.0108	85.1077	22.20	<.0001
2	feb		2	0.0081	0.0190	69.7152	16.84	<.0001
3	jul		3	0.0065	0.0255	57.8053	13.55	0.0002
4	apr		4	0.0059	0.0314	47.1346	12.41	0.0004
5	may		5	0.0074	0.0388	33.3108	15.61	<.0001
6	aug		6	0.0035	0.0424	27.7485	7.49	0.0063
7	pturnback		7	0.0032	0.0456	22.9458	6.75	0.0094
8	pexchange		8	0.0047	0.0503	14.8701	10.05	0.0015

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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0223 and C(p) = 173.8387

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	9.89532	9.89532	46.21	<.0001
Error	2026	433.83782	0.21414		
Corrected Total	2027	443.73313			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.09225	0.01089	2155.77822	10067.4	<.0001
jun	-0.22417	0.03298	9.89532	46.21	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pturnback Entered: R-Square = 0.0418 and C(p) = 132.0114

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	18.54651	9.27326	44.16	<.0001
Error	2025	425.18662	0.20997		
Corrected Total	2027	443.73313			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.05377	0.01233	1532.51055	7298.76	<.0001
jun	-0.21646	0.03268	9.21380	43.88	<.0001
pturnback	-0.14795	0.02305	8.65119	41.20	<.0001

Bounds on condition number: 1.0014, 4.0054

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 298
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.0547 and C(p) = 104.9349

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	24.28602	8.09534	39.06	<.0001
Error	2024	419.44711	0.20724		
Corrected Total	2027	443.73313			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.03602	0.01271	1376.98809	6644.52	<.0001
jun	-0.23696	0.03270	10.88552	52.53	<.0001
jul	-0.17934	0.03408	5.73951	27.70	<.0001
pturnback	-0.13912	0.02296	7.60849	36.71	<.0001

Bounds on condition number: 1.0192, 9.125

Stepwise Selection: Step 4

Variable may Entered: R-Square = 0.0691 and C(p) = 74.5855

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	30.67156	7.66789	37.55	<.0001
Error	2023	413.06157	0.20418		
Corrected Total	2027	443.73313			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.01625	0.01310	1228.52063	6016.77	<.0001
may	-0.21071	0.03768	6.38554	31.27	<.0001
jun	-0.25829	0.03268	12.75687	62.48	<.0001
jul	-0.20088	0.03404	7.10931	34.82	<.0001
pturnback	-0.13412	0.02281	7.06081	34.58	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0324, 16.381

Stepwise Selection: Step 5

Variable apr Entered: R-Square = 0.0820 and C(p) = 47.6332

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	36.38654	7.27731	36.12	<.0001
Error	2022	407.34660	0.20146		
Corrected Total	2027	443.73313			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.99431	0.01365	1068.87489	5305.72	<.0001
apr	-0.20208	0.03794	5.71498	28.37	<.0001
may	-0.23266	0.03765	7.69251	38.18	<.0001
jun	-0.28025	0.03272	14.77976	73.36	<.0001
jul	-0.22284	0.03407	8.62056	42.79	<.0001
pturnback	-0.13408	0.02266	7.05642	35.03	<.0001

Bounds on condition number: 1.0477, 25.873

Stepwise Selection: Step 6

Variable pexchange Entered: R-Square = 0.0909 and C(p) = 29.5810

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	40.34469	6.72411	33.69	<.0001
Error	2021	403.38844	0.19960		
Corrected Total	2027	443.73313			

Logarithms of single lockage times using key variables from stepwise proc 300
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.94396	0.01768	569.20026	2851.73	<.0001
apr	-0.21166	0.03783	6.24931	31.31	<.0001
may	-0.24815	0.03764	8.67568	43.47	<.0001
jun	-0.28078	0.03257	14.83542	74.33	<.0001
jul	-0.22363	0.03391	8.68148	43.49	<.0001
pturnback	-0.18218	0.02500	10.59607	53.09	<.0001
pexchange	-0.10395	0.02334	3.95815	19.83	<.0001

Bounds on condition number: 1.2444, 39.976

Stepwise Selection: Step 7

Variable aug Entered: R-Square = 0.0953 and C(p) = 21.6485

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	42.30531	6.04362	30.41	<.0001
Error	2020	401.42782	0.19873		
Corrected Total	2027	443.73313			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.92798	0.01836	507.84647	2555.50	<.0001
apr	-0.22904	0.03815	7.16377	36.05	<.0001
may	-0.26538	0.03796	9.71518	48.89	<.0001
jun	-0.29848	0.03298	16.27542	81.90	<.0001
jul	-0.24135	0.03430	9.83812	49.51	<.0001
aug	-0.10396	0.03310	1.96062	9.87	0.0017
pturnback	-0.18012	0.02496	10.35135	52.09	<.0001
pexchange	-0.10072	0.02331	3.70909	18.66	<.0001

Bounds on condition number: 1.2469, 54.936

Stepwise Selection: Step 8

Logarithms of single lockage times using key variables from stepwise proc 301
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 8

Variable feb Entered: R-Square = 0.0985 and C(p) = 16.5619

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	43.70415	5.46302	27.57	<.0001
Error	2019	400.02898	0.19813		
Corrected Total	2027	443.73313			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.93861	0.01876	495.92113	2502.98	<.0001
feb	0.20477	0.07706	1.39884	7.06	0.0079
apr	-0.22176	0.03819	6.68107	33.72	<.0001
may	-0.25784	0.03800	9.12003	46.03	<.0001
jun	-0.29198	0.03302	15.48904	78.18	<.0001
jul	-0.23494	0.03434	9.27600	46.82	<.0001
aug	-0.09773	0.03313	1.72394	8.70	0.0032
pturnback	-0.17454	0.02501	9.65035	48.71	<.0001
pexchange	-0.09359	0.02343	3.16049	15.95	<.0001

Bounds on condition number: 1.2634, 71.461

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun		1	0.0223	0.0223	173.839	46.21	<.0001
2	pturnback		2	0.0195	0.0418	132.011	41.20	<.0001
3	jul		3	0.0129	0.0547	104.935	27.70	<.0001
4	may		4	0.0144	0.0691	74.5855	31.27	<.0001
5	apr		5	0.0129	0.0820	47.6332	28.37	<.0001
6	pexchange		6	0.0089	0.0909	29.5810	19.83	<.0001
7	aug		7	0.0044	0.0953	21.6485	9.87	0.0017
8	feb		8	0.0032	0.0985	16.5619	7.06	0.0079

Logarithms of single lockage times using key variables from stepwise proc 302
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable feb Entered: R-Square = 0.0035 and C(p) = 35.9779

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	130.64701	130.64701	14.84	0.0001
Error	4259	37506	8.80629		
Corrected Total	4260	37637			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	7.04699	0.04569	209516	23791.6	<.0001
feb	1.77246	0.46017	130.64701	14.84	0.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable sep Entered: R-Square = 0.0051 and C(p) = 31.1588

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	190.22248	95.11124	10.82	<.0001
Error	4258	37446	8.79437		
Corrected Total	4260	37637			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	7.01147	0.04765	190399	21650.1	<.0001
feb	1.80798	0.46007	135.81584	15.44	<.0001
sep	0.43309	0.16640	59.57547	6.77	0.0093

Bounds on condition number: 1.0009, 4.0035

All variables left in the model are significant at the 0.0100 level.

Logarithms of single lockage times using key variables from stepwise proc 303
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 2

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	feb		1	0.0035	0.0035	35.9779	14.84	0.0001
2	sep		2	0.0016	0.0051	31.1588	6.77	0.0093

Logarithms of single lockage times using key variables from stepwise proc 304
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable sep Entered: R-Square = 0.0039 and C(p) = 82.3644

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.11228	1.11228	16.68	<.0001
Error	4260	284.03444	0.06667		
Corrected Total	4261	285.14672			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.91216	0.00413	14318	214749	<.0001
sep	0.05915	0.01448	1.11228	16.68	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jul Entered: R-Square = 0.0074 and C(p) = 69.0232

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	2.11622	1.05811	15.92	<.0001
Error	4259	283.03050	0.06645		
Corrected Total	4261	285.14672			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.90553	0.00446	12139	182660	<.0001
jul	0.04530	0.01166	1.00394	15.11	0.0001
sep	0.06578	0.01456	1.35668	20.42	<.0001

Bounds on condition number: 1.0139, 4.0557

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 305
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable feb Entered: R-Square = 0.0107 and C(p) = 56.5353

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	3.06431	1.02144	15.42	<.0001
Error	4258	282.08241	0.06625		
Corrected Total	4261	285.14672			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.90363	0.00448	11962	180568	<.0001
feb	0.15120	0.03997	0.94809	14.31	0.0002
jul	0.04720	0.01165	1.08787	16.42	<.0001
sep	0.06768	0.01454	1.43446	21.65	<.0001

Bounds on condition number: 1.0158, 9.101

Stepwise Selection: Step 4

Variable aug Entered: R-Square = 0.0124 and C(p) = 51.1993

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	3.54438	0.88609	13.40	<.0001
Error	4257	281.60234	0.06615		
Corrected Total	4261	285.14672			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.89887	0.00481	10294	155619	<.0001
feb	0.15596	0.03998	1.00683	15.22	<.0001
jul	0.05197	0.01177	1.28888	19.48	<.0001
aug	0.03528	0.01310	0.48007	7.26	0.0071
sep	0.07244	0.01464	1.61962	24.48	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0393, 16.438

Stepwise Selection: Step 5

Variable jun Entered: R-Square = 0.0145 and C(p) = 44.2050

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	4.13297	0.82659	12.52	<.0001
Error	4256	281.01375	0.06603		
Corrected Total	4261	285.14672			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.89185	0.00535	8246.19700	124890	<.0001
feb	0.16299	0.04001	1.09573	16.60	<.0001
jun	0.03638	0.01219	0.58859	8.91	0.0028
jul	0.05899	0.01200	1.59686	24.18	<.0001
aug	0.04230	0.01329	0.66858	10.13	0.0015
sep	0.07947	0.01482	1.89969	28.77	<.0001

Bounds on condition number: 1.0808, 26.467

Stepwise Selection: Step 6

Variable oct Entered: R-Square = 0.0169 and C(p) = 35.8688

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	4.80937	0.80156	12.17	<.0001
Error	4255	280.33735	0.06588		
Corrected Total	4261	285.14672			

Logarithms of single lockage times using key variables from stepwise proc 307
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.88354	0.00594	6620.07946	100481	<.0001
feb	0.17129	0.04005	1.20513	18.29	<.0001
jun	0.04468	0.01245	0.84935	12.89	0.0003
jul	0.06729	0.01226	1.98510	30.13	<.0001
aug	0.05060	0.01353	0.92166	13.99	0.0002
sep	0.08777	0.01502	2.24840	34.13	<.0001
oct	0.04367	0.01363	0.67640	10.27	0.0014

Bounds on condition number: 1.1313, 39.468

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	sep		1	0.0039	0.0039	82.3644	16.68	<.0001
2	jul		2	0.0035	0.0074	69.0232	15.11	0.0001
3	feb		3	0.0033	0.0107	56.5353	14.31	0.0002
4	aug		4	0.0017	0.0124	51.1993	7.26	0.0071
5	jun		5	0.0021	0.0145	44.2050	8.91	0.0028
6	oct		6	0.0024	0.0169	35.8688	10.27	0.0014

Logarithms of single lockage times using key variables from stepwise proc 308
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

No variable met the 0.0100 significance level for entry into the model.

Logarithms of single lockage times using key variables from stepwise proc 309
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

No variable met the 0.0100 significance level for entry into the model.

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	6258	0	26701333074	4266751.85	3823914.00	4329369.00
strtlcktime	Start/lockge/time	6258	0	8.2978963E12	1325966165	1263005940	1387130700
arrtime	Arriv/time	6258	0	8.2978625E12	1325960774	1263005700	1387130700
deptime	Leave/lockge/time	6258	0	8.2979149E12	1325969139	1263030480	1387131600
BOW_OVER_SILL	BOW_OVER_SILL	6218	40	8.2444008E12	1325892697	1263029520	1387129500
END_OF_ENTRY	END_OF_ENTRY	6218	40	8.244404E12	1325893207	1263029700	1387130220
START_OF_EXIT	START_OF_EXIT	6218	40	8.2444084E12	1325893921	1263030180	1387130880
SIGNAL_DATE	SIGNAL_DATE	0	6258	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	6258	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	5762	496	66747.00	11.5839986	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	5762	496	4131.00	0.7169386	0	27.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	6258	.	.	.	.
vess_no		6258	0	4241127540	677712.93	2611.00	8888846.00
vss_hp		6230	28	28175744.00	4522.59	75.0000000	8800.00
frsttime		6258	0	8.2978625E12	1325960774	1263005700	1387130700
lasttime		6258	0	8.2979149E12	1325969139	1263030480	1387131600
newpoolno		6258	0	165544.00	26.4531799	3.0000000	28.0000000
oldpoolno		6258	0	160510.00	25.6487696	4.0000000	28.0000000
waitmin	Wait/before/lockge	6258	0	562266.00	89.8475551	0	3923.00
lockmin	Wait/lockge/time	6258	0	310189.00	49.5667945	1.0000000	468.0000000
year		6258	0	12524976.00	2001.43	2000.00	2003.00
fly		6258	0	2863.00	0.4574944	0	1.0000000
turnback		6258	0	2132.00	0.3406839	0	1.0000000
exchange		6258	0	1263.00	0.2018217	0	1.0000000
lock		6258	0	159898.00	25.5509748	3.0000000	27.0000000
totmin		6258	0	872455.00	139.4143496	1.0000000	4025.00
month		6258	0	47009.00	7.5118249	1.0000000	12.0000000
day		6258	0	97916.00	15.6465324	1.0000000	31.0000000
sunrise		6131	127	139819103	22805.27	20114.00	26850.00
sunset		6131	127	420296390	68552.67	59976.00	73907.00
sequpstr		6258	0	0	0	0	0
seqdstr		6258	0	4810.00	0.7686162	0	1.0000000
plock		6258	0	156450.00	25.0000000	25.0000000	25.0000000
pempty		5777	481	2941.00	0.5090878	0	27.0000000
pfull		5777	481	67907.00	11.7547170	0	28.0000000
parrtime		6258	0	8.2975181E12	1325905743	1262306700	1387100460
pstrtlcktime		6258	0	8.2975799E12	1325915611	1262306700	1387100460
pdeptime		6258	0	8.2976174E12	1325921600	1262307720	1387107360
birth		6258	0	0	0	0	0
transithrs		6258	0	68097.65	10.8816954	-10.3666667	2260.33
reclock		6258	0	0	0	0	0
i		6258	0	2259067.00	360.9886545	58.0000000	401.0000000
pctpsysdn		6258	0	12046.34	1.9249511	0	96.1060000
pctplckdn		6258	0	5058.58	0.8083386	0	93.4040000
cumdown		6131	127	322740.00	52.6406785	0	24540.00
pctdown		6131	127	4168.97	0.6799822	0	87.3930000
pcttrandn		6107	151	9620.64	1.5753468	0	100.0000000
pctsysdn		6131	127	8172.54	1.3329863	0	98.6320000
pctlckdn		6131	127	4168.97	0.6799822	0	87.3930000
stime		6258	0	267665700	42771.76	0	86340.00
etime		6258	0	268478640	42901.67	0	86340.00
sdate		6258	0	96037368.00	15346.34	14618.00	16054.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		6258	0	96037574.00	15346.37	14618.00	16054.00
hrsduration		6258	0	5169.82	0.8261132	0.0166667	7.8000000
ndays		6258	0	0	0	0	0
pctday		6257	1	339062.84	54.1893617	0	100.0000000
pctpsysnite		6235	23	291004.04	46.6726606	0	100.0000000
pctplcknite		6249	9	293823.83	47.0193354	0	100.0000000
pcttrannite		6143	115	291646.75	47.4762733	0	100.0000000
pctsysnite		6250	8	285566.10	45.6905765	0	100.0000000
pctlcknite		6257	1	286637.16	45.8106383	0	100.0000000
stage		6103	155	142579.72	23.3622350	10.8200000	32.7100000
flow		3	6255	129887.39	43295.80	25393.50	64704.91
jan		6258	0	28.0000000	0.0044743	0	1.0000000
feb		6258	0	57.0000000	0.0091083	0	1.0000000
mar		6258	0	405.0000000	0.0647172	0	1.0000000
apr		6258	0	601.0000000	0.0960371	0	1.0000000
may		6258	0	552.0000000	0.0882071	0	1.0000000
jun		6258	0	744.0000000	0.1188878	0	1.0000000
jul		6258	0	777.0000000	0.1241611	0	1.0000000
aug		6258	0	722.0000000	0.1153723	0	1.0000000
sep		6258	0	543.0000000	0.0867689	0	1.0000000
oct		6258	0	625.0000000	0.0998722	0	1.0000000
nov		6258	0	776.0000000	0.1240013	0	1.0000000
dec		6258	0	428.0000000	0.0683925	0	1.0000000
m31day		6258	0	3537.00	0.5651965	0	1.0000000
m30day		6258	0	2664.00	0.4256951	0	1.0000000
qtr1		6258	0	490.0000000	0.0782998	0	1.0000000
qtr2		6258	0	1897.00	0.3031320	0	1.0000000
qtr3		6258	0	2042.00	0.3263023	0	1.0000000
qtr4		6258	0	1829.00	0.2922659	0	1.0000000
psingle		6258	0	1252.00	0.2000639	0	1.0000000
pdouble		6258	0	4734.00	0.7564717	0	1.0000000
pknockout		6258	0	193.0000000	0.0308405	0	1.0000000
pjacknife		6258	0	78.0000000	0.0124640	0	1.0000000
pothtype		6258	0	1.0000000	0.000159795	0	1.0000000
pexchange		6258	0	2854.00	0.4560562	0	1.0000000
pturnback		6258	0	2278.00	0.3640141	0	1.0000000
single		6258	0	5767.00	0.9215404	0	1.0000000
double		6258	0	376.0000000	0.0600831	0	1.0000000
knockout		6258	0	62.0000000	0.0099073	0	1.0000000
jacknife		6258	0	12.0000000	0.0019175	0	1.0000000
othtype		6258	0	41.0000000	0.0065516	0	1.0000000
contthru		6258	0	4810.00	0.7686162	0	1.0000000
return		6258	0	464.0000000	0.0741451	0	1.0000000
contstop		6258	0	759.0000000	0.1212848	0	1.0000000
kill		6258	0	225.0000000	0.0359540	0	1.0000000
contsame		6258	0	4810.00	0.7686162	0	1.0000000
contdouble		6258	0	21.0000000	0.0033557	0	1.0000000
contsingle		6258	0	732.0000000	0.1169703	0	1.0000000
contko		6258	0	5.0000000	0.000798977	0	1.0000000
contjk		6258	0	1.0000000	0.000159795	0	1.0000000
retdouble		6258	0	137.0000000	0.0218920	0	1.0000000
retsingle		6258	0	326.0000000	0.0520933	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		6258	0	1.0000000	0.000159795	0	1.0000000
retjk		6258	0	0	0	0	0
xkill		6258	0	225.0000000	0.0359540	0	1.0000000
logtrnhrs		6234	24	11448.85	1.8365169	-1.8971200	7.7232676
plockhrs		6258	0	10241.10	1.6364810	0.0819672	27.8360656
loglckhrs		6258	0	1872.23	0.2991739	-2.5014360	3.3263325
thrusingle		6258	0	548.0000000	0.0875679	0	1.0000000
thruother		6258	0	223.0000000	0.0356344	0	1.0000000
contother		6258	0	6.0000000	0.000958773	0	1.0000000
retother		6258	0	1.0000000	0.000159795	0	1.0000000
thrudoubnite		6143	115	1922.84	0.3130133	0	1.0000000
thrusingnite		6143	115	311.8517700	0.0507654	0	1.0000000
thruothnite		6143	115	91.1078500	0.0148312	0	1.0000000
pdoubnite		6249	9	2265.08	0.3624713	0	1.0000000
psingnite		6249	9	552.3802800	0.0883950	0	1.0000000
pothnite		6249	9	120.7750700	0.0193271	0	1.0000000

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The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI26D

pconfig / doutcome Frequency Percent Row Pct Col Pct	1:contsame	2:contdouble	3:contsingle	4:contko	5:contjk	6:retdouble	7:retsingle	8:retko	x:kill	Total
1:double	4039 64.54 85.32 83.97	18 0.29 0.38 85.71	440 7.03 9.29 60.11	2 0.03 0.04 40.00	0 0.00 0.00 0.00	132 2.11 2.79 96.35	12 0.19 0.25 3.68	1 0.02 0.02 100.00	90 1.44 1.90 40.00	4734 75.65
2:single	548 8.76 43.77 11.39	2 0.03 0.16 9.52	268 4.28 21.41 36.61	2 0.03 0.16 40.00	0 0.00 0.00 0.00	4 0.06 0.32 2.92	314 5.02 25.08 96.32	0 0.00 0.00 0.00	114 1.82 9.11 50.67	1252 20.01
3:knockout	156 2.49 80.83 3.24	1 0.02 0.52 4.76	20 0.32 10.36 2.73	1 0.02 0.52 20.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	15 0.24 7.77 6.67	193 3.08
4:jacknife	67 1.07 85.90 1.39	0 0.00 0.00 0.00	4 0.06 5.13 0.55	0 0.00 0.00 0.00	1 0.02 1.28 100.00	1 0.02 1.28 0.73	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5 0.08 6.41 2.22	78 1.25
5:Other	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02 100.00 0.44	1 0.02
Total	4810 76.86	21 0.34	732 11.70	5 0.08	1 0.02	137 2.19	326 5.21	1 0.02	225 3.60	6258 100.00

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 13:12 Friday, June 24, 2005 314

The FREQ Procedure

Table 1 of pconfig by nextstep
Controlling for pnewpool=MI26D

pconfig nextstep

Frequency Percent Row Pct Col Pct	1:contth	2:contst	3:return	4:kill	Total
1:double	4039 64.54 85.32 83.97	460 7.35 9.72 60.61	145 2.32 3.06 31.25	90 1.44 1.90 40.00	4734 75.65
2:single	548 8.76 43.77 11.39	272 4.35 21.73 35.84	318 5.08 25.40 68.53	114 1.82 9.11 50.67	1252 20.01
3:knockout	156 2.49 80.83 3.24	22 0.35 11.40 2.90	0 0.00 0.00 0.00	15 0.24 7.77 6.67	193 3.08
4:jacknife	67 1.07 85.90 1.39	5 0.08 6.41 0.66	1 0.02 1.28 0.22	5 0.08 6.41 2.22	78 1.25
5:Other	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02 100.00 0.44	1 0.02
Total	4810 76.86	759 12.13	464 7.41	225 3.60	6258 100.00

Statistics from water.regfile for regfile 13:12 Friday, June 24, 2005 315

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	85685	0	364345311259	4252148.12	3515664.00	4331559.00
strtlcktime	Start/lockge/time	85685	0	1.1370142E14	1326969995	1262306700	1388533680
arrtime	Arriv/time	85685	0	1.1370115E14	1326966764	1262306700	1388530800
deptime	Leave/lockge/time	85685	0	1.1370164E14	1326972554	1262307720	1388536080
BOW_OVER_SILL	BOW_OVER_SILL	85668	17	1.1367912E14	1326973008	1262307000	1388534700
END_OF_ENTRY	END_OF_ENTRY	85668	17	1.1367916E14	1326973482	1262307060	1388535000
START_OF_EXIT	START_OF_EXIT	85668	17	1.1367923E14	1326974210	1262307660	1388535600
SIGNAL_DATE	SIGNAL_DATE	0	85685	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	85685	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	74515	11170	464381.00	6.2320472	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	74515	11170	244434.00	3.2803328	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	85685	.	.	.	.
vess_no		85685	0	68807586487	803029.54	2611.00	8888864.00
vss_hp		84970	715	330503513	3889.65	60.0000000	81800.00
frsttime		85685	0	1.1370115E14	1326966764	1262306700	1388530800
lasttime		85685	0	1.1370164E14	1326972554	1262307720	1388536080
newpoolno		85685	0	2152204.00	25.1176285	1.0000000	28.0000000
oldpoolno		85685	0	2153865.00	25.1370135	1.0000000	28.0000000
waitmin	Wait/before/lockge	85685	0	4614775.00	53.8574430	0	7423.00
lockmin	Wait/lockge/time	85685	0	3654502.00	42.6504289	4.0000000	1823.00
year		85685	0	171498420	2001.50	2000.00	2003.00
fly		85685	0	36810.00	0.4295968	0	1.0000000
turnback		85685	0	26631.00	0.3108012	0	1.0000000
exchange		85685	0	22243.00	0.2595904	0	1.0000000
lock		85685	0	2110192.00	24.6273210	1.0000000	27.0000000
totmin		85685	0	8269277.00	96.5078719	4.0000000	7490.00
month		85685	0	609881.00	7.1177102	1.0000000	12.0000000
day		85685	0	1344450.00	15.6906110	1.0000000	31.0000000
sunrise		84943	742	1967000929	23156.72	19414.00	27155.00
sunset		84943	742	5770395888	67932.57	59694.00	75152.00
sequpstr		85685	0	14034.00	0.1637860	0	1.0000000
seqdstr		85685	0	20990.00	0.2449670	0	1.0000000
plock		85685	0	2017556.00	23.5461983	1.0000000	27.0000000
pempty		74878	10807	192576.00	2.5718636	0	50.0000000
pfull		74878	10807	516882.00	6.9029889	0	28.0000000
parrtime		85685	0	1.1367672E14	1326681682	1262304600	1388521920
pstrtlcktime		85685	0	1.1367718E14	1326686994	1262304600	1388521920
pdeptime		85685	0	1.1367745E14	1326690193	1262305620	1388523540
birth		85685	0	0	0	0	0
transithrs		85685	0	6582770.12	76.8252333	-249.0333333	8099.42
reclock		85685	0	0	0	0	0
i		85685	0	19844733.00	231.6010153	58.0000000	401.0000000
pctpsysdn		79969	5716	79492.99	0.9940475	0	98.9510000
pctplckdn		79969	5716	38042.97	0.4757215	0	98.3000000
cumdown		84884	801	3289560.00	38.7535931	0	107520.00
pctdown		84884	801	31918.01	0.3760192	0	98.3000000
pcttrandn		84625	1060	113965.95	1.3467172	0	100.0000000
pctsysdn		84884	801	73557.22	0.8665616	0	98.6320000
pctlckdn		84884	801	31918.01	0.3760192	0	98.3000000
stime		85685	0	3788405040	44213.16	0	86340.00
etime		85685	0	3799278360	44340.06	0	86340.00
sdate		85685	0	1315944857	15357.94	14610.00	16070.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		85685	0	1315947269	15357.97	14610.00	16071.00
hrsduration		85685	0	60908.37	0.7108405	0.0666667	30.3833333
ndays		85685	0	1.0000000	0.000011671	0	1.0000000
pctday		85667	18	4692684.75	54.7782081	0	100.0000000
pctpsysnite		85634	51	3857022.16	45.0407801	0	100.0000000
pctplcknite		85663	22	3867049.80	45.1425914	0	100.0000000
pcttrannite		85084	601	4019527.77	47.2418759	0	100.0000000
pctsysnite		85603	82	3854297.38	45.0252605	0	100.0000000
pctlcknite		85667	18	3874015.25	45.2217919	0	100.0000000
stage		40984	44701	889512.64	21.7039001	8.3500000	33.0800000
flow		7706	77979	636568695	82606.89	16077.99	306262.78
jan		85685	0	3078.00	0.0359223	0	1.0000000
feb		85685	0	3442.00	0.0401704	0	1.0000000
mar		85685	0	6981.00	0.0814728	0	1.0000000
apr		85685	0	7604.00	0.0887437	0	1.0000000
may		85685	0	7238.00	0.0844722	0	1.0000000
jun		85685	0	8512.00	0.0993406	0	1.0000000
jul		85685	0	8633.00	0.1007528	0	1.0000000
aug		85685	0	8038.00	0.0938087	0	1.0000000
sep		85685	0	7646.00	0.0892338	0	1.0000000
oct		85685	0	8580.00	0.1001342	0	1.0000000
nov		85685	0	9247.00	0.1079185	0	1.0000000
dec		85685	0	6686.00	0.0780300	0	1.0000000
m31day		85685	0	49234.00	0.5745930	0	1.0000000
m30day		85685	0	33009.00	0.3852366	0	1.0000000
qtr1		85685	0	13501.00	0.1575655	0	1.0000000
qtr2		85685	0	23354.00	0.2725565	0	1.0000000
qtr3		85685	0	24317.00	0.2837953	0	1.0000000
qtr4		85685	0	24513.00	0.2860827	0	1.0000000
psingle		85685	0	65876.00	0.7688160	0	1.0000000
pdouble		85685	0	15912.00	0.1857034	0	1.0000000
pknockout		85685	0	1445.00	0.0168641	0	1.0000000
pjacknife		85685	0	529.0000000	0.0061738	0	1.0000000
pothtype		85685	0	1923.00	0.0224427	0	1.0000000
pexchange		85685	0	23484.00	0.2740736	0	1.0000000
pturnback		85685	0	27840.00	0.3249110	0	1.0000000
single		85685	0	85656.00	0.9996616	0	1.0000000
double		85685	0	9.0000000	0.000105036	0	1.0000000
knockout		85685	0	3.0000000	0.000035012	0	1.0000000
jacknife		85685	0	0	0	0	0
othtype		85685	0	17.0000000	0.000198401	0	1.0000000
contthru		1252	84433	548.0000000	0.4376997	0	1.0000000
return		1252	84433	318.0000000	0.2539936	0	1.0000000
contstop		1252	84433	272.0000000	0.2172524	0	1.0000000
kill		1252	84433	114.0000000	0.0910543	0	1.0000000
contsame		1252	84433	548.0000000	0.4376997	0	1.0000000
contdouble		1252	84433	2.0000000	0.0015974	0	1.0000000
contsingle		1252	84433	268.0000000	0.2140575	0	1.0000000
contko		1252	84433	2.0000000	0.0015974	0	1.0000000
contjk		1252	84433	0	0	0	0
retdouble		1252	84433	4.0000000	0.0031949	0	1.0000000
retsingle		1252	84433	314.0000000	0.2507987	0	1.0000000

Statistics from water.regfile for regfile 13:12 Friday, June 24, 2005 317

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1252	84433	0	0	0	0
retjk		1252	84433	0	0	0	0
xkill		1252	84433	114.0000000	0.0910543	0	1.0000000
logtrnhrs		1237	84448	2541.81	2.0548221	-1.8971200	7.7232676
plockhrs		1252	84433	522.2295082	0.4171162	0.0819672	4.1803279
loglckhrs		1252	84433	-1256.80	-1.0038312	-2.5014360	1.4303897
thrusingle		1252	84433	548.0000000	0.4376997	0	1.0000000
thruother		1252	84433	0	0	0	0
contother		1252	84433	2.0000000	0.0015974	0	1.0000000
retother		1252	84433	0	0	0	0
thrudoubnite		1217	84468	0	0	0	0
thrusingnite		1217	84468	311.8517700	0.2562463	0	1.0000000
thruothnite		1217	84468	0	0	0	0
pdoubnite		1251	84434	0	0	0	0
psingnite		1251	84434	552.3802800	0.4415510	0	1.0000000
pothnite		1251	84434	0	0	0	0

Transition models using key variables from stepwise proc transitions to contthru 13:12 Friday, June 24, 2005 318

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 1

Variable psingle Entered: R-Square = 0.1540 and C(p) = 19.4702

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	171.39015	171.39015	1138.76	<.0001
Error	6256	941.56606	0.15051		
Corrected Total	6257	1112.95622			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.85138	0.00548	3628.57451	24109.2	<.0001
psingle	-0.41368	0.01226	171.39015	1138.76	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable oct Entered: R-Square = 0.1553 and C(p) = 12.0069

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	172.81047	86.40523	574.87	<.0001
Error	6255	940.14575	0.15030		
Corrected Total	6257	1112.95622			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.85630	0.00571	3382.22175	22502.7	<.0001
oct	-0.05025	0.01635	1.42032	9.45	0.0021
psingle	-0.41318	0.01225	170.94621	1137.34	<.0001

Bounds on condition number: 1.0002, 4.0007

All variables left in the model are significant at the 0.0100 level.

Transition models using key variables from stepwise proc transitions to contthru 13:12 Friday, June 24, 2005 319

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 2

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	psingle		1	0.1540	0.1540	19.4702	1138.76	<.0001
2	oct		2	0.0013	0.1553	12.0069	9.45	0.0021

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 320

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0422 and C(p) = 423.8926

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	52.75839	52.75839	208.64	<.0001
Error	4731	1196.30686	0.25287		
Corrected Total	4732	1249.06525			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.06689	0.00915	12906	51038.4	<.0001
pturnback	-0.21973	0.01521	52.75839	208.64	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.0846 and C(p) = 198.1803

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	105.62460	52.81230	218.47	<.0001
Error	4730	1143.44066	0.24174		
Corrected Total	4732	1249.06525			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.30867	0.01864	3709.65825	15345.5	<.0001
pturnback	-0.46151	0.02210	105.39415	435.98	<.0001
pexchange	-0.31416	0.02124	52.86620	218.69	<.0001

Bounds on condition number: 2.2083, 8.8333

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 321

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.0941 and C(p) = 149.0391

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	117.49765	39.16588	163.68	<.0001
Error	4729	1131.56761	0.23928		
Corrected Total	4732	1249.06525			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.31908	0.01860	3719.56426	15544.6	<.0001
jul	-0.14781	0.02098	11.87305	49.62	<.0001
pturnback	-0.44938	0.02206	99.31879	415.07	<.0001
pexchange	-0.30416	0.02118	49.33120	206.16	<.0001

Bounds on condition number: 2.2219, 16.339

Stepwise Selection: Step 4

Variable jun Entered: R-Square = 0.1040 and C(p) = 97.7952

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	129.85886	32.46471	137.14	<.0001
Error	4728	1119.20640	0.23672		
Corrected Total	4732	1249.06525			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.33491	0.01863	3718.39043	15708.0	<.0001
jun	-0.15692	0.02172	12.36121	52.22	<.0001
jul	-0.17088	0.02111	15.50521	65.50	<.0001
pturnback	-0.44281	0.02196	96.27038	406.69	<.0001
pexchange	-0.29527	0.02111	46.33273	195.73	<.0001

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 322

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 2.2258, 26.029

Stepwise Selection: Step 5

Variable may Entered: R-Square = 0.1137 and C(p) = 47.3044

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	142.04526	28.40905	121.31	<.0001
Error	4727	1107.02000	0.23419		
Corrected Total	4732	1249.06525			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.35441	0.01873	3701.97806	15807.5	<.0001
may	-0.17811	0.02469	12.18640	52.04	<.0001
jun	-0.17954	0.02183	15.84847	67.67	<.0001
jul	-0.19338	0.02123	19.42989	82.97	<.0001
pturnback	-0.44190	0.02184	95.87280	409.38	<.0001
pexchange	-0.29009	0.02100	44.67062	190.74	<.0001

Bounds on condition number: 2.2284, 37.966

Stepwise Selection: Step 6

Variable feb Entered: R-Square = 0.1172 and C(p) = 30.6673

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	146.37208	24.39535	104.56	<.0001
Error	4726	1102.69317	0.23332		
Corrected Total	4732	1249.06525			

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 323

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.36090	0.01875	3698.37220	15850.7	<.0001
feb	-0.44567	0.10349	4.32683	18.54	<.0001
may	-0.18110	0.02466	12.58798	53.95	<.0001
jun	-0.18243	0.02180	16.34635	70.06	<.0001
jul	-0.19623	0.02120	19.98598	85.66	<.0001
pturnback	-0.44503	0.02181	97.12698	416.27	<.0001
pexchange	-0.29472	0.02099	45.98586	197.09	<.0001

Bounds on condition number: 2.2343, 51.657

Stepwise Selection: Step 7

Variable sep Entered: R-Square = 0.1198 and C(p) = 18.6671

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	149.62239	21.37463	91.86	<.0001
Error	4725	1099.44286	0.23269		
Corrected Total	4732	1249.06525			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.34685	0.01910	3513.05884	15097.8	<.0001
feb	-0.43270	0.10341	4.07398	17.51	<.0001
may	-0.16852	0.02485	10.70047	45.99	<.0001
jun	-0.16992	0.02202	13.85363	59.54	<.0001
jul	-0.18378	0.02143	17.10851	73.53	<.0001
sep	0.09714	0.02599	3.25031	13.97	0.0002
pturnback	-0.44312	0.02179	96.24381	413.62	<.0001
pexchange	-0.29313	0.02097	45.47049	195.42	<.0001

Bounds on condition number: 2.2352, 68.156

Stepwise Selection: Step 8

Variable aug Entered: R-Square = 0.1211 and C(p) = 13.5875

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 324

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 8

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	151.26600	18.90825	81.37	<.0001
Error	4724	1097.79925	0.23239		
Corrected Total	4732	1249.06525			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.35685	0.01945	3410.63659	14676.5	<.0001
feb	-0.44450	0.10344	4.29139	18.47	<.0001
may	-0.18139	0.02530	11.94376	51.40	<.0001
jun	-0.18288	0.02254	15.29738	65.83	<.0001
jul	-0.19680	0.02197	18.64404	80.23	<.0001
aug	-0.06152	0.02313	1.64361	7.07	0.0079
sep	0.08450	0.02641	2.37924	10.24	0.0014
pturnback	-0.44034	0.02180	94.82096	408.03	<.0001
pexchange	-0.28947	0.02100	44.15419	190.00	<.0001

Bounds on condition number: 2.2448, 88.457

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0422	0.0422	423.893	208.64	<.0001
2	pexchange		2	0.0423	0.0846	198.180	218.69	<.0001
3	jul		3	0.0095	0.0941	149.039	49.62	<.0001
4	jun		4	0.0099	0.1040	97.7952	52.22	<.0001
5	may		5	0.0098	0.1137	47.3044	52.04	<.0001
6	feb		6	0.0035	0.1172	30.6673	18.54	<.0001
7	sep		7	0.0026	0.1198	18.6671	13.97	0.0002
8	aug		8	0.0013	0.1211	13.5875	7.07	0.0079

Logarithms of double lockage times using key variables from stepwise proc 325
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0645 and C(p) = 590.0222

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	13.68772	13.68772	326.08	<.0001
Error	4731	198.58870	0.04198		
Corrected Total	4732	212.27642			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.70315	0.00373	1493.62223	35582.7	<.0001
pturnback	-0.11192	0.00620	13.68772	326.08	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.1107 and C(p) = 329.4761

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	23.49003	11.74501	294.27	<.0001
Error	4730	188.78639	0.03991		
Corrected Total	4732	212.27642			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.80726	0.00757	453.55691	11363.8	<.0001
pturnback	-0.21603	0.00898	23.09333	578.60	<.0001
pexchange	-0.13528	0.00863	9.80231	245.59	<.0001

Bounds on condition number: 2.2083, 8.8333

Stepwise Selection: Step 3

Logarithms of double lockage times using key variables from stepwise proc 326
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.1242 and C(p) = 254.3837

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	26.36832	8.78944	223.58	<.0001
Error	4729	185.90810	0.03931		
Corrected Total	4732	212.27642			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.81238	0.00754	456.43520	11610.5	<.0001
jul	-0.07278	0.00851	2.87829	73.22	<.0001
pturnback	-0.21006	0.00894	21.70128	552.02	<.0001
pexchange	-0.13035	0.00859	9.06078	230.48	<.0001

Bounds on condition number: 2.2219, 16.339

Stepwise Selection: Step 4

Variable jun Entered: R-Square = 0.1387 and C(p) = 174.0813

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	29.44112	7.36028	190.33	<.0001
Error	4728	182.83529	0.03867		
Corrected Total	4732	212.27642			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.82027	0.00753	458.91349	11867.2	<.0001
jun	-0.07824	0.00878	3.07281	79.46	<.0001
jul	-0.08428	0.00853	3.77163	97.53	<.0001
pturnback	-0.20678	0.00887	20.99363	542.88	<.0001
pexchange	-0.12592	0.00853	8.42657	217.91	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 2.2258, 26.029

Stepwise Selection: Step 5

Variable may Entered: R-Square = 0.1532 and C(p) = 93.7452

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	32.51519	6.50304	171.00	<.0001
Error	4727	179.76123	0.03803		
Corrected Total	4732	212.27642			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.83006	0.00755	460.14524	12100.0	<.0001
may	-0.08946	0.00995	3.07406	80.84	<.0001
jun	-0.08960	0.00879	3.94699	103.79	<.0001
jul	-0.09558	0.00856	4.74651	124.81	<.0001
pturnback	-0.20633	0.00880	20.90044	549.60	<.0001
pexchange	-0.12332	0.00846	8.07285	212.28	<.0001

Bounds on condition number: 2.2284, 37.966

Stepwise Selection: Step 6

Variable feb Entered: R-Square = 0.1649 and C(p) = 29.2162

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	34.99908	5.83318	155.51	<.0001
Error	4726	177.27733	0.03751		
Corrected Total	4732	212.27642			

Logarithms of double lockage times using key variables from stepwise proc 328
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.83498	0.00752	462.60572	12332.5	<.0001
feb	-0.33767	0.04150	2.48390	66.22	<.0001
may	-0.09172	0.00989	3.22877	86.08	<.0001
jun	-0.09179	0.00874	4.13798	110.31	<.0001
jul	-0.09774	0.00850	4.95804	132.18	<.0001
pturnback	-0.20870	0.00875	21.35962	569.42	<.0001
pexchange	-0.12683	0.00842	8.51587	227.02	<.0001

Bounds on condition number: 2.2343, 51.657

Stepwise Selection: Step 7

Variable sep Entered: R-Square = 0.1667 and C(p) = 20.9043

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	35.38409	5.05487	135.02	<.0001
Error	4725	176.89233	0.03744		
Corrected Total	4732	212.27642			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.83015	0.00766	439.56740	11741.4	<.0001
feb	-0.33321	0.04148	2.41592	64.53	<.0001
may	-0.08739	0.00997	2.87747	76.86	<.0001
jun	-0.08748	0.00883	3.67202	98.08	<.0001
jul	-0.09345	0.00860	4.42366	118.16	<.0001
sep	0.03343	0.01043	0.38500	10.28	0.0014
pturnback	-0.20804	0.00874	21.21388	566.65	<.0001
pexchange	-0.12628	0.00841	8.43879	225.41	<.0001

Bounds on condition number: 2.2352, 68.156

Stepwise Selection: Step 8

Logarithms of double lockage times using key variables from stepwise proc 329
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 8

Variable oct Entered: R-Square = 0.1680 and C(p) = 15.6101

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	35.65642	4.45705	119.21	<.0001
Error	4724	176.62000	0.03739		
Corrected Total	4732	212.27642			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.82469	0.00792	405.48761	10845.5	<.0001
feb	-0.32827	0.04149	2.34033	62.60	<.0001
may	-0.08281	0.01010	2.51088	67.16	<.0001
jun	-0.08292	0.00899	3.18302	85.14	<.0001
jul	-0.08890	0.00876	3.85526	103.12	<.0001
sep	0.03809	0.01056	0.48635	13.01	0.0003
oct	0.02684	0.00995	0.27233	7.28	0.0070
pturnback	-0.20728	0.00874	21.03666	562.66	<.0001
pexchange	-0.12510	0.00842	8.26055	220.94	<.0001

Bounds on condition number: 2.2412, 87.854

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0645	0.0645	590.022	326.08	<.0001
2	pexchange		2	0.0462	0.1107	329.476	245.59	<.0001
3	jul		3	0.0136	0.1242	254.384	73.22	<.0001
4	jun		4	0.0145	0.1387	174.081	79.46	<.0001
5	may		5	0.0145	0.1532	93.7452	80.84	<.0001
6	feb		6	0.0117	0.1649	29.2162	66.22	<.0001
7	sep		7	0.0018	0.1667	20.9043	10.28	0.0014
8	oct		8	0.0013	0.1680	15.6101	7.28	0.0070

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0229 and C(p) = 88.3455

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.96693	1.96693	29.21	<.0001
Error	1249	84.10638	0.06734		
Corrected Total	1250	86.07331			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.44654	0.00911	161.91087	2404.42	<.0001
pturnback	-0.08308	0.01537	1.96693	29.21	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jun Entered: R-Square = 0.0390 and C(p) = 68.2439

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	3.35900	1.67950	25.34	<.0001
Error	1248	82.71431	0.06628		
Corrected Total	1250	86.07331			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.45712	0.00932	159.27776	2403.20	<.0001
jun	-0.11011	0.02403	1.39206	21.00	<.0001
pturnback	-0.08112	0.01526	1.87356	28.27	<.0001

Bounds on condition number: 1.0008, 4.0032

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 331

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable feb Entered: R-Square = 0.0529 and C(p) = 51.2834

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	4.55322	1.51774	23.22	<.0001
Error	1247	81.52010	0.06537		
Corrected Total	1250	86.07331			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.44939	0.00944	148.28084	2268.23	<.0001
feb	0.18831	0.04406	1.19422	18.27	<.0001
jun	-0.10448	0.02390	1.24951	19.11	<.0001
pturnback	-0.07575	0.01520	1.62242	24.82	<.0001

Bounds on condition number: 1.0102, 9.0651

Stepwise Selection: Step 4

Variable dec Entered: R-Square = 0.0646 and C(p) = 37.2979

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	5.56006	1.39002	21.51	<.0001
Error	1246	80.51325	0.06462		
Corrected Total	1250	86.07331			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.44027	0.00966	134.19157	2076.71	<.0001
feb	0.19716	0.04386	1.30566	20.21	<.0001
jun	-0.09628	0.02385	1.05309	16.30	<.0001
dec	0.12017	0.03044	1.00685	15.58	<.0001
pturnback	-0.07339	0.01513	1.52078	23.54	<.0001

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 332

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0128, 16.179

Stepwise Selection: Step 5

Variable sep Entered: R-Square = 0.0748 and C(p) = 25.3155

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	6.44074	1.28815	20.14	<.0001
Error	1245	79.63257	0.06396		
Corrected Total	1250	86.07331			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.42982	0.01002	117.79013	1841.57	<.0001
feb	0.20766	0.04373	1.44234	22.55	<.0001
jun	-0.08567	0.02390	0.82170	12.85	0.0004
sep	0.09260	0.02495	0.88068	13.77	0.0002
dec	0.13074	0.03042	1.18129	18.47	<.0001
pturnback	-0.07382	0.01505	1.53865	24.06	<.0001

Bounds on condition number: 1.0262, 25.487

Stepwise Selection: Step 6

Variable jul Entered: R-Square = 0.0805 and C(p) = 19.6042

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	6.92643	1.15441	18.14	<.0001
Error	1244	79.14688	0.06362		
Corrected Total	1250	86.07331			

Activity times using key variables from stepwise proc 13:12 Friday, June 24, 2005 333

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.43841	0.01046	111.73000	1756.13	<.0001
feb	0.19896	0.04373	1.31722	20.70	<.0001
jun	-0.09462	0.02406	0.98431	15.47	<.0001
jul	-0.06962	0.02520	0.48569	7.63	0.0058
sep	0.08366	0.02510	0.70693	11.11	0.0009
dec	0.12189	0.03051	1.01543	15.96	<.0001
pturnback	-0.07288	0.01502	1.49858	23.55	<.0001

Bounds on condition number: 1.0452, 37.159

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0229	0.0229	88.3455	29.21	<.0001
2	jun		2	0.0162	0.0390	68.2439	21.00	<.0001
3	feb		3	0.0139	0.0529	51.2834	18.27	<.0001
4	dec		4	0.0117	0.0646	37.2979	15.58	<.0001
5	sep		5	0.0102	0.0748	25.3155	13.77	0.0002
6	jul		6	0.0056	0.0805	19.6042	7.63	0.0058

Logarithms of single lockage times using key variables from stepwise proc 334
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0350 and C(p) = 108.0518

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	10.43934	10.43934	45.25	<.0001
Error	1249	288.14269	0.23070		
Corrected Total	1250	298.58203			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.97179	0.01433	1060.54165	4597.09	<.0001
jun	-0.30142	0.04481	10.43934	45.25	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pturnback Entered: R-Square = 0.0604 and C(p) = 74.3951

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	18.02151	9.01075	40.08	<.0001
Error	1248	280.56052	0.22481		
Corrected Total	1250	298.58203			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.91527	0.01717	638.55119	2840.43	<.0001
jun	-0.29420	0.04425	9.93751	44.20	<.0001
pturnback	-0.16319	0.02810	7.58216	33.73	<.0001

Bounds on condition number: 1.0008, 4.0032

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 335
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.0809 and C(p) = 47.5095

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	24.16384	8.05461	36.60	<.0001
Error	1247	274.41819	0.22006		
Corrected Total	1250	298.58203			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.89181	0.01756	567.48573	2578.75	<.0001
jun	-0.31939	0.04404	11.57464	52.60	<.0001
jul	-0.24405	0.04619	6.14233	27.91	<.0001
pturnback	-0.15876	0.02781	7.16985	32.58	<.0001

Bounds on condition number: 1.0127, 9.0808

Stepwise Selection: Step 4

Variable pexchange Entered: R-Square = 0.0888 and C(p) = 38.4404

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	26.51761	6.62940	30.36	<.0001
Error	1246	272.06443	0.21835		
Corrected Total	1250	298.58203			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.83829	0.02391	268.39048	1229.17	<.0001
jun	-0.30603	0.04406	10.53590	48.25	<.0001
jul	-0.23217	0.04616	5.52508	25.30	<.0001
pturnback	-0.21502	0.03258	9.51289	43.57	<.0001
pexchange	-0.10844	0.03303	2.35377	10.78	0.0011

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.3906, 19.263

Stepwise Selection: Step 5

Variable may Entered: R-Square = 0.0964 and C(p) = 29.7444

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	28.79204	5.75841	26.57	<.0001
Error	1245	269.79000	0.21670		
Corrected Total	1250	298.58203			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.81972	0.02450	242.58291	1119.45	<.0001
may	-0.17041	0.05260	2.27443	10.50	0.0012
jun	-0.31968	0.04409	11.39164	52.57	<.0001
jul	-0.24590	0.04618	6.14554	28.36	<.0001
pturnback	-0.22131	0.03251	10.04186	46.34	<.0001
pexchange	-0.11440	0.03296	2.61112	12.05	0.0005

Bounds on condition number: 1.395, 29.328

Stepwise Selection: Step 6

Variable sep Entered: R-Square = 0.1025 and C(p) = 23.2616

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	30.59586	5.09931	23.67	<.0001
Error	1244	267.98617	0.21542		
Corrected Total	1250	298.58203			

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.83566	0.02504	239.91003	1113.67	<.0001
may	-0.15379	0.05276	1.83035	8.50	0.0036
jun	-0.30275	0.04435	10.03912	46.60	<.0001
jul	-0.22898	0.04641	5.24429	24.34	<.0001
sep	0.13339	0.04610	1.80382	8.37	0.0039
pturnback	-0.22301	0.03242	10.19327	47.32	<.0001
pexchange	-0.11519	0.03286	2.64723	12.29	0.0005

Bounds on condition number: 1.3951, 41.709

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun		1	0.0350	0.0350	108.052	45.25	<.0001
2	pturnback		2	0.0254	0.0604	74.3951	33.73	<.0001
3	jul		3	0.0206	0.0809	47.5095	27.91	<.0001
4	pexchange		4	0.0079	0.0888	38.4404	10.78	0.0011
5	may		5	0.0076	0.0964	29.7444	10.50	0.0012
6	sep		6	0.0060	0.1025	23.2616	8.37	0.0039

Logarithms of single lockage times using key variables from stepwise proc 338
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable aug Entered: R-Square = 0.0202 and C(p) = 90.1242

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	605.29384	605.29384	83.36	<.0001
Error	4037	29315	7.26161		
Corrected Total	4038	29920			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	5.70816	0.04521	115768	15942.5	<.0001
aug	1.18988	0.13033	605.29384	83.36	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jun Entered: R-Square = 0.0284 and C(p) = 57.6235

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	850.47207	425.23604	59.04	<.0001
Error	4036	29070	7.20266		
Corrected Total	4038	29920			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	5.81681	0.04872	102656	14252.5	<.0001
jun	-0.74378	0.12748	245.17823	34.04	<.0001
aug	1.08124	0.13113	489.72243	67.99	<.0001

Bounds on condition number: 1.0206, 4.0823

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 339
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.0326 and C(p) = 41.9157

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	976.31251	325.43750	45.37	<.0001
Error	4035	28944	7.17325		
Corrected Total	4038	29920			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	5.91264	0.05374	86839	12105.9	<.0001
jun	-0.83962	0.12926	302.63899	42.19	<.0001
jul	-0.52864	0.12621	125.84044	17.54	<.0001
aug	0.98540	0.13284	394.69386	55.02	<.0001

Bounds on condition number: 1.0551, 9.4814

Stepwise Selection: Step 4

Variable may Entered: R-Square = 0.0384 and C(p) = 19.7803

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	1147.82997	286.95749	40.23	<.0001
Error	4034	28773	7.13251		
Corrected Total	4038	29920			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	6.02275	0.05810	76646	10746.0	<.0001
may	-0.73721	0.15034	171.51746	24.05	<.0001
jun	-0.94972	0.13084	375.81568	52.69	<.0001
jul	-0.63875	0.12784	178.05338	24.96	<.0001
aug	0.87530	0.13436	302.71962	42.44	<.0001

Logarithms of single lockage times using key variables from stepwise proc 340
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0887, 17.295

Stepwise Selection: Step 5

Variable dec Entered: R-Square = 0.0401 and C(p) = 14.6183

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	1198.72639	239.74528	33.66	<.0001
Error	4033	28722	7.12166		
Corrected Total	4038	29920			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	5.96048	0.06255	64660	9079.29	<.0001
may	-0.67494	0.15202	140.38972	19.71	<.0001
jun	-0.88745	0.13280	318.05149	44.66	<.0001
jul	-0.57648	0.12985	140.36166	19.71	<.0001
aug	0.93757	0.13626	337.17464	47.34	<.0001
dec	0.44908	0.16799	50.89641	7.15	0.0075

Bounds on condition number: 1.1249, 27.648

Stepwise Selection: Step 6

Variable sep Entered: R-Square = 0.0417 and C(p) = 9.7331

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	1247.65616	207.94269	29.24	<.0001
Error	4032	28673	7.11129		
Corrected Total	4038	29920			

Logarithms of single lockage times using key variables from stepwise proc 341
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	5.88446	0.06890	51871	7294.17	<.0001
may	-0.59892	0.15465	106.66394	15.00	0.0001
jun	-0.81143	0.13583	253.79177	35.69	<.0001
jul	-0.50046	0.13295	100.75768	14.17	0.0002
aug	1.01359	0.13921	376.98973	53.01	<.0001
sep	0.42967	0.16380	48.92977	6.88	0.0087
dec	0.52510	0.17035	67.57198	9.50	0.0021

Bounds on condition number: 1.181, 41.277

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	aug		1	0.0202	0.0202	90.1242	83.36	<.0001
2	jun		2	0.0082	0.0284	57.6235	34.04	<.0001
3	jul		3	0.0042	0.0326	41.9157	17.54	<.0001
4	may		4	0.0057	0.0384	19.7803	24.05	<.0001
5	dec		5	0.0017	0.0401	14.6183	7.15	0.0075
6	sep		6	0.0016	0.0417	9.7331	6.88	0.0087

Logarithms of single lockage times using key variables from stepwise proc 342
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0351 and C(p) = 270.8840

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	9.70611	9.70611	146.70	<.0001
Error	4035	266.96885	0.06616		
Corrected Total	4036	276.67496			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.74124	0.00434	10666	161211	<.0001
jun	-0.14649	0.01210	9.70611	146.70	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable may Entered: R-Square = 0.0534 and C(p) = 191.0387

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	14.78295	7.39148	113.85	<.0001
Error	4034	261.89201	0.06492		
Corrected Total	4036	276.67496			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.75428	0.00454	9684.88755	149179	<.0001
may	-0.12368	0.01399	5.07684	78.20	<.0001
jun	-0.15954	0.01207	11.33958	174.67	<.0001

Bounds on condition number: 1.0152, 4.0606

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 343
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.0743 and C(p) = 99.9606

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	20.55656	6.85219	107.90	<.0001
Error	4033	256.11840	0.06351		
Corrected Total	4036	276.67496			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.77399	0.00495	8172.87879	128695	<.0001
may	-0.14339	0.01399	6.67492	105.11	<.0001
jun	-0.17925	0.01212	13.89810	218.85	<.0001
jul	-0.11279	0.01183	5.77361	90.91	<.0001

Bounds on condition number: 1.0467, 9.3903

Stepwise Selection: Step 4

Variable apr Entered: R-Square = 0.0853 and C(p) = 52.6871

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	23.61299	5.90325	94.06	<.0001
Error	4032	253.06197	0.06276		
Corrected Total	4036	276.67496			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.78843	0.00533	7055.88693	112420	<.0001
apr	-0.09593	0.01375	3.05643	48.70	<.0001
may	-0.15784	0.01406	7.91197	126.06	<.0001
jun	-0.19369	0.01222	15.76267	251.14	<.0001
jul	-0.12723	0.01194	7.12624	113.54	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0791, 17.118

Stepwise Selection: Step 5

Variable mar Entered: R-Square = 0.0909 and C(p) = 29.7652

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	25.15889	5.03178	80.64	<.0001
Error	4031	251.51607	0.06240		
Corrected Total	4036	276.67496			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.79670	0.00557	6488.55019	103991	<.0001
mar	-0.09304	0.01869	1.54590	24.78	<.0001
apr	-0.10420	0.01381	3.55371	56.95	<.0001
may	-0.16610	0.01411	8.64111	138.49	<.0001
jun	-0.20196	0.01230	16.82436	269.64	<.0001
jul	-0.13550	0.01202	7.92807	127.06	<.0001

Bounds on condition number: 1.1001, 26.977

Stepwise Selection: Step 6

Variable nov Entered: R-Square = 0.0945 and C(p) = 15.7637

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	26.15146	4.35858	70.11	<.0001
Error	4030	250.52350	0.06216		
Corrected Total	4036	276.67496			

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.81007	0.00649	4835.88290	77791.5	<.0001
mar	-0.10641	0.01895	1.95901	31.51	<.0001
apr	-0.11756	0.01418	4.27222	68.72	<.0001
may	-0.17947	0.01448	9.54942	153.62	<.0001
jun	-0.21532	0.01272	17.80322	286.39	<.0001
jul	-0.14886	0.01246	8.87922	142.83	<.0001
nov	-0.05031	0.01259	0.99257	15.97	<.0001

Bounds on condition number: 1.1856, 41.41

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun		1	0.0351	0.0351	270.884	146.70	<.0001
2	may		2	0.0183	0.0534	191.039	78.20	<.0001
3	jul		3	0.0209	0.0743	99.9606	90.91	<.0001
4	apr		4	0.0110	0.0853	52.6871	48.70	<.0001
5	mar		5	0.0056	0.0909	29.7652	24.78	<.0001
6	nov		6	0.0036	0.0945	15.7637	15.97	<.0001

Logarithms of single lockage times using key variables from stepwise proc 346
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

No variable met the 0.0100 significance level for entry into the model.

Logarithms of single lockage times using key variables from stepwise proc 347
13:12 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

No variable met the 0.0100 significance level for entry into the model.

```
 ***** probabilities of outcomes after entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   24JUN05 13:12   ;
pcontsame=0.7363148051 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(-
0.05423533 )*nov +(-0.168350332 )*dec +(-0.333831761 )*psingle +(0.2232308179 )*pjacknife +(0.1784229662 )*pknockout
+(0 )*pothtype    ;

 * stderr = 0.4488018639  ;

 mcontsame = 0.644234021 ;
 *  based on           5,914 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   24JUN05 13:12   ;
pcontsame=0.8374939143 +(-0.416473123 )*feb +(-0.127275034 )*mar +(-0.049780559 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0
)*aug +(-0.103304285 )*sep +(-0.06727403 )*oct +(0 )*nov +(0 )*dec +(-0.406660935 )*psingle +(0.1526545144 )*pjacknife
+(0 )*pknockout
+(0 )*pothtype    ;

 * stderr = 0.4103125805  ;

 mcontsame = 0.7189097104 ;
 *  based on           5,870 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   24JUN05 13:12   ;
pcontsame=0.7494463179 +(-0.223419007 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0.0668068171 )*jun +(0.0845970204 )*jul +(0
)*aug +(0 )*sep +(-0.056750863 )*oct +(-0.06719612 )*nov +(-0.223922867 )*dec +(-0.332115313 )*psingle +(0.165032684
)*pjacknife +(0 )*
```

```
pknockout +(0 )*pothtype    ;

 * stderr = 0.4386323767  ;

 mcontsame = 0.667670179 ;
 *  based on           5,979 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   24JUN05 13:12   ;
pcontsame=0.9144242097 +(0 )*feb +(0 )*mar +(-0.056700292 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0
)*oct +(0 )*nov +(0 )*dec +(-0.694298222 )*psingle +(0 )*pjacknife +(0 )*pknockout +(-0.41442421 )*pothtype    ;

 * stderr = 0.3175302203  ;

 mcontsame = 0.7610501828 ;
 *  based on           6,018 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   24JUN05 13:12   ;
pcontsame=0.8943231441 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0 )*dec +(-0.591602056 )*psingle +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype    ;

 * stderr = 0.3440450492  ;

 mcontsame = 0.7734537874 ;
 *  based on           5,756 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
```

```
 * model  fitted   24JUN05 13:12   ;
pcontsame=0.8534987541 +(0 )*feb +(-0.071816332 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0
)*oct +(0.0517398326 )*nov +(0 )*dec +(-0.343700716 )*psingle +(0.1118309747 )*pjacknife +(0 )*pknockout +(0 )*pothtype
;

 * stderr = 0.3787640874  ;

 mcontsame = 0.7962068966 ;
 *  based on           5,800 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   24JUN05 13:12   ;
pcontsame=0.7447429182 +(0 )*feb +(0.0583689683 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0
)*oct +(0 )*nov +(-0.08952626 )*dec +(-0.311825749 )*psingle +(0.2335143917 )*pjacknife +(0.1052009871 )*pknockout +(0
)*pothtype    ;

 * stderr = 0.4407611941  ;

 mcontsame = 0.6886587606 ;
 *  based on           5,987 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   24JUN05 13:12   ;
pcontsame=0.9623582487 +(0 )*feb +(-0.059061037 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0
)*oct +(0 )*nov +(0 )*dec +(-0.368389505 )*psingle +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype    ;

 * stderr = 0.2726625181  ;

 mcontsame = 0.8943183701 ;
```

```
 *  based on           6,037 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   24JUN05 13:12   ;
pcontsame=0.954037529 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0 )*dec +(-0.612658219 )*psingle +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype    ;

 * stderr = 0.313249089  ;

 mcontsame = 0.7704119297 ;
 *  based on           6,773 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   24JUN05 13:12   ;
pcontsame=0.8562969757 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(-0.050250327
)*oct +(0 )*nov +(0 )*dec +(-0.413178929 )*psingle +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype    ;

 * stderr = 0.3876894079  ;

 mcontsame = 0.7686161713 ;
 *  based on           6,258 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** transit times for doubles continuing nonstop on entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -0.183 and max = 2501.383   ;


 * model  fitted   24JUN05 13:12   ;
nstransithrs=4.2086309524 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.2623957705 )*sep
+(0 )*oct +(0 )*nov +(0 )*dec    ;

 * stderr = 1.4643912035  ;

 mnstransithrs = 4.229107672 ;
 *  based on           3,037 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for doubles continuing straight through on entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =    0.017 and max =    7.825   ;


 * model  fitted   24JUN05 13:12   ;
lognstrnhrs=1.4132167032 +(0 )*feb +(-0.051559966 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug
+(0.0457164011 )*sep +(0 )*oct +(-0.067708653 )*nov +(-0.129534843 )*dec    ;

 * stderr = 0.2541571154  ;

 mlognstrnhrs = 1.4048712005 ;
 *  based on           3,036 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for singles continuing nonstop on entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -0.183 and max = 2501.383   ;


 * model  fitted   24JUN05 13:12   ;
nstransithrs=7.7250719632 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0 )*dec +(0 )*thruother    ;
```

```
 * stderr = 41.949172692  ;

 mnstransithrs = 7.7250719632 ;
 *  based on             579 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for singles continuing straight through on entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =    0.017 and max =    7.825   ;


 * model  fitted   24JUN05 13:12   ;
lognstrnhrs=1.3039664849 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0 )*dec +(0 )*thruother    ;

 * stderr = 0.6355113183  ;

 mlognstrnhrs = 1.3039664849 ;
 *  based on             580 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for doubles continuing nonstop on entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -0.650 and max = 1571.950   ;


 * model  fitted   24JUN05 13:12   ;
nstransithrs=2.4001491424 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.9155686794 )*aug +(0 )*sep
+(0 )*oct +(0 )*nov +(0 )*dec    ;

 * stderr = 3.1997636599  ;

 mnstransithrs = 2.5048447967 ;
 *  based on           3,533 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for doubles continuing straight through on entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
```

```
 *** with screen between min =   -2.996 and max =    7.360   ;


 * model  fitted   24JUN05 13:12   ;
lognstrnhrs=0.9102641403 +(0 )*feb +(0 )*mar +(-0.101198672 )*apr +(-0.179635614 )*may +(-0.22117672 )*jun +(-
0.147097683 )*jul +(0 )*aug +(0.0662177921 )*sep +(0 )*oct +(0 )*nov +(0.0755701735 )*dec    ;

 * stderr = 0.2800047362  ;

 mlognstrnhrs = 0.840248456 ;
 *  based on           3,533 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for singles continuing nonstop on entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -0.650 and max = 1571.950   ;


 * model  fitted   24JUN05 13:12   ;
nstransithrs=6.948015873 +(0 )*feb +(0 )*mar +(0 )*apr +(41.660756057 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0
)*oct +(0 )*nov +(0 )*dec +(0 )*thruother    ;

 * stderr = 92.592124855  ;

 mnstransithrs = 10.114233333 ;
 *  based on            500 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for singles continuing straight through on entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -2.996 and max =    7.360   ;


 * model  fitted   24JUN05 13:12   ;
lognstrnhrs=0.6835762249 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0 )*dec +(0 )*thruother    ;

 * stderr = 0.7786911629  ;
```

```
 mlognstrnhrs = 0.6835762249 ;
 *  based on             498 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for doubles continuing nonstop on entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -0.050 and max =  285.217   ;


 * model  fitted   24JUN05 13:12   ;
nstransithrs=3.6449400645 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(1.5300350598 )*aug +(0 )*sep
+(0 )*oct +(0 )*nov +(0 )*dec    ;

 * stderr = 4.0938360337  ;

 mnstransithrs = 3.8037754364 ;
 *  based on           3,227 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for doubles continuing straight through on entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -0.163 and max =    5.653   ;


 * model  fitted   24JUN05 13:12   ;
lognstrnhrs=1.2262470034 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.064200059 )*jun +(0 )*jul +(0.0759355704 )*aug
+(0.098005473 )*sep +(0.0905090934 )*oct +(0 )*nov +(0 )*dec    ;

 * stderr = 0.3448162454  ;

 mlognstrnhrs = 1.240889181 ;
 *  based on           3,226 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for singles continuing nonstop on entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -0.050 and max =  285.217   ;
```

```
 * model  fitted   24JUN05 13:12   ;
nstransithrs=4.4985148515 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(9.945929593 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0
)*oct +(0 )*nov +(0 )*dec +(0 )*thruother    ;

 * stderr = 16.659646711  ;

 mnstransithrs = 5.4593023256 ;
 *  based on             559 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for singles continuing straight through on entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -0.163 and max =    5.653   ;


 * model  fitted   24JUN05 13:12   ;
lognstrnhrs=1.2975409528 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0 )*dec +(0 )*thruother    ;

 * stderr = 0.5565172922  ;

 mlognstrnhrs = 1.2975409528 ;
 *  based on             558 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for doubles continuing nonstop on entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -2.533 and max =  140.500   ;


 * model  fitted   24JUN05 13:12   ;
nstransithrs=3.296111665 +(10.606666113 )*feb +(0 )*mar +(-0.494494414 )*apr +(-0.566547632 )*may +(-0.872977337 )*jun
+(-0.413132314 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0.4197706879 )*dec    ;

 * stderr = 1.8476036295  ;

 mnstransithrs = 3.0873581388 ;
 *  based on           4,112 observations;
```

```
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for doubles continuing straight through on entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -2.996 and max =    4.945   ;


 * model  fitted   24JUN05 13:12   ;
lognstrnhrs=1.1385265584 +(1.0160964959 )*feb +(0 )*mar +(-0.13387862 )*apr +(-0.191516888 )*may +(-0.276430023 )*jun
+(-0.161334567 )*jul +(0 )*aug +(0.0670674429 )*sep +(0 )*oct +(0 )*nov +(0.098911311 )*dec    ;

 * stderr = 0.2704614859  ;

 mlognstrnhrs = 1.0657664944 ;
 *  based on           4,111 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for singles continuing nonstop on entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -2.533 and max =  140.500   ;


 * model  fitted   24JUN05 13:12   ;
nstransithrs=3.5578629032 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(6.3261114557 )*jul +(0 )*aug +(0 )*sep
+(0 )*oct +(0 )*nov +(0 )*dec +(0 )*thruother    ;

 * stderr = 10.847468284  ;

 mnstransithrs = 4.1581508516 ;
 *  based on             274 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for singles continuing straight through on entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -2.996 and max =    4.945   ;


 * model  fitted   24JUN05 13:12   ;
```

```
lognstrnhrs=0.9184652822 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0 )*dec +(0 )*thruother    ;

 * stderr = 0.6624340807  ;

 mlognstrnhrs = 0.9184652822 ;
 *  based on             272 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for doubles continuing nonstop on entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =    1.400 and max =  137.500   ;


 * model  fitted   24JUN05 13:12   ;
nstransithrs=4.6361773885 +(1.527615715 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0.6691471232 )*jul +(0 )*aug
+(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec    ;

 * stderr = 2.600674152  ;

 mnstransithrs = 4.7391186353 ;
 *  based on           3,869 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for doubles continuing straight through on entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =    0.336 and max =    4.924   ;


 * model  fitted   24JUN05 13:12   ;
lognstrnhrs=1.5318208209 +(0.1834317753 )*feb +(-0.080834996 )*mar +(-0.060040108 )*apr +(0 )*may +(-0.037828359 )*jun
+(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(-0.092876639 )*nov +(0 )*dec    ;

 * stderr = 0.2709924099  ;

 mlognstrnhrs = 1.5051182391 ;
 *  based on           3,869 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** transit times for singles continuing nonstop on entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =    1.400 and max =  137.500   ;


 * model  fitted   24JUN05 13:12   ;
nstransithrs=5.9735018727 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0 )*dec +(0 )*thruother    ;

 * stderr = 10.794365891  ;

 mnstransithrs = 5.9735018727 ;
 *  based on             356 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for singles continuing straight through on entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =    0.336 and max =    4.924   ;


 * model  fitted   24JUN05 13:12   ;
lognstrnhrs=1.5451900513 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(-
0.269778032 )*nov +(0 )*dec +(0 )*thruother    ;

 * stderr = 0.5661440927  ;

 mlognstrnhrs = 1.4883547917 ;
 *  based on             356 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for doubles continuing nonstop on entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -0.300 and max =  628.167   ;


 * model  fitted   24JUN05 13:12   ;
nstransithrs=4.0443984723 +(4.438934861 )*feb +(0 )*mar +(0 )*apr +(-0.455306712 )*may +(-0.650083982 )*jun +(-
0.473347477 )*jul +(0 )*aug +(0.4931556402 )*sep +(0.2174412362 )*oct +(0 )*nov +(0.4318218903 )*dec    ;
```

```
 * stderr = 1.3265670503  ;

 mnstransithrs = 3.949444302 ;
 *  based on           3,899 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for doubles continuing straight through on entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -2.708 and max =    6.443   ;


 * model  fitted   24JUN05 13:12   ;
lognstrnhrs=1.3818856486 +(0.5625563067 )*feb +(0 )*mar +(-0.059815489 )*apr +(-0.140047608 )*may +(-0.190843753 )*jun
+(-0.139989728 )*jul +(0 )*aug +(0.088125443 )*sep +(0 )*oct +(0 )*nov +(0.0723040651 )*dec    ;

 * stderr = 0.2554652851  ;

 mlognstrnhrs = 1.3319350159 ;
 *  based on           3,899 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for singles continuing nonstop on entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -0.300 and max =  628.167   ;


 * model  fitted   24JUN05 13:12   ;
nstransithrs=3.6424085576 +(0 )*feb +(0 )*mar +(0 )*apr +(17.13568668 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0
)*oct +(0 )*nov +(0 )*dec +(0 )*thruother    ;

 * stderr = 27.903078911  ;

 mnstransithrs = 4.8002252252 ;
 *  based on            518 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for singles continuing straight through on entering pool MI24D ;
```

```
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -2.708 and max =    6.443   ;


 * model  fitted   24JUN05 13:12   ;
lognstrnhrs=1.132767866 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0 )*dec +(0 )*thruother    ;

 * stderr = 0.4542000724  ;

 mlognstrnhrs = 1.132767866 ;
 *  based on             517 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for doubles continuing nonstop on entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -4.667 and max =  369.700   ;


 * model  fitted   24JUN05 13:12   ;
nstransithrs=5.1300846354 +(0 )*feb +(1.3933689728 )*mar +(0 )*apr +(2.3699577734 )*may +(0 )*jun +(0 )*jul +(0 )*aug
+(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec    ;

 * stderr = 9.3233236432  ;

 mnstransithrs = 5.5706774419 ;
 *  based on           3,341 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for doubles continuing straight through on entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -0.244 and max =    5.913   ;


 * model  fitted   24JUN05 13:12   ;
lognstrnhrs=1.604970478 +(0.2230728996 )*feb +(0 )*mar +(0 )*apr +(0.0523856124 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0
)*sep +(0 )*oct +(-0.071989116 )*nov +(0 )*dec    ;

 * stderr = 0.3197716017  ;
```

```
 mlognstrnhrs = 1.6079272249 ;
 *  based on           3,339 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for singles continuing nonstop on entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -4.667 and max =  369.700   ;


 * model  fitted   24JUN05 13:12   ;
nstransithrs=4.7519417476 +(0 )*feb +(0 )*mar +(0 )*apr +(16.453827483 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep
+(0 )*oct +(0 )*nov +(0 )*dec +(0 )*thruother    ;

 * stderr = 16.661104373  ;

 mnstransithrs = 5.5426987061 ;
 *  based on             541 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for singles continuing straight through on entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -0.244 and max =    5.913   ;


 * model  fitted   24JUN05 13:12   ;
lognstrnhrs=1.4266439293 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0 )*dec +(0 )*thruother    ;

 * stderr = 0.4541808912  ;

 mlognstrnhrs = 1.4266439293 ;
 *  based on             541 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for doubles continuing nonstop on entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -4.967 and max =  526.083   ;
```

```
 * model  fitted   24JUN05 13:12   ;
nstransithrs=4.6063239645 +(2.1819113296 )*feb +(0 )*mar +(-0.570302459 )*apr +(-0.7831039 )*may +(-0.962566706 )*jun
+(-0.71087952 )*jul +(0 )*aug +(0.5294735265 )*sep +(0.266247037 )*oct +(0 )*nov +(0.5628743477 )*dec    ;

 * stderr = 1.4880697336  ;

 mnstransithrs = 4.3811371509 ;
 *  based on           4,523 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for doubles continuing straight through on entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -0.288 and max =    6.265   ;


 * model  fitted   24JUN05 13:12   ;
lognstrnhrs=1.5924387393 +(0.207868233 )*feb +(-0.139986413 )*mar +(-0.220179998 )*apr +(-0.287832995 )*may +(-
0.326195499 )*jun +(-0.263571767 )*jul +(-0.082484221 )*aug +(0 )*sep +(-0.049465171 )*oct +(-0.093325949 )*nov +(0
)*dec    ;

 * stderr = 0.2451167703  ;

 mlognstrnhrs = 1.435815069 ;
 *  based on           4,522 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for singles continuing nonstop on entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -4.967 and max =  526.083   ;


 * model  fitted   24JUN05 13:12   ;
nstransithrs=4.0373382625 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep
+(5.7306617375 )*oct +(0 )*nov +(0 )*dec +(0 )*thruother    ;

 * stderr = 13.026599994  ;
```

```
 mnstransithrs = 4.7350649351 ;
 *  based on             616 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for singles continuing straight through on entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -0.288 and max =    6.265   ;


 * model  fitted   24JUN05 13:12   ;
lognstrnhrs=1.2763611396 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0 )*dec +(0 )*thruother    ;

 * stderr = 0.4713971626  ;

 mlognstrnhrs = 1.2763611396 ;
 *  based on             616 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for doubles continuing nonstop on entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -4.333 and max =  113.633   ;


 * model  fitted   24JUN05 13:12   ;
nstransithrs=7.0114682847 +(1.8079761597 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug
+(0.4330885554 )*sep +(0 )*oct +(0 )*nov +(0 )*dec    ;

 * stderr = 2.9655305739  ;

 mnstransithrs = 7.0644567003 ;
 *  based on           4,261 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for doubles continuing straight through on entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =    0.811 and max =    4.733   ;
```

```
 * model  fitted   24JUN05 13:12   ;
lognstrnhrs=1.8835440497 +(0.1712872273 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0.0446837049 )*jun +(0.0672920328 )*jul
+(0.0506007443 )*aug +(0.0877678135 )*sep +(0.043666741 )*oct +(0 )*nov +(0 )*dec    ;

 * stderr = 0.2566792145  ;

 mlognstrnhrs = 1.9169637465 ;
 *  based on           4,262 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for singles continuing nonstop on entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -4.333 and max =  113.633   ;


 * model  fitted   24JUN05 13:12   ;
nstransithrs=5.8112073112 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0 )*dec +(0 )*thruother    ;

 * stderr = 4.3779126759  ;

 mnstransithrs = 5.8112073112 ;
 *  based on             693 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for singles continuing straight through on entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =    0.811 and max =    4.733   ;


 * model  fitted   24JUN05 13:12   ;
lognstrnhrs=1.6548588261 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0 )*dec +(0 )*thruother    ;

 * stderr = 0.3790074523  ;

 mlognstrnhrs = 1.6548588261 ;
 *  based on             693 observations;
```

```
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for doubles continuing nonstop on entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -0.850 and max =  464.450   ;


 * model  fitted   24JUN05 13:12   ;
nstransithrs=5.8844570539 +(0 )*feb +(0 )*mar +(0 )*apr +(-0.598922463 )*may +(-0.811432006 )*jun +(-0.500457054 )*jul
+(1.0135882136 )*aug +(0.4296733809 )*sep +(0 )*oct +(0 )*nov +(0.5250992601 )*dec    ;

 * stderr = 2.6667010248  ;

 mnstransithrs = 5.8513369646 ;
 *  based on           4,039 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for doubles continuing straight through on entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =    0.372 and max =    6.141   ;


 * model  fitted   24JUN05 13:12   ;
lognstrnhrs=1.8100672441 +(0 )*feb +(-0.106405757 )*mar +(-0.117562115 )*apr +(-0.179470022 )*may +(-0.2153247 )*jun
+(-0.148861564 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(-0.050311207 )*nov +(0 )*dec    ;

 * stderr = 0.2493283783  ;

 mlognstrnhrs = 1.7224033209 ;
 *  based on           4,037 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for singles continuing nonstop on entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -0.850 and max =  464.450   ;


 * model  fitted   24JUN05 13:12   ;
```

```
nstransithrs=6.9495437956 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0 )*dec +(0 )*thruother    ;

 * stderr = 22.641671554  ;

 mnstransithrs = 6.9495437956 ;
 *  based on             548 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for singles continuing straight through on entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =    0.372 and max =    6.141   ;


 * model  fitted   24JUN05 13:12   ;
lognstrnhrs=1.5953703194 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0 )*dec +(0 )*thruother    ;

 * stderr = 0.4977017598  ;

 mlognstrnhrs = 1.5953703194 ;
 *  based on             548 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** lockage  times (hours) for double lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.115 and max =   12.525  ;


 * model  fitted   24JUN05 13:12   ;
dlockhrs=1.8627836912 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.058573742 )*jun +(0 )*jul +(0 )*aug +(0.212260242
)*sep +(0.1742146381 )*oct +(0 )*nov +(0 )*dec +(-0.310980269 )*pturnback +(0 )*pexchange    ;

 * stderr = 0.4634774546  ;

 mdlckhrs = 1.7810085 ;
 *  based on           4,162 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -2.165 and max =    2.528   ;


 * model  fitted   24JUN05 13:12   ;
lgdlckhrs=0.5862681455 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.032496274 )*jun +(0 )*jul +(0 )*aug +(0.1091215251
)*sep +(0.1002919491 )*oct +(0 )*nov +(0 )*dec +(-0.170340915 )*pturnback +(0.0208603397 )*pexchange    ;

 * stderr = 0.20347005  ;

 mlgdlckhrs = 0.5493349277 ;
 *  based on           4,162 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.115 and max =   12.525   ;


 * model  fitted   24JUN05 13:12   ;
slockhrs=0.4783398117 +(1.0434363844 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0
)*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.114263734 )*pturnback +(0 )*pexchange
;
```

```
 * stderr = 0.4470557949  ;

 mslckhrs = 0.4581664418 ;
 *  based on           1,543 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -2.165 and max =    2.528   ;


 * model  fitted   24JUN05 13:12   ;
lgslckhrs=-0.848084783 +(0.3797302102 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.1253124 )*jun +(-0.13224382 )*jul +(0
)*aug +(0.114171798 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*poththype +(-0.205455223
)*pturnback +(0 )*
pexchange    ;

 * stderr = 0.4356313295  ;

 mlgslckhrs = -0.905606685 ;
 *  based on           1,544 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.115 and max =   27.689  ;


 * model  fitted   24JUN05 13:12   ;
dlockhrs=1.950407782 +(1.8200840214 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.074505424 )*jun +(0 )*jul +(0 )*aug +(0
)*sep +(0 )*oct +(0 )*nov +(0.2285343483 )*dec +(-0.169382757 )*pturnback +(-0.087207964 )*pexchange    ;

 * stderr = 0.603738298  ;

 mdlckhrs = 1.8633792009 ;
 *  based on           4,358 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** log(lockage times) for double lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -2.165 and max =    3.321   ;


 * model  fitted   24JUN05 13:12   ;
lgdlckhrs=0.6477531655 +(0.6794522793 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.02996301 )*jun +(0 )*jul +(0 )*aug +(0
)*sep +(0.030199038 )*oct +(0 )*nov +(0.0577791659 )*dec +(-0.090667474 )*pturnback +(-0.052569031 )*pexchange    ;

 * stderr = 0.1798411864  ;

 mlgdlckhrs = 0.5995084721 ;
 *  based on           4,357 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.115 and max =   27.689   ;


 * model  fitted   24JUN05 13:12   ;
slockhrs=0.4639962044 +(0.4272109491 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0
)*oct +(0.0908795269 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.080434989 )*pturnback +(0
)*pexchange    ;

 * stderr = 0.3716008544  ;

 mslckhrs = 0.4521678587 ;
 *  based on           1,295 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -2.165 and max =    3.321   ;


 * model  fitted   24JUN05 13:12   ;
```

```
lgslckhrs=-0.884018874 +(0 )*feb +(0 )*mar +(0 )*apr +(-0.140328034 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep
+(0.1000398947 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.119556479 )*pturnback +(0
)*pexchange    ;

 * stderr = 0.4484976598  ;

 mlgslckhrs = -0.917047191 ;
 *  based on           1,296 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.148 and max =   13.410  ;


 * model  fitted   24JUN05 13:12   ;
dlockhrs=1.9200142881 +(0.4351291002 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.071296819 )*aug
+(0.1893185748 )*sep +(0.1824631616 )*oct +(0 )*nov +(0 )*dec +(-0.406577338 )*pturnback +(-0.059674274 )*pexchange
;

 * stderr = 0.4795210823  ;

 mdlckhrs = 1.8070629656 ;
 *  based on           4,293 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -1.914 and max =    2.596   ;


 * model  fitted   24JUN05 13:12   ;
lgdlckhrs=0.6281336585 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0436277398 )*aug +(0.1104505512
)*sep +(0.1030040682 )*oct +(0 )*nov +(0 )*dec +(-0.235304289 )*pturnback +(-0.028471418 )*pexchange    ;

 * stderr = 0.1979930283  ;

 mlgdlckhrs = 0.5635660524 ;
 *  based on           4,293 observations;
```

```
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.148 and max =   13.410   ;


 * model  fitted   24JUN05 13:12   ;
slockhrs=0.5373875086 +(0.3990850209 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.0619646789
)*sep +(0.0579901965 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.185017664
)*pturnback +(-0.128481003 )*
pexchange    ;

 * stderr = 0.229564  ;

 mslckhrs = 0.4523063603 ;
 *  based on           1,439 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -1.914 and max =    2.596   ;


 * model  fitted   24JUN05 13:12   ;
lgslckhrs=-0.703789618 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.1490240765 )*sep
+(0.1110521468 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.3895724 )*pturnback +(-
0.329657254 )*pexchange
   ;

 * stderr = 0.4337809675  ;

 mlgslckhrs = -0.910955641 ;
 *  based on           1,444 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
```

```
 *** with time screen between min =    0.131 and max =   10.705  ;


 * model  fitted   24JUN05 13:12   ;
dlockhrs=2.1722989271 +(1.3326625368 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.054500659 )*jun +(0 )*jul +(0 )*aug +(0
)*sep +(0.1256772406 )*oct +(0.0748230574 )*nov +(0.1670637403 )*dec +(-0.399018216 )*pturnback +(-0.294288019
)*pexchange    ;

 * stderr = 0.437372541  ;

 mdlckhrs = 1.9562214399 ;
 *  based on           4,531 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -2.031 and max =    2.371   ;


 * model  fitted   24JUN05 13:12   ;
lgdlckhrs=0.7773083088 +(0.33796831 )*feb +(0 )*mar +(0 )*apr +(-0.027687245 )*may +(-0.042925139 )*jun +(-0.031479787
)*jul +(0 )*aug +(0 )*sep +(0.0392522507 )*oct +(0.0252585184 )*nov +(0.0566660714 )*dec +(-0.20561122 )*pturnback +(-
0.150898769 )*
pexchange    ;

 * stderr = 0.1680478316  ;

 mlgdlckhrs = 0.6505689335 ;
 *  based on           4,531 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.131 and max =   10.705   ;


 * model  fitted   24JUN05 13:12   ;
```

```
slockhrs=0.5509708738 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.146755417 )*pturnback +(-0.12041379 )*pexchange
;

 * stderr = 0.2509064508  ;

 mslckhrs = 0.4606954716 ;
 *  based on           1,279 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -2.031 and max =    2.371   ;


 * model  fitted   24JUN05 13:12   ;
lgslckhrs=-0.702170428 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.1076326246 )*aug +(0 )*sep +(0
)*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.304951814 )*pturnback +(-0.264732599
)*pexchange    ;

 * stderr = 0.426012727  ;

 mlgslckhrs = -0.882972789 ;
 *  based on           1,277 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.148 and max =   14.541  ;


 * model  fitted   24JUN05 13:12   ;
dlockhrs=2.1958998794 +(0.2649362794 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.091691914 )*jun +(-0.08655735 )*jul +(0
)*aug +(0.2492828655 )*sep +(0.202025939 )*oct +(0 )*nov +(0 )*dec +(-0.458316672 )*pturnback +(-0.117801277
)*pexchange    ;

 * stderr = 0.558075946  ;

 mdlckhrs = 1.9790942879 ;
```

```
 *  based on           4,327 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -1.914 and max =    2.677   ;


 * model  fitted   24JUN05 13:12   ;
lgdlckhrs=0.7644596753 +(0.0974208449 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.039425701 )*jun +(-0.039910191 )*jul +(0
)*aug +(0.1105491425 )*sep +(0.0935981382 )*oct +(0 )*nov +(0 )*dec +(-0.242953456 )*pturnback +(-0.056415622
)*pexchange    ;

 * stderr = 0.2119908917  ;

 mlgdlckhrs = 0.6505495528 ;
 *  based on           4,327 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.148 and max =   14.541   ;


 * model  fitted   24JUN05 13:12   ;
slockhrs=0.7991751418 +(0.5059343674 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0
)*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.384372463 )*pturnback +(-0.31154075
)*pexchange    ;

 * stderr = 0.6169176852  ;

 mslckhrs = 0.5512661318 ;
 *  based on           1,175 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -1.914 and max =    2.677   ;
```

```
 * model  fitted   24JUN05 13:12   ;
lgslckhrs=-0.379247137 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.118549728 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0
)*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.57344693 )*pturnback +(-0.444404765
)*pexchange    ;

 * stderr = 0.4515893979  ;

 mlgslckhrs = -0.76166153 ;
 *  based on           1,176 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.164 and max =   29.885  ;


 * model  fitted   24JUN05 13:12   ;
dlockhrs=2.4866955284 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.118100143 )*jun +(-0.110942874 )*jul +(0 )*aug +(0
)*sep +(0.1021783282 )*oct +(0 )*nov +(0 )*dec +(-0.498554122 )*pturnback +(-0.360057324 )*pexchange    ;

 * stderr = 0.619722608  ;

 mdlckhrs = 2.1279525145 ;
 *  based on           4,546 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -1.808 and max =    3.397   ;


 * model  fitted   24JUN05 13:12   ;
lgdlckhrs=0.8805701946 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.043890997 )*jun +(-0.043101814 )*jul +(0 )*aug +(0
)*sep +(0.0302125249 )*oct +(0 )*nov +(0.0387523434 )*dec +(-0.221399269 )*pturnback +(-0.151317758 )*pexchange    ;

 * stderr = 0.1977350281  ;
```

```
 mlgdlckhrs = 0.7276220145 ;
 *  based on           4,546 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.164 and max =   29.885   ;


 * model  fitted   24JUN05 13:12   ;
slockhrs=0.844840487 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.288234417 )*pturnback +(-0.341522243 )*pexchange
;

 * stderr = 0.7030949166  ;

 mslckhrs = 0.6053174015 ;
 *  based on           1,018 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -1.808 and max =    3.397   ;


 * model  fitted   24JUN05 13:12   ;
lgslckhrs=-0.325170048 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.425275643 )*pturnback +(-0.461865369 )*pexchange
;

 * stderr = 0.4485126334  ;

 mlgslckhrs = -0.663173135 ;
 *  based on           1,018 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
```

```
 *** with time screen between min =    0.131 and max =   11.475  ;


 * model  fitted   24JUN05 13:12   ;
dlockhrs=1.78036695 +(0 )*feb +(0.0836196008 )*mar +(0.0535144991 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.1258876067
)*aug +(0.2355990249 )*sep +(0.2585929729 )*oct +(0.2276301143 )*nov +(0.1575408491 )*dec +(-0.216687279 )*pturnback
+(0 )*pexchange    ;

 * stderr = 0.4048105248  ;

 mdlckhrs = 1.7859471113 ;
 *  based on           4,456 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -2.031 and max =    2.440   ;


 * model  fitted   24JUN05 13:12   ;
lgdlckhrs=0.5685851157 +(0 )*feb +(0.04168753 )*mar +(0.0363566666 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0776798615
)*aug +(0.1366127403 )*sep +(0.151095082 )*oct +(0.1324928774 )*nov +(0.0853752485 )*dec +(-0.140489624 )*pturnback +(-
0.023247025 )*
pexchange    ;

 * stderr = 0.1895529793  ;

 mlgdlckhrs = 0.5568841582 ;
 *  based on           4,456 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.131 and max =   11.475   ;


 * model  fitted   24JUN05 13:12   ;
```

```
slockhrs=0.5837877881 +(0 )*feb +(-0.056489451 )*mar +(-0.095058384 )*apr +(-0.127780044 )*may +(-0.096598065 )*jun +(-
0.10209369 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-
0.10842217 )*
pturnback +(-0.097978404 )*pexchange    ;

 * stderr = 0.1789729486  ;

 mslckhrs = 0.4734690181 ;
 *  based on           1,267 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -2.031 and max =    2.440   ;


 * model  fitted   24JUN05 13:12   ;
lgslckhrs=-0.585981472 +(0 )*feb +(-0.135874603 )*mar +(-0.237510143 )*apr +(-0.302209548 )*may +(-0.225506229 )*jun
+(-0.226773654 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype
+(-0.217730982 )*
pturnback +(-0.197177365 )*pexchange    ;

 * stderr = 0.3492166588  ;

 mlgslckhrs = -0.819848282 ;
 *  based on           1,266 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.131 and max =   12.951  ;


 * model  fitted   24JUN05 13:12   ;
dlockhrs=2.1524597677 +(0 )*feb +(0 )*mar +(0 )*apr +(-0.140621674 )*may +(-0.189190123 )*jun +(-0.130666007 )*jul +(0
)*aug +(0.1151065072 )*sep +(0.130026092 )*oct +(0 )*nov +(0.1862778743 )*dec +(-0.158015933 )*pturnback +(0
)*pexchange    ;

 * stderr = 0.6004034192  ;
```

```
 mdlckhrs = 2.0665329798 ;
 *  based on           4,717 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -2.031 and max =    2.561   ;


 * model  fitted   24JUN05 13:12   ;
lgdlckhrs=0.7822298708 +(0 )*feb +(-0.034000001 )*mar +(-0.054875924 )*apr +(-0.103702302 )*may +(-0.125719863 )*jun
+(-0.098807076 )*jul +(-0.042143646 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0.0394306452 )*dec +(-0.078476363 )*pturnback
+(0 )*pexchange
   ;

 * stderr = 0.1865005697  ;

 mlgdlckhrs = 0.701385526 ;
 *  based on           4,716 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.131 and max =   12.951   ;


 * model  fitted   24JUN05 13:12   ;
slockhrs=0.5522851465 +(0 )*feb +(0 )*mar +(-0.161275925 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0
)*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pturnback +(0 )*pexchange    ;

 * stderr = 0.6525186475  ;

 mslckhrs = 0.5326622203 ;
 *  based on           1,052 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI25D ;
```

```
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -2.031 and max =    2.561   ;


 * model  fitted   24JUN05 13:12   ;
lgslckhrs=-0.558160335 +(0 )*feb +(-0.15157409 )*mar +(-0.352574905 )*apr +(-0.288017323 )*may +(-0.258619455 )*jun +(-
0.229564942 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-
0.142097369 )*
pturnback +(-0.117401159 )*pexchange    ;

 * stderr = 0.4232814187  ;

 mlgslckhrs = -0.772296929 ;
 *  based on           1,051 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.098 and max =   11.836  ;


 * model  fitted   24JUN05 13:12   ;
dlockhrs=1.9499533804 +(0.4225651193 )*feb +(0 )*mar +(0 )*apr +(-0.109008906 )*may +(-0.157569369 )*jun +(-0.134505841
)*jul +(0 )*aug +(0.1550721341 )*sep +(0.1686208678 )*oct +(0 )*nov +(-0.171993721 )*dec +(-0.324719544 )*pturnback +(0
)*pexchange
   ;

 * stderr = 0.5426940701  ;

 mdlckhrs = 1.7951956069 ;
 *  based on           4,472 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -2.319 and max =    2.471   ;


 * model  fitted   24JUN05 13:12   ;
```

```
lgdlckhrs=0.6661930208 +(0 )*feb +(0 )*mar +(0 )*apr +(-0.058276394 )*may +(-0.089254208 )*jun +(-0.072420675 )*jul +(0
)*aug +(0.08183678 )*sep +(0.0771893918 )*oct +(0 )*nov +(-0.093711236 )*dec +(-0.20856828 )*pturnback +(-0.033120462
)*pexchange    ;

 * stderr = 0.2226251127  ;

 mlgdlckhrs = 0.5509707219 ;
 *  based on           4,472 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.098 and max =   11.836   ;


 * model  fitted   24JUN05 13:12   ;
slockhrs=0.4355659662 +(0.1190725418 )*feb +(0 )*mar +(-0.093283848 )*apr +(-0.092626575 )*may +(-0.109366007 )*jun +(-
0.088485574 )*jul +(-0.046806036 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0
)*pothtype +(
-0.050273728 )*pturnback +(-0.040052663 )*pexchange    ;

 * stderr = 0.2401460939  ;

 mslckhrs = 0.3702414601 ;
 *  based on           2,030 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -2.319 and max =    2.471   ;


 * model  fitted   24JUN05 13:12   ;
lgslckhrs=-0.93860769 +(0.2047667784 )*feb +(0 )*mar +(-0.221763583 )*apr +(-0.257842196 )*may +(-0.291981426 )*jun +(-
0.234935064 )*jul +(-0.097731465 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0
)*pothtype +(
-0.174536367 )*pturnback +(-0.093590337 )*pexchange    ;

 * stderr = 0.4451204736  ;
```

```
 mlgslckhrs = -1.116680856 ;
 *  based on           2,028 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.082 and max =   27.836  ;


 * model  fitted   24JUN05 13:12   ;
dlockhrs=2.3568545432 +(-0.44450039 )*feb +(0 )*mar +(0 )*apr +(-0.181390157 )*may +(-0.182878515 )*jun +(-0.196795356
)*jul +(-0.061522608 )*aug +(0.0844954485 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.440342924 )*pturnback +(-0.289471349
)*pexchange    ;

 * stderr = 0.4820660212  ;

 mdlckhrs = 1.9874131057 ;
 *  based on           4,733 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -2.501 and max =    3.326   ;


 * model  fitted   24JUN05 13:12   ;
lgdlckhrs=0.8246879304 +(-0.328271707 )*feb +(0 )*mar +(0 )*apr +(-0.082808723 )*may +(-0.082924342 )*jun +(-
0.088904667 )*jul +(0 )*aug +(0.0380888989 )*sep +(0.0268419746 )*oct +(0 )*nov +(0 )*dec +(-0.20727846 )*pturnback +(-
0.125104588 )*pexchange
   ;

 * stderr = 0.1933592695  ;

 mlgdlckhrs = 0.6626621039 ;
 *  based on           4,733 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** lockage  times (hours) for single lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.082 and max =   27.836   ;


 * model  fitted   24JUN05 13:12   ;
slockhrs=0.4384080094 +(0.1989604789 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.094623233 )*jun +(-0.0696205 )*jul +(0
)*aug +(0.0836600402 )*sep +(0 )*oct +(0 )*nov +(0.1218879565 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-
0.072875913 )*
pturnback +(0 )*pexchange    ;

 * stderr = 0.2522357923  ;

 mslckhrs = 0.4173841255 ;
 *  based on           1,251 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -2.501 and max =    3.326   ;


 * model  fitted   24JUN05 13:12   ;
lgslckhrs=-0.835659055 +(0 )*feb +(0 )*mar +(0 )*apr +(-0.153789421 )*may +(-0.302745418 )*jun +(-0.22898103 )*jul +(0
)*aug +(0.1333944017 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.223008
)*pturnback +(
-0.115188773 )*pexchange    ;

 * stderr = 0.4641367986  ;

 mlgslckhrs = -1.002634108 ;
 *  based on           1,251 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 14:22 Friday, June 24, 2005 1

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	655	0	2498770275	3814916.45	3494149.00	4327938.00
strtlcktime	Start/lockge/time	655	0	869318470920	1327203772	1270200600	1382713200
arrtime	Arriv/time	655	0	869318345520	1327203581	1270200600	1382713200
deptime	Leave/lockge/time	655	0	869319054540	1327204663	1270201080	1382714100
BOW_OVER_SILL	BOW_OVER_SILL	0	655	.	.	.	.
END_OF_ENTRY	END_OF_ENTRY	0	655	.	.	.	.
START_OF_EXIT	START_OF_EXIT	0	655	.	.	.	.
SIGNAL_DATE	SIGNAL_DATE	0	655	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	655	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	0	655	.	.	.	.
NUM_EMPTY_BRG	NUM_EMPTY_BRG	0	655	.	.	.	.
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	655	.	.	.	.
vess_no		655	0	6549999345	9999999.00	9999999.00	9999999.00
vss_hp		0	655	.	.	.	.
frsttime		655	0	869318345520	1327203581	1270200600	1382713200
lasttime		655	0	869319054540	1327204663	1270201080	1382714100
newpoolno		655	0	10379.00	15.8458015	1.0000000	56.0000000
oldpoolno		655	0	10364.00	15.8229008	1.0000000	56.0000000
waitmin	Wait/before/lockge	655	0	2090.00	3.1908397	0	154.0000000
lockmin	Wait/lockge/time	655	0	9727.00	14.8503817	2.0000000	55.0000000
year		655	0	1310981.00	2001.50	2000.00	2003.00
fly		655	0	565.0000000	0.8625954	0	1.0000000
turnback		655	0	30.0000000	0.0458015	0	1.0000000
exchange		655	0	60.0000000	0.0916031	0	1.0000000
lock		655	0	10044.00	15.3343511	1.0000000	55.0000000
totmin		655	0	11817.00	18.0412214	2.0000000	200.0000000
month		655	0	4743.00	7.2412214	1.0000000	12.0000000
day		655	0	9943.00	15.1801527	1.0000000	31.0000000
sunrise		429	226	9335124.00	21760.20	19367.00	27557.00
sunset		429	226	31142586.00	72593.44	60134.00	75777.00
sequpstr		655	0	0	0	0	0
seqdstr		655	0	0	0	0	0
plock		655	0	13100.00	20.0000000	20.0000000	20.0000000
pempty		0	655	.	.	.	.
pfull		0	655	.	.	.	.
parrtime		655	0	869318143020	1327203272	1270200360	1382712900
pstrtlcktime		655	0	869318889540	1327204412	1270201020	1382712900
pdeptime		655	0	869319392400	1327205179	1270201620	1382713500
birth		655	0	0	0	0	0
transithrs		655	0	-290.8000000	-0.4439695	-8.9000000	9.0666667
reclock		655	0	655.0000000	1.0000000	1.0000000	1.0000000
i		655	0	113712.00	173.6061069	58.0000000	401.0000000
pctpsysdn		655	0	136.5230000	0.2084321	0	97.4360000
pctplckdn		655	0	97.9740000	0.1495786	0	97.9740000
cumdown		103	552	0	0	0	0
pctdown		103	552	0	0	0	0
pcttrandn		3	652	0	0	0	0
pctsysdn		103	552	0	0	0	0
pctlckdn		103	552	0	0	0	0
stime		655	0	31136520.00	47536.67	25200.00	79440.00
etime		655	0	31720140.00	48427.69	25920.00	79920.00
sdate		655	0	10061196.00	15360.60	14701.00	16003.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		655	0	10061196.00	15360.60	14701.00	16003.00
hrsduration		655	0	162.1166667	0.2475064	0.0333333	0.9166667
ndays		655	0	0	0	0	0
pctday		655	0	42088.06	64.2565740	0	100.0000000
pctpsysnite		655	0	23553.20	35.9590763	0	100.0000000
pctplcknite		655	0	23739.24	36.2431176	0	100.0000000
pcttrannite		655	0	23739.24	36.2431176	0	100.0000000
pctsysnite		655	0	23411.94	35.7434260	0	100.0000000
pctlcknite		655	0	23411.94	35.7434260	0	100.0000000
stage		72	583	1447.48	20.1038889	10.9300000	27.3500000
flow		28	627	2766476.61	98802.74	38724.09	206876.39
jan		655	0	1.0000000	0.0015267	0	1.0000000
feb		655	0	0	0	0	0
mar		655	0	5.0000000	0.0076336	0	1.0000000
apr		655	0	21.0000000	0.0320611	0	1.0000000
may		655	0	62.0000000	0.0946565	0	1.0000000
jun		655	0	92.0000000	0.1404580	0	1.0000000
jul		655	0	161.0000000	0.2458015	0	1.0000000
aug		655	0	191.0000000	0.2916031	0	1.0000000
sep		655	0	97.0000000	0.1480916	0	1.0000000
oct		655	0	23.0000000	0.0351145	0	1.0000000
nov		655	0	1.0000000	0.0015267	0	1.0000000
dec		655	0	1.0000000	0.0015267	0	1.0000000
m31day		655	0	444.0000000	0.6778626	0	1.0000000
m30day		655	0	211.0000000	0.3221374	0	1.0000000
qtr1		655	0	6.0000000	0.0091603	0	1.0000000
qtr2		655	0	175.0000000	0.2671756	0	1.0000000
qtr3		655	0	449.0000000	0.6854962	0	1.0000000
qtr4		655	0	25.0000000	0.0381679	0	1.0000000
psingle		655	0	655.0000000	1.0000000	1.0000000	1.0000000
pdouble		655	0	0	0	0	0
pknockout		655	0	0	0	0	0
pjacknife		655	0	0	0	0	0
pothtype		655	0	0	0	0	0
pexchange		655	0	296.0000000	0.4519084	0	1.0000000
pturnback		655	0	170.0000000	0.2595420	0	1.0000000
single		655	0	655.0000000	1.0000000	1.0000000	1.0000000
double		655	0	0	0	0	0
knockout		655	0	0	0	0	0
jacknife		655	0	0	0	0	0
othtype		655	0	0	0	0	0
contthru		655	0	0	0	0	0
return		655	0	1.0000000	0.0015267	0	1.0000000
contstop		655	0	2.0000000	0.0030534	0	1.0000000
kill		655	0	652.0000000	0.9954198	0	1.0000000
contsame		655	0	0	0	0	0
contdouble		655	0	0	0	0	0
contsingle		655	0	2.0000000	0.0030534	0	1.0000000
contko		655	0	0	0	0	0
contjk		655	0	0	0	0	0
retdouble		655	0	0	0	0	0
retsingle		655	0	1.0000000	0.0015267	0	1.0000000

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 14:22 Friday, June 24, 2005 3

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		655	0	0	0	0	0
retjk		655	0	0	0	0	0
xkill		655	0	652.0000000	0.9954198	0	1.0000000
logtrnhrs		15	640	-21.0447529	-1.4029835	-4.0943446	2.2046047
plockhrs		655	0	137.3934426	0.2097610	0.0163934	8.9016393
loglckhrs		655	0	-1091.79	-1.6668614	-4.1108739	2.1862355
thrusingle		655	0	0	0	0	0
thruother		655	0	0	0	0	0
contother		655	0	0	0	0	0
retother		655	0	0	0	0	0
thrudoubnite		655	0	0	0	0	0
thrusingnite		655	0	0	0	0	0
thruothnite		655	0	0	0	0	0
pdoubnite		655	0	0	0	0	0
psingnite		655	0	237.3924200	0.3624312	0	1.0000000
pothnite		655	0	0	0	0	0

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 14:22 Friday, June 24, 2005 4

The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI2OU

pconfig doutcome

Frequency Percent Row Pct Col Pct	3:contsingle	7:retsingle	x:kill	Total
2:single	2 0.31 0.31 100.00	1 0.15 0.15 100.00	652 99.54 99.54 100.00	655 100.00
Total	2 0.31	1 0.15	652 99.54	655 100.00

Table 1 of pconfig by nextstep
Controlling for pnewpool=MI2OU

pconfig nextstep

Frequency Percent Row Pct Col Pct	2:contst	3:return	4:kill	Total
2:single	2 0.31 0.31 100.00	1 0.15 0.15 100.00	652 99.54 99.54 100.00	655 100.00
Total	2 0.31	1 0.15	652 99.54	655 100.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	36938	0	147725720274	3999288.54	3494031.00	4332992.00
strtlcktime	Start/lockge/time	36938	0	4.9059871E13	1328168045	1262343000	1388404500
arrtime	Arriv/time	36938	0	4.9059854E13	1328167577	1262343000	1388404500
deptime	Leave/lockge/time	36938	0	4.9059906E13	1328168983	1262344020	1388405400
BOW_OVER_SILL	BOW_OVER_SILL	0	36938	.	.	.	.
END_OF_ENTRY	END_OF_ENTRY	0	36938	.	.	.	.
START_OF_EXIT	START_OF_EXIT	0	36938	.	.	.	.
SIGNAL_DATE	SIGNAL_DATE	0	36938	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	36938	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	0	36938	.	.	.	.
NUM_EMPTY_BRG	NUM_EMPTY_BRG	0	36938	.	.	.	.
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	36938	.	.	.	.
vess_no		36938	0	369379963062	9999999.00	9999999.00	9999999.00
vss_hp		0	36938	.	.	.	.
frsttime		36938	0	4.9059854E13	1328167577	1262343000	1388404500
lasttime		36938	0	4.9059906E13	1328168983	1262344020	1388405400
newpoolno		36938	0	692650.00	18.7516920	1.0000000	56.0000000
oldpoolno		36938	0	688914.00	18.6505496	1.0000000	56.0000000
waitmin	Wait/before/lockge	36938	0	287826.00	7.7921382	0	14400.00
lockmin	Wait/lockge/time	36938	0	577690.00	15.6394499	1.0000000	543.0000000
year		36938	0	73930941.00	2001.49	2000.00	2003.00
fly		36938	0	27993.00	0.7578375	0	1.0000000
turnback		36938	0	3417.00	0.0925064	0	1.0000000
exchange		36938	0	5528.00	0.1496562	0	1.0000000
lock		36938	0	672313.00	18.2011208	1.0000000	55.0000000
totmin		36938	0	865516.00	23.4315881	1.0000000	14410.00
month		36938	0	285513.00	7.7295197	1.0000000	12.0000000
day		36938	0	559099.00	15.1361471	1.0000000	31.0000000
sunrise		29102	7836	654057969	22474.67	19360.00	28091.00
sunset		29102	7836	2070633904	71150.91	59437.00	75777.00
sequpstr		36938	0	0	0	0	0
seqdstr		36938	0	0	0	0	0
plock		36938	0	629449.00	17.0406898	1.0000000	55.0000000
pempty		0	36938	.	.	.	.
pfull		0	36938	.	.	.	.
parrtime		36938	0	4.9059824E13	1328166775	1262331720	1388310900
pstrtlcktime		36938	0	4.9059843E13	1328167276	1262331720	1388310900
pdeptime		36938	0	4.9059877E13	1328168205	1262332920	1388312280
birth		36938	0	0	0	0	0
transithrs		36938	0	-6446.40	-0.1745195	-240.0000000	192.3500000
reclock		36938	0	36938.00	1.0000000	1.0000000	1.0000000
i		36938	0	8077413.00	218.6748876	58.0000000	401.0000000
pctpsysdn		20239	16699	2230.95	0.1102301	0	97.4360000
pctplckdn		20239	16699	795.2970000	0.0392953	0	97.9740000
cumdown		19520	17418	48060.00	2.4620902	0	31920.00
pctdown		19520	17418	632.3230000	0.0323936	0	97.9740000
pcttrandn		1749	35189	891.0290000	0.5094505	0	100.0000000
pctsysdn		19520	17418	2029.43	0.1039664	0	97.4360000
pctlckdn		19520	17418	632.3230000	0.0323936	0	97.9740000
stime		36938	0	1790784060	48480.81	0	86340.00
etime		36938	0	1821643860	49316.26	0	86340.00
sdate		36938	0	567801857	15371.75	14610.00	16069.00

Statistics from water.regfile for regfile 14:22 Friday, June 24, 2005 6

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		36938	0	567801901	15371.76	14610.00	16069.00
hrsduration		36938	0	9628.17	0.2606575	0.0166667	9.0500000
ndays		36938	0	0	0	0	0
pctday		36925	13	2701136.03	73.1519576	0	100.0000000
pctpsysnite		36919	19	987810.19	26.7561471	0	100.0000000
pctplcknite		36926	12	993788.49	26.9129744	0	100.0000000
pcttrannite		36874	64	991563.73	26.8905930	0	100.0000000
pctsysnite		36925	13	984325.35	26.6574231	0	100.0000000
pctlcknite		36925	13	991363.97	26.8480424	0	100.0000000
stage		14524	22414	298129.31	20.5266669	8.3200000	33.2500000
flow		4908	32030	437502151	89140.62	16240.90	280143.91
jan		36938	0	48.0000000	0.0012995	0	1.0000000
feb		36938	0	19.0000000	0.000514375	0	1.0000000
mar		36938	0	320.0000000	0.0086632	0	1.0000000
apr		36938	0	1100.00	0.0297796	0	1.0000000
may		36938	0	2426.00	0.0656776	0	1.0000000
jun		36938	0	4444.00	0.1203097	0	1.0000000
jul		36938	0	7642.00	0.2068872	0	1.0000000
aug		36938	0	8102.00	0.2193405	0	1.0000000
sep		36938	0	6986.00	0.1891277	0	1.0000000
oct		36938	0	4483.00	0.1213655	0	1.0000000
nov		36938	0	1157.00	0.0313228	0	1.0000000
dec		36938	0	211.0000000	0.0057123	0	1.0000000
m31day		36938	0	23232.00	0.6289458	0	1.0000000
m30day		36938	0	13687.00	0.3705398	0	1.0000000
qtr1		36938	0	387.0000000	0.0104770	0	1.0000000
qtr2		36938	0	7970.00	0.2157670	0	1.0000000
qtr3		36938	0	22730.00	0.6153555	0	1.0000000
qtr4		36938	0	5851.00	0.1584006	0	1.0000000
psingle		36938	0	36931.00	0.9998105	0	1.0000000
pdouble		36938	0	0	0	0	0
pknockout		36938	0	0	0	0	0
pjacknife		36938	0	0	0	0	0
pothtype		36938	0	7.0000000	0.000189507	0	1.0000000
pexchange		36938	0	6074.00	0.1644377	0	1.0000000
pturnback		36938	0	3652.00	0.0988684	0	1.0000000
single		36938	0	36938.00	1.0000000	1.0000000	1.0000000
double		36938	0	0	0	0	0
knockout		36938	0	0	0	0	0
jacknife		36938	0	0	0	0	0
othtype		36938	0	0	0	0	0
contthru		655	36283	0	0	0	0
return		655	36283	1.0000000	0.0015267	0	1.0000000
contstop		655	36283	2.0000000	0.0030534	0	1.0000000
kill		655	36283	652.0000000	0.9954198	0	1.0000000
contsame		655	36283	0	0	0	0
contdouble		655	36283	0	0	0	0
contsingle		655	36283	2.0000000	0.0030534	0	1.0000000
contko		655	36283	0	0	0	0
contjk		655	36283	0	0	0	0
retdouble		655	36283	0	0	0	0
retsingle		655	36283	1.0000000	0.0015267	0	1.0000000

Statistics from water.regfile for regfile 14:22 Friday, June 24, 2005 7

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		655	36283	0	0	0	0
retjk		655	36283	0	0	0	0
xkill		655	36283	652.0000000	0.9954198	0	1.0000000
logtrnhrs		15	36923	-21.0447529	-1.4029835	-4.0943446	2.2046047
plockhrs		655	36283	137.3934426	0.2097610	0.0163934	8.9016393
loglckhrs		655	36283	-1091.79	-1.6668614	-4.1108739	2.1862355
thrusingle		655	36283	0	0	0	0
thruother		655	36283	0	0	0	0
contother		655	36283	0	0	0	0
retother		655	36283	0	0	0	0
thrudoubnite		655	36283	0	0	0	0
thrusingnite		655	36283	0	0	0	0
thruothnite		655	36283	0	0	0	0
pdoubnite		655	36283	0	0	0	0
psingnite		655	36283	237.3924200	0.3624312	0	1.0000000
pothnite		655	36283	0	0	0	0

```
Activity times using key variables from stepwise proc        14:22 Friday, June 24, 2005   8

                    The REG Procedure
                      Model: MODEL1
                Dependent Variable: plockhrs

No variable met the 0.0100 significance level for entry into the model.
```

Logarithms of single lockage times using key variables from stepwise proc 9
14:22 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0269 and C(p) = 25.8467

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.58005	1.58005	18.01	<.0001
Error	652	57.19097	0.08772		
Corrected Total	653	58.77102			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.64362	0.01346	1307.52341	14906.3	<.0001
pturnback	-0.11207	0.02640	1.58005	18.01	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.0506 and C(p) = 11.3499

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	2.97604	1.48802	17.36	<.0001
Error	651	55.79499	0.08571		
Corrected Total	653	58.77102			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.57653	0.02129	469.74723	5480.88	<.0001
pturnback	-0.17916	0.03095	2.87285	33.52	<.0001
pexchange	-0.11008	0.02728	1.39598	16.29	<.0001

Bounds on condition number: 1.4057, 5.6229

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 10
14:22 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.0668 and C(p) = 2.1194

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	3.92637	1.30879	15.51	<.0001
Error	650	54.84465	0.08438		
Corrected Total	653	58.77102			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.56412	0.02145	448.65499	5317.31	<.0001
jul	-0.09017	0.02687	0.95033	11.26	0.0008
pturnback	-0.17088	0.03080	2.59663	30.77	<.0001
pexchange	-0.09345	0.02751	0.97335	11.54	0.0007

Bounds on condition number: 1.4529, 11.705

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0269	0.0269	25.8467	18.01	<.0001
2	pexchange		2	0.0238	0.0506	11.3499	16.29	<.0001
3	jul		3	0.0162	0.0668	2.1194	11.26	0.0008

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	903	0	3441618141	3811315.77	3496555.00	4330300.00
strtlcktime	Start/lockge/time	903	0	1.1987373E12	1327505369	1272731400	1384856160
arrtime	Arriv/time	903	0	1.1987372E12	1327505168	1272731400	1384856160
deptime	Leave/lockge/time	903	0	1.1987382E12	1327506275	1272732000	1384856760
BOW_OVER_SILL	BOW_OVER_SILL	0	903	.	.	.	.
END_OF_ENTRY	END_OF_ENTRY	0	903	.	.	.	.
START_OF_EXIT	START_OF_EXIT	0	903	.	.	.	.
SIGNAL_DATE	SIGNAL_DATE	0	903	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	903	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	0	903	.	.	.	.
NUM_EMPTY_BRG	NUM_EMPTY_BRG	0	903	.	.	.	.
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	903	.	.	.	.
vess_no		903	0	9029999097	9999999.00	9999999.00	9999999.00
vss_hp		0	903	.	.	.	.
frsttime		903	0	1.1987372E12	1327505168	1272731400	1384856160
lasttime		903	0	1.1987382E12	1327506275	1272732000	1384856760
newpoolno		903	0	13171.00	14.5858250	1.0000000	56.0000000
oldpoolno		903	0	13062.00	14.4651163	1.0000000	56.0000000
waitmin	Wait/before/lockge	903	0	3018.00	3.3421927	0	215.0000000
lockmin	Wait/lockge/time	903	0	13638.00	15.1029900	5.0000000	92.0000000
year		903	0	1807296.00	2001.44	2000.00	2003.00
fly		903	0	786.0000000	0.8704319	0	1.0000000
turnback		903	0	46.0000000	0.0509413	0	1.0000000
exchange		903	0	71.0000000	0.0786268	0	1.0000000
lock		903	0	12665.00	14.0254707	1.0000000	55.0000000
totmin		903	0	16656.00	18.4451827	5.0000000	247.0000000
month		903	0	7313.00	8.0985604	1.0000000	12.0000000
day		903	0	13745.00	15.2214839	1.0000000	31.0000000
sunrise		581	322	13073109.00	22501.05	19411.00	27520.00
sunset		581	322	41474383.00	71384.48	59587.00	75740.00
sequpstr		903	0	0	0	0	0
seqdstr		903	0	0	0	0	0
plock		903	0	18060.00	20.0000000	20.0000000	20.0000000
pempty		0	903	.	.	.	.
pfull		0	903	.	.	.	.
parrtime		903	0	1.1987368E12	1327504738	1272731340	1384856100
pstrtlcktime		903	0	1.1987379E12	1327505925	1272731340	1384856100
pdeptime		903	0	1.1987385E12	1327506680	1272732120	1384857000
birth		903	0	0	0	0	0
transithrs		903	0	-379.1166667	-0.4198413	-2.7833333	11.4333333
reclock		903	0	903.0000000	1.0000000	1.0000000	1.0000000
i		903	0	156397.00	173.1971207	58.0000000	401.0000000
pctpsysdn		903	0	0	0	0	0
pctplckdn		903	0	0	0	0	0
cumdown		143	760	3840.00	26.8531469	0	3840.00
pctdown		143	760	92.7540000	0.6486294	0	92.7540000
pcttrandn		6	897	0	0	0	0
pctsysdn		143	760	109.4210000	0.7651818	0	92.7540000
pctlckdn		143	760	92.7540000	0.6486294	0	92.7540000
stime		903	0	44656980.00	49454.02	3240.00	85440.00
etime		903	0	45475260.00	50360.20	4620.00	86040.00
sdate		903	0	13873758.00	15364.07	14730.00	16028.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		903	0	13873758.00	15364.07	14730.00	16028.00
hrsduration		903	0	227.3000000	0.2517165	0.0833333	1.5333333
ndays		903	0	0	0	0	0
pctday		903	0	55123.08	61.0443887	0	100.0000000
pctpsysnite		903	0	35108.71	38.8800797	0	100.0000000
pctplcknite		903	0	35581.86	39.4040543	0	100.0000000
pcttrannite		900	3	35283.97	39.2044078	0	100.0000000
pctsysnite		903	0	35176.92	38.9556113	0	100.0000000
pctlcknite		903	0	35176.92	38.9556113	0	100.0000000
stage		114	789	2296.51	20.1448246	9.5900000	27.4900000
flow		42	861	3694468.29	87963.53	29401.70	197037.59
jan		903	0	1.0000000	0.0011074	0	1.0000000
feb		903	0	0	0	0	0
mar		903	0	3.0000000	0.0033223	0	1.0000000
apr		903	0	5.0000000	0.0055371	0	1.0000000
may		903	0	24.0000000	0.0265781	0	1.0000000
jun		903	0	83.0000000	0.0919158	0	1.0000000
jul		903	0	197.0000000	0.2181617	0	1.0000000
aug		903	0	240.0000000	0.2657807	0	1.0000000
sep		903	0	174.0000000	0.1926910	0	1.0000000
oct		903	0	140.0000000	0.1550388	0	1.0000000
nov		903	0	32.0000000	0.0354374	0	1.0000000
dec		903	0	4.0000000	0.0044297	0	1.0000000
m31day		903	0	609.0000000	0.6744186	0	1.0000000
m30day		903	0	294.0000000	0.3255814	0	1.0000000
qtr1		903	0	4.0000000	0.0044297	0	1.0000000
qtr2		903	0	112.0000000	0.1240310	0	1.0000000
qtr3		903	0	611.0000000	0.6766334	0	1.0000000
qtr4		903	0	176.0000000	0.1949059	0	1.0000000
psingle		903	0	903.0000000	1.0000000	1.0000000	1.0000000
pdouble		903	0	0	0	0	0
pknockout		903	0	0	0	0	0
pjacknife		903	0	0	0	0	0
pothtype		903	0	0	0	0	0
pexchange		903	0	360.0000000	0.3986711	0	1.0000000
pturnback		903	0	253.0000000	0.2801772	0	1.0000000
single		903	0	903.0000000	1.0000000	1.0000000	1.0000000
double		903	0	0	0	0	0
knockout		903	0	0	0	0	0
jacknife		903	0	0	0	0	0
othtype		903	0	0	0	0	0
contthru		903	0	0	0	0	0
return		903	0	5.0000000	0.0055371	0	1.0000000
contstop		903	0	19.0000000	0.0210410	0	1.0000000
kill		903	0	879.0000000	0.9734219	0	1.0000000
contsame		903	0	0	0	0	0
contdouble		903	0	0	0	0	0
contsingle		903	0	19.0000000	0.0210410	0	1.0000000
contko		903	0	0	0	0	0
contjk		903	0	0	0	0	0
retdouble		903	0	0	0	0	0
retsingle		903	0	5.0000000	0.0055371	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		903	0	0	0	0	0
retjk		903	0	0	0	0	0
xkill		903	0	879.0000000	0.9734219	0	1.0000000
logtrnhrs		43	860	-51.7141818	-1.2026554	-4.0943446	2.4365331
plockhrs		903	0	186.2786885	0.2062887	0.0491803	0.5737705
loglckhrs		903	0	-1469.29	-1.6271188	-3.0122616	-0.5555258
thrusingle		903	0	0	0	0	0
thruother		903	0	0	0	0	0
contother		903	0	0	0	0	0
retother		903	0	0	0	0	0
thrudoubnite		900	3	0	0	0	0
thrusingnite		900	3	0	0	0	0
thruothnite		900	3	0	0	0	0
pdoubnite		903	0	0	0	0	0
psingnite		903	0	355.8186100	0.3940405	0	1.0000000
pothnite		903	0	0	0	0	0

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                The FREQ Procedure

        Table 1 of pconfig by doutcome
        Controlling for pnewpool=MI21D

pconfig     doutcome

Frequency|
Percent  |
Row Pct  |
Col Pct  |3:contsi|7:retsin|x:kill  |  Total
         |ngle    |gle     |        |
---------+--------+--------+--------+
2:single |     19 |      5 |    879 |    903
         |   2.10 |   0.55 |  97.34 | 100.00
         |   2.10 |   0.55 |  97.34 |
         | 100.00 | 100.00 | 100.00 |
---------+--------+--------+--------+
Total          19        5      879      903
             2.10     0.55    97.34   100.00


        Table 1 of pconfig by nextstep
        Controlling for pnewpool=MI21D

pconfig     nextstep

Frequency|
Percent  |
Row Pct  |
Col Pct  |2:contst|3:return|4:kill  |  Total
---------+--------+--------+--------+
2:single |     19 |      5 |    879 |    903
         |   2.10 |   0.55 |  97.34 | 100.00
         |   2.10 |   0.55 |  97.34 |
         | 100.00 | 100.00 | 100.00 |
---------+--------+--------+--------+
Total          19        5      879      903
             2.10     0.55    97.34   100.00
```

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	37186	0	148668568140	3997971.50	3494031.00	4332992.00
strtlcktime	Start/lockge/time	37186	0	4.938929E13	1328168937	1262343000	1388404500
arrtime	Arriv/time	37186	0	4.9389273E13	1328168471	1262343000	1388404500
deptime	Leave/lockge/time	37186	0	4.9389325E13	1328169876	1262344020	1388405400
BOW_OVER_SILL	BOW_OVER_SILL	0	37186	.	.	.	.
END_OF_ENTRY	END_OF_ENTRY	0	37186	.	.	.	.
START_OF_EXIT	START_OF_EXIT	0	37186	.	.	.	.
SIGNAL_DATE	SIGNAL_DATE	0	37186	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	37186	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	0	37186	.	.	.	.
NUM_EMPTY_BRG	NUM_EMPTY_BRG	0	37186	.	.	.	.
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	37186	.	.	.	.
vess_no		37186	0	371859962814	9999999.00	9999999.00	9999999.00
vss_hp		0	37186	.	.	.	.
frsttime		37186	0	4.9389273E13	1328168471	1262343000	1388404500
lasttime		37186	0	4.9389325E13	1328169876	1262344020	1388405400
newpoolno		37186	0	695442.00	18.7017157	1.0000000	56.0000000
oldpoolno		37186	0	691612.00	18.5987199	1.0000000	56.0000000
waitmin	Wait/before/lockge	37186	0	288754.00	7.7651267	0	14400.00
lockmin	Wait/lockge/time	37186	0	581601.00	15.6403216	1.0000000	543.0000000
year		37186	0	74427256.00	2001.49	2000.00	2003.00
fly		37186	0	28214.00	0.7587264	0	1.0000000
turnback		37186	0	3433.00	0.0923197	0	1.0000000
exchange		37186	0	5539.00	0.1489539	0	1.0000000
lock		37186	0	674934.00	18.1502178	1.0000000	55.0000000
totmin		37186	0	870355.00	23.4054483	1.0000000	14410.00
month		37186	0	288083.00	7.7470822	1.0000000	12.0000000
day		37186	0	562901.00	15.1374442	1.0000000	31.0000000
sunrise		29254	7932	657795954	22485.68	19360.00	28091.00
sunset		29254	7932	2080965701	71134.40	59437.00	75777.00
sequpstr		37186	0	0	0	0	0
seqdstr		37186	0	0	0	0	0
plock		37186	0	634409.00	17.0604260	1.0000000	55.0000000
pempty		0	37186	.	.	.	.
pfull		0	37186	.	.	.	.
parrtime		37186	0	4.9389243E13	1328167670	1262331720	1388310900
pstrtlcktime		37186	0	4.9389262E13	1328168177	1262331720	1388310900
pdeptime		37186	0	4.9389296E13	1328169104	1262332920	1388312280
birth		37186	0	0	0	0	0
transithrs		37186	0	-6534.72	-0.1757306	-240.0000000	192.3500000
reclock		37186	0	37186.00	1.0000000	1.0000000	1.0000000
i		37186	0	8120098.00	218.3643844	58.0000000	401.0000000
pctpsysdn		20487	16699	2094.43	0.1022319	0	97.4360000
pctplckdn		20487	16699	697.3230000	0.0340373	0	97.9740000
cumdown		19560	17626	51900.00	2.6533742	0	31920.00
pctdown		19560	17626	725.0770000	0.0370694	0	97.9740000
pcttrandn		1752	35434	891.0290000	0.5085782	0	100.0000000
pctsysdn		19560	17626	2138.85	0.1093480	0	97.4360000
pctlckdn		19560	17626	725.0770000	0.0370694	0	97.9740000
stime		37186	0	1804304520	48521.07	0	86340.00
etime		37186	0	1835398980	49357.26	0	86340.00
sdate		37186	0	571614419	15371.76	14610.00	16069.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		37186	0	571614463	15371.77	14610.00	16069.00
hrsduration		37186	0	9693.35	0.2606720	0.0166667	9.0500000
ndays		37186	0	0	0	0	0
pctday		37173	13	2714171.06	73.0145821	0	100.0000000
pctpsysnite		37167	19	999365.71	26.8885224	0	100.0000000
pctplcknite		37174	12	1005631.11	27.0520017	0	100.0000000
pcttrannite		37119	67	1003108.45	27.0241238	0	100.0000000
pctsysnite		37173	13	996090.32	26.7960703	0	100.0000000
pctlcknite		37173	13	1003128.94	26.9854179	0	100.0000000
stage		14566	22620	298978.34	20.5257682	8.3200000	33.2500000
flow		4922	32264	438430142	89075.61	16240.90	280143.91
jan		37186	0	48.0000000	0.0012908	0	1.0000000
feb		37186	0	19.0000000	0.000510945	0	1.0000000
mar		37186	0	318.0000000	0.0085516	0	1.0000000
apr		37186	0	1084.00	0.0291508	0	1.0000000
may		37186	0	2388.00	0.0642177	0	1.0000000
jun		37186	0	4435.00	0.1192653	0	1.0000000
jul		37186	0	7678.00	0.2064756	0	1.0000000
aug		37186	0	8151.00	0.2191954	0	1.0000000
sep		37186	0	7063.00	0.1899371	0	1.0000000
oct		37186	0	4600.00	0.1237025	0	1.0000000
nov		37186	0	1188.00	0.0319475	0	1.0000000
dec		37186	0	214.0000000	0.0057549	0	1.0000000
m31day		37186	0	23397.00	0.6291884	0	1.0000000
m30day		37186	0	13770.00	0.3703007	0	1.0000000
qtr1		37186	0	385.0000000	0.0103534	0	1.0000000
qtr2		37186	0	7907.00	0.2126338	0	1.0000000
qtr3		37186	0	22892.00	0.6156080	0	1.0000000
qtr4		37186	0	6002.00	0.1614048	0	1.0000000
psingle		37186	0	37179.00	0.9998118	0	1.0000000
pdouble		37186	0	0	0	0	0
pknockout		37186	0	0	0	0	0
pjacknife		37186	0	0	0	0	0
pothtype		37186	0	7.0000000	0.000188243	0	1.0000000
pexchange		37186	0	6138.00	0.1650621	0	1.0000000
pturnback		37186	0	3735.00	0.1004410	0	1.0000000
single		37186	0	37186.00	1.0000000	1.0000000	1.0000000
double		37186	0	0	0	0	0
knockout		37186	0	0	0	0	0
jacknife		37186	0	0	0	0	0
othtype		37186	0	0	0	0	0
contthru		903	36283	0	0	0	0
return		903	36283	5.0000000	0.0055371	0	1.0000000
contstop		903	36283	19.0000000	0.0210410	0	1.0000000
kill		903	36283	879.0000000	0.9734219	0	1.0000000
contsame		903	36283	0	0	0	0
contdouble		903	36283	0	0	0	0
contsingle		903	36283	19.0000000	0.0210410	0	1.0000000
contko		903	36283	0	0	0	0
contjk		903	36283	0	0	0	0
retdouble		903	36283	0	0	0	0
retsingle		903	36283	5.0000000	0.0055371	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		903	36283	0	0	0	0
retjk		903	36283	0	0	0	0
xkill		903	36283	879.0000000	0.9734219	0	1.0000000
logtrnhrs		43	37143	-51.7141818	-1.2026554	-4.0943446	2.4365331
plockhrs		903	36283	186.2786885	0.2062887	0.0491803	0.5737705
loglckhrs		903	36283	-1469.29	-1.6271188	-3.0122616	-0.5555258
thrusingle		903	36283	0	0	0	0
thruother		903	36283	0	0	0	0
contother		903	36283	0	0	0	0
retother		903	36283	0	0	0	0
thrudoubnite		900	36286	0	0	0	0
thrusingnite		900	36286	0	0	0	0
thruothnite		900	36286	0	0	0	0
pdoubnite		903	36283	0	0	0	0
psingnite		903	36283	355.8186100	0.3940405	0	1.0000000
pothnite		903	36283	0	0	0	0

Activity times using key variables from stepwise proc 14:22 Friday, June 24, 2005 18

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable jul Entered: R-Square = 0.0394 and C(p) = 46.0027

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.17200	0.17200	36.97	<.0001
Error	901	4.19173	0.00465		
Corrected Total	902	4.36373			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.21358	0.00257	32.20494	6922.36	<.0001
jul	-0.03342	0.00550	0.17200	36.97	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.0575 and C(p) = 30.2030

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	0.25096	0.12548	27.46	<.0001
Error	900	4.11277	0.00457		
Corrected Total	902	4.36373			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.22092	0.00310	23.24885	5087.56	<.0001
jul	-0.03212	0.00546	0.15837	34.66	<.0001
pexchange	-0.01913	0.00460	0.07895	17.28	<.0001

Bounds on condition number: 1.0033, 4.0132

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 14:22 Friday, June 24, 2005 19

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable pturnback Entered: R-Square = 0.0859 and C(p) = 4.2538

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	0.37493	0.12498	28.17	<.0001
Error	899	3.98880	0.00444		
Corrected Total	902	4.36373			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.23465	0.00401	15.20926	3427.88	<.0001
jul	-0.03001	0.00539	0.13745	30.98	<.0001
pturnback	-0.03037	0.00575	0.12397	27.94	<.0001
pexchange	-0.03338	0.00528	0.17764	40.04	<.0001

Bounds on condition number: 1.3581, 11.167

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jul		1	0.0394	0.0394	46.0027	36.97	<.0001
2	pexchange		2	0.0181	0.0575	30.2030	17.28	<.0001
3	pturnback		3	0.0284	0.0859	4.2538	27.94	<.0001

Logarithms of single lockage times using key variables from stepwise proc 20
14:22 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable jul Entered: R-Square = 0.0433 and C(p) = 46.6004

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	3.51316	3.51316	40.73	<.0001
Error	899	77.55178	0.08626		
Corrected Total	900	81.06494			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.59374	0.01107	1788.16266	20728.8	<.0001
jul	-0.15107	0.02367	3.51316	40.73	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.0585 and C(p) = 33.6225

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	4.74415	2.37207	27.91	<.0001
Error	898	76.32079	0.08499		
Corrected Total	900	81.06494			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.56474	0.01337	1163.78170	13693.2	<.0001
jul	-0.14591	0.02354	3.26631	38.43	<.0001
pexchange	-0.07562	0.01987	1.23099	14.48	0.0002

Bounds on condition number: 1.0033, 4.0133

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 21
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable pturnback Entered: R-Square = 0.0921 and C(p) = 2.5513

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	7.46217	2.48739	30.31	<.0001
Error	897	73.60277	0.08205		
Corrected Total	900	81.06494			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.50025	0.01727	619.43996	7549.14	<.0001
jul	-0.13609	0.02319	2.82600	34.44	<.0001
pturnback	-0.14233	0.02473	2.71803	33.12	<.0001
pexchange	-0.14254	0.02272	3.22845	39.35	<.0001

Bounds on condition number: 1.3591, 11.172

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jul		1	0.0433	0.0433	46.6004	40.73	<.0001
2	pexchange		2	0.0152	0.0585	33.6225	14.48	0.0002
3	pturnback		3	0.0335	0.0921	2.5513	33.12	<.0001

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	789	0	3008072114	3812512.19	3494220.00	4328913.00
strtlcktime	Start/lockge/time	789	0	1.0470908E12	1327111234	1269606900	1385046900
arrtime	Arriv/time	789	0	1.0470906E12	1327111023	1269606900	1385046900
deptime	Leave/lockge/time	789	0	1.0470915E12	1327112133	1269607800	1385048700
BOW_OVER_SILL	BOW_OVER_SILL	0	789	.	.	.	.
END_OF_ENTRY	END_OF_ENTRY	0	789	.	.	.	.
START_OF_EXIT	START_OF_EXIT	0	789	.	.	.	.
SIGNAL_DATE	SIGNAL_DATE	0	789	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	789	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	0	789	.	.	.	.
NUM_EMPTY_BRG	NUM_EMPTY_BRG	0	789	.	.	.	.
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	789	.	.	.	.
vess_no		789	0	7889999211	9999999.00	9999999.00	9999999.00
vss_hp		0	789	.	.	.	.
frsttime		789	0	1.0470906E12	1327111023	1269606900	1385046900
lasttime		789	0	1.0470915E12	1327112133	1269607800	1385048700
newpoolno		789	0	12129.00	15.3726236	1.0000000	56.0000000
oldpoolno		789	0	12150.00	15.3992395	1.0000000	56.0000000
waitmin	Wait/before/lockge	789	0	2774.00	3.5158428	0	202.0000000
lockmin	Wait/lockge/time	789	0	11812.00	14.9708492	4.0000000	90.0000000
year		789	0	1579180.00	2001.50	2000.00	2003.00
fly		789	0	669.0000000	0.8479087	0	1.0000000
turnback		789	0	44.0000000	0.0557668	0	1.0000000
exchange		789	0	76.0000000	0.0963245	0	1.0000000
lock		789	0	11745.00	14.8859316	1.0000000	55.0000000
totmin		789	0	14586.00	18.4866920	4.0000000	230.0000000
month		789	0	5709.00	7.2357414	1.0000000	11.0000000
day		789	0	11839.00	15.0050697	1.0000000	31.0000000
sunrise		510	279	11119525.00	21802.99	19371.00	27233.00
sunset		510	279	36995990.00	72541.16	60225.00	75759.00
sequpstr		789	0	0	0	0	0
seqdstr		789	0	0	0	0	0
plock		789	0	16569.00	21.0000000	21.0000000	21.0000000
pempty		0	789	.	.	.	.
pfull		0	789	.	.	.	.
parrtime		789	0	1.0470903E12	1327110626	1269606600	1385046600
pstrtlcktime		789	0	1.0470911E12	1327111661	1269609780	1385046600
pdeptime		789	0	1.0470917E12	1327112396	1269610380	1385047200
birth		789	0	0	0	0	0
transithrs		789	0	-300.7666667	-0.3811998	-3.5833333	9.4333333
reclock		789	0	789.0000000	1.0000000	1.0000000	1.0000000
i		789	0	98152.00	124.4005070	58.0000000	401.0000000
pctpsysdn		789	0	0	0	0	0
pctplckdn		789	0	0	0	0	0
cumdown		131	658	0	0	0	0
pctdown		131	658	0	0	0	0
pcttrandn		7	782	0	0	0	0
pctsysdn		131	658	54.0540000	0.4126260	0	54.0540000
pctlckdn		131	658	0	0	0	0
stime		789	0	40267920.00	51036.65	1440.00	85500.00
etime		789	0	40890240.00	51825.40	299.9999998	83760.00
sdate		789	0	12118640.00	15359.49	14694.00	16030.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		789	0	12118641.00	15359.49	14694.00	16030.00
hrsduration		789	0	196.8666667	0.2495142	0.0666667	1.5000000
ndays		789	0	0	0	0	0
pctday		789	0	49041.33	62.1563093	0	100.0000000
pctpsysnite		789	0	29760.59	37.7193828	0	100.0000000
pctplcknite		789	0	30023.68	38.0528276	0	100.0000000
pcttrannite		788	1	29826.89	37.8513883	0	100.0000000
pctsysnite		789	0	29743.49	37.6977047	0	100.0000000
pctlcknite		789	0	29858.67	37.8436907	0	100.0000000
stage		106	683	2207.86	20.8288679	10.4900000	31.1900000
flow		35	754	3010528.61	86015.10	25393.50	193851.25
jan		789	0	1.0000000	0.0012674	0	1.0000000
feb		789	0	0	0	0	0
mar		789	0	8.0000000	0.0101394	0	1.0000000
apr		789	0	26.0000000	0.0329531	0	1.0000000
may		789	0	76.0000000	0.0963245	0	1.0000000
jun		789	0	117.0000000	0.1482890	0	1.0000000
jul		789	0	187.0000000	0.2370089	0	1.0000000
aug		789	0	211.0000000	0.2674271	0	1.0000000
sep		789	0	133.0000000	0.1685678	0	1.0000000
oct		789	0	26.0000000	0.0329531	0	1.0000000
nov		789	0	4.0000000	0.0050697	0	1.0000000
dec		789	0	0	0	0	0
m31day		789	0	509.0000000	0.6451204	0	1.0000000
m30day		789	0	280.0000000	0.3548796	0	1.0000000
qtr1		789	0	9.0000000	0.0114068	0	1.0000000
qtr2		789	0	219.0000000	0.2775665	0	1.0000000
qtr3		789	0	531.0000000	0.6730038	0	1.0000000
qtr4		789	0	30.0000000	0.0380228	0	1.0000000
psingle		789	0	789.0000000	1.0000000	1.0000000	1.0000000
pdouble		789	0	0	0	0	0
pknockout		789	0	0	0	0	0
pjacknife		789	0	0	0	0	0
pothtype		789	0	0	0	0	0
pexchange		789	0	309.0000000	0.3916350	0	1.0000000
pturnback		789	0	179.0000000	0.2268695	0	1.0000000
single		789	0	789.0000000	1.0000000	1.0000000	1.0000000
double		789	0	0	0	0	0
knockout		789	0	0	0	0	0
jacknife		789	0	0	0	0	0
othtype		789	0	0	0	0	0
contthru		789	0	0	0	0	0
return		789	0	4.0000000	0.0050697	0	1.0000000
contstop		789	0	4.0000000	0.0050697	0	1.0000000
kill		789	0	781.0000000	0.9898606	0	1.0000000
contsame		789	0	0	0	0	0
contdouble		789	0	0	0	0	0
contsingle		789	0	4.0000000	0.0050697	0	1.0000000
contko		789	0	0	0	0	0
contjk		789	0	0	0	0	0
retdouble		789	0	0	0	0	0
retsingle		789	0	4.0000000	0.0050697	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		789	0	0	0	0	0
retjk		789	0	0	0	0	0
xkill		789	0	781.0000000	0.9898606	0	1.0000000
logtrnhrs		28	761	-30.5894525	-1.0924804	-3.4011974	2.2442495
plockhrs		789	0	158.4754098	0.2008560	0.0163934	0.9016393
loglckhrs		789	0	-1308.29	-1.6581635	-4.1108739	-0.1035407
thrusingle		789	0	0	0	0	0
thruother		789	0	0	0	0	0
contother		789	0	0	0	0	0
retother		789	0	0	0	0	0
thrudoubnite		788	1	0	0	0	0
thrusingnite		788	1	0	0	0	0
thruothnite		788	1	0	0	0	0
pdoubnite		789	0	0	0	0	0
psingnite		789	0	300.2368100	0.3805283	0	1.0000000
pothnite		789	0	0	0	0	0

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The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI21U

pconfig doutcome

Frequency Percent Row Pct Col Pct	3:contsingle	7:retsingle	x:kill	Total
2:single	4 0.51 0.51 100.00	4 0.51 0.51 100.00	781 98.99 98.99 100.00	789 100.00
Total	4 0.51	4 0.51	781 98.99	789 100.00

Table 1 of pconfig by nextstep
Controlling for pnewpool=MI21U

pconfig nextstep

Frequency Percent Row Pct Col Pct	2:contst	3:return	4:kill	Total
2:single	4 0.51 0.51 100.00	4 0.51 0.51 100.00	781 98.99 98.99 100.00	789 100.00
Total	4 0.51	4 0.51	781 98.99	789 100.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	37072	0	148235022113	3998570.95	3494031.00	4332992.00
strtlcktime	Start/lockge/time	37072	0	4.9237644E13	1328162590	1262343000	1388404500
arrtime	Arriv/time	37072	0	4.9237626E13	1328162123	1262343000	1388404500
deptime	Leave/lockge/time	37072	0	4.9237678E13	1328163528	1262344020	1388405400
BOW_OVER_SILL	BOW_OVER_SILL	0	37072	.	.	.	.
END_OF_ENTRY	END_OF_ENTRY	0	37072	.	.	.	.
START_OF_EXIT	START_OF_EXIT	0	37072	.	.	.	.
SIGNAL_DATE	SIGNAL_DATE	0	37072	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	37072	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	0	37072	.	.	.	.
NUM_EMPTY_BRG	NUM_EMPTY_BRG	0	37072	.	.	.	.
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	37072	.	.	.	.
vess_no		37072	0	370719962928	9999999.00	9999999.00	9999999.00
vss_hp		0	37072	.	.	.	.
frsttime		37072	0	4.9237626E13	1328162123	1262343000	1388404500
lasttime		37072	0	4.9237678E13	1328163528	1262344020	1388405400
newpoolno		37072	0	694400.00	18.7311178	1.0000000	56.0000000
oldpoolno		37072	0	690700.00	18.6313120	1.0000000	56.0000000
waitmin	Wait/before/lockge	37072	0	288510.00	7.7824234	0	14400.00
lockmin	Wait/lockge/time	37072	0	579775.00	15.6391616	1.0000000	543.0000000
year		37072	0	74199140.00	2001.49	2000.00	2003.00
fly		37072	0	28097.00	0.7579035	0	1.0000000
turnback		37072	0	3431.00	0.0925496	0	1.0000000
exchange		37072	0	5544.00	0.1495468	0	1.0000000
lock		37072	0	674014.00	18.1812149	1.0000000	55.0000000
totmin		37072	0	868285.00	23.4215850	1.0000000	14410.00
month		37072	0	286479.00	7.7276381	1.0000000	12.0000000
day		37072	0	560995.00	15.1325798	1.0000000	31.0000000
sunrise		29183	7889	655842370	22473.44	19360.00	28091.00
sunset		29183	7889	2076487308	71154.00	59437.00	75777.00
sequpstr		37072	0	0	0	0	0
seqdstr		37072	0	0	0	0	0
plock		37072	0	632918.00	17.0726694	1.0000000	55.0000000
pempty		0	37072	.	.	.	.
pfull		0	37072	.	.	.	.
parrtime		37072	0	4.9237596E13	1328161320	1262331720	1388310900
pstrtlcktime		37072	0	4.9237615E13	1328161822	1262331720	1388310900
pdeptime		37072	0	4.9237649E13	1328162750	1262332920	1388312280
birth		37072	0	0	0	0	0
transithrs		37072	0	-6456.37	-0.1741575	-240.0000000	192.3500000
reclock		37072	0	37072.00	1.0000000	1.0000000	1.0000000
i		37072	0	8061853.00	217.4647443	58.0000000	401.0000000
pctpsysdn		20373	16699	2094.43	0.1028040	0	97.4360000
pctplckdn		20373	16699	697.3230000	0.0342278	0	97.9740000
cumdown		19548	17524	48060.00	2.4585635	0	31920.00
pctdown		19548	17524	632.3230000	0.0323472	0	97.9740000
pcttrandn		1753	35319	891.0290000	0.5082881	0	100.0000000
pctsysdn		19548	17524	2083.48	0.1065827	0	97.4360000
pctlckdn		19548	17524	632.3230000	0.0323472	0	97.9740000
stime		37072	0	1799915460	48551.88	0	86340.00
etime		37072	0	1830813960	49385.36	0	86340.00
sdate		37072	0	569859301	15371.69	14610.00	16069.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		37072	0	569859346	15371.69	14610.00	16069.00
hrsduration		37072	0	9662.92	0.2606527	0.0166667	9.0500000
ndays		37072	0	0	0	0	0
pctday		37059	13	2708089.31	73.0750777	0	100.0000000
pctpsysnite		37053	19	994017.59	26.8269126	0	100.0000000
pctplcknite		37060	12	1000072.93	26.9852383	0	100.0000000
pcttrannite		37007	65	997651.38	26.9584506	0	100.0000000
pctsysnite		37059	13	990656.89	26.7318841	0	100.0000000
pctlcknite		37059	13	997810.70	26.9249223	0	100.0000000
stage		14558	22514	298889.69	20.5309582	8.3200000	33.2500000
flow		4915	32157	437746203	89063.32	16240.90	280143.91
jan		37072	0	48.0000000	0.0012948	0	1.0000000
feb		37072	0	19.0000000	0.000512516	0	1.0000000
mar		37072	0	323.0000000	0.0087128	0	1.0000000
apr		37072	0	1105.00	0.0298069	0	1.0000000
may		37072	0	2440.00	0.0658179	0	1.0000000
jun		37072	0	4469.00	0.1205492	0	1.0000000
jul		37072	0	7668.00	0.2068407	0	1.0000000
aug		37072	0	8122.00	0.2190872	0	1.0000000
sep		37072	0	7022.00	0.1894152	0	1.0000000
oct		37072	0	4486.00	0.1210078	0	1.0000000
nov		37072	0	1160.00	0.0312905	0	1.0000000
dec		37072	0	210.0000000	0.0056647	0	1.0000000
m31day		37072	0	23297.00	0.6284258	0	1.0000000
m30day		37072	0	13756.00	0.3710617	0	1.0000000
qtr1		37072	0	390.0000000	0.0105201	0	1.0000000
qtr2		37072	0	8014.00	0.2161739	0	1.0000000
qtr3		37072	0	22812.00	0.6153431	0	1.0000000
qtr4		37072	0	5856.00	0.1579629	0	1.0000000
psingle		37072	0	37065.00	0.9998112	0	1.0000000
pdouble		37072	0	0	0	0	0
pknockout		37072	0	0	0	0	0
pjacknife		37072	0	0	0	0	0
pothtype		37072	0	7.0000000	0.000188822	0	1.0000000
pexchange		37072	0	6087.00	0.1641940	0	1.0000000
pturnback		37072	0	3661.00	0.0987538	0	1.0000000
single		37072	0	37072.00	1.0000000	1.0000000	1.0000000
double		37072	0	0	0	0	0
knockout		37072	0	0	0	0	0
jacknife		37072	0	0	0	0	0
othtype		37072	0	0	0	0	0
contthru		789	36283	0	0	0	0
return		789	36283	4.0000000	0.0050697	0	1.0000000
contstop		789	36283	4.0000000	0.0050697	0	1.0000000
kill		789	36283	781.0000000	0.9898606	0	1.0000000
contsame		789	36283	0	0	0	0
contdouble		789	36283	0	0	0	0
contsingle		789	36283	4.0000000	0.0050697	0	1.0000000
contko		789	36283	0	0	0	0
contjk		789	36283	0	0	0	0
retdouble		789	36283	0	0	0	0
retsingle		789	36283	4.0000000	0.0050697	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		789	36283	0	0	0	0
retjk		789	36283	0	0	0	0
xkill		789	36283	781.0000000	0.9898606	0	1.0000000
logtrnhrs		28	37044	-30.5894525	-1.0924804	-3.4011974	2.2442495
plockhrs		789	36283	158.4754098	0.2008560	0.0163934	0.9016393
loglckhrs		789	36283	-1308.29	-1.6581635	-4.1108739	-0.1035407
thrusingle		789	36283	0	0	0	0
thruother		789	36283	0	0	0	0
contother		789	36283	0	0	0	0
retother		789	36283	0	0	0	0
thrudoubnite		788	36284	0	0	0	0
thrusingnite		788	36284	0	0	0	0
thruothnite		788	36284	0	0	0	0
pdoubnite		789	36283	0	0	0	0
psingnite		789	36283	300.2368100	0.3805283	0	1.0000000
pothnite		789	36283	0	0	0	0

Activity times using key variables from stepwise proc 14:22 Friday, June 24, 2005 29

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable jul Entered: R-Square = 0.0223 and C(p) = 33.4270

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.09213	0.09213	17.93	<.0001
Error	787	4.04407	0.00514		
Corrected Total	788	4.13620			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.20688	0.00292	25.76488	5014.00	<.0001
jul	-0.02541	0.00600	0.09213	17.93	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jun Entered: R-Square = 0.0387 and C(p) = 21.6552

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	0.16018	0.08009	15.83	<.0001
Error	786	3.97602	0.00506		
Corrected Total	788	4.13620			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.21210	0.00323	21.81856	4313.20	<.0001
jun	-0.02687	0.00733	0.06805	13.45	0.0003
jul	-0.03063	0.00612	0.12665	25.04	<.0001

Bounds on condition number: 1.0572, 4.2287

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 14:22 Friday, June 24, 2005 30

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable pexchange Entered: R-Square = 0.0495 and C(p) = 14.6361

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	0.20475	0.06825	13.63	<.0001
Error	785	3.93145	0.00501		
Corrected Total	788	4.13620			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.21770	0.00372	17.13312	3421.00	<.0001
jun	-0.02574	0.00730	0.06229	12.44	0.0004
jul	-0.02947	0.00610	0.11670	23.30	<.0001
pexchange	-0.01544	0.00518	0.04457	8.90	0.0029

Bounds on condition number: 1.0615, 9.3814

Stepwise Selection: Step 4

Variable pturnback Entered: R-Square = 0.0580 and C(p) = 9.5388

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	0.23982	0.05995	12.06	<.0001
Error	784	3.89638	0.00497		
Corrected Total	788	4.13620			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.22403	0.00441	12.84770	2585.11	<.0001
jun	-0.02508	0.00728	0.05904	11.88	0.0006
jul	-0.02861	0.00609	0.10969	22.07	<.0001
pturnback	-0.01771	0.00667	0.03507	7.06	0.0081
pexchange	-0.02210	0.00573	0.07385	14.86	0.0001

Activity times using key variables from stepwise proc 14:22 Friday, June 24, 2005 31

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.2434, 18.425

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jul		1	0.0223	0.0223	33.4270	17.93	<.0001
2	jun		2	0.0165	0.0387	21.6552	13.45	0.0003
3	pexchange		3	0.0108	0.0495	14.6361	8.90	0.0029
4	pturnback		4	0.0085	0.0580	9.5388	7.06	0.0081

Logarithms of single lockage times using key variables from stepwise proc 32
14:22 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable jul Entered: R-Square = 0.0206 and C(p) = 40.6980

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.62891	1.62891	16.49	<.0001
Error	786	77.62359	0.09876		
Corrected Total	787	79.25250			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.63478	0.01282	1606.16648	16263.7	<.0001
jul	-0.10687	0.02631	1.62891	16.49	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jun Entered: R-Square = 0.0385 and C(p) = 27.5885

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	3.05107	1.52553	15.72	<.0001
Error	785	76.20143	0.09707		
Corrected Total	787	79.25250			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.61086	0.01416	1255.91424	12938.0	<.0001
jun	-0.12286	0.03210	1.42216	14.65	0.0001
jul	-0.13079	0.02683	2.30723	23.77	<.0001

Bounds on condition number: 1.0574, 4.2295

All variables left in the model are significant at the 0.0100 level.

Logarithms of single lockage times using key variables from stepwise proc 33
14:22 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 2

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jul		1	0.0206	0.0206	40.6980	16.49	<.0001
2	jun		2	0.0179	0.0385	27.5885	14.65	0.0001

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	1032	0	3957751342	3835030.37	3494117.00	4329806.00
strtlcktime	Start/lockge/time	1032	0	1.370574E12	1328075610	1269519240	1385046600
arrtime	Arriv/time	1032	0	1.3705738E12	1328075370	1269519240	1385046600
deptime	Leave/lockge/time	1032	0	1.370575E12	1328076521	1269519720	1385047800
BOW_OVER_SILL	BOW_OVER_SILL	0	1032	.	.	.	.
END_OF_ENTRY	END_OF_ENTRY	0	1032	.	.	.	.
START_OF_EXIT	START_OF_EXIT	0	1032	.	.	.	.
SIGNAL_DATE	SIGNAL_DATE	0	1032	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	1032	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	0	1032	.	.	.	.
NUM_EMPTY_BRG	NUM_EMPTY_BRG	0	1032	.	.	.	.
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	1032	.	.	.	.
vess_no		1032	0	10319998968	9999999.00	9999999.00	9999999.00
vss_hp		0	1032	.	.	.	.
frsttime		1032	0	1.3705738E12	1328075370	1269519240	1385046600
lasttime		1032	0	1.370575E12	1328076521	1269519720	1385047800
newpoolno		1032	0	15506.00	15.0251938	1.0000000	56.0000000
oldpoolno		1032	0	15360.00	14.8837209	1.0000000	56.0000000
waitmin	Wait/before/lockge	1032	0	4129.00	4.0009690	0	135.0000000
lockmin	Wait/lockge/time	1032	0	15666.00	15.1802326	1.0000000	66.0000000
year		1032	0	2065513.00	2001.47	2000.00	2003.00
fly		1032	0	876.0000000	0.8488372	0	1.0000000
turnback		1032	0	53.0000000	0.0513566	0	1.0000000
exchange		1032	0	103.0000000	0.0998062	0	1.0000000
lock		1032	0	14917.00	14.4544574	1.0000000	55.0000000
totmin		1032	0	19795.00	19.1812016	1.0000000	155.0000000
month		1032	0	8197.00	7.9428295	1.0000000	12.0000000
day		1032	0	15841.00	15.3498062	1.0000000	31.0000000
sunrise		651	381	14602278.00	22430.53	19372.00	27111.00
sunset		651	381	46526356.00	71469.06	59568.00	75760.00
sequpstr		1032	0	0	0	0	0
seqdstr		1032	0	0	0	0	0
plock		1032	0	21672.00	21.0000000	21.0000000	21.0000000
pempty		0	1032	.	.	.	.
pfull		0	1032	.	.	.	.
parrtime		1032	0	1.3705733E12	1328074934	1269516900	1385038800
pstrtlcktime		1032	0	1.3705745E12	1328076032	1269516900	1385038980
pdeptime		1032	0	1.3705752E12	1328076786	1269517500	1385039580
birth		1032	0	0	0	0	0
transithrs		1032	0	-405.7833333	-0.3932009	-10.9666667	15.0500000
reclock		1032	0	1032.00	1.0000000	1.0000000	1.0000000
i		1032	0	130042.00	126.0096899	58.0000000	401.0000000
pctpsysdn		1032	0	73.1400000	0.0708721	0	64.4440000
pctplckdn		1032	0	0	0	0	0
cumdown		181	851	0	0	0	0
pctdown		181	851	0	0	0	0
pcttrandn		11	1021	0	0	0	0
pctsysdn		181	851	0	0	0	0
pctlckdn		181	851	0	0	0	0
stime		1032	0	48154680.00	46661.51	660.0000002	84240.00
etime		1032	0	49094640.00	47572.33	1320.00	84720.00
sdate		1032	0	15862568.00	15370.71	14693.00	16030.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		1032	0	15862568.00	15370.71	14693.00	16030.00
hrsduration		1032	0	261.1000000	0.2530039	0.0166667	1.1000000
ndays		1032	0	0	0	0	0
pctday		1032	0	62866.82	60.9174641	0	100.0000000
pctpsysnite		1032	0	40618.26	39.3587791	0	100.0000000
pctplcknite		1032	0	40677.01	39.4157045	0	100.0000000
pcttrannite		1032	0	40664.26	39.4033479	0	100.0000000
pctsysnite		1032	0	40333.18	39.0825359	0	100.0000000
pctlcknite		1032	0	40333.18	39.0825359	0	100.0000000
stage		139	893	3046.36	21.9162590	10.3700000	28.4200000
flow		38	994	3086131.64	81213.99	31033.89	198441.97
jan		1032	0	1.0000000	0.000968992	0	1.0000000
feb		1032	0	0	0	0	0
mar		1032	0	5.0000000	0.0048450	0	1.0000000
apr		1032	0	15.0000000	0.0145349	0	1.0000000
may		1032	0	43.0000000	0.0416667	0	1.0000000
jun		1032	0	117.0000000	0.1133721	0	1.0000000
jul		1032	0	221.0000000	0.2141473	0	1.0000000
aug		1032	0	252.0000000	0.2441860	0	1.0000000
sep		1032	0	183.0000000	0.1773256	0	1.0000000
oct		1032	0	154.0000000	0.1492248	0	1.0000000
nov		1032	0	38.0000000	0.0368217	0	1.0000000
dec		1032	0	3.0000000	0.0029070	0	1.0000000
m31day		1032	0	679.0000000	0.6579457	0	1.0000000
m30day		1032	0	353.0000000	0.3420543	0	1.0000000
qtr1		1032	0	6.0000000	0.0058140	0	1.0000000
qtr2		1032	0	175.0000000	0.1695736	0	1.0000000
qtr3		1032	0	656.0000000	0.6356589	0	1.0000000
qtr4		1032	0	195.0000000	0.1889535	0	1.0000000
psingle		1032	0	1032.00	1.0000000	1.0000000	1.0000000
pdouble		1032	0	0	0	0	0
pknockout		1032	0	0	0	0	0
pjacknife		1032	0	0	0	0	0
poththype		1032	0	0	0	0	0
pexchange		1032	0	373.0000000	0.3614341	0	1.0000000
pturnback		1032	0	269.0000000	0.2606589	0	1.0000000
single		1032	0	1032.00	1.0000000	1.0000000	1.0000000
double		1032	0	0	0	0	0
knockout		1032	0	0	0	0	0
jacknife		1032	0	0	0	0	0
othtype		1032	0	0	0	0	0
contthru		1032	0	0	0	0	0
return		1032	0	3.0000000	0.0029070	0	1.0000000
contstop		1032	0	18.0000000	0.0174419	0	1.0000000
kill		1032	0	1011.00	0.9796512	0	1.0000000
contsame		1032	0	0	0	0	0
contdouble		1032	0	0	0	0	0
contsingle		1032	0	18.0000000	0.0174419	0	1.0000000
contko		1032	0	0	0	0	0
contjk		1032	0	0	0	0	0
retdouble		1032	0	0	0	0	0
retsingle		1032	0	3.0000000	0.0029070	0	1.0000000

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 14:22 Friday, June 24, 2005 36

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1032	0	0	0	0	0
retjk		1032	0	0	0	0	0
xkill		1032	0	1011.00	0.9796512	0	1.0000000
logtrnhrs		60	972	-94.8973317	-1.5816222	-4.0943446	2.7113780
plockhrs		1032	0	212.4426230	0.2058553	0.0327869	1.2295082
loglckhrs		1032	0	-1696.09	-1.6434984	-3.4177267	0.2066142
thrusingle		1032	0	0	0	0	0
thruother		1032	0	0	0	0	0
contother		1032	0	0	0	0	0
retother		1032	0	0	0	0	0
thrudoubnite		1032	0	0	0	0	0
thrusingnite		1032	0	0	0	0	0
thruothnite		1032	0	0	0	0	0
pdoubnite		1032	0	0	0	0	0
psingnite		1032	0	406.7700700	0.3941570	0	1.0000000
pothnite		1032	0	0	0	0	0

```
resulting regfile for mdy(1,1,2000) to mdy(12,31,2003)        14:22 Friday, June 24, 2005  37

                The FREQ Procedure

        Table 1 of pconfig by doutcome
        Controlling for pnewpool=MI22D

pconfig     doutcome

Frequency|
Percent  |
Row Pct  |
Col Pct  |3:contsi|7:retsin|x:kill  |  Total
         |ngle    |gle     |        |
---------+--------+--------+--------+
2:single |     18 |      3 |   1011 |   1032
         |   1.74 |   0.29 |  97.97 | 100.00
         |   1.74 |   0.29 |  97.97 |
         | 100.00 | 100.00 | 100.00 |
---------+--------+--------+--------+
Total          18        3     1011     1032
              1.74     0.29    97.97   100.00


        Table 1 of pconfig by nextstep
        Controlling for pnewpool=MI22D

pconfig     nextstep

Frequency|
Percent  |
Row Pct  |
Col Pct  |2:contst|3:return|4:kill  |  Total
---------+--------+--------+--------+
2:single |     18 |      3 |   1011 |   1032
         |   1.74 |   0.29 |  97.97 | 100.00
         |   1.74 |   0.29 |  97.97 |
         | 100.00 | 100.00 | 100.00 |
---------+--------+--------+--------+
Total          18        3     1011     1032
              1.74     0.29    97.97   100.00
```

Statistics from water.regfile for regfile 14:22 Friday, June 24, 2005 38

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	37315	0	149184701341	3997982.08	3494031.00	4332992.00
strtlcktime	Start/lockge/time	37315	0	4.9561127E13	1328182414	1262343000	1388404500
arrtime	Arriv/time	37315	0	4.9561109E13	1328181948	1262343000	1388404500
deptime	Leave/lockge/time	37315	0	4.9561162E13	1328183353	1262344020	1388405400
BOW_OVER_SILL	BOW_OVER_SILL	0	37315	.	.	.	.
END_OF_ENTRY	END_OF_ENTRY	0	37315	.	.	.	.
START_OF_EXIT	START_OF_EXIT	0	37315	.	.	.	.
SIGNAL_DATE	SIGNAL_DATE	0	37315	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	37315	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	0	37315	.	.	.	.
NUM_EMPTY_BRG	NUM_EMPTY_BRG	0	37315	.	.	.	.
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	37315	.	.	.	.
vess_no		37315	0	373149962685	9999999.00	9999999.00	9999999.00
vss_hp		0	37315	.	.	.	.
frsttime		37315	0	4.9561109E13	1328181948	1262343000	1388404500
lasttime		37315	0	4.9561162E13	1328183353	1262344020	1388405400
newpoolno		37315	0	697777.00	18.6996382	1.0000000	56.0000000
oldpoolno		37315	0	693910.00	18.5960070	1.0000000	56.0000000
waitmin	Wait/before/lockge	37315	0	289865.00	7.7680557	0	14400.00
lockmin	Wait/lockge/time	37315	0	583629.00	15.6406003	1.0000000	543.0000000
year		37315	0	74685473.00	2001.49	2000.00	2003.00
fly		37315	0	28304.00	0.7585153	0	1.0000000
turnback		37315	0	3440.00	0.0921881	0	1.0000000
exchange		37315	0	5571.00	0.1492965	0	1.0000000
lock		37315	0	677186.00	18.1478226	1.0000000	55.0000000
totmin		37315	0	873494.00	23.4086560	1.0000000	14410.00
month		37315	0	288967.00	7.7439904	1.0000000	12.0000000
day		37315	0	564997.00	15.1412837	1.0000000	31.0000000
sunrise		29324	7991	659325123	22484.15	19360.00	28091.00
sunset		29324	7991	2086017674	71136.87	59437.00	75777.00
sequpstr		37315	0	0	0	0	0
seqdstr		37315	0	0	0	0	0
plock		37315	0	638021.00	17.0982447	1.0000000	55.0000000
pempty		0	37315	.	.	.	.
pfull		0	37315	.	.	.	.
parrtime		37315	0	4.956108E13	1328181147	1262331720	1388310900
pstrtlcktime		37315	0	4.9561098E13	1328181654	1262331720	1388310900
pdeptime		37315	0	4.9561133E13	1328182581	1262332920	1388312280
birth		37315	0	0	0	0	0
transithrs		37315	0	-6561.38	-0.1758377	-240.0000000	192.3500000
reclock		37315	0	37315.00	1.0000000	1.0000000	1.0000000
i		37315	0	8093743.00	216.9032025	58.0000000	401.0000000
pctpsysdn		20616	16699	2167.57	0.1051399	0	97.4360000
pctplckdn		20616	16699	697.3230000	0.0338244	0	97.9740000
cumdown		19598	17717	48060.00	2.4522911	0	31920.00
pctdown		19598	17717	632.3230000	0.0322647	0	97.9740000
pcttrandn		1757	35558	891.0290000	0.5071309	0	100.0000000
pctsysdn		19598	17717	2029.43	0.1035527	0	97.4360000
pctlckdn		19598	17717	632.3230000	0.0322647	0	97.9740000
stime		37315	0	1807802220	48447.06	0	86340.00
etime		37315	0	1839018360	49283.62	0	86340.00
sdate		37315	0	573603229	15371.92	14610.00	16069.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		37315	0	573603273	15371.92	14610.00	16069.00
hrsduration		37315	0	9727.15	0.2606767	0.0166667	9.0500000
ndays		37315	0	0	0	0	0
pctday		37302	13	2721914.80	72.9696745	0	100.0000000
pctpsysnite		37296	19	1004875.26	26.9432449	0	100.0000000
pctplcknite		37303	12	1010726.26	27.0950395	0	100.0000000
pcttrannite		37251	64	1008488.74	27.0727965	0	100.0000000
pctsysnite		37302	13	1001246.58	26.8416326	0	100.0000000
pctlcknite		37302	13	1008285.20	27.0303255	0	100.0000000
stage		14591	22724	299728.19	20.5419910	8.3200000	33.2500000
flow		4918	32397	437821806	89024.36	16240.90	280143.91
jan		37315	0	48.0000000	0.0012863	0	1.0000000
feb		37315	0	19.0000000	0.000509179	0	1.0000000
mar		37315	0	320.0000000	0.0085756	0	1.0000000
apr		37315	0	1094.00	0.0293180	0	1.0000000
may		37315	0	2407.00	0.0645049	0	1.0000000
jun		37315	0	4469.00	0.1197642	0	1.0000000
jul		37315	0	7702.00	0.2064049	0	1.0000000
aug		37315	0	8163.00	0.2187592	0	1.0000000
sep		37315	0	7072.00	0.1895216	0	1.0000000
oct		37315	0	4614.00	0.1236500	0	1.0000000
nov		37315	0	1194.00	0.0319979	0	1.0000000
dec		37315	0	213.0000000	0.0057082	0	1.0000000
m31day		37315	0	23467.00	0.6288892	0	1.0000000
m30day		37315	0	13829.00	0.3706016	0	1.0000000
qtr1		37315	0	387.0000000	0.0103712	0	1.0000000
qtr2		37315	0	7970.00	0.2135870	0	1.0000000
qtr3		37315	0	22937.00	0.6146858	0	1.0000000
qtr4		37315	0	6021.00	0.1613560	0	1.0000000
psingle		37315	0	37308.00	0.9998124	0	1.0000000
pdouble		37315	0	0	0	0	0
pknockout		37315	0	0	0	0	0
pjacknife		37315	0	0	0	0	0
pothtype		37315	0	7.0000000	0.000187592	0	1.0000000
pexchange		37315	0	6151.00	0.1648399	0	1.0000000
pturnback		37315	0	3751.00	0.1005226	0	1.0000000
single		37315	0	37315.00	1.0000000	1.0000000	1.0000000
double		37315	0	0	0	0	0
knockout		37315	0	0	0	0	0
jacknife		37315	0	0	0	0	0
othtype		37315	0	0	0	0	0
contthru		1032	36283	0	0	0	0
return		1032	36283	3.0000000	0.0029070	0	1.0000000
contstop		1032	36283	18.0000000	0.0174419	0	1.0000000
kill		1032	36283	1011.00	0.9796512	0	1.0000000
contsame		1032	36283	0	0	0	0
contdouble		1032	36283	0	0	0	0
contsingle		1032	36283	18.0000000	0.0174419	0	1.0000000
contko		1032	36283	0	0	0	0
contjk		1032	36283	0	0	0	0
retdouble		1032	36283	0	0	0	0
retsingle		1032	36283	3.0000000	0.0029070	0	1.0000000

Statistics from water.regfile for regfile 14:22 Friday, June 24, 2005 40

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1032	36283	0	0	0	0
retjk		1032	36283	0	0	0	0
xkill		1032	36283	1011.00	0.9796512	0	1.0000000
logtrnhrs		60	37255	-94.8973317	-1.5816222	-4.0943446	2.7113780
plockhrs		1032	36283	212.4426230	0.2058553	0.0327869	1.2295082
loglckhrs		1032	36283	-1696.09	-1.6434984	-3.4177267	0.2066142
thrusingle		1032	36283	0	0	0	0
thruother		1032	36283	0	0	0	0
contother		1032	36283	0	0	0	0
retother		1032	36283	0	0	0	0
thrudoubnite		1032	36283	0	0	0	0
thrusingnite		1032	36283	0	0	0	0
thruothnite		1032	36283	0	0	0	0
pdoubnite		1032	36283	0	0	0	0
psingnite		1032	36283	406.7700700	0.3941570	0	1.0000000
pothnite		1032	36283	0	0	0	0

Activity times using key variables from stepwise proc 14:22 Friday, June 24, 2005 41

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable jul Entered: R-Square = 0.0330 and C(p) = 50.2651

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.24209	0.24209	35.15	<.0001
Error	1029	7.08633	0.00689		
Corrected Total	1030	7.32842			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.21400	0.00291	37.14200	5393.36	<.0001
jul	-0.03740	0.00631	0.24209	35.15	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable oct Entered: R-Square = 0.0529 and C(p) = 30.1884

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	0.38731	0.19366	28.68	<.0001
Error	1028	6.94111	0.00675		
Corrected Total	1030	7.32842			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.20753	0.00321	28.29491	4190.56	<.0001
jul	-0.03092	0.00640	0.15760	23.34	<.0001
oct	0.03412	0.00736	0.14522	21.51	<.0001

Bounds on condition number: 1.05, 4.2001

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 14:22 Friday, June 24, 2005 42

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable may Entered: R-Square = 0.0628 and C(p) = 21.1204

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	0.46012	0.15337	22.93	<.0001
Error	1027	6.86831	0.00669		
Corrected Total	1030	7.32842			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.21031	0.00330	27.15774	4060.83	<.0001
may	-0.04256	0.01290	0.07281	10.89	0.0010
jul	-0.03371	0.00643	0.18404	27.52	<.0001
oct	0.03133	0.00737	0.12087	18.07	<.0001

Bounds on condition number: 1.0685, 9.4735

Stepwise Selection: Step 4

Variable pturnback Entered: R-Square = 0.0702 and C(p) = 14.9099

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	0.51413	0.12853	19.35	<.0001
Error	1026	6.81430	0.00664		
Corrected Total	1030	7.32842			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.21451	0.00360	23.53964	3544.26	<.0001
may	-0.04100	0.01287	0.06743	10.15	0.0015
jul	-0.03363	0.00640	0.18314	27.57	<.0001
oct	0.03143	0.00734	0.12159	18.31	<.0001
pturnback	-0.01652	0.00579	0.05401	8.13	0.0044

Activity times using key variables from stepwise proc 14:22 Friday, June 24, 2005 43

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0685, 16.646

Stepwise Selection: Step 5

Variable pexchange Entered: R-Square = 0.0795 and C(p) = 6.4521

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	0.58292	0.11658	17.72	<.0001
Error	1025	6.74550	0.00658		
Corrected Total	1030	7.32842			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.22361	0.00456	15.83241	2405.78	<.0001
may	-0.04109	0.01281	0.06773	10.29	0.0014
jul	-0.03226	0.00639	0.16781	25.50	<.0001
oct	0.03093	0.00731	0.11774	17.89	<.0001
pturnback	-0.02583	0.00644	0.10569	16.06	<.0001
pexchange	-0.01905	0.00589	0.06879	10.45	0.0013

Bounds on condition number: 1.2559, 28.363

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jul		1	0.0330	0.0330	50.2651	35.15	<.0001
2	oct		2	0.0198	0.0529	30.1884	21.51	<.0001
3	may		3	0.0099	0.0628	21.1204	10.89	0.0010
4	pturnback		4	0.0074	0.0702	14.9099	8.13	0.0044
5	pexchange		5	0.0094	0.0795	6.4521	10.45	0.0013

Logarithms of single lockage times using key variables from stepwise proc 44
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable jul Entered: R-Square = 0.0491 and C(p) = 59.9635

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	5.98052	5.98052	53.21	<.0001
Error	1030	115.76877	0.11240		
Corrected Total	1031	121.74928			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.60376	0.01177	2085.92818	18558.6	<.0001
jul	-0.18557	0.02544	5.98052	53.21	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable oct Entered: R-Square = 0.0694 and C(p) = 38.7390

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	8.45181	4.22590	38.38	<.0001
Error	1029	113.29748	0.11010		
Corrected Total	1031	121.74928			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.63049	0.01295	1746.62273	15863.3	<.0001
jul	-0.15884	0.02580	4.17248	37.90	<.0001
oct	0.14074	0.02971	2.47129	22.44	<.0001

Bounds on condition number: 1.0502, 4.2008

Stepwise Selection: Step 3

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable may Entered: R-Square = 0.0800 and C(p) = 28.6797

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	9.73501	3.24500	29.78	<.0001
Error	1028	112.01427	0.10896		
Corrected Total	1031	121.74928			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.61879	0.01332	1608.97501	14766.2	<.0001
may	-0.17870	0.05207	1.28321	11.78	0.0006
jul	-0.17054	0.02589	4.72622	43.37	<.0001
oct	0.12905	0.02975	2.05037	18.82	<.0001

Bounds on condition number: 1.0687, 9.475

Stepwise Selection: Step 4

Variable jun Entered: R-Square = 0.0895 and C(p) = 19.7902

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	10.89375	2.72344	25.23	<.0001
Error	1027	110.85554	0.10794		
Corrected Total	1031	121.74928			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.59771	0.01474	1268.68398	11753.5	<.0001
may	-0.19977	0.05222	1.57944	14.63	0.0001
jun	-0.11061	0.03376	1.15874	10.73	0.0011
jul	-0.19162	0.02656	5.61674	52.04	<.0001
oct	0.10797	0.03030	1.37059	12.70	0.0004

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.1353, 17.545

Stepwise Selection: Step 5

Variable pturnback Entered: R-Square = 0.0973 and C(p) = 12.8117

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	11.84914	2.36983	22.12	<.0001
Error	1026	109.90015	0.10712		
Corrected Total	1031	121.74928			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.57970	0.01587	1061.19043	9907.01	<.0001
may	-0.19358	0.05207	1.48065	13.82	0.0002
jun	-0.11261	0.03364	1.20049	11.21	0.0008
jul	-0.19141	0.02646	5.60497	52.33	<.0001
oct	0.10798	0.03018	1.37091	12.80	0.0004
pturnback	-0.06939	0.02323	0.95539	8.92	0.0029

Bounds on condition number: 1.1353, 26.953

Stepwise Selection: Step 6

Variable pexchange Entered: R-Square = 0.1060 and C(p) = 4.9281

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	12.90084	2.15014	20.25	<.0001
Error	1025	108.84844	0.10619		
Corrected Total	1031	121.74928			

Logarithms of single lockage times using key variables from stepwise proc 47
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.54432	0.01939	673.38457	6341.10	<.0001
may	-0.19374	0.05184	1.48308	13.97	0.0002
jun	-0.11157	0.03349	1.17838	11.10	0.0009
jul	-0.18589	0.02641	5.26287	49.56	<.0001
oct	0.10625	0.03006	1.32671	12.49	0.0004
pturnback	-0.10579	0.02586	1.77666	16.73	<.0001
pexchange	-0.07449	0.02367	1.05170	9.90	0.0017

Bounds on condition number: 1.2567, 41.421

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jul		1	0.0491	0.0491	59.9635	53.21	<.0001
2	oct		2	0.0203	0.0694	38.7390	22.44	<.0001
3	may		3	0.0105	0.0800	28.6797	11.78	0.0006
4	jun		4	0.0095	0.0895	19.7902	10.73	0.0011
5	pturnback		5	0.0078	0.0973	12.8117	8.92	0.0029
6	pexchange		6	0.0086	0.1060	4.9281	9.90	0.0017

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	730	0	2791189435	3823547.17	3494221.00	4329684.00
strtlcktime	Start/lockge/time	730	0	968552611740	1326784400	1270138560	1382204820
arrtime	Arriv/time	730	0	968552404680	1326784116	1270138560	1382204820
deptime	Leave/lockge/time	730	0	968553266700	1326785297	1270139280	1382205420
BOW_OVER_SILL	BOW_OVER_SILL	0	730	.	.	.	.
END_OF_ENTRY	END_OF_ENTRY	0	730	.	.	.	.
START_OF_EXIT	START_OF_EXIT	0	730	.	.	.	.
SIGNAL_DATE	SIGNAL_DATE	0	730	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	730	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	0	730	.	.	.	.
NUM_EMPTY_BRG	NUM_EMPTY_BRG	0	730	.	.	.	.
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	730	.	.	.	.
vess_no		730	0	7299999270	9999999.00	9999999.00	9999999.00
vss_hp		0	730	.	.	.	.
frsttime		730	0	968552404680	1326784116	1270138560	1382204820
lasttime		730	0	968553266700	1326785297	1270139280	1382205420
newpoolno		730	0	10377.00	14.2150685	1.0000000	56.0000000
oldpoolno		730	0	10361.00	14.1931507	1.0000000	56.0000000
waitmin	Wait/before/lockge	730	0	3451.00	4.7273973	0	606.0000000
lockmin	Wait/lockge/time	730	0	10916.00	14.9534247	5.0000000	58.0000000
year		730	0	1461081.00	2001.48	2000.00	2003.00
fly		730	0	627.0000000	0.8589041	0	1.0000000
turnback		730	0	33.0000000	0.0452055	0	1.0000000
exchange		730	0	70.0000000	0.0958904	0	1.0000000
lock		730	0	10004.00	13.7041096	1.0000000	55.0000000
totmin		730	0	14367.00	19.6808219	5.0000000	616.0000000
month		730	0	5329.00	7.3000000	3.0000000	11.0000000
day		730	0	10700.00	14.6575342	1.0000000	31.0000000
sunrise		476	254	10363410.00	21771.87	19360.00	27610.00
sunset		476	254	34519642.00	72520.26	60294.00	75773.00
sequpstr		730	0	0	0	0	0
seqdstr		730	0	0	0	0	0
plock		730	0	16060.00	22.0000000	22.0000000	22.0000000
pempty		0	730	.	.	.	.
pfull		0	730	.	.	.	.
parrtime		730	0	968552183460	1326783813	1270138500	1382204700
pstrtlcktime		730	0	968553448860	1326785546	1270138500	1382204700
pdeptime		730	0	968554101780	1326786441	1270139400	1382205600
birth		730	0	0	0	0	0
transithrs		730	0	-471.4166667	-0.6457763	-72.4166667	1.3166667
reclock		730	0	730.0000000	1.0000000	1.0000000	1.0000000
i		730	0	149338.00	204.5726027	58.0000000	401.0000000
pctpsysdn		730	0	294.8780000	0.4039425	0	74.8090000
pctplckdn		730	0	90.5200000	0.1240000	0	66.6670000
cumdown		114	616	0	0	0	0
pctdown		114	616	0	0	0	0
pcttrandn		4	726	0	0	0	0
pctsysdn		114	616	0	0	0	0
pctlckdn		114	616	0	0	0	0
stime		730	0	35568540.00	48724.03	5340.00	84900.00
etime		730	0	36223500.00	49621.23	6480.00	85860.00
sdate		730	0	11209688.00	15355.74	14700.00	15997.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		730	0	11209688.00	15355.74	14700.00	15997.00
hrsduration		730	0	181.9333333	0.2492237	0.0833333	0.9666667
ndays		730	0	0	0	0	0
pctday		730	0	45336.45	62.1047260	0	100.0000000
pctpsysnite		729	1	27676.44	37.9649355	0	100.0000000
pctplcknite		730	0	28047.78	38.4216137	0	100.0000000
pcttrannite		730	0	28047.78	38.4216137	0	100.0000000
pctsysnite		730	0	27614.72	37.8283781	0	100.0000000
pctlcknite		730	0	27663.55	37.8952740	0	100.0000000
stage		87	643	1963.68	22.5710345	9.8700000	27.2600000
flow		17	713	1544737.86	90866.93	27601.70	189895.67
jan		730	0	0	0	0	0
feb		730	0	0	0	0	0
mar		730	0	6.0000000	0.0082192	0	1.0000000
apr		730	0	24.0000000	0.0328767	0	1.0000000
may		730	0	66.0000000	0.0904110	0	1.0000000
jun		730	0	111.0000000	0.1520548	0	1.0000000
jul		730	0	166.0000000	0.2273973	0	1.0000000
aug		730	0	193.0000000	0.2643836	0	1.0000000
sep		730	0	131.0000000	0.1794521	0	1.0000000
oct		730	0	29.0000000	0.0397260	0	1.0000000
nov		730	0	4.0000000	0.0054795	0	1.0000000
dec		730	0	0	0	0	0
m31day		730	0	460.0000000	0.6301370	0	1.0000000
m30day		730	0	270.0000000	0.3698630	0	1.0000000
qtr1		730	0	6.0000000	0.0082192	0	1.0000000
qtr2		730	0	201.0000000	0.2753425	0	1.0000000
qtr3		730	0	490.0000000	0.6712329	0	1.0000000
qtr4		730	0	33.0000000	0.0452055	0	1.0000000
psingle		730	0	730.0000000	1.0000000	1.0000000	1.0000000
pdouble		730	0	0	0	0	0
pknockout		730	0	0	0	0	0
pjacknife		730	0	0	0	0	0
pothtype		730	0	0	0	0	0
pexchange		730	0	369.0000000	0.5054795	0	1.0000000
pturnback		730	0	194.0000000	0.2657534	0	1.0000000
single		730	0	730.0000000	1.0000000	1.0000000	1.0000000
double		730	0	0	0	0	0
knockout		730	0	0	0	0	0
jacknife		730	0	0	0	0	0
othtype		730	0	0	0	0	0
contthru		730	0	0	0	0	0
return		730	0	6.0000000	0.0082192	0	1.0000000
contstop		730	0	2.0000000	0.0027397	0	1.0000000
kill		730	0	722.0000000	0.9890411	0	1.0000000
contsame		730	0	0	0	0	0
contdouble		730	0	0	0	0	0
contsingle		730	0	2.0000000	0.0027397	0	1.0000000
contko		730	0	0	0	0	0
contjk		730	0	0	0	0	0
retdouble		730	0	0	0	0	0
retsingle		730	0	6.0000000	0.0082192	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		730	0	0	0	0	0
retjk		730	0	0	0	0	0
xkill		730	0	722.0000000	0.9890411	0	1.0000000
logtrnhrs		16	714	-19.4374851	-1.2148428	-2.9957323	0.2751033
plockhrs		730	0	178.3934426	0.2443746	0.0327869	1.7868852
loglckhrs		730	0	-1081.91	-1.4820693	-3.4177267	0.5804740
thrusingle		730	0	0	0	0	0
thruother		730	0	0	0	0	0
contother		730	0	0	0	0	0
retother		730	0	0	0	0	0
thrudoubnite		730	0	0	0	0	0
thrusingnite		730	0	0	0	0	0
thruothnite		730	0	0	0	0	0
pdoubnite		730	0	0	0	0	0
psingnite		730	0	280.4777800	0.3842161	0	1.0000000
pothnite		730	0	0	0	0	0

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 14:22 Friday, June 24, 2005 51

The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI22U

pconfig doutcome

Frequency Percent Row Pct Col Pct	3:contsingle	7:retsingle	x:kill	Total
2:single	2 0.27 0.27 100.00	6 0.82 0.82 100.00	722 98.90 98.90 100.00	730 100.00
Total	2 0.27	6 0.82	722 98.90	730 100.00

Table 1 of pconfig by nextstep
Controlling for pnewpool=MI22U

pconfig nextstep

Frequency Percent Row Pct Col Pct	2:contst	3:return	4:kill	Total
2:single	2 0.27 0.27 100.00	6 0.82 0.82 100.00	722 98.90 98.90 100.00	730 100.00
Total	2 0.27	6 0.82	722 98.90	730 100.00

Statistics from water.regfile for regfile 14:22 Friday, June 24, 2005 52

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	37013	0	148018139434	3999085.17	3494031.00	4332992.00
strtlcktime	Start/lockge/time	37013	0	4.9159105E13	1328157819	1262343000	1388404500
arrtime	Arriv/time	37013	0	4.9159088E13	1328157351	1262343000	1388404500
deptime	Leave/lockge/time	37013	0	4.915914E13	1328158758	1262344020	1388405400
BOW_OVER_SILL	BOW_OVER_SILL	0	37013	.	.	.	.
END_OF_ENTRY	END_OF_ENTRY	0	37013	.	.	.	.
START_OF_EXIT	START_OF_EXIT	0	37013	.	.	.	.
SIGNAL_DATE	SIGNAL_DATE	0	37013	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	37013	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	0	37013	.	.	.	.
NUM_EMPTY_BRG	NUM_EMPTY_BRG	0	37013	.	.	.	.
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	37013	.	.	.	.
vess_no		37013	0	370129962987	9999999.00	9999999.00	9999999.00
vss_hp		0	37013	.	.	.	.
frsttime		37013	0	4.9159088E13	1328157351	1262343000	1388404500
lasttime		37013	0	4.915914E13	1328158758	1262344020	1388405400
newpoolno		37013	0	692648.00	18.7136412	1.0000000	56.0000000
oldpoolno		37013	0	688911.00	18.6126766	1.0000000	56.0000000
waitmin	Wait/before/lockge	37013	0	289187.00	7.8131197	0	14400.00
lockmin	Wait/lockge/time	37013	0	578879.00	15.6398833	1.0000000	543.0000000
year		37013	0	74081041.00	2001.49	2000.00	2003.00
fly		37013	0	28055.00	0.7579769	0	1.0000000
turnback		37013	0	3420.00	0.0924000	0	1.0000000
exchange		37013	0	5538.00	0.1496231	0	1.0000000
lock		37013	0	672273.00	18.1631589	1.0000000	55.0000000
totmin		37013	0	868066.00	23.4530030	1.0000000	14410.00
month		37013	0	286099.00	7.7296896	1.0000000	12.0000000
day		37013	0	559856.00	15.1259287	1.0000000	31.0000000
sunrise		29149	7864	655086255	22473.71	19360.00	28091.00
sunset		29149	7864	2074010960	71152.05	59437.00	75777.00
sequpstr		37013	0	0	0	0	0
seqdstr		37013	0	0	0	0	0
plock		37013	0	632409.00	17.0861319	1.0000000	55.0000000
pempty		0	37013	.	.	.	.
pfull		0	37013	.	.	.	.
parrtime		37013	0	4.9159058E13	1328156549	1262331720	1388310900
pstrtlcktime		37013	0	4.9159077E13	1328157064	1262331720	1388310900
pdeptime		37013	0	4.9159112E13	1328157995	1262332920	1388312280
birth		37013	0	0	0	0	0
transithrs		37013	0	-6627.02	-0.1790457	-240.0000000	192.3500000
reclock		37013	0	37013.00	1.0000000	1.0000000	1.0000000
i		37013	0	8113039.00	219.1943101	58.0000000	401.0000000
pctpsysdn		20314	16699	2389.30	0.1176185	0	97.4360000
pctplckdn		20314	16699	787.8430000	0.0387833	0	97.9740000
cumdown		19531	17482	48060.00	2.4607035	0	31920.00
pctdown		19531	17482	632.3230000	0.0323754	0	97.9740000
pcttrandn		1750	35263	891.0290000	0.5091594	0	100.0000000
pctsysdn		19531	17482	2029.43	0.1039079	0	97.4360000
pctlckdn		19531	17482	632.3230000	0.0323754	0	97.9740000
stime		37013	0	1795216080	48502.31	0	86340.00
etime		37013	0	1826147220	49338.00	0	86340.00
sdate		37013	0	568950349	15371.64	14610.00	16069.00

Statistics from water.regfile for regfile 14:22 Friday, June 24, 2005 53

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		37013	0	568950393	15371.64	14610.00	16069.00
hrsduration		37013	0	9647.98	0.2606647	0.0166667	9.0500000
ndays		37013	0	0	0	0	0
pctday		37000	13	2704384.43	73.0914710	0	100.0000000
pctpsysnite		36993	20	991933.44	26.8140848	0	100.0000000
pctplcknite		37001	12	998097.03	26.9748663	0	100.0000000
pcttrannite		36949	64	995872.26	26.9526175	0	100.0000000
pctsysnite		37000	13	988528.12	26.7169762	0	100.0000000
pctlcknite		37000	13	995615.57	26.9085290	0	100.0000000
stage		14539	22474	298645.51	20.5409939	8.3200000	33.2500000
flow		4897	32116	436280412	89091.36	16240.90	280143.91
jan		37013	0	47.0000000	0.0012698	0	1.0000000
feb		37013	0	19.0000000	0.000513333	0	1.0000000
mar		37013	0	321.0000000	0.0086726	0	1.0000000
apr		37013	0	1103.00	0.0298003	0	1.0000000
may		37013	0	2430.00	0.0656526	0	1.0000000
jun		37013	0	4463.00	0.1205793	0	1.0000000
jul		37013	0	7647.00	0.2066031	0	1.0000000
aug		37013	0	8104.00	0.2189501	0	1.0000000
sep		37013	0	7020.00	0.1896631	0	1.0000000
oct		37013	0	4489.00	0.1212817	0	1.0000000
nov		37013	0	1160.00	0.0313403	0	1.0000000
dec		37013	0	210.0000000	0.0056737	0	1.0000000
m31day		37013	0	23248.00	0.6281036	0	1.0000000
m30day		37013	0	13746.00	0.3713830	0	1.0000000
qtr1		37013	0	387.0000000	0.0104558	0	1.0000000
qtr2		37013	0	7996.00	0.2160322	0	1.0000000
qtr3		37013	0	22771.00	0.6152163	0	1.0000000
qtr4		37013	0	5859.00	0.1582957	0	1.0000000
psingle		37013	0	37006.00	0.9998109	0	1.0000000
pdouble		37013	0	0	0	0	0
pknockout		37013	0	0	0	0	0
pjacknife		37013	0	0	0	0	0
pothtype		37013	0	7.0000000	0.000189123	0	1.0000000
pexchange		37013	0	6147.00	0.1660768	0	1.0000000
pturnback		37013	0	3676.00	0.0993165	0	1.0000000
single		37013	0	37013.00	1.0000000	1.0000000	1.0000000
double		37013	0	0	0	0	0
knockout		37013	0	0	0	0	0
jacknife		37013	0	0	0	0	0
othtype		37013	0	0	0	0	0
contthru		730	36283	0	0	0	0
return		730	36283	6.0000000	0.0082192	0	1.0000000
contstop		730	36283	2.0000000	0.0027397	0	1.0000000
kill		730	36283	722.0000000	0.9890411	0	1.0000000
contsame		730	36283	0	0	0	0
contdouble		730	36283	0	0	0	0
contsingle		730	36283	2.0000000	0.0027397	0	1.0000000
contko		730	36283	0	0	0	0
contjk		730	36283	0	0	0	0
retdouble		730	36283	0	0	0	0
retsingle		730	36283	6.0000000	0.0082192	0	1.0000000

Statistics from water.regfile for regfile 14:22 Friday, June 24, 2005 54

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		730	36283	0	0	0	0
retjk		730	36283	0	0	0	0
xkill		730	36283	722.0000000	0.9890411	0	1.0000000
logtrnhrs		16	36997	-19.4374851	-1.2148428	-2.9957323	0.2751033
plockhrs		730	36283	178.3934426	0.2443746	0.0327869	1.7868852
loglckhrs		730	36283	-1081.91	-1.4820693	-3.4177267	0.5804740
thrusingle		730	36283	0	0	0	0
thruother		730	36283	0	0	0	0
contother		730	36283	0	0	0	0
retother		730	36283	0	0	0	0
thrudoubnite		730	36283	0	0	0	0
thrusingnite		730	36283	0	0	0	0
thruothnite		730	36283	0	0	0	0
pdoubnite		730	36283	0	0	0	0
psingnite		730	36283	280.4777800	0.3842161	0	1.0000000
pothnite		730	36283	0	0	0	0

Activity times using key variables from stepwise proc 14:22 Friday, June 24, 2005 55

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable may Entered: R-Square = 0.0099 and C(p) = 25.2804

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.09541	0.09541	7.24	0.0073
Error	727	9.57480	0.01317		
Corrected Total	728	9.67021			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.24106	0.00446	38.52538	2925.17	<.0001
may	0.03987	0.01481	0.09541	7.24	0.0073

Bounds on condition number: 1, 1

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	may		1	0.0099	0.0099	25.2804	7.24	0.0073

Logarithms of single lockage times using key variables from stepwise proc 56
14:22 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pexchange Entered: R-Square = 0.0125 and C(p) = 31.5715

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.15393	1.15393	9.19	0.0025
Error	727	91.25730	0.12553		
Corrected Total	728	92.41123			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.44473	0.01865	753.49453	6002.70	<.0001
pexchange	-0.07957	0.02625	1.15393	9.19	0.0025

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pturnback Entered: R-Square = 0.0504 and C(p) = 4.5533

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	4.65410	2.32705	19.25	<.0001
Error	726	87.75713	0.12088		
Corrected Total	728	92.41123			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.33860	0.02690	299.23908	2475.55	<.0001
pturnback	-0.19749	0.03670	3.50017	28.96	<.0001
pexchange	-0.18570	0.03244	3.96142	32.77	<.0001

Bounds on condition number: 1.5864, 6.3457

All variables left in the model are significant at the 0.0100 level.

Logarithms of single lockage times using key variables from stepwise proc 57
14:22 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 2

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pexchange		1	0.0125	0.0125	31.5715	9.19	0.0025
2	pturnback		2	0.0379	0.0504	4.5533	28.96	<.0001

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 14:22 Friday, June 24, 2005 58

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	889	0	3393192350	3816864.29	3494118.00	4330296.00
strtlcktime	Start/lockge/time	889	0	1.1804707E12	1327863594	1269526200	1386304200
arrtime	Arriv/time	889	0	1.1804705E12	1327863376	1269526200	1386304200
deptime	Leave/lockge/time	889	0	1.1804715E12	1327864495	1269526680	1386305400
BOW_OVER_SILL	BOW_OVER_SILL	0	889	.	.	.	.
END_OF_ENTRY	END_OF_ENTRY	0	889	.	.	.	.
START_OF_EXIT	START_OF_EXIT	0	889	.	.	.	.
SIGNAL_DATE	SIGNAL_DATE	0	889	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	889	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	0	889	.	.	.	.
NUM_EMPTY_BRG	NUM_EMPTY_BRG	0	889	.	.	.	.
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	889	.	.	.	.
vess_no		889	0	8889999111	9999999.00	9999999.00	9999999.00
vss_hp		0	889	.	.	.	.
frsttime		889	0	1.1804705E12	1327863376	1269526200	1386304200
lasttime		889	0	1.1804715E12	1327864495	1269526680	1386305400
newpoolno		889	0	14081.00	15.8391451	1.0000000	56.0000000
oldpoolno		889	0	13978.00	15.7232846	1.0000000	56.0000000
waitmin	Wait/before/lockge	889	0	3230.00	3.6332958	0	163.0000000
lockmin	Wait/lockge/time	889	0	13350.00	15.0168729	2.0000000	50.0000000
year		889	0	1779287.00	2001.45	2000.00	2003.00
fly		889	0	765.0000000	0.8605174	0	1.0000000
turnback		889	0	31.0000000	0.0348706	0	1.0000000
exchange		889	0	93.0000000	0.1046119	0	1.0000000
lock		889	0	13585.00	15.2812148	1.0000000	55.0000000
totmin		889	0	16580.00	18.6501687	2.0000000	197.0000000
month		889	0	7185.00	8.0821147	3.0000000	12.0000000
day		889	0	13632.00	15.3340832	1.0000000	31.0000000
sunrise		570	319	12855690.00	22553.84	19391.00	27610.00
sunset		570	319	40651474.00	71318.38	59505.00	75739.00
sequpstr		889	0	0	0	0	0
seqdstr		889	0	0	0	0	0
plock		889	0	19558.00	22.0000000	22.0000000	22.0000000
pempty		0	889	.	.	.	.
pfull		0	889	.	.	.	.
parrtime		889	0	1.1804701E12	1327862857	1269525300	1386302700
pstrtlcktime		889	0	1.1804713E12	1327864212	1269525780	1386305160
pdeptime		889	0	1.1804721E12	1327865097	1269526500	1386306120
birth		889	0	0	0	0	0
transithrs		889	0	-425.1000000	-0.4781777	-2.6166667	22.7666667
reclock		889	0	889.0000000	1.0000000	1.0000000	1.0000000
i		889	0	182580.00	205.3768279	58.0000000	401.0000000
pctpsysdn		889	0	93.7040000	0.1054038	0	46.6670000
pctplckdn		889	0	77.7780000	0.0874893	0	77.7780000
cumdown		132	757	0	0	0	0
pctdown		132	757	0	0	0	0
pcttrandn		4	885	0	0	0	0
pctsysdn		132	757	0	0	0	0
pctlckdn		132	757	0	0	0	0
stime		889	0	42571800.00	47887.29	1080.00	83100.00
etime		889	0	43372800.00	48788.30	1560.00	83580.00
sdate		889	0	13662363.00	15368.24	14693.00	16045.00

SAS Program Output from “fitmodx.sas” for Recreational Vessels Only (cont.)

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 14:22 Friday, June 24, 2005 59

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		889	0	13662363.00	15368.24	14693.00	16045.00
hrsduration		889	0	222.5000000	0.2502812	0.0333333	0.8333333
ndays		889	0	0	0	0	0
pctday		889	0	54939.91	61.7996715	0	100.0000000
pctpsysnite		889	0	34095.61	38.3527638	0	100.0000000
pctplcknite		889	0	34725.21	39.0609786	0	100.0000000
pcttrannite		887	2	34513.26	38.9101048	0	100.0000000
pctsysnite		889	0	33818.98	38.0415984	0	100.0000000
pctlcknite		889	0	33960.09	38.2003285	0	100.0000000
stage		98	791	2266.46	23.1271429	9.1800000	27.3700000
flow		15	874	1386161.13	92410.74	28384.38	253106.08
jan		889	0	0	0	0	0
feb		889	0	0	0	0	0
mar		889	0	4.0000000	0.0044994	0	1.0000000
apr		889	0	8.0000000	0.0089989	0	1.0000000
may		889	0	31.0000000	0.0348706	0	1.0000000
jun		889	0	93.0000000	0.1046119	0	1.0000000
jul		889	0	185.0000000	0.2080990	0	1.0000000
aug		889	0	213.0000000	0.2395951	0	1.0000000
sep		889	0	167.0000000	0.1878515	0	1.0000000
oct		889	0	147.0000000	0.1653543	0	1.0000000
nov		889	0	36.0000000	0.0404949	0	1.0000000
dec		889	0	5.0000000	0.0056243	0	1.0000000
m31day		889	0	585.0000000	0.6580427	0	1.0000000
m30day		889	0	304.0000000	0.3419573	0	1.0000000
qtr1		889	0	4.0000000	0.0044994	0	1.0000000
qtr2		889	0	132.0000000	0.1484814	0	1.0000000
qtr3		889	0	565.0000000	0.6355456	0	1.0000000
qtr4		889	0	188.0000000	0.2114736	0	1.0000000
psingle		889	0	889.0000000	1.0000000	1.0000000	1.0000000
pdouble		889	0	0	0	0	0
pknockout		889	0	0	0	0	0
pjacknife		889	0	0	0	0	0
pothtype		889	0	0	0	0	0
pexchange		889	0	404.0000000	0.4544432	0	1.0000000
pturnback		889	0	287.0000000	0.3228346	0	1.0000000
single		889	0	889.0000000	1.0000000	1.0000000	1.0000000
double		889	0	0	0	0	0
knockout		889	0	0	0	0	0
jacknife		889	0	0	0	0	0
othtype		889	0	0	0	0	0
contthru		889	0	0	0	0	0
return		889	0	2.0000000	0.0022497	0	1.0000000
contstop		889	0	19.0000000	0.0213723	0	1.0000000
kill		889	0	868.0000000	0.9763780	0	1.0000000
contsame		889	0	0	0	0	0
contdouble		889	0	0	0	0	0
contsingle		889	0	19.0000000	0.0213723	0	1.0000000
contko		889	0	0	0	0	0
contjk		889	0	0	0	0	0
retdouble		889	0	0	0	0	0
retsingle		889	0	2.0000000	0.0022497	0	1.0000000

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 14:22 Friday, June 24, 2005 60

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		889	0	0	0	0	0
retjk		889	0	0	0	0	0
xkill		889	0	868.0000000	0.9763780	0	1.0000000
logtrnhrs		29	860	-25.3466264	-0.8740216	-4.0943446	3.1252975
plockhrs		889	0	215.0163934	0.2418632	0.0819672	0.7540984
loglckhrs		889	0	-1312.68	-1.4765764	-2.5014360	-0.2822325
thrusingle		889	0	0	0	0	0
thruother		889	0	0	0	0	0
contother		889	0	0	0	0	0
retother		889	0	0	0	0	0
thrudoubnite		887	2	0	0	0	0
thrusingnite		887	2	0	0	0	0
thruothnite		887	2	0	0	0	0
pdoubnite		889	0	0	0	0	0
psingnite		889	0	347.2521000	0.3906098	0	1.0000000
pothnite		889	0	0	0	0	0

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 14:22 Friday, June 24, 2005 61

The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI24D

pconfig doutcome

Frequency Percent Row Pct Col Pct	3:contsingle	7:retsingle	x:kill	Total
2:single	19 2.14 2.14 100.00	2 0.22 0.22 100.00	868 97.64 97.64 100.00	889 100.00
Total	19 2.14	2 0.22	868 97.64	889 100.00

Table 1 of pconfig by nextstep
Controlling for pnewpool=MI24D

pconfig nextstep

Frequency Percent Row Pct Col Pct	2:contst	3:return	4:kill	Total
2:single	19 2.14 2.14 100.00	2 0.22 0.22 100.00	868 97.64 97.64 100.00	889 100.00
Total	19 2.14	2 0.22	868 97.64	889 100.00

Statistics from water.regfile for regfile 14:22 Friday, June 24, 2005 62

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	37172	0	148620142349	3998174.50	3494031.00	4332992.00
strtlcktime	Start/lockge/time	37172	0	4.9371023E13	1328177755	1262343000	1388404500
arrtime	Arriv/time	37172	0	4.9371006E13	1328177288	1262343000	1388404500
deptime	Leave/lockge/time	37172	0	4.9371058E13	1328178693	1262344020	1388405400
BOW_OVER_SILL	BOW_OVER_SILL	0	37172	.	.	.	.
END_OF_ENTRY	END_OF_ENTRY	0	37172	.	.	.	.
START_OF_EXIT	START_OF_EXIT	0	37172	.	.	.	.
SIGNAL_DATE	SIGNAL_DATE	0	37172	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	37172	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	0	37172	.	.	.	.
NUM_EMPTY_BRG	NUM_EMPTY_BRG	0	37172	.	.	.	.
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	37172	.	.	.	.
vess_no		37172	0	371719962828	9999999.00	9999999.00	9999999.00
vss_hp		0	37172	.	.	.	.
frsttime		37172	0	4.9371006E13	1328177288	1262343000	1388404500
lasttime		37172	0	4.9371058E13	1328178693	1262344020	1388405400
newpoolno		37172	0	696352.00	18.7332401	1.0000000	56.0000000
oldpoolno		37172	0	692528.00	18.6303669	1.0000000	56.0000000
waitmin	Wait/before/lockge	37172	0	288966.00	7.7737544	0	14400.00
lockmin	Wait/lockge/time	37172	0	581313.00	15.6384644	1.0000000	543.0000000
year		37172	0	74399247.00	2001.49	2000.00	2003.00
fly		37172	0	28193.00	0.7584472	0	1.0000000
turnback		37172	0	3418.00	0.0919509	0	1.0000000
exchange		37172	0	5561.00	0.1496019	0	1.0000000
lock		37172	0	675854.00	18.1818035	1.0000000	55.0000000
totmin		37172	0	870279.00	23.4122189	1.0000000	14410.00
month		37172	0	287955.00	7.7465565	1.0000000	12.0000000
day		37172	0	562788.00	15.1401055	1.0000000	31.0000000
sunrise		29243	7929	657578535	22486.70	19360.00	28091.00
sunset		29243	7929	2080142792	71133.02	59437.00	75777.00
sequpstr		37172	0	0	0	0	0
seqdstr		37172	0	0	0	0	0
plock		37172	0	635907.00	17.1071505	1.0000000	55.0000000
pempty		0	37172	.	.	.	.
pfull		0	37172	.	.	.	.
parrtime		37172	0	4.9370976E13	1328176484	1262331720	1388310900
pstrtlcktime		37172	0	4.9370995E13	1328176995	1262331720	1388310900
pdeptime		37172	0	4.937103E13	1328177925	1262332920	1388312280
birth		37172	0	0	0	0	0
transithrs		37172	0	-6580.70	-0.1770338	-240.0000000	192.3500000
reclock		37172	0	37172.00	1.0000000	1.0000000	1.0000000
i		37172	0	8146281.00	219.1510008	58.0000000	401.0000000
pctpsysdn		20473	16699	2188.13	0.1068788	0	97.4360000
pctplckdn		20473	16699	775.1010000	0.0378597	0	97.9740000
cumdown		19549	17623	48060.00	2.4584378	0	31920.00
pctdown		19549	17623	632.3230000	0.0323455	0	97.9740000
pcttrandn		1750	35422	891.0290000	0.5091594	0	100.0000000
pctsysdn		19549	17623	2029.43	0.1038122	0	97.4360000
pctlckdn		19549	17623	632.3230000	0.0323455	0	97.9740000
stime		37172	0	1802219340	48483.25	0	86340.00
etime		37172	0	1833296520	49319.29	0	86340.00
sdate		37172	0	571403024	15371.87	14610.00	16069.00

Statistics from water.regfile for regfile 14:22 Friday, June 24, 2005 63

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		37172	0	571403068	15371.87	14610.00	16069.00
hrsduration		37172	0	9688.55	0.2606411	0.0166667	9.0500000
ndays		37172	0	0	0	0	0
pctday		37159	13	2713987.89	73.0371615	0	100.0000000
pctpsysnite		37153	19	998352.61	26.8713861	0	100.0000000
pctplcknite		37160	12	1004774.46	27.0391405	0	100.0000000
pcttrannite		37106	66	1002337.75	27.0128213	0	100.0000000
pctsysnite		37159	13	994732.38	26.7696220	0	100.0000000
pctlcknite		37159	13	1001912.12	26.9628385	0	100.0000000
stage		14550	22622	298948.29	20.5462742	8.3200000	33.2500000
flow		4895	32277	436121835	89095.37	16240.90	280143.91
jan		37172	0	47.0000000	0.0012644	0	1.0000000
feb		37172	0	19.0000000	0.000511137	0	1.0000000
mar		37172	0	319.0000000	0.0085817	0	1.0000000
apr		37172	0	1087.00	0.0292424	0	1.0000000
may		37172	0	2395.00	0.0644302	0	1.0000000
jun		37172	0	4445.00	0.1195793	0	1.0000000
jul		37172	0	7666.00	0.2062305	0	1.0000000
aug		37172	0	8124.00	0.2185516	0	1.0000000
sep		37172	0	7056.00	0.1898203	0	1.0000000
oct		37172	0	4607.00	0.1239374	0	1.0000000
nov		37172	0	1192.00	0.0320671	0	1.0000000
dec		37172	0	215.0000000	0.0057839	0	1.0000000
m31day		37172	0	23373.00	0.6287797	0	1.0000000
m30day		37172	0	13780.00	0.3707091	0	1.0000000
qtr1		37172	0	385.0000000	0.0103573	0	1.0000000
qtr2		37172	0	7927.00	0.2132519	0	1.0000000
qtr3		37172	0	22846.00	0.6146024	0	1.0000000
qtr4		37172	0	6014.00	0.1617884	0	1.0000000
psingle		37172	0	37165.00	0.9998117	0	1.0000000
pdouble		37172	0	0	0	0	0
pknockout		37172	0	0	0	0	0
pjacknife		37172	0	0	0	0	0
pothtype		37172	0	7.0000000	0.000188314	0	1.0000000
pexchange		37172	0	6182.00	0.1663080	0	1.0000000
pturnback		37172	0	3769.00	0.1013935	0	1.0000000
single		37172	0	37172.00	1.0000000	1.0000000	1.0000000
double		37172	0	0	0	0	0
knockout		37172	0	0	0	0	0
jacknife		37172	0	0	0	0	0
othtype		37172	0	0	0	0	0
contthru		889	36283	0	0	0	0
return		889	36283	2.0000000	0.0022497	0	1.0000000
contstop		889	36283	19.0000000	0.0213723	0	1.0000000
kill		889	36283	868.0000000	0.9763780	0	1.0000000
contsame		889	36283	0	0	0	0
contdouble		889	36283	0	0	0	0
contsingle		889	36283	19.0000000	0.0213723	0	1.0000000
contko		889	36283	0	0	0	0
contjk		889	36283	0	0	0	0
retdouble		889	36283	0	0	0	0
retsingle		889	36283	2.0000000	0.0022497	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		889	36283	0	0	0	0
retjk		889	36283	0	0	0	0
xkill		889	36283	868.0000000	0.9763780	0	1.0000000
logtrnhrs		29	37143	-25.3466264	-0.8740216	-4.0943446	3.1252975
plockhrs		889	36283	215.0163934	0.2418632	0.0819672	0.7540984
loglckhrs		889	36283	-1312.68	-1.4765764	-2.5014360	-0.2822325
thrusingle		889	36283	0	0	0	0
thruother		889	36283	0	0	0	0
contother		889	36283	0	0	0	0
retother		889	36283	0	0	0	0
thrudoubnite		887	36285	0	0	0	0
thrusingnite		887	36285	0	0	0	0
thruothnite		887	36285	0	0	0	0
pdoubnite		889	36283	0	0	0	0
psingnite		889	36283	347.2521000	0.3906098	0	1.0000000
pothnite		889	36283	0	0	0	0

Activity times using key variables from stepwise proc 14:22 Friday, June 24, 2005 65

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable jul Entered: R-Square = 0.0243 and C(p) = 22.5437

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.16957	0.16957	22.02	<.0001
Error	885	6.81433	0.00770		
Corrected Total	886	6.98389			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.24856	0.00331	43.37235	5632.92	<.0001
jul	-0.03403	0.00725	0.16957	22.02	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.0425 and C(p) = 7.6082

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	0.29701	0.14850	19.63	<.0001
Error	884	6.68688	0.00756		
Corrected Total	886	6.98389			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.25908	0.00416	29.27286	3869.85	<.0001
jul	-0.03190	0.00721	0.14819	19.59	<.0001
pexchange	-0.02414	0.00588	0.12744	16.85	<.0001

Bounds on condition number: 1.0052, 4.0209

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 14:22 Friday, June 24, 2005 66

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable pturnback Entered: R-Square = 0.0521 and C(p) = 0.6887

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	0.36413	0.12138	16.19	<.0001
Error	883	6.61976	0.00750		
Corrected Total	886	6.98389			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.27302	0.00624	14.36953	1916.73	<.0001
jul	-0.03011	0.00720	0.13115	17.49	<.0001
pturnback	-0.02405	0.00804	0.06712	8.95	0.0028
pexchange	-0.03850	0.00757	0.19388	25.86	<.0001

Bounds on condition number: 1.6816, 13.102

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jul		1	0.0243	0.0243	22.5437	22.02	<.0001
2	pexchange		2	0.0182	0.0425	7.6082	16.85	<.0001
3	pturnback		3	0.0096	0.0521	0.6887	8.95	0.0028

Logarithms of single lockage times using key variables from stepwise proc 67
14:22 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable jul Entered: R-Square = 0.0287 and C(p) = 27.9135

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	2.69027	2.69027	26.21	<.0001
Error	886	90.93763	0.10264		
Corrected Total	887	93.62790			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.44719	0.01208	1472.32728	14344.8	<.0001
jul	-0.13553	0.02647	2.69027	26.21	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.0507 and C(p) = 9.2531

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	4.75056	2.37528	23.65	<.0001
Error	885	88.87733	0.10043		
Corrected Total	887	93.62790			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.40496	0.01516	862.78965	8591.27	<.0001
jul	-0.12689	0.02626	2.34583	23.36	<.0001
pexchange	-0.09701	0.02142	2.06030	20.52	<.0001

Bounds on condition number: 1.0053, 4.0212

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 68
14:22 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable pturnback Entered: R-Square = 0.0612 and C(p) = 1.4390

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	5.72924	1.90975	19.21	<.0001
Error	884	87.89866	0.09943		
Corrected Total	887	93.62790			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.35194	0.02265	354.16384	3561.84	<.0001
jul	-0.12002	0.02622	2.08373	20.96	<.0001
pturnback	-0.09172	0.02923	0.97868	9.84	0.0018
pexchange	-0.15169	0.02753	3.01855	30.36	<.0001

Bounds on condition number: 1.6777, 13.079

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jul		1	0.0287	0.0287	27.9135	26.21	<.0001
2	pexchange		2	0.0220	0.0507	9.2531	20.52	<.0001
3	pturnback		3	0.0105	0.0612	1.4390	9.84	0.0018

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 14:22 Friday, June 24, 2005 69

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	979	0	3709498217	3789068.66	3494671.00	4329257.00
strtlcktime	Start/lockge/time	979	0	1.29792E12	1325761018	1269617400	1383480600
arrtime	Arriv/time	979	0	1.2979199E12	1325760860	1269617400	1383480600
deptime	Leave/lockge/time	979	0	1.2979209E12	1325761931	1269618600	1383481080
BOW_OVER_SILL	BOW_OVER_SILL	0	979	.	.	.	.
END_OF_ENTRY	END_OF_ENTRY	0	979	.	.	.	.
START_OF_EXIT	START_OF_EXIT	0	979	.	.	.	.
SIGNAL_DATE	SIGNAL_DATE	0	979	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	979	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	0	979	.	.	.	.
NUM_EMPTY_BRG	NUM_EMPTY_BRG	0	979	.	.	.	.
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	979	.	.	.	.
vess_no		979	0	9789999021	9999999.00	9999999.00	9999999.00
vss_hp		0	979	.	.	.	.
frsttime		979	0	1.2979199E12	1325760860	1269617400	1383480600
lasttime		979	0	1.2979209E12	1325761931	1269618600	1383481080
newpoolno		979	0	13878.00	14.1756895	1.0000000	56.0000000
oldpoolno		979	0	13807.00	14.1031665	1.0000000	56.0000000
waitmin	Wait/before/lockge	979	0	2580.00	2.6353422	0	162.0000000
lockmin	Wait/lockge/time	979	0	14899.00	15.2185904	3.0000000	73.0000000
year		979	0	1959403.00	2001.43	2000.00	2003.00
fly		979	0	856.0000000	0.8743616	0	1.0000000
turnback		979	0	29.0000000	0.0296221	0	1.0000000
exchange		979	0	94.0000000	0.0960163	0	1.0000000
lock		979	0	13353.00	13.6394280	1.0000000	55.0000000
totmin		979	0	17479.00	17.8539326	3.0000000	188.0000000
month		979	0	7285.00	7.4412666	3.0000000	12.0000000
day		979	0	15540.00	15.8733401	1.0000000	31.0000000
sunrise		618	361	13582388.00	21977.97	19360.00	27398.00
sunset		618	361	44662058.00	72268.70	60248.00	75772.00
sequpstr		979	0	0	0	0	0
seqdstr		979	0	0	0	0	0
plock		979	0	23496.00	24.0000000	24.0000000	24.0000000
pempty		0	979	.	.	.	.
pfull		0	979	.	.	.	.
parrtime		979	0	1.2979195E12	1325760438	1269614400	1383480000
pstrtlcktime		979	0	1.2979204E12	1325761428	1269614400	1383480000
pdeptime		979	0	1.2979213E12	1325762356	1269616020	1383481620
birth		979	0	0	0	0	0
transithrs		979	0	-406.9333333	-0.4156622	-240.0000000	13.7333333
reclock		979	0	979.0000000	1.0000000	1.0000000	1.0000000
i		979	0	282623.00	288.6853933	58.0000000	401.0000000
pctpsysdn		979	0	77.6950000	0.0793616	0	76.7440000
pctplckdn		979	0	76.7440000	0.0783902	0	76.7440000
cumdown		99	880	0	0	0	0
pctdown		99	880	0	0	0	0
pcttrandn		7	972	0	0	0	0
pctsysdn		99	880	0	0	0	0
pctlckdn		99	880	0	0	0	0
stime		979	0	50599680.00	51685.07	360.0000000	86100.00
etime		979	0	51407220.00	52509.93	600.0000000	84600.00
sdate		979	0	15021637.00	15343.86	14694.00	16012.00

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 14:22 Friday, June 24, 2005 70

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		979	0	15021638.00	15343.86	14694.00	16012.00
hrsduration		979	0	248.3166667	0.2536432	0.0500000	1.2166667
ndays		979	0	0	0	0	0
pctday		979	0	58758.69	60.0190950	0	100.0000000
pctpsysnite		978	1	38964.10	39.8405961	0	100.0000000
pctplcknite		979	0	39148.18	39.9879244	0	100.0000000
pcttrannite		977	2	38843.36	39.7577912	0	100.0000000
pctsysnite		979	0	39096.98	39.9356251	0	100.0000000
pctlcknite		979	0	39141.31	39.9809050	0	100.0000000
stage		65	914	1434.18	22.0643077	10.7700000	29.3100000
flow		14	965	1296770.72	92626.48	23494.59	212955.92
jan		979	0	0	0	0	0
feb		979	0	0	0	0	0
mar		979	0	10.0000000	0.0102145	0	1.0000000
apr		979	0	31.0000000	0.0316650	0	1.0000000
may		979	0	74.0000000	0.0755873	0	1.0000000
jun		979	0	138.0000000	0.1409602	0	1.0000000
jul		979	0	208.0000000	0.2124617	0	1.0000000
aug		979	0	269.0000000	0.2747702	0	1.0000000
sep		979	0	177.0000000	0.1807967	0	1.0000000
oct		979	0	61.0000000	0.0623085	0	1.0000000
nov		979	0	10.0000000	0.0102145	0	1.0000000
dec		979	0	1.0000000	0.0010215	0	1.0000000
m31day		979	0	623.0000000	0.6363636	0	1.0000000
m30day		979	0	356.0000000	0.3636364	0	1.0000000
qtr1		979	0	10.0000000	0.0102145	0	1.0000000
qtr2		979	0	243.0000000	0.2482125	0	1.0000000
qtr3		979	0	654.0000000	0.6680286	0	1.0000000
qtr4		979	0	72.0000000	0.0735444	0	1.0000000
psingle		979	0	979.0000000	1.0000000	1.0000000	1.0000000
pdouble		979	0	0	0	0	0
pknockout		979	0	0	0	0	0
pjacknife		979	0	0	0	0	0
pothtype		979	0	0	0	0	0
pexchange		979	0	19.0000000	0.0194076	0	1.0000000
pturnback		979	0	59.0000000	0.0602656	0	1.0000000
single		979	0	978.0000000	0.9989785	0	1.0000000
double		979	0	0	0	0	0
knockout		979	0	0	0	0	0
jacknife		979	0	0	0	0	0
othtype		979	0	1.0000000	0.0010215	0	1.0000000
contthru		979	0	0	0	0	0
return		979	0	2.0000000	0.0020429	0	1.0000000
contstop		979	0	2.0000000	0.0020429	0	1.0000000
kill		979	0	975.0000000	0.9959142	0	1.0000000
contsame		979	0	0	0	0	0
contdouble		979	0	0	0	0	0
contsingle		979	0	2.0000000	0.0020429	0	1.0000000
contko		979	0	0	0	0	0
contjk		979	0	0	0	0	0
retdouble		979	0	0	0	0	0
retsingle		979	0	2.0000000	0.0020429	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		979	0	0	0	0	0
retjk		979	0	0	0	0	0
xkill		979	0	975.0000000	0.9959142	0	1.0000000
logtrnhrs		49	930	-65.2926135	-1.3325023	-4.0943446	2.6198260
plockhrs		979	0	248.1967213	0.2535207	0.0163934	0.8524590
loglckhrs		979	0	-1413.20	-1.4435096	-4.1108739	-0.1596301
thrusingle		979	0	0	0	0	0
thruother		979	0	0	0	0	0
contother		979	0	0	0	0	0
retother		979	0	0	0	0	0
thrudoubnite		977	2	0	0	0	0
thrusingnite		977	2	0	0	0	0
thruothnite		977	2	0	0	0	0
pdoubnite		979	0	0	0	0	0
psingnite		979	0	391.4817800	0.3998792	0	1.0000000
pothnite		979	0	0	0	0	0

```
resulting regfile for mdy(1,1,2000) to mdy(12,31,2003)        14:22 Friday, June 24, 2005  72

                The FREQ Procedure

        Table 1 of pconfig by doutcome
        Controlling for pnewpool=MI24U

pconfig     doutcome

Frequency|
Percent  |
Row Pct  |
Col Pct  |3:contsi|7:retsin|x:kill  |  Total
         |ngle    |gle     |        |
---------+--------+--------+--------+
2:single |      2 |      2 |    975 |    979
         |   0.20 |   0.20 |  99.59 | 100.00
         |   0.20 |   0.20 |  99.59 |
         | 100.00 | 100.00 | 100.00 |
---------+--------+--------+--------+
Total           2        2      975      979
              0.20     0.20    99.59   100.00


        Table 1 of pconfig by nextstep
        Controlling for pnewpool=MI24U

pconfig     nextstep

Frequency|
Percent  |
Row Pct  |
Col Pct  |2:contst|3:return|4:kill  |  Total
---------+--------+--------+--------+
2:single |      2 |      2 |    975 |    979
         |   0.20 |   0.20 |  99.59 | 100.00
         |   0.20 |   0.20 |  99.59 |
         | 100.00 | 100.00 | 100.00 |
---------+--------+--------+--------+
Total           2        2      975      979
              0.20     0.20    99.59   100.00
```

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	37262	0	148936448216	3997006.29	3494031.00	4332992.00
strtlcktime	Start/lockge/time	37262	0	4.9488473E13	1328121754	1262343000	1388404500
arrtime	Arriv/time	37262	0	4.9488455E13	1328121290	1262343000	1388404500
deptime	Leave/lockge/time	37262	0	4.9488508E13	1328122692	1262344020	1388405400
BOW_OVER_SILL	BOW_OVER_SILL	0	37262	.	.	.	.
END_OF_ENTRY	END_OF_ENTRY	0	37262	.	.	.	.
START_OF_EXIT	START_OF_EXIT	0	37262	.	.	.	.
SIGNAL_DATE	SIGNAL_DATE	0	37262	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	37262	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	0	37262	.	.	.	.
NUM_EMPTY_BRG	NUM_EMPTY_BRG	0	37262	.	.	.	.
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	37262	.	.	.	.
vess_no		37262	0	372619962738	9999999.00	9999999.00	9999999.00
vss_hp		0	37262	.	.	.	.
frsttime		37262	0	4.9488455E13	1328121290	1262343000	1388404500
lasttime		37262	0	4.9488508E13	1328122692	1262344020	1388405400
newpoolno		37262	0	696149.00	18.6825452	1.0000000	56.0000000
oldpoolno		37262	0	692357.00	18.5807793	1.0000000	56.0000000
waitmin	Wait/before/lockge	37262	0	288316.00	7.7375342	0	14400.00
lockmin	Wait/lockge/time	37262	0	582862.00	15.6422629	1.0000000	543.0000000
year		37262	0	74579363.00	2001.49	2000.00	2003.00
fly		37262	0	28284.00	0.7590575	0	1.0000000
turnback		37262	0	3416.00	0.0916752	0	1.0000000
exchange		37262	0	5562.00	0.1492674	0	1.0000000
lock		37262	0	675622.00	18.1316623	1.0000000	55.0000000
totmin		37262	0	871178.00	23.3797971	1.0000000	14410.00
month		37262	0	288055.00	7.7305298	1.0000000	12.0000000
day		37262	0	564696.00	15.1547421	1.0000000	31.0000000
sunrise		29291	7971	658305233	22474.66	19360.00	28091.00
sunset		29291	7971	2084153376	71153.37	59437.00	75777.00
sequpstr		37262	0	0	0	0	0
seqdstr		37262	0	0	0	0	0
plock		37262	0	639845.00	17.1715152	1.0000000	55.0000000
pempty		0	37262	.	.	.	.
pfull		0	37262	.	.	.	.
parrtime		37262	0	4.9488426E13	1328120489	1262331720	1388310900
pstrtlcktime		37262	0	4.9488444E13	1328120992	1262331720	1388310900
pdeptime		37262	0	4.9488479E13	1328121924	1262332920	1388312280
birth		37262	0	0	0	0	0
transithrs		37262	0	-6562.53	-0.1761187	-240.0000000	192.3500000
reclock		37262	0	37262.00	1.0000000	1.0000000	1.0000000
i		37262	0	8246324.00	221.3065321	58.0000000	401.0000000
pctpsysdn		20563	16699	2172.12	0.1056324	0	97.4360000
pctplckdn		20563	16699	774.0670000	0.0376437	0	97.9740000
cumdown		19516	17746	48060.00	2.4625948	0	31920.00
pctdown		19516	17746	632.3230000	0.0324002	0	97.9740000
pcttrandn		1753	35509	891.0290000	0.5082881	0	100.0000000
pctsysdn		19516	17746	2029.43	0.1039878	0	97.4360000
pctlckdn		19516	17746	632.3230000	0.0324002	0	97.9740000
stime		37262	0	1810247220	48581.59	0	86340.00
etime		37262	0	1841330940	49415.78	0	86340.00
sdate		37262	0	572762298	15371.22	14610.00	16069.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		37262	0	572762343	15371.22	14610.00	16069.00
hrsduration		37262	0	9714.37	0.2607044	0.0166667	9.0500000
ndays		37262	0	0	0	0	0
pctday		37249	13	2717806.67	72.9632117	0	100.0000000
pctpsysnite		37242	20	1003221.10	26.9378955	0	100.0000000
pctplcknite		37250	12	1009197.43	27.0925484	0	100.0000000
pcttrannite		37196	66	1006667.85	27.0638737	0	100.0000000
pctsysnite		37249	13	1000010.38	26.8466370	0	100.0000000
pctlcknite		37249	13	1007093.33	27.0367883	0	100.0000000
stage		14517	22745	298116.01	20.5356485	8.3200000	33.2500000
flow		4894	32368	436032445	89095.31	16240.90	280143.91
jan		37262	0	47.0000000	0.0012613	0	1.0000000
feb		37262	0	19.0000000	0.000509903	0	1.0000000
mar		37262	0	325.0000000	0.0087220	0	1.0000000
apr		37262	0	1110.00	0.0297891	0	1.0000000
may		37262	0	2438.00	0.0654286	0	1.0000000
jun		37262	0	4490.00	0.1204981	0	1.0000000
jul		37262	0	7689.00	0.2063496	0	1.0000000
aug		37262	0	8180.00	0.2195266	0	1.0000000
sep		37262	0	7066.00	0.1896302	0	1.0000000
oct		37262	0	4521.00	0.1213300	0	1.0000000
nov		37262	0	1166.00	0.0312919	0	1.0000000
dec		37262	0	211.0000000	0.0056626	0	1.0000000
m31day		37262	0	23411.00	0.6282808	0	1.0000000
m30day		37262	0	13832.00	0.3712093	0	1.0000000
qtr1		37262	0	391.0000000	0.0104933	0	1.0000000
qtr2		37262	0	8038.00	0.2157157	0	1.0000000
qtr3		37262	0	22935.00	0.6155064	0	1.0000000
qtr4		37262	0	5898.00	0.1582846	0	1.0000000
psingle		37262	0	37255.00	0.9998121	0	1.0000000
pdouble		37262	0	0	0	0	0
pknockout		37262	0	0	0	0	0
pjacknife		37262	0	0	0	0	0
pothtype		37262	0	7.0000000	0.000187859	0	1.0000000
pexchange		37262	0	5797.00	0.1555740	0	1.0000000
pturnback		37262	0	3541.00	0.0950298	0	1.0000000
single		37262	0	37261.00	0.9999732	0	1.0000000
double		37262	0	0	0	0	0
knockout		37262	0	0	0	0	0
jacknife		37262	0	0	0	0	0
othtype		37262	0	1.0000000	0.000026837	0	1.0000000
contthru		979	36283	0	0	0	0
return		979	36283	2.0000000	0.0020429	0	1.0000000
contstop		979	36283	2.0000000	0.0020429	0	1.0000000
kill		979	36283	975.0000000	0.9959142	0	1.0000000
contsame		979	36283	0	0	0	0
contdouble		979	36283	0	0	0	0
contsingle		979	36283	2.0000000	0.0020429	0	1.0000000
contko		979	36283	0	0	0	0
contjk		979	36283	0	0	0	0
retdouble		979	36283	0	0	0	0
retsingle		979	36283	2.0000000	0.0020429	0	1.0000000

Statistics from water.regfile for regfile 14:22 Friday, June 24, 2005 75

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		979	36283	0	0	0	0
retjk		979	36283	0	0	0	0
xkill		979	36283	975.0000000	0.9959142	0	1.0000000
logtrnhrs		49	37213	-65.2926135	-1.3325023	-4.0943446	2.6198260
plockhrs		979	36283	248.1967213	0.2535207	0.0163934	0.8524590
loglckhrs		979	36283	-1413.20	-1.4435096	-4.1108739	-0.1596301
thrusingle		979	36283	0	0	0	0
thruother		979	36283	0	0	0	0
contother		979	36283	0	0	0	0
retother		979	36283	0	0	0	0
thrudoubnite		977	36285	0	0	0	0
thrusingnite		977	36285	0	0	0	0
thruothnite		977	36285	0	0	0	0
pdoubnite		979	36283	0	0	0	0
psingnite		979	36283	391.4817800	0.3998792	0	1.0000000
pothnite		979	36283	0	0	0	0

Activity times using key variables from stepwise proc 14:22 Friday, June 24, 2005 76

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable aug Entered: R-Square = 0.0424 and C(p) = 35.6659

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.40347	0.40347	43.21	<.0001
Error	976	9.11369	0.00934		
Corrected Total	977	9.51716			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.24043	0.00363	41.04249	4395.31	<.0001
aug	0.04554	0.00693	0.40347	43.21	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable sep Entered: R-Square = 0.0594 and C(p) = 19.7099

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	0.56554	0.28277	30.80	<.0001
Error	975	8.95161	0.00918		
Corrected Total	977	9.51716			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.23172	0.00415	28.61965	3117.22	<.0001
aug	0.05425	0.00718	0.52475	57.15	<.0001
sep	0.03493	0.00831	0.16208	17.65	<.0001

Bounds on condition number: 1.091, 4.364

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 14:22 Friday, June 24, 2005 77

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable oct Entered: R-Square = 0.0741 and C(p) = 6.1984

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	0.70556	0.23519	26.00	<.0001
Error	974	8.81160	0.00905		
Corrected Total	977	9.51716			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.22590	0.00438	24.08571	2662.34	<.0001
aug	0.06007	0.00727	0.61686	68.18	<.0001
sep	0.04075	0.00838	0.21378	23.63	<.0001
oct	0.05091	0.01294	0.14001	15.48	<.0001

Bounds on condition number: 1.1382, 9.9694

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	aug		1	0.0424	0.0424	35.6659	43.21	<.0001
2	sep		2	0.0170	0.0594	19.7099	17.65	<.0001
3	oct		3	0.0147	0.0741	6.1984	15.48	<.0001

Logarithms of single lockage times using key variables from stepwise proc 78
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable aug Entered: R-Square = 0.0441 and C(p) = 52.4552

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	6.12129	6.12129	45.06	<.0001
Error	976	132.58324	0.13584		
Corrected Total	977	138.70453			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.49343	0.01383	1583.53312	11657.0	<.0001
aug	0.17738	0.02642	6.12129	45.06	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable sep Entered: R-Square = 0.0720 and C(p) = 24.4768

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	9.99348	4.99674	37.85	<.0001
Error	975	128.71105	0.13201		
Corrected Total	977	138.70453			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.53599	0.01574	1257.48104	9525.55	<.0001
aug	0.21993	0.02721	8.62601	65.34	<.0001
sep	0.17071	0.03152	3.87219	29.33	<.0001

Bounds on condition number: 1.091, 4.364

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 79
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable oct Entered: R-Square = 0.0893 and C(p) = 7.9626

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	12.38489	4.12830	31.83	<.0001
Error	974	126.31964	0.12969		
Corrected Total	977	138.70453			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.56007	0.01658	1148.75568	8857.59	<.0001
aug	0.24401	0.02754	10.17820	78.48	<.0001
sep	0.19479	0.03174	4.88429	37.66	<.0001
oct	0.21040	0.04900	2.39140	18.44	<.0001

Bounds on condition number: 1.1382, 9.9694

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	aug		1	0.0441	0.0441	52.4552	45.06	<.0001
2	sep		2	0.0279	0.0720	24.4768	29.33	<.0001
3	oct		3	0.0172	0.0893	7.9626	18.44	<.0001

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	1140	0	4336125039	3803618.46	3494222.00	4329830.00
strtlcktime	Start/lockge/time	1140	0	1.5112934E12	1325696001	1268125800	1386325800
arrtime	Arriv/time	1140	0	1.5112932E12	1325695788	1268125800	1386325800
deptime	Leave/lockge/time	1140	0	1.5112945E12	1325696956	1268126640	1386326700
BOW_OVER_SILL	BOW_OVER_SILL	0	1140	.	.	.	.
END_OF_ENTRY	END_OF_ENTRY	0	1140	.	.	.	.
START_OF_EXIT	START_OF_EXIT	0	1140	.	.	.	.
SIGNAL_DATE	SIGNAL_DATE	0	1140	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	1140	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	0	1140	.	.	.	.
NUM_EMPTY_BRG	NUM_EMPTY_BRG	0	1140	.	.	.	.
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	1140	.	.	.	.
vess_no		1140	0	11399998860	9999999.00	9999999.00	9999999.00
vss_hp		0	1140	.	.	.	.
frsttime		1140	0	1.5112932E12	1325695788	1268125800	1386325800
lasttime		1140	0	1.5112945E12	1325696956	1268126640	1386326700
newpoolno		1140	0	14916.00	13.0842105	1.0000000	56.0000000
oldpoolno		1140	0	14810.00	12.9912281	1.0000000	56.0000000
waitmin	Wait/before/lockge	1140	0	4037.00	3.5412281	0	720.0000000
lockmin	Wait/lockge/time	1140	0	18139.00	15.9114035	4.0000000	422.0000000
year		1140	0	2281569.00	2001.38	2000.00	2003.00
fly		1140	0	995.0000000	0.8728070	0	1.0000000
turnback		1140	0	45.0000000	0.0394737	0	1.0000000
exchange		1140	0	100.0000000	0.0877193	0	1.0000000
lock		1140	0	14293.00	12.5377193	1.0000000	55.0000000
totmin		1140	0	22176.00	19.4526316	4.0000000	740.0000000
month		1140	0	9258.00	8.1210526	3.0000000	12.0000000
day		1140	0	17200.00	15.0877193	1.0000000	31.0000000
sunrise		701	439	15929843.00	22724.46	19366.00	27642.00
sunset		701	439	49708398.00	70910.70	59459.00	75772.00
sequpstr		1140	0	0	0	0	0
seqdstr		1140	0	0	0	0	0
plock		1140	0	27360.00	24.0000000	24.0000000	24.0000000
pempty		0	1140	.	.	.	.
pfull		0	1140	.	.	.	.
parrtime		1140	0	1.5112926E12	1325695224	1268123100	1386319620
pstrtlcktime		1140	0	1.5112927E12	1325695350	1268123100	1386319620
pdeptime		1140	0	1.5112937E12	1325696240	1268123700	1386320400
birth		1140	0	0	0	0	0
transithrs		1140	0	-143.1000000	-0.1255263	-11.1166667	24.0833333
reclock		1140	0	1140.00	1.0000000	1.0000000	1.0000000
i		1140	0	328836.00	288.4526316	58.0000000	401.0000000
pctpsysdn		1140	0	111.2730000	0.0976079	0	92.7540000
pctplckdn		1140	0	92.7540000	0.0813632	0	92.7540000
cumdown		127	1013	0	0	0	0
pctdown		127	1013	0	0	0	0
pcttrandn		15	1125	44.8280000	2.9885333	0	44.8280000
pctsysdn		127	1013	0	0	0	0
pctlckdn		127	1013	0	0	0	0
stime		1140	0	54538620.00	47840.89	899.9999998	85680.00
etime		1140	0	55540560.00	48719.79	299.9999998	85620.00
sdate		1140	0	17491191.00	15343.15	14677.00	16045.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		1140	0	17491192.00	15343.15	14677.00	16045.00
hrsduration		1140	0	302.3166667	0.2651901	0.0666667	7.0333333
ndays		1140	0	0	0	0	0
pctday		1139	1	67400.00	59.1747147	0	100.0000000
pctpsysnite		1140	0	46500.05	40.7895158	0	100.0000000
pctplcknite		1140	0	46480.99	40.7727947	0	100.0000000
pcttrannite		1140	0	46622.24	40.8967026	0	100.0000000
pctsysnite		1139	1	46486.91	40.8137884	0	100.0000000
pctlcknite		1139	1	46500.00	40.8252853	0	100.0000000
stage		94	1046	2115.58	22.5061702	9.8600000	29.5000000
flow		16	1124	1621199.67	101324.98	29401.70	193942.00
jan		1140	0	0	0	0	0
feb		1140	0	0	0	0	0
mar		1140	0	4.0000000	0.0035088	0	1.0000000
apr		1140	0	16.0000000	0.0140351	0	1.0000000
may		1140	0	47.0000000	0.0412281	0	1.0000000
jun		1140	0	107.0000000	0.0938596	0	1.0000000
jul		1140	0	225.0000000	0.1973684	0	1.0000000
aug		1140	0	248.0000000	0.2175439	0	1.0000000
sep		1140	0	253.0000000	0.2219298	0	1.0000000
oct		1140	0	178.0000000	0.1561404	0	1.0000000
nov		1140	0	55.0000000	0.0482456	0	1.0000000
dec		1140	0	7.0000000	0.0061404	0	1.0000000
m31day		1140	0	709.0000000	0.6219298	0	1.0000000
m30day		1140	0	431.0000000	0.3780702	0	1.0000000
qtr1		1140	0	4.0000000	0.0035088	0	1.0000000
qtr2		1140	0	170.0000000	0.1491228	0	1.0000000
qtr3		1140	0	726.0000000	0.6368421	0	1.0000000
qtr4		1140	0	240.0000000	0.2105263	0	1.0000000
psingle		1140	0	1140.00	1.0000000	1.0000000	1.0000000
pdouble		1140	0	0	0	0	0
pknockout		1140	0	0	0	0	0
pjacknife		1140	0	0	0	0	0
pothtype		1140	0	0	0	0	0
pexchange		1140	0	22.0000000	0.0192982	0	1.0000000
pturnback		1140	0	78.0000000	0.0684211	0	1.0000000
single		1140	0	1140.00	1.0000000	1.0000000	1.0000000
double		1140	0	0	0	0	0
knockout		1140	0	0	0	0	0
jacknife		1140	0	0	0	0	0
othtype		1140	0	0	0	0	0
contthru		1140	0	0	0	0	0
return		1140	0	2.0000000	0.0017544	0	1.0000000
contstop		1140	0	16.0000000	0.0140351	0	1.0000000
kill		1140	0	1122.00	0.9842105	0	1.0000000
contsame		1140	0	0	0	0	0
contdouble		1140	0	0	0	0	0
contsingle		1140	0	16.0000000	0.0140351	0	1.0000000
contko		1140	0	0	0	0	0
contjk		1140	0	0	0	0	0
retdouble		1140	0	0	0	0	0
retsingle		1140	0	2.0000000	0.0017544	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1140	0	0	0	0	0
retjk		1140	0	0	0	0	0
xkill		1140	0	1122.00	0.9842105	0	1.0000000
logtrnhrs		68	1072	-96.1971705	-1.4146643	-4.0943446	3.1815200
plockhrs		1140	0	277.3770492	0.2433132	0.0327869	1.1311475
loglckhrs		1140	0	-1691.14	-1.4834594	-3.4177267	0.1232326
thrusingle		1140	0	0	0	0	0
thruother		1140	0	0	0	0	0
contother		1140	0	0	0	0	0
retother		1140	0	0	0	0	0
thrudoubnite		1140	0	0	0	0	0
thrusingnite		1140	0	0	0	0	0
thruothnite		1140	0	0	0	0	0
pdoubnite		1140	0	0	0	0	0
psingnite		1140	0	464.8098600	0.4077279	0	1.0000000
pothnite		1140	0	0	0	0	0

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resulting regfile for mdy(1,1,2000) to mdy(12,31,2003)        14:22 Friday, June 24, 2005  83

                The FREQ Procedure

        Table 1 of pconfig by doutcome
        Controlling for pnewpool=MI25D

pconfig     doutcome

Frequency|
Percent  |
Row Pct  |
Col Pct  |3:contsi|7:retsin|x:kill  |  Total
         |ngle    |gle     |        |
---------+--------+--------+--------+
2:single |     16 |      2 |   1122 |   1140
         |   1.40 |   0.18 |  98.42 | 100.00
         |   1.40 |   0.18 |  98.42 |
         | 100.00 | 100.00 | 100.00 |
---------+--------+--------+--------+
Total          16        2     1122     1140
             1.40     0.18    98.42   100.00


        Table 1 of pconfig by nextstep
        Controlling for pnewpool=MI25D

pconfig     nextstep

Frequency|
Percent  |
Row Pct  |
Col Pct  |2:contst|3:return|4:kill  |  Total
---------+--------+--------+--------+
2:single |     16 |      2 |   1122 |   1140
         |   1.40 |   0.18 |  98.42 | 100.00
         |   1.40 |   0.18 |  98.42 |
         | 100.00 | 100.00 | 100.00 |
---------+--------+--------+--------+
Total          16        2     1122     1140
             1.40     0.18    98.42   100.00
```

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	37423	0	149563075038	3996554.93	3494031.00	4332992.00
strtlcktime	Start/lockge/time	37423	0	4.9701846E13	1328109617	1262343000	1388404500
arrtime	Arriv/time	37423	0	4.9701829E13	1328109152	1262343000	1388404500
deptime	Leave/lockge/time	37423	0	4.9701881E13	1328110557	1262344020	1388405400
BOW_OVER_SILL	BOW_OVER_SILL	0	37423	.	.	.	.
END_OF_ENTRY	END_OF_ENTRY	0	37423	.	.	.	.
START_OF_EXIT	START_OF_EXIT	0	37423	.	.	.	.
SIGNAL_DATE	SIGNAL_DATE	0	37423	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	37423	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	0	37423	.	.	.	.
NUM_EMPTY_BRG	NUM_EMPTY_BRG	0	37423	.	.	.	.
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	37423	.	.	.	.
vess_no		37423	0	374229962577	9999999.00	9999999.00	9999999.00
vss_hp		0	37423	.	.	.	.
frsttime		37423	0	4.9701829E13	1328109152	1262343000	1388404500
lasttime		37423	0	4.9701881E13	1328110557	1262344020	1388405400
newpoolno		37423	0	697187.00	18.6299067	1.0000000	56.0000000
oldpoolno		37423	0	693360.00	18.5276434	1.0000000	56.0000000
waitmin	Wait/before/lockge	37423	0	289773.00	7.7431793	0	14400.00
lockmin	Wait/lockge/time	37423	0	586102.00	15.6615450	1.0000000	543.0000000
year		37423	0	74901529.00	2001.48	2000.00	2003.00
fly		37423	0	28423.00	0.7595062	0	1.0000000
turnback		37423	0	3432.00	0.0917083	0	1.0000000
exchange		37423	0	5568.00	0.1487855	0	1.0000000
lock		37423	0	676562.00	18.0787751	1.0000000	55.0000000
totmin		37423	0	875875.00	23.4047244	1.0000000	14410.00
month		37423	0	290028.00	7.7499933	1.0000000	12.0000000
day		37423	0	566356.00	15.1339016	1.0000000	31.0000000
sunrise		29374	8049	660652688	22491.07	19360.00	28091.00
sunset		29374	8049	2089199716	71124.11	59437.00	75777.00
sequpstr		37423	0	0	0	0	0
seqdstr		37423	0	0	0	0	0
plock		37423	0	643709.00	17.2008925	1.0000000	55.0000000
pempty		0	37423	.	.	.	.
pfull		0	37423	.	.	.	.
parrtime		37423	0	4.9701799E13	1328108349	1262331720	1388310900
pstrtlcktime		37423	0	4.9701817E13	1328108828	1262331720	1388310900
pdeptime		37423	0	4.9701851E13	1328109758	1262332920	1388312280
birth		37423	0	0	0	0	0
transithrs		37423	0	-6298.70	-0.1683109	-240.0000000	192.3500000
reclock		37423	0	37423.00	1.0000000	1.0000000	1.0000000
i		37423	0	8292537.00	221.5893167	58.0000000	401.0000000
pctpsysdn		20724	16699	2205.70	0.1064321	0	97.4360000
pctplckdn		20724	16699	790.0770000	0.0381238	0	97.9740000
cumdown		19544	17879	48060.00	2.4590667	0	31920.00
pctdown		19544	17879	632.3230000	0.0323538	0	97.9740000
pcttrandn		1761	35662	935.8570000	0.5314350	0	100.0000000
pctsysdn		19544	17879	2029.43	0.1038388	0	97.4360000
pctlckdn		19544	17879	632.3230000	0.0323538	0	97.9740000
stime		37423	0	1814186160	48477.84	0	86340.00
etime		37423	0	1845464280	49313.64	0	86340.00
sdate		37423	0	575231852	15371.08	14610.00	16069.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		37423	0	575231897	15371.08	14610.00	16069.00
hrsduration		37423	0	9768.37	0.2610258	0.0166667	9.0500000
ndays		37423	0	0	0	0	0
pctday		37409	14	2726447.98	72.8821400	0	100.0000000
pctpsysnite		37404	19	1010757.05	27.0226994	0	100.0000000
pctplcknite		37411	12	1016530.24	27.1719611	0	100.0000000
pcttrannite		37359	64	1014446.73	27.1540118	0	100.0000000
pctsysnite		37409	14	1007400.31	26.9293568	0	100.0000000
pctlcknite		37409	14	1014452.02	27.1178600	0	100.0000000
stage		14546	22877	298797.41	20.5415516	8.3200000	33.2500000
flow		4896	32527	436356874	89125.18	16240.90	280143.91
jan		37423	0	47.0000000	0.0012559	0	1.0000000
feb		37423	0	19.0000000	0.000507709	0	1.0000000
mar		37423	0	319.0000000	0.0085242	0	1.0000000
apr		37423	0	1095.00	0.0292601	0	1.0000000
may		37423	0	2411.00	0.0644256	0	1.0000000
jun		37423	0	4459.00	0.1191513	0	1.0000000
jul		37423	0	7706.00	0.2059161	0	1.0000000
aug		37423	0	8159.00	0.2180210	0	1.0000000
sep		37423	0	7142.00	0.1908452	0	1.0000000
oct		37423	0	4638.00	0.1239345	0	1.0000000
nov		37423	0	1211.00	0.0323598	0	1.0000000
dec		37423	0	217.0000000	0.0057986	0	1.0000000
m31day		37423	0	23497.00	0.6278759	0	1.0000000
m30day		37423	0	13907.00	0.3716164	0	1.0000000
qtr1		37423	0	385.0000000	0.0102878	0	1.0000000
qtr2		37423	0	7965.00	0.2128370	0	1.0000000
qtr3		37423	0	23007.00	0.6147824	0	1.0000000
qtr4		37423	0	6066.00	0.1620928	0	1.0000000
psingle		37423	0	37416.00	0.9998129	0	1.0000000
pdouble		37423	0	0	0	0	0
pknockout		37423	0	0	0	0	0
pjacknife		37423	0	0	0	0	0
pothtype		37423	0	7.0000000	0.000187051	0	1.0000000
pexchange		37423	0	5800.00	0.1549849	0	1.0000000
pturnback		37423	0	3560.00	0.0951287	0	1.0000000
single		37423	0	37423.00	1.0000000	1.0000000	1.0000000
double		37423	0	0	0	0	0
knockout		37423	0	0	0	0	0
jacknife		37423	0	0	0	0	0
othtype		37423	0	0	0	0	0
contthru		1140	36283	0	0	0	0
return		1140	36283	2.0000000	0.0017544	0	1.0000000
contstop		1140	36283	16.0000000	0.0140351	0	1.0000000
kill		1140	36283	1122.00	0.9842105	0	1.0000000
contsame		1140	36283	0	0	0	0
contdouble		1140	36283	0	0	0	0
contsingle		1140	36283	16.0000000	0.0140351	0	1.0000000
contko		1140	36283	0	0	0	0
contjk		1140	36283	0	0	0	0
retdouble		1140	36283	0	0	0	0
retsingle		1140	36283	2.0000000	0.0017544	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1140	36283	0	0	0	0
retjk		1140	36283	0	0	0	0
xkill		1140	36283	1122.00	0.9842105	0	1.0000000
logtrnhrs		68	37355	-96.1971705	-1.4146643	-4.0943446	3.1815200
plockhrs		1140	36283	277.3770492	0.2433132	0.0327869	1.1311475
loglckhrs		1140	36283	-1691.14	-1.4834594	-3.4177267	0.1232326
thrusingle		1140	36283	0	0	0	0
thruother		1140	36283	0	0	0	0
contother		1140	36283	0	0	0	0
retother		1140	36283	0	0	0	0
thrudoubnite		1140	36283	0	0	0	0
thrusingnite		1140	36283	0	0	0	0
thruothnite		1140	36283	0	0	0	0
pdoubnite		1140	36283	0	0	0	0
psingnite		1140	36283	464.8098600	0.4077279	0	1.0000000
pothnite		1140	36283	0	0	0	0

Activity times using key variables from stepwise proc 14:22 Friday, June 24, 2005 87

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable sep Entered: R-Square = 0.0358 and C(p) = 58.8630

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.35372	0.35372	42.12	<.0001
Error	1135	9.53125	0.00840		
Corrected Total	1136	9.88496			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.23349	0.00308	48.24838	5745.51	<.0001
sep	0.04247	0.00654	0.35372	42.12	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable oct Entered: R-Square = 0.0567 and C(p) = 35.0084

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	0.56047	0.28024	34.08	<.0001
Error	1134	9.32449	0.00822		
Corrected Total	1136	9.88496			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.22582	0.00341	36.05368	4384.68	<.0001
sep	0.05013	0.00665	0.46696	56.79	<.0001
oct	0.03813	0.00760	0.20676	25.14	<.0001

Bounds on condition number: 1.0558, 4.2232

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 14:22 Friday, June 24, 2005 88

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable aug Entered: R-Square = 0.0696 and C(p) = 21.0193

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	0.68834	0.22945	28.27	<.0001
Error	1133	9.19663	0.00812		
Corrected Total	1136	9.88496			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.21594	0.00421	21.40247	2636.73	<.0001
aug	0.02818	0.00710	0.12786	15.75	<.0001
sep	0.06002	0.00706	0.58605	72.20	<.0001
oct	0.04802	0.00796	0.29572	36.43	<.0001

Bounds on condition number: 1.2057, 10.742

Stepwise Selection: Step 4

Variable nov Entered: R-Square = 0.0892 and C(p) = -1.1353

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	0.88150	0.22038	27.71	<.0001
Error	1132	9.00346	0.00795		
Corrected Total	1136	9.88496			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.20837	0.00444	17.54041	2205.35	<.0001
aug	0.03575	0.00719	0.19640	24.69	<.0001
sep	0.06759	0.00716	0.70898	89.14	<.0001
oct	0.05559	0.00802	0.38177	48.00	<.0001
nov	0.06317	0.01282	0.19316	24.29	<.0001

Activity times using key variables from stepwise proc 14:22 Friday, June 24, 2005 89

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.2639, 19.288

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	sep		1	0.0358	0.0358	58.8630	42.12	<.0001
2	oct		2	0.0209	0.0567	35.0084	25.14	<.0001
3	aug		3	0.0129	0.0696	21.0193	15.75	<.0001
4	nov		4	0.0195	0.0892	-1.1353	24.29	<.0001

Logarithms of single lockage times using key variables from stepwise proc 90
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable jul Entered: R-Square = 0.0441 and C(p) = 78.1215

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	6.86256	6.86256	52.46	<.0001
Error	1137	148.74441	0.13082		
Corrected Total	1138	155.60698			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.44636	0.01196	1912.04290	14615.6	<.0001
jul	-0.19496	0.02692	6.86256	52.46	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jun Entered: R-Square = 0.0782 and C(p) = 36.8832

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	12.16414	6.08207	48.17	<.0001
Error	1136	143.44283	0.12627		
Corrected Total	1138	155.60698			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.41863	0.01251	1624.08613	12862.0	<.0001
jun	-0.23689	0.03656	5.30158	41.99	<.0001
jul	-0.22269	0.02679	8.72525	69.10	<.0001

Bounds on condition number: 1.0262, 4.1048

Stepwise Selection: Step 3

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable may Entered: R-Square = 0.0930 and C(p) = 20.0039

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	14.47898	4.82633	38.81	<.0001
Error	1135	141.12799	0.12434		
Corrected Total	1138	155.60698			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.40531	0.01279	1500.91399	12070.9	<.0001
may	-0.22869	0.05300	2.31484	18.62	<.0001
jun	-0.25021	0.03641	5.87198	47.22	<.0001
jul	-0.23601	0.02676	9.66978	77.77	<.0001

Bounds on condition number: 1.04, 9.275

Stepwise Selection: Step 4

Variable aug Entered: R-Square = 0.1029 and C(p) = 9.4489

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	16.01840	4.00460	32.53	<.0001
Error	1134	139.58858	0.12309		
Corrected Total	1138	155.60698			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.37398	0.01551	966.56973	7852.29	<.0001
may	-0.26001	0.05347	2.91029	23.64	<.0001
jun	-0.28153	0.03729	7.01485	56.99	<.0001
jul	-0.26733	0.02806	11.17084	90.75	<.0001
aug	-0.09599	0.02714	1.53941	12.51	0.0004

Logarithms of single lockage times using key variables from stepwise proc 92
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.1612, 17.834

Stepwise Selection: Step 5

Variable apr Entered: R-Square = 0.1086 and C(p) = 4.3289

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	16.89139	3.37828	27.59	<.0001
Error	1133	138.71558	0.12243		
Corrected Total	1138	155.60698			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.36657	0.01571	926.28326	7565.69	<.0001
apr	-0.23732	0.08888	0.87300	7.13	0.0077
may	-0.26743	0.05340	3.07035	25.08	<.0001
jun	-0.28895	0.03730	7.34833	60.02	<.0001
jul	-0.27475	0.02812	11.68418	95.43	<.0001
aug	-0.10341	0.02721	1.76787	14.44	0.0002

Bounds on condition number: 1.1734, 27.544

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jul		1	0.0441	0.0441	78.1215	52.46	<.0001
2	jun		2	0.0341	0.0782	36.8832	41.99	<.0001
3	may		3	0.0149	0.0930	20.0039	18.62	<.0001
4	aug		4	0.0099	0.1029	9.4489	12.51	0.0004
5	apr		5	0.0056	0.1086	4.3289	7.13	0.0077

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	1209	0	4582240026	3790107.55	3494437.00	4329673.00
strtlcktime	Start/lockge/time	1209	0	1.6053083E12	1327798413	1263313800	1383404100
arrtime	Arriv/time	1209	0	1.6053081E12	1327798279	1263313800	1383404100
deptime	Leave/lockge/time	1209	0	1.6053094E12	1327799316	1263314820	1383404760
BOW_OVER_SILL	BOW_OVER_SILL	0	1209	.	.	.	.
END_OF_ENTRY	END_OF_ENTRY	0	1209	.	.	.	.
START_OF_EXIT	START_OF_EXIT	0	1209	.	.	.	.
SIGNAL_DATE	SIGNAL_DATE	0	1209	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	1209	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	0	1209	.	.	.	.
NUM_EMPTY_BRG	NUM_EMPTY_BRG	0	1209	.	.	.	.
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	1209	.	.	.	.
vess_no		1209	0	12089998791	9999999.00	9999999.00	9999999.00
vss_hp		0	1209	.	.	.	.
frsttime		1209	0	1.6053081E12	1327798279	1263313800	1383404100
lasttime		1209	0	1.6053094E12	1327799316	1263314820	1383404760
newpoolno		1209	0	18849.00	15.5905707	1.0000000	56.0000000
oldpoolno		1209	0	18804.00	15.5533499	1.0000000	56.0000000
waitmin	Wait/before/lockge	1209	0	2685.00	2.2208437	0	143.0000000
lockmin	Wait/lockge/time	1209	0	18207.00	15.0595533	2.0000000	66.0000000
year		1209	0	2419808.00	2001.50	2000.00	2003.00
fly		1209	0	1082.00	0.8949545	0	1.0000000
turnback		1209	0	35.0000000	0.0289495	0	1.0000000
exchange		1209	0	92.0000000	0.0760959	0	1.0000000
lock		1209	0	18222.00	15.0719603	1.0000000	55.0000000
totmin		1209	0	20892.00	17.2803970	2.0000000	160.0000000
month		1209	0	9025.00	7.4648470	1.0000000	12.0000000
day		1209	0	19357.00	16.0107527	1.0000000	31.0000000
sunrise		734	475	16216032.00	22092.69	19360.00	27430.00
sunset		734	475	52915674.00	72092.20	60015.00	75735.00
sequpstr		1209	0	0	0	0	0
seqdstr		1209	0	0	0	0	0
plock		1209	0	30225.00	25.0000000	25.0000000	25.0000000
pempty		0	1209	.	.	.	.
pfull		0	1209	.	.	.	.
parrtime		1209	0	1.6053077E12	1327797905	1263310200	1383404040
pstrtlcktime		1209	0	1.6053088E12	1327798802	1263310200	1383404040
pdeptime		1209	0	1.6053098E12	1327799656	1263311400	1383405180
birth		1209	0	0	0	0	0
transithrs		1209	0	-462.4166667	-0.3824786	-3.0833333	17.5000000
reclock		1209	0	1209.00	1.0000000	1.0000000	1.0000000
i		1209	0	460567.00	380.9487179	58.0000000	401.0000000
pctpsysdn		1209	0	307.5000000	0.2543424	0	68.1820000
pctplckdn		1209	0	63.6360000	0.0526352	0	63.6360000
cumdown		122	1087	0	0	0	0
pctdown		122	1087	0	0	0	0
pcttrandn		15	1194	0	0	0	0
pctsysdn		122	1087	0	0	0	0
pctlckdn		122	1087	0	0	0	0
stime		1209	0	58056840.00	48020.55	299.9999998	83880.00
etime		1209	0	59149260.00	48924.12	1200.00	85440.00
sdate		1209	0	18579285.00	15367.48	14621.00	16011.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		1209	0	18579285.00	15367.48	14621.00	16011.00
hrsduration		1209	0	303.4500000	0.2509926	0.0333333	1.1000000
ndays		1209	0	0	0	0	0
pctday		1209	0	71134.38	58.8373656	0	100.0000000
pctpsysnite		1208	1	49568.06	41.0331589	0	100.0000000
pctplcknite		1209	0	49842.92	41.2265633	0	100.0000000
pcttrannite		1208	1	49742.92	41.1779098	0	100.0000000
pctsysnite		1209	0	49706.48	41.1137155	0	100.0000000
pctlcknite		1209	0	49765.63	41.1626344	0	100.0000000
stage		78	1131	1672.57	21.4432051	9.0400000	29.6200000
flow		16	1193	1390265.13	86891.57	47338.54	165222.25
jan		1209	0	1.0000000	0.000827130	0	1.0000000
feb		1209	0	0	0	0	0
mar		1209	0	8.0000000	0.0066170	0	1.0000000
apr		1209	0	45.0000000	0.0372208	0	1.0000000
may		1209	0	99.0000000	0.0818859	0	1.0000000
jun		1209	0	154.0000000	0.1273780	0	1.0000000
jul		1209	0	252.0000000	0.2084367	0	1.0000000
aug		1209	0	324.0000000	0.2679901	0	1.0000000
sep		1209	0	233.0000000	0.1927213	0	1.0000000
oct		1209	0	78.0000000	0.0645161	0	1.0000000
nov		1209	0	12.0000000	0.0099256	0	1.0000000
dec		1209	0	3.0000000	0.0024814	0	1.0000000
m31day		1209	0	765.0000000	0.6327543	0	1.0000000
m30day		1209	0	444.0000000	0.3672457	0	1.0000000
qtr1		1209	0	9.0000000	0.0074442	0	1.0000000
qtr2		1209	0	298.0000000	0.2464847	0	1.0000000
qtr3		1209	0	809.0000000	0.6691481	0	1.0000000
qtr4		1209	0	93.0000000	0.0769231	0	1.0000000
psingle		1209	0	1209.00	1.0000000	1.0000000	1.0000000
pdouble		1209	0	0	0	0	0
pknockout		1209	0	0	0	0	0
pjacknife		1209	0	0	0	0	0
pothtype		1209	0	0	0	0	0
pexchange		1209	0	332.0000000	0.2746071	0	1.0000000
pturnback		1209	0	218.0000000	0.1803143	0	1.0000000
single		1209	0	1209.00	1.0000000	1.0000000	1.0000000
double		1209	0	0	0	0	0
knockout		1209	0	0	0	0	0
jacknife		1209	0	0	0	0	0
othtype		1209	0	0	0	0	0
contthru		1209	0	0	0	0	0
return		1209	0	6.0000000	0.0049628	0	1.0000000
contstop		1209	0	11.0000000	0.0090984	0	1.0000000
kill		1209	0	1192.00	0.9859388	0	1.0000000
contsame		1209	0	0	0	0	0
contdouble		1209	0	0	0	0	0
contsingle		1209	0	11.0000000	0.0090984	0	1.0000000
contko		1209	0	0	0	0	0
contjk		1209	0	0	0	0	0
retdouble		1209	0	0	0	0	0
retsingle		1209	0	6.0000000	0.0049628	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1209	0	0	0	0	0
retjk		1209	0	0	0	0	0
xkill		1209	0	1192.00	0.9859388	0	1.0000000
logtrnhrs		45	1164	-60.7635010	-1.3503000	-3.4011974	2.8622009
plockhrs		1209	0	282.1475410	0.2333727	0.0819672	0.8360656
loglckhrs		1209	0	-1857.63	-1.5365020	-2.5014360	-0.1790482
thrusingle		1209	0	0	0	0	0
thruother		1209	0	0	0	0	0
contother		1209	0	0	0	0	0
retother		1209	0	0	0	0	0
thrudoubnite		1208	1	0	0	0	0
thrusingnite		1208	1	0	0	0	0
thruothnite		1208	1	0	0	0	0
pdoubnite		1209	0	0	0	0	0
psingnite		1209	0	498.4291500	0.4122656	0	1.0000000
pothnite		1209	0	0	0	0	0

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The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI25U

pconfig doutcome

Frequency Percent Row Pct Col Pct	3:contsingle	7:retsingle	x:kill	Total
2:single	11 0.91 0.91 100.00	6 0.50 0.50 100.00	1192 98.59 98.59 100.00	1209 100.00
Total	11 0.91	6 0.50	1192 98.59	1209 100.00

Table 1 of pconfig by nextstep
Controlling for pnewpool=MI25U

pconfig nextstep

Frequency Percent Row Pct Col Pct	2:contst	3:return	4:kill	Total
2:single	11 0.91 0.91 100.00	6 0.50 0.50 100.00	1192 98.59 98.59 100.00	1209 100.00
Total	11 0.91	6 0.50	1192 98.59	1209 100.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	37492	0	149809190025	3995764.16	3494031.00	4332992.00
strtlcktime	Start/lockge/time	37492	0	4.9795861E13	1328172971	1262343000	1388404500
arrtime	Arriv/time	37492	0	4.9795844E13	1328172510	1262343000	1388404500
deptime	Leave/lockge/time	37492	0	4.9795896E13	1328173909	1262344020	1388405400
BOW_OVER_SILL	BOW_OVER_SILL	0	37492	.	.	.	.
END_OF_ENTRY	END_OF_ENTRY	0	37492	.	.	.	.
START_OF_EXIT	START_OF_EXIT	0	37492	.	.	.	.
SIGNAL_DATE	SIGNAL_DATE	0	37492	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	37492	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	0	37492	.	.	.	.
NUM_EMPTY_BRG	NUM_EMPTY_BRG	0	37492	.	.	.	.
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	37492	.	.	.	.
vess_no		37492	0	374919962508	9999999.00	9999999.00	9999999.00
vss_hp		0	37492	.	.	.	.
frsttime		37492	0	4.9795844E13	1328172510	1262343000	1388404500
lasttime		37492	0	4.9795896E13	1328173909	1262344020	1388405400
newpoolno		37492	0	701120.00	18.7005228	1.0000000	56.0000000
oldpoolno		37492	0	697354.00	18.6000747	1.0000000	56.0000000
waitmin	Wait/before/lockge	37492	0	288421.00	7.6928678	0	14400.00
lockmin	Wait/lockge/time	37492	0	586170.00	15.6345354	1.0000000	543.0000000
year		37492	0	75039768.00	2001.49	2000.00	2003.00
fly		37492	0	28510.00	0.7604289	0	1.0000000
turnback		37492	0	3422.00	0.0912728	0	1.0000000
exchange		37492	0	5560.00	0.1482983	0	1.0000000
lock		37492	0	680491.00	18.1502987	1.0000000	55.0000000
totmin		37492	0	874591.00	23.3274032	1.0000000	14410.00
month		37492	0	289795.00	7.7295156	1.0000000	12.0000000
day		37492	0	568513.00	15.1635816	1.0000000	31.0000000
sunrise		29407	8085	660938877	22475.56	19360.00	28091.00
sunset		29407	8085	2092406992	71153.36	59437.00	75777.00
sequpstr		37492	0	0	0	0	0
seqdstr		37492	0	0	0	0	0
plock		37492	0	646574.00	17.2456524	1.0000000	55.0000000
pempty		0	37492	.	.	.	.
pfull		0	37492	.	.	.	.
parrtime		37492	0	4.9795814E13	1328171713	1262331720	1388310900
pstrtlcktime		37492	0	4.9795833E13	1328172216	1262331720	1388310900
pdeptime		37492	0	4.9795868E13	1328173145	1262332920	1388312280
birth		37492	0	0	0	0	0
transithrs		37492	0	-6618.02	-0.1765181	-240.0000000	192.3500000
reclock		37492	0	37492.00	1.0000000	1.0000000	1.0000000
i		37492	0	8424268.00	224.6950816	58.0000000	401.0000000
pctpsysdn		20793	16699	2401.92	0.1155160	0	97.4360000
pctplckdn		20793	16699	760.9590000	0.0365969	0	97.9740000
cumdown		19539	17953	48060.00	2.4596960	0	31920.00
pctdown		19539	17953	632.3230000	0.0323621	0	97.9740000
pcttrandn		1761	35731	891.0290000	0.5059790	0	100.0000000
pctsysdn		19539	17953	2029.43	0.1038653	0	97.4360000
pctlckdn		19539	17953	632.3230000	0.0323621	0	97.9740000
stime		37492	0	1817704380	48482.46	0	86340.00
etime		37492	0	1849072980	49319.13	0	86340.00
sdate		37492	0	576319946	15371.81	14610.00	16069.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		37492	0	576319990	15371.81	14610.00	16069.00
hrsduration		37492	0	9769.50	0.2605756	0.0166667	9.0500000
ndays		37492	0	0	0	0	0
pctday		37479	13	2730182.35	72.8456563	0	100.0000000
pctpsysnite		37472	20	1013825.06	27.0555363	0	100.0000000
pctplcknite		37480	12	1019892.17	27.2116373	0	100.0000000
pcttrannite		37427	65	1017567.40	27.1880568	0	100.0000000
pctsysnite		37479	13	1010619.89	26.9649640	0	100.0000000
pctlcknite		37479	13	1017717.65	27.1543437	0	100.0000000
stage		14530	22962	298354.40	20.5336820	8.3200000	33.2500000
flow		4896	32596	436125939	89078.01	16240.90	280143.91
jan		37492	0	48.0000000	0.0012803	0	1.0000000
feb		37492	0	19.0000000	0.000506775	0	1.0000000
mar		37492	0	323.0000000	0.0086152	0	1.0000000
apr		37492	0	1124.00	0.0299797	0	1.0000000
may		37492	0	2463.00	0.0656940	0	1.0000000
jun		37492	0	4506.00	0.1201856	0	1.0000000
jul		37492	0	7733.00	0.2062573	0	1.0000000
aug		37492	0	8235.00	0.2196469	0	1.0000000
sep		37492	0	7122.00	0.1899605	0	1.0000000
oct		37492	0	4538.00	0.1210392	0	1.0000000
nov		37492	0	1168.00	0.0311533	0	1.0000000
dec		37492	0	213.0000000	0.0056812	0	1.0000000
m31day		37492	0	23553.00	0.6282140	0	1.0000000
m30day		37492	0	13920.00	0.3712792	0	1.0000000
qtr1		37492	0	390.0000000	0.0104022	0	1.0000000
qtr2		37492	0	8093.00	0.2158594	0	1.0000000
qtr3		37492	0	23090.00	0.6158647	0	1.0000000
qtr4		37492	0	5919.00	0.1578737	0	1.0000000
psingle		37492	0	37485.00	0.9998133	0	1.0000000
pdouble		37492	0	0	0	0	0
pknockout		37492	0	0	0	0	0
pjacknife		37492	0	0	0	0	0
pothtype		37492	0	7.0000000	0.000186706	0	1.0000000
pexchange		37492	0	6110.00	0.1629681	0	1.0000000
pturnback		37492	0	3700.00	0.0986877	0	1.0000000
single		37492	0	37492.00	1.0000000	1.0000000	1.0000000
double		37492	0	0	0	0	0
knockout		37492	0	0	0	0	0
jacknife		37492	0	0	0	0	0
othtype		37492	0	0	0	0	0
contthru		1209	36283	0	0	0	0
return		1209	36283	6.0000000	0.0049628	0	1.0000000
contstop		1209	36283	11.0000000	0.0090984	0	1.0000000
kill		1209	36283	1192.00	0.9859388	0	1.0000000
contsame		1209	36283	0	0	0	0
contdouble		1209	36283	0	0	0	0
contsingle		1209	36283	11.0000000	0.0090984	0	1.0000000
contko		1209	36283	0	0	0	0
contjk		1209	36283	0	0	0	0
retdouble		1209	36283	0	0	0	0
retsingle		1209	36283	6.0000000	0.0049628	0	1.0000000

Statistics from water.regfile for regfile 14:22 Friday, June 24, 2005 99

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1209	36283	0	0	0	0
retjk		1209	36283	0	0	0	0
xkill		1209	36283	1192.00	0.9859388	0	1.0000000
logtrnhrs		45	37447	-60.7635010	-1.3503000	-3.4011974	2.8622009
plockhrs		1209	36283	282.1475410	0.2333727	0.0819672	0.8360656
loglckhrs		1209	36283	-1857.63	-1.5365020	-2.5014360	-0.1790482
thrusingle		1209	36283	0	0	0	0
thruother		1209	36283	0	0	0	0
contother		1209	36283	0	0	0	0
retother		1209	36283	0	0	0	0
thrudoubnite		1208	36284	0	0	0	0
thrusingnite		1208	36284	0	0	0	0
thruothnite		1208	36284	0	0	0	0
pdoubnite		1209	36283	0	0	0	0
psingnite		1209	36283	498.4291500	0.4122656	0	1.0000000
pothnite		1209	36283	0	0	0	0

Activity times using key variables from stepwise proc 14:22 Friday, June 24, 2005 100

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0433 and C(p) = 112.3687

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.55780	0.55780	54.32	<.0001
Error	1200	12.32211	0.01027		
Corrected Total	1201	12.87990			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.24185	0.00313	61.35957	5975.56	<.0001
jun	-0.06463	0.00877	0.55780	54.32	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jul Entered: R-Square = 0.1047 and C(p) = 30.2714

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	1.34861	0.67431	70.11	<.0001
Error	1199	11.53129	0.00962		
Corrected Total	1201	12.87990			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.25717	0.00347	52.91000	5501.47	<.0001
jun	-0.07995	0.00865	0.82100	85.37	<.0001
jul	-0.06453	0.00712	0.79081	82.23	<.0001

Bounds on condition number: 1.0396, 4.1585

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 14:22 Friday, June 24, 2005 101

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable may Entered: R-Square = 0.1178 and C(p) = 14.2737

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	1.51785	0.50595	53.35	<.0001
Error	1198	11.36205	0.00948		
Corrected Total	1201	12.87990			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.26257	0.00367	48.46875	5110.48	<.0001
may	-0.04456	0.01055	0.16924	17.84	<.0001
jun	-0.08535	0.00869	0.91543	96.52	<.0001
jul	-0.06994	0.00718	0.89932	94.82	<.0001

Bounds on condition number: 1.0737, 9.5474

Stepwise Selection: Step 4

Variable apr Entered: R-Square = 0.1237 and C(p) = 8.2464

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	1.59334	0.39833	42.25	<.0001
Error	1197	11.28657	0.00943		
Corrected Total	1201	12.87990			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.26528	0.00379	46.30741	4911.15	<.0001
apr	-0.04233	0.01496	0.07548	8.01	0.0047
may	-0.04727	0.01056	0.18889	20.03	<.0001
jun	-0.08806	0.00872	0.96271	102.10	<.0001
jul	-0.07265	0.00722	0.95331	101.10	<.0001

Activity times using key variables from stepwise proc 14:22 Friday, June 24, 2005 102

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0929, 17.007

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun		1	0.0433	0.0433	112.369	54.32	<.0001
2	jul		2	0.0614	0.1047	30.2714	82.23	<.0001
3	may		3	0.0131	0.1178	14.2737	17.84	<.0001
4	apr		4	0.0059	0.1237	8.2464	8.01	0.0047

Logarithms of single lockage times using key variables from stepwise proc 103
14:22 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0636 and C(p) = 159.2970

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	11.29207	11.29207	81.61	<.0001
Error	1201	166.17740	0.13837		
Corrected Total	1202	177.46947			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.49471	0.01148	2345.85360	16954.0	<.0001
jun	-0.29079	0.03219	11.29207	81.61	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jul Entered: R-Square = 0.1450 and C(p) = 43.2290

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	25.73680	12.86840	101.77	<.0001
Error	1200	151.73267	0.12644		
Corrected Total	1202	177.46947			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.42931	0.01256	1636.38746	12941.6	<.0001
jun	-0.35618	0.03137	16.29769	128.89	<.0001
jul	-0.27576	0.02580	14.44473	114.24	<.0001

Bounds on condition number: 1.0395, 4.1581

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 104
14:22 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable may Entered: R-Square = 0.1602 and C(p) = 23.2488

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	28.42591	9.47530	76.23	<.0001
Error	1199	149.04356	0.12431		
Corrected Total	1202	177.46947			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.40780	0.01329	1395.26586	11224.4	<.0001
may	-0.17760	0.03818	2.68911	21.63	<.0001
jun	-0.37769	0.03145	17.92912	144.23	<.0001
jul	-0.29727	0.02600	16.25465	130.76	<.0001

Bounds on condition number: 1.0735, 9.5462

Stepwise Selection: Step 4

Variable apr Entered: R-Square = 0.1701 and C(p) = 10.9038

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	30.18091	7.54523	61.37	<.0001
Error	1198	147.28855	0.12295		
Corrected Total	1202	177.46947			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.39476	0.01366	1281.98317	10427.3	<.0001
apr	-0.20412	0.05402	1.75500	14.27	0.0002
may	-0.19065	0.03813	3.07331	25.00	<.0001
jun	-0.39074	0.03147	18.95810	154.20	<.0001
jul	-0.31032	0.02608	17.40231	141.55	<.0001

Logarithms of single lockage times using key variables from stepwise proc 105
14:22 Friday, June 24, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0927, 17.005

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun		1	0.0636	0.0636	159.297	81.61	<.0001
2	jul		2	0.0814	0.1450	43.2290	114.24	<.0001
3	may		3	0.0152	0.1602	23.2488	21.63	<.0001
4	apr		4	0.0099	0.1701	10.9038	14.27	0.0002

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	1382	0	5246942295	3796629.74	3496613.00	4330980.00
strtlcktime	Start/lockge/time	1382	0	1.836316E12	1328738090	1263541860	1386341700
arrtime	Arriv/time	1382	0	1.8363159E12	1328737971	1263541860	1386341700
deptime	Leave/lockge/time	1382	0	1.8363173E12	1328738989	1263542640	1386343200
BOW_OVER_SILL	BOW_OVER_SILL	0	1382	.	.	.	.
END_OF_ENTRY	END_OF_ENTRY	0	1382	.	.	.	.
START_OF_EXIT	START_OF_EXIT	0	1382	.	.	.	.
SIGNAL_DATE	SIGNAL_DATE	0	1382	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	1382	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	0	1382	.	.	.	.
NUM_EMPTY_BRG	NUM_EMPTY_BRG	0	1382	.	.	.	.
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	1382	.	.	.	.
vess_no		1382	0	13819998618	9999999.00	9999999.00	9999999.00
vss_hp		0	1382	.	.	.	.
frsttime		1382	0	1.8363159E12	1328737971	1263541860	1386341700
lasttime		1382	0	1.8363173E12	1328738989	1263542640	1386343200
newpoolno		1382	0	20435.00	14.7865412	1.0000000	56.0000000
oldpoolno		1382	0	20347.00	14.7228654	1.0000000	56.0000000
waitmin	Wait/before/lockge	1382	0	2749.00	1.9891462	0	177.0000000
lockmin	Wait/lockge/time	1382	0	20692.00	14.9725036	1.0000000	70.0000000
year		1382	0	2766046.00	2001.48	2000.00	2003.00
fly		1382	0	1235.00	0.8936324	0	1.0000000
turnback		1382	0	32.0000000	0.0231548	0	1.0000000
exchange		1382	0	115.0000000	0.0832127	0	1.0000000
lock		1382	0	19700.00	14.2547033	1.0000000	55.0000000
totmin		1382	0	23441.00	16.9616498	1.0000000	210.0000000
month		1382	0	11082.00	8.0188133	1.0000000	12.0000000
day		1382	0	21236.00	15.3661360	1.0000000	31.0000000
sunrise		880	502	19843277.00	22549.18	19360.00	27317.00
sunset		880	502	62767335.00	71326.52	59531.00	75776.00
sequpstr		1382	0	0	0	0	0
seqdstr		1382	0	0	0	0	0
plock		1382	0	34550.00	25.0000000	25.0000000	25.0000000
pempty		0	1382	.	.	.	.
pfull		0	1382	.	.	.	.
parrtime		1382	0	1.8363148E12	1328737218	1263313800	1386337500
pstrtlcktime		1382	0	1.8363162E12	1328738211	1263313800	1386338520
pdeptime		1382	0	1.8363173E12	1328739034	1263314820	1386340500
birth		1382	0	0	0	0	0
transithrs		1382	0	-407.9166667	-0.2951640	-10.1000000	63.0666667
reclock		1382	0	1382.00	1.0000000	1.0000000	1.0000000
i		1382	0	522097.00	377.7836469	58.0000000	401.0000000
pctpsysdn		1382	0	145.3570000	0.1051787	0	92.1050000
pctplckdn		1382	0	0	0	0	0
cumdown		154	1228	0	0	0	0
pctdown		154	1228	0	0	0	0
pcttrandn		12	1370	0	0	0	0
pctsysdn		154	1228	39.2160000	0.2546494	0	39.2160000
pctlckdn		154	1228	0	0	0	0
stime		1382	0	71615220.00	51819.99	3900.00	84060.00
etime		1382	0	72856740.00	52718.34	4500.00	84780.00
sdate		1382	0	21252829.00	15378.31	14624.00	16045.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		1382	0	21252829.00	15378.31	14624.00	16045.00
hrsduration		1382	0	344.8666667	0.2495417	0.0166667	1.1666667
ndays		1382	0	0	0	0	0
pctday		1382	0	83980.67	60.7674855	0	100.0000000
pctpsysnite		1382	0	54285.19	39.2801671	0	100.0000000
pctplcknite		1382	0	54599.63	39.5076896	0	100.0000000
pcttrannite		1376	6	54108.75	39.3232158	0	100.0000000
pctsysnite		1382	0	54168.11	39.1954493	0	100.0000000
pctlcknite		1382	0	54219.34	39.2325145	0	100.0000000
stage		98	1284	2008.84	20.4983673	9.7400000	27.2600000
flow		28	1354	2218157.28	79219.90	23494.59	206246.06
jan		1382	0	1.0000000	0.000723589	0	1.0000000
feb		1382	0	0	0	0	0
mar		1382	0	3.0000000	0.0021708	0	1.0000000
apr		1382	0	21.0000000	0.0151954	0	1.0000000
may		1382	0	63.0000000	0.0455861	0	1.0000000
jun		1382	0	144.0000000	0.1041968	0	1.0000000
jul		1382	0	277.0000000	0.2004342	0	1.0000000
aug		1382	0	313.0000000	0.2264834	0	1.0000000
sep		1382	0	302.0000000	0.2185239	0	1.0000000
oct		1382	0	198.0000000	0.1432706	0	1.0000000
nov		1382	0	52.0000000	0.0376266	0	1.0000000
dec		1382	0	8.0000000	0.0057887	0	1.0000000
m31day		1382	0	863.0000000	0.6244573	0	1.0000000
m30day		1382	0	519.0000000	0.3755427	0	1.0000000
qtr1		1382	0	4.0000000	0.0028944	0	1.0000000
qtr2		1382	0	228.0000000	0.1649783	0	1.0000000
qtr3		1382	0	892.0000000	0.6454414	0	1.0000000
qtr4		1382	0	258.0000000	0.1866860	0	1.0000000
psingle		1382	0	1382.00	1.0000000	1.0000000	1.0000000
pdouble		1382	0	0	0	0	0
pknockout		1382	0	0	0	0	0
pjacknife		1382	0	0	0	0	0
poththype		1382	0	0	0	0	0
pexchange		1382	0	358.0000000	0.2590449	0	1.0000000
pturnback		1382	0	255.0000000	0.1845152	0	1.0000000
single		1382	0	1382.00	1.0000000	1.0000000	1.0000000
double		1382	0	0	0	0	0
knockout		1382	0	0	0	0	0
jacknife		1382	0	0	0	0	0
othtype		1382	0	0	0	0	0
contthru		1382	0	0	0	0	0
return		1382	0	7.0000000	0.0050651	0	1.0000000
contstop		1382	0	29.0000000	0.0209841	0	1.0000000
kill		1382	0	1346.00	0.9739508	0	1.0000000
contsame		1382	0	0	0	0	0
contdouble		1382	0	0	0	0	0
contsingle		1382	0	29.0000000	0.0209841	0	1.0000000
contko		1382	0	0	0	0	0
contjk		1382	0	0	0	0	0
retdouble		1382	0	0	0	0	0
retsingle		1382	0	7.0000000	0.0050651	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1382	0	0	0	0	0
retjk		1382	0	0	0	0	0
xkill		1382	0	1346.00	0.9739508	0	1.0000000
logtrnhrs		65	1317	-52.7492419	-0.8115268	-4.0943446	4.1441924
plockhrs		1382	0	310.7377049	0.2248464	0.0327869	1.6393443
loglckhrs		1382	0	-2175.54	-1.5741946	-3.4177267	0.4942963
thrusingle		1382	0	0	0	0	0
thruother		1382	0	0	0	0	0
contother		1382	0	0	0	0	0
retother		1382	0	0	0	0	0
thrudoubnite		1376	6	0	0	0	0
thrusingnite		1376	6	0	0	0	0
thruothnite		1376	6	0	0	0	0
pdoubnite		1382	0	0	0	0	0
psingnite		1382	0	545.9962700	0.3950769	0	1.0000000
pothnite		1382	0	0	0	0	0

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The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI26D

pconfig doutcome

Frequency Percent Row Pct Col Pct	3:contsingle	7:retsingle	x:kill	Total
2:single	29 2.10 2.10 100.00	7 0.51 0.51 100.00	1346 97.40 97.40 100.00	1382 100.00
Total	29 2.10	7 0.51	1346 97.40	1382 100.00

Table 1 of pconfig by nextstep
Controlling for pnewpool=MI26D

pconfig nextstep

Frequency Percent Row Pct Col Pct	2:contst	3:return	4:kill	Total
2:single	29 2.10 2.10 100.00	7 0.51 0.51 100.00	1346 97.40 97.40 100.00	1382 100.00
Total	29 2.10	7 0.51	1346 97.40	1382 100.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	37665	0	150473892294	3995058.87	3494031.00	4332992.00
strtlcktime	Start/lockge/time	37665	0	5.0026869E13	1328205729	1262343000	1388404500
arrtime	Arriv/time	37665	0	5.0026851E13	1328205270	1262343000	1388404500
deptime	Leave/lockge/time	37665	0	5.0026904E13	1328206667	1262344020	1388405400
BOW_OVER_SILL	BOW_OVER_SILL	0	37665	.	.	.	.
END_OF_ENTRY	END_OF_ENTRY	0	37665	.	.	.	.
START_OF_EXIT	START_OF_EXIT	0	37665	.	.	.	.
SIGNAL_DATE	SIGNAL_DATE	0	37665	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	37665	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	0	37665	.	.	.	.
NUM_EMPTY_BRG	NUM_EMPTY_BRG	0	37665	.	.	.	.
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	37665	.	.	.	.
vess_no		37665	0	376649962335	9999999.00	9999999.00	9999999.00
vss_hp		0	37665	.	.	.	.
frsttime		37665	0	5.0026851E13	1328205270	1262343000	1388404500
lasttime		37665	0	5.0026904E13	1328206667	1262344020	1388405400
newpoolno		37665	0	702706.00	18.6567370	1.0000000	56.0000000
oldpoolno		37665	0	698897.00	18.5556087	1.0000000	56.0000000
waitmin	Wait/before/lockge	37665	0	288485.00	7.6592327	0	14400.00
lockmin	Wait/lockge/time	37665	0	588655.00	15.6287004	1.0000000	543.0000000
year		37665	0	75386006.00	2001.49	2000.00	2003.00
fly		37665	0	28663.00	0.7609983	0	1.0000000
turnback		37665	0	3419.00	0.0907739	0	1.0000000
exchange		37665	0	5583.00	0.1482278	0	1.0000000
lock		37665	0	681969.00	18.1061728	1.0000000	55.0000000
totmin		37665	0	877140.00	23.2879331	1.0000000	14410.00
month		37665	0	291852.00	7.7486260	1.0000000	12.0000000
day		37665	0	570392.00	15.1438205	1.0000000	31.0000000
sunrise		29553	8112	664566122	22487.26	19360.00	28091.00
sunset		29553	8112	2102258653	71135.20	59437.00	75777.00
sequpstr		37665	0	0	0	0	0
seqdstr		37665	0	0	0	0	0
plock		37665	0	650899.00	17.2812691	1.0000000	55.0000000
pempty		0	37665	.	.	.	.
pfull		0	37665	.	.	.	.
parrtime		37665	0	5.0026821E13	1328204461	1262331720	1388310900
pstrtlcktime		37665	0	5.002684E13	1328204969	1262331720	1388310900
pdeptime		37665	0	5.0026875E13	1328205897	1262332920	1388312280
birth		37665	0	0	0	0	0
transithrs		37665	0	-6563.52	-0.1742604	-240.0000000	192.3500000
reclock		37665	0	37665.00	1.0000000	1.0000000	1.0000000
i		37665	0	8485798.00	225.2966414	58.0000000	401.0000000
pctpsysdn		20966	16699	2239.78	0.1068292	0	97.4360000
pctplckdn		20966	16699	697.3230000	0.0332597	0	97.9740000
cumdown		19571	18094	48060.00	2.4556742	0	31920.00
pctdown		19571	18094	632.3230000	0.0323092	0	97.9740000
pcttrandn		1758	35907	891.0290000	0.5068424	0	100.0000000
pctsysdn		19571	18094	2068.64	0.1056993	0	97.4360000
pctlckdn		19571	18094	632.3230000	0.0323092	0	97.9740000
stime		37665	0	1831262760	48619.75	0	86340.00
etime		37665	0	1862780460	49456.54	0	86340.00
sdate		37665	0	578993490	15372.19	14610.00	16069.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		37665	0	578993534	15372.19	14610.00	16069.00
hrsduration		37665	0	9810.92	0.2604783	0.0166667	9.0500000
ndays		37665	0	0	0	0	0
pctday		37652	13	2743028.64	72.8521365	0	100.0000000
pctpsysnite		37646	19	1018542.19	27.0557879	0	100.0000000
pctplcknite		37653	12	1024648.88	27.2129413	0	100.0000000
pcttrannite		37595	70	1021933.23	27.1826900	0	100.0000000
pctsysnite		37652	13	1015081.51	26.9595643	0	100.0000000
pctlcknite		37652	13	1022171.36	27.1478635	0	100.0000000
stage		14550	23115	298690.67	20.5285684	8.3200000	33.2500000
flow		4908	32757	436953831	89028.90	16240.90	280143.91
jan		37665	0	48.0000000	0.0012744	0	1.0000000
feb		37665	0	19.0000000	0.000504447	0	1.0000000
mar		37665	0	318.0000000	0.0084429	0	1.0000000
apr		37665	0	1100.00	0.0292048	0	1.0000000
may		37665	0	2427.00	0.0644365	0	1.0000000
jun		37665	0	4496.00	0.1193681	0	1.0000000
jul		37665	0	7758.00	0.2059737	0	1.0000000
aug		37665	0	8224.00	0.2183459	0	1.0000000
sep		37665	0	7191.00	0.1909200	0	1.0000000
oct		37665	0	4658.00	0.1236692	0	1.0000000
nov		37665	0	1208.00	0.0320722	0	1.0000000
dec		37665	0	218.0000000	0.0057879	0	1.0000000
m31day		37665	0	23651.00	0.6279304	0	1.0000000
m30day		37665	0	13995.00	0.3715651	0	1.0000000
qtr1		37665	0	385.0000000	0.0102217	0	1.0000000
qtr2		37665	0	8023.00	0.2130094	0	1.0000000
qtr3		37665	0	23173.00	0.6152396	0	1.0000000
qtr4		37665	0	6084.00	0.1615293	0	1.0000000
psingle		37665	0	37658.00	0.9998142	0	1.0000000
pdouble		37665	0	0	0	0	0
pknockout		37665	0	0	0	0	0
pjacknife		37665	0	0	0	0	0
pothtype		37665	0	7.0000000	0.000185849	0	1.0000000
pexchange		37665	0	6136.00	0.1629099	0	1.0000000
pturnback		37665	0	3737.00	0.0992168	0	1.0000000
single		37665	0	37665.00	1.0000000	1.0000000	1.0000000
double		37665	0	0	0	0	0
knockout		37665	0	0	0	0	0
jacknife		37665	0	0	0	0	0
othtype		37665	0	0	0	0	0
contthru		1382	36283	0	0	0	0
return		1382	36283	7.0000000	0.0050651	0	1.0000000
contstop		1382	36283	29.0000000	0.0209841	0	1.0000000
kill		1382	36283	1346.00	0.9739508	0	1.0000000
contsame		1382	36283	0	0	0	0
contdouble		1382	36283	0	0	0	0
contsingle		1382	36283	29.0000000	0.0209841	0	1.0000000
contko		1382	36283	0	0	0	0
contjk		1382	36283	0	0	0	0
retdouble		1382	36283	0	0	0	0
retsingle		1382	36283	7.0000000	0.0050651	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1382	36283	0	0	0	0
retjk		1382	36283	0	0	0	0
xkill		1382	36283	1346.00	0.9739508	0	1.0000000
logtrnhrs		65	37600	-52.7492419	-0.8115268	-4.0943446	4.1441924
plockhrs		1382	36283	310.7377049	0.2248464	0.0327869	1.6393443
loglckhrs		1382	36283	-2175.54	-1.5741946	-3.4177267	0.4942963
thrusingle		1382	36283	0	0	0	0
thruother		1382	36283	0	0	0	0
contother		1382	36283	0	0	0	0
retother		1382	36283	0	0	0	0
thrudoubnite		1376	36289	0	0	0	0
thrusingnite		1376	36289	0	0	0	0
thruothnite		1376	36289	0	0	0	0
pdoubnite		1382	36283	0	0	0	0
psingnite		1382	36283	545.9962700	0.3950769	0	1.0000000
pothnite		1382	36283	0	0	0	0

Activity times using key variables from stepwise proc 14:22 Friday, June 24, 2005 113

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable jul Entered: R-Square = 0.0426 and C(p) = 103.0748

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.60205	0.60205	61.31	<.0001
Error	1378	13.53151	0.00982		
Corrected Total	1379	14.13356			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.23443	0.00298	60.61686	6173.00	<.0001
jul	-0.05215	0.00666	0.60205	61.31	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jun Entered: R-Square = 0.0817 and C(p) = 44.7134

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	1.15427	0.57714	61.23	<.0001
Error	1377	12.97928	0.00943		
Corrected Total	1379	14.13356			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.24310	0.00314	56.67376	6012.64	<.0001
jun	-0.06641	0.00868	0.55222	58.59	<.0001
jul	-0.06082	0.00662	0.79494	84.34	<.0001

Bounds on condition number: 1.0301, 4.1206

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 14:22 Friday, June 24, 2005 114

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable may Entered: R-Square = 0.0930 and C(p) = 29.2194

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	1.31432	0.43811	47.03	<.0001
Error	1376	12.81924	0.00932		
Corrected Total	1379	14.13356			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.24652	0.00322	54.45345	5844.96	<.0001
may	-0.05214	0.01258	0.16005	17.18	<.0001
jun	-0.06984	0.00867	0.60511	64.95	<.0001
jul	-0.06424	0.00664	0.87325	93.73	<.0001

Bounds on condition number: 1.0464, 9.3223

Stepwise Selection: Step 4

Variable apr Entered: R-Square = 0.1010 and C(p) = 18.8846

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	1.42717	0.35679	38.61	<.0001
Error	1375	12.70639	0.00924		
Corrected Total	1379	14.13356			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.24826	0.00325	53.92990	5835.93	<.0001
apr	-0.07418	0.02123	0.11285	12.21	0.0005
may	-0.05388	0.01254	0.17063	18.46	<.0001
jun	-0.07158	0.00864	0.63350	68.55	<.0001
jul	-0.06598	0.00663	0.91596	99.12	<.0001

Activity times using key variables from stepwise proc 14:22 Friday, June 24, 2005 115

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0523, 16.507

Stepwise Selection: Step 5

Variable dec Entered: R-Square = 0.1069 and C(p) = 11.6764

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	1.51141	0.30228	32.91	<.0001
Error	1374	12.62215	0.00919		
Corrected Total	1379	14.13356			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.24732	0.00326	53.03184	5772.85	<.0001
apr	-0.07324	0.02117	0.10997	11.97	0.0006
may	-0.05294	0.01251	0.16461	17.92	<.0001
jun	-0.07063	0.00862	0.61612	67.07	<.0001
jul	-0.06504	0.00662	0.88801	96.67	<.0001
dec	0.10309	0.03404	0.08424	9.17	0.0025

Bounds on condition number: 1.0546, 25.674

Stepwise Selection: Step 6

Variable sep Entered: R-Square = 0.1115 and C(p) = 6.7041

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	1.57520	0.26253	28.70	<.0001
Error	1373	12.55836	0.00915		
Corrected Total	1379	14.13356			

Activity times using key variables from stepwise proc 14:22 Friday, June 24, 2005 116

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.24106	0.00402	32.89150	3596.01	<.0001
apr	-0.06698	0.02125	0.09085	9.93	0.0017
may	-0.04669	0.01270	0.12356	13.51	0.0002
jun	-0.06438	0.00893	0.47580	52.02	<.0001
jul	-0.05878	0.00701	0.64266	70.26	<.0001
sep	0.01802	0.00682	0.06379	6.97	0.0084
dec	0.10935	0.03405	0.09432	10.31	0.0014

Bounds on condition number: 1.1977, 39.611

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jul		1	0.0426	0.0426	103.075	61.31	<.0001
2	jun		2	0.0391	0.0817	44.7134	58.59	<.0001
3	may		3	0.0113	0.0930	29.2194	17.18	<.0001
4	apr		4	0.0080	0.1010	18.8846	12.21	0.0005
5	dec		5	0.0060	0.1069	11.6764	9.17	0.0025
6	sep		6	0.0045	0.1115	6.7041	6.97	0.0084

Logarithms of single lockage times using key variables from stepwise proc 117
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable jul Entered: R-Square = 0.0564 and C(p) = 151.8051

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	11.41374	11.41374	82.36	<.0001
Error	1379	191.09825	0.13858		
Corrected Total	1380	202.51199			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.53015	0.01120	2584.87586	18652.9	<.0001
jul	-0.22703	0.02502	11.41374	82.36	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jun Entered: R-Square = 0.1200 and C(p) = 50.6646

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	24.30614	12.15307	93.98	<.0001
Error	1378	178.20584	0.12932		
Corrected Total	1380	202.51199			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.48830	0.01161	2126.43954	16443.0	<.0001
jun	-0.32087	0.03214	12.89241	99.69	<.0001
jul	-0.26888	0.02453	15.54224	120.18	<.0001

Bounds on condition number: 1.0301, 4.1203

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 118
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable may Entered: R-Square = 0.1319 and C(p) = 33.4737

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	26.70497	8.90166	69.72	<.0001
Error	1377	175.80702	0.12767		
Corrected Total	1380	202.51199			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.47505	0.01193	1951.67804	15286.4	<.0001
may	-0.20187	0.04657	2.39883	18.79	<.0001
jun	-0.33412	0.03208	13.85204	108.50	<.0001
jul	-0.28213	0.02456	16.84651	131.95	<.0001

Bounds on condition number: 1.0463, 9.3217

Stepwise Selection: Step 4

Variable apr Entered: R-Square = 0.1410 and C(p) = 20.6428

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	28.55881	7.13970	56.48	<.0001
Error	1376	173.95318	0.12642		
Corrected Total	1380	202.51199			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.46802	0.01201	1887.83971	14933.1	<.0001
apr	-0.30066	0.07851	1.85384	14.66	0.0001
may	-0.20891	0.04638	2.56499	20.29	<.0001
jun	-0.34116	0.03197	14.39408	113.86	<.0001
jul	-0.28917	0.02451	17.59805	139.20	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0522, 16.506

Stepwise Selection: Step 5

Variable aug Entered: R-Square = 0.1475 and C(p) = 12.0755

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	29.87971	5.97594	47.60	<.0001
Error	1375	172.63227	0.12555		
Corrected Total	1380	202.51199			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.43906	0.01493	1165.91563	9286.41	<.0001
apr	-0.32961	0.07875	2.19946	17.52	<.0001
may	-0.23786	0.04707	3.20568	25.53	<.0001
jun	-0.37011	0.03309	15.70806	125.11	<.0001
jul	-0.31812	0.02600	18.78899	149.65	<.0001
aug	-0.08103	0.02498	1.32090	10.52	0.0012

Bounds on condition number: 1.2033, 28.018

Stepwise Selection: Step 6

Variable pturnback Entered: R-Square = 0.1527 and C(p) = 5.7814

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	30.91646	5.15274	41.26	<.0001
Error	1374	171.59553	0.12489		
Corrected Total	1380	202.51199			

Logarithms of single lockage times using key variables from stepwise proc 120
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.42672	0.01550	1058.42027	8474.98	<.0001
apr	-0.33182	0.07855	2.22888	17.85	<.0001
may	-0.23445	0.04696	3.11231	24.92	<.0001
jun	-0.36325	0.03309	15.05259	120.53	<.0001
jul	-0.31639	0.02594	18.57439	148.73	<.0001
aug	-0.08295	0.02493	1.38331	11.08	0.0009
pturnback	-0.07091	0.02461	1.03675	8.30	0.0040

Bounds on condition number: 1.2042, 39.721

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jul		1	0.0564	0.0564	151.805	82.36	<.0001
2	jun		2	0.0637	0.1200	50.6646	99.69	<.0001
3	may		3	0.0118	0.1319	33.4737	18.79	<.0001
4	apr		4	0.0092	0.1410	20.6428	14.66	0.0001
5	aug		5	0.0065	0.1475	12.0755	10.52	0.0012
6	pturnback		6	0.0051	0.1527	5.7814	8.30	0.0040

```
 ***** lockage  times (hours) for single lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.016 and max =    8.902   ;


 * model  fitted   24JUN05 14:22   ;
slockhrs=0.2097609811 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pturnback +(0 )*pexchange    ;

 * stderr = 0.3461933123  ;

 mslckhrs = 0.2097609811 ;
 *  based on             655 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -4.111 and max =    2.186   ;


 * model  fitted   24JUN05 14:22   ;
lgslckhrs=-1.564121912 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(-0.090170078 )*jul +(0 )*aug +(0 )*sep +(0
)*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.170881328 )*pturnback +(-0.093449713
)*pexchange    ;

 * stderr = 0.2904761414  ;

 mlgslckhrs = -1.672752958 ;
 *  based on             654 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.049 and max =    0.574   ;


 * model  fitted   24JUN05 14:22   ;
```

```
slockhrs=0.2346537858 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(-0.030005396 )*jul +(0 )*aug +(0 )*sep +(0
)*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.030373991 )*pturnback +(-0.033383326
)*pexchange    ;

 * stderr = 0.0666102758  ;

 mslckhrs = 0.2062886916 ;
 *  based on             903 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -3.012 and max =   -0.556   ;


 * model  fitted   24JUN05 14:22   ;
lgslckhrs=-1.500254013 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(-0.1360913 )*jul +(0 )*aug +(0 )*sep +(0
)*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.142329962 )*pturnback +(-0.142540848
)*pexchange    ;

 * stderr = 0.2864513339  ;

 mlgslckhrs = -1.626770807 ;
 *  based on             901 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.016 and max =    0.902   ;


 * model  fitted   24JUN05 14:22   ;
slockhrs=0.2240269136 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.025075517 )*jun +(-0.028607515 )*jul +(0 )*aug +(0
)*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.01770518 )*pturnback +(-
0.022100831 )*pexchange
   ;

 * stderr = 0.0704973627  ;
```

```
 mslckhrs = 0.2008560328 ;
 *  based on             789 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -4.111 and max =   -0.104   ;


 * model  fitted   24JUN05 14:22   ;
lgslckhrs=-1.610858196 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.122855773 )*jun +(-0.130786517 )*jul +(0 )*aug +(0
)*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pturnback +(0 )*pexchange    ;

 * stderr = 0.3115636081  ;

 mlgslckhrs = -1.660136374 ;
 *  based on             788 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.033 and max =    1.230   ;


 * model  fitted   24JUN05 14:22   ;
slockhrs=0.2236061249 +(0 )*feb +(0 )*mar +(0 )*apr +(-0.041090323 )*may +(0 )*jun +(-0.032259254 )*jul +(0 )*aug +(0
)*sep +(0.0309310832 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.025827117
)*pturnback +(-0.019050613 )*
pexchange    ;

 * stderr = 0.0811232375  ;

 mslckhrs = 0.2060231194 ;
 *  based on           1,031 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
```

```
 *** with screen between min =   -3.418 and max =    0.207   ;


 * model  fitted   24JUN05 14:22   ;
lgslckhrs=-1.544323325 +(0 )*feb +(0 )*mar +(0 )*apr +(-0.193736479 )*may +(-0.111574131 )*jun +(-0.185892422 )*jul +(0
)*aug +(0 )*sep +(0.1062459862 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.10579285
)*pturnback +(
-0.074491093 )*pexchange    ;

 * stderr = 0.3258735973  ;

 mlgslckhrs = -1.643498363 ;
 *  based on           1,032 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.033 and max =    1.787   ;


 * model  fitted   24JUN05 14:22   ;
slockhrs=0.2410553124 +(0 )*feb +(0 )*mar +(0 )*apr +(0.0398686816 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0
)*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pturnback +(0 )*pexchange    ;

 * stderr = 0.1147618777  ;

 mslckhrs = 0.2446648227 ;
 *  based on             729 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -3.418 and max =    0.580   ;


 * model  fitted   24JUN05 14:22   ;
lgslckhrs=-1.338600299 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.197487279 )*pturnback +(-0.185703652 )*pexchange
;
```

```
 * stderr = 0.3476745492  ;

 mlgslckhrs = -1.48489862 ;
 *  based on             729 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.082 and max =    0.754   ;


 * model  fitted   24JUN05 14:22   ;
slockhrs=0.2730230809 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(-0.030110402 )*jul +(0 )*aug +(0 )*sep +(0
)*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.024053282 )*pturnback +(-0.038504786
)*pexchange    ;

 * stderr = 0.0865846418  ;

 mslckhrs = 0.2414659841 ;
 *  based on             887 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -2.501 and max =   -0.282   ;


 * model  fitted   24JUN05 14:22   ;
lgslckhrs=-1.351937521 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(-0.120015322 )*jul +(0 )*aug +(0 )*sep +(0
)*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.091715177 )*pturnback +(-0.151685842
)*pexchange    ;

 * stderr = 0.3153297784  ;

 mlgslckhrs = -1.475422301 ;
 *  based on             888 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** lockage  times (hours) for single lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.016 and max =    0.852   ;


 * model  fitted   24JUN05 14:22   ;
slockhrs=0.2258960822 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0600716202 )*aug +(0.0407520608
)*sep +(0.0509112276 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pturnback +(0
)*pexchange    ;

 * stderr = 0.0951147555  ;

 mslckhrs = 0.2529082437 ;
 *  based on             978 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -4.111 and max =   -0.160   ;


 * model  fitted   24JUN05 14:22   ;
lgslckhrs=-1.560065515 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.2440129618 )*aug +(0.1947893791
)*sep +(0.2104039949 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pturnback +(0
)*pexchange    ;

 * stderr = 0.3601272359  ;

 mlgslckhrs = -1.444822327 ;
 *  based on             978 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.033 and max =    1.131   ;


 * model  fitted   24JUN05 14:22   ;
```

```
slockhrs=0.2083671482 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0357497212 )*aug +(0.067589136
)*sep +(0.0555856976 )*oct +(0.0631678742 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*poththype +(0
)*pturnback +(0 )*pexchange
   ;

 * stderr = 0.089182895  ;

 mslckhrs = 0.242902663 ;
 *  based on           1,137 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -3.418 and max =    0.123   ;


 * model  fitted   24JUN05 14:22   ;
lgslckhrs=-1.366567443 +(0 )*feb +(0 )*mar +(-0.237323631 )*apr +(-0.267426317 )*may +(-0.288948279 )*jun +(-
0.274748084 )*jul +(-0.10340578 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0
)*poththype +(0 )*pturnback +(0 )*
pexchange    ;

 * stderr = 0.349903002  ;

 mlgslckhrs = -1.484870018 ;
 *  based on           1,139 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.082 and max =    0.836   ;


 * model  fitted   24JUN05 14:22   ;
slockhrs=0.2652847676 +(0 )*feb +(0 )*mar +(-0.042333948 )*apr +(-0.047268881 )*may +(-0.088064153 )*jun +(-0.072645357
)*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*poththype +(0 )*pturnback
+(0 )*pexchange
   ;
```

```
 * stderr = 0.0971032647  ;

 mslckhrs = 0.2336270151 ;
 *  based on           1,202 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -2.501 and max =   -0.179   ;


 * model  fitted   24JUN05 14:22   ;
lgslckhrs=-1.394756695 +(0 )*feb +(0 )*mar +(-0.204115744 )*apr +(-0.190649413 )*may +(-0.390739246 )*jun +(-
0.310315906 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*poththype +(0
)*pturnback +(0 )*pexchange
   ;

 * stderr = 0.3506356644  ;

 mlgslckhrs = -1.531689336 ;
 *  based on           1,203 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between min =    0.033 and max =    1.639   ;


 * model  fitted   24JUN05 14:22   ;
slockhrs=0.2410647049 +(0 )*feb +(0 )*mar +(-0.066981957 )*apr +(-0.046685314 )*may +(-0.064379823 )*jun +(-0.058783827
)*jul +(0 )*aug +(0.0180170445 )*sep +(0 )*oct +(0 )*nov +(0.1093451312 )*dec +(0 )*pjacknife +(0 )*pknockout +(0
)*poththype +(0 )*
pturnback +(0 )*pexchange    ;

 * stderr = 0.0956381594  ;

 mslckhrs = 0.2239605607 ;
 *  based on           1,380 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** log(lockage times) for single lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between min =   -3.418 and max =    0.494   ;


 * model  fitted   24JUN05 14:22   ;
lgslckhrs=-1.426717604 +(0 )*feb +(0 )*mar +(-0.33182323 )*apr +(-0.234445939 )*may +(-0.363251908 )*jun +(-0.31638807
)*jul +(-0.082954786 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-
0.070914627 )*
pturnback +(0 )*pexchange    ;

 * stderr = 0.3533943623  ;

 mlgslckhrs = -1.575692427 ;
 *  based on           1,381 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
/*********************************************************************
* Program:   FITMOD.SAS   - for lockage activity and pool transit     *
* Narrative: Calibrates models for nonstationary Markovian transition *
*            probabilities and writes corresponding equations to a    *
*            flat file for importation by the simulation model     *
*            The calibration of the models makes use of a set of SAS  *
*            macros in  STATMAC.SAS                                   *
*            Also estimates expected transit times for next lockage   *
* Author:    L.D.Smith,                                               *
*********************************************************************/

/*** Copyright (c) 2004 by the unuators of the University of Missouri
 *** Any use or copying of this program without authorization
 *** of the University of Missouri Board of unuators is strictly
 *** prohibited.   *** */
** include SAS macros created for model building;
 %macro subset; if plockno ge 20 and plockno le 25;  %mend;
%macro fitmod(
  regen=yes,       /* regenerate temporary regression files  */
  start=mdy(1,1,2000),   /* starting date for subsetting */
  end=mdy(12,31,2003),   /* ending date for subsetting */
  subset=subset,   /* name of subsetting macro for selecting observations */
  path=~/waterway/,  /* directory path to sas datasets and flat files with source statements*/
  modout=tprob,    /* root for name of file to contain transition  equations */
  intopool=MI21D,  /* entering pool for which transition probabilities are to be calculated */
  tmodel=yes,        /* create transition models and equations */
  times=yes,         /* create models for average activity times */
  mxlpdn=100,       /* max pct of time lock impaired in lockage */
  mxtpdn=100,       /* max pct of time next lock impaired during transit */
  timeout=times,   /* root for name of file to contain transition  equations */
  screen=yes,   /* compute screens for depvar */
  loscreen=p1,    /* low screen from proc univariate for fitting model */
  hiscreen=p99,   /* high screen for fitting model */
  ols=YES,     /* use ols or logistic approach rather than catmod */
  modmacro=%autostep,  /* choice of macro for fitting models for transitional equation
                          %autoreg for linear equations using all selected variables
                          %autostep for linear equations using stepwise selection
                          %autolog for logistic equations using all selected variables
                          %asteplog for logistic equations using stepwise selection  */
  alpha=.01,      /* significance lvl for choosing variables stepwise */
  catmod=no,     /* create multinomial logit models */
  maxiter=20,      /* max. no. of MLE iterations */
  round=yes,       /* round selected variables for fitting with catmod */
  lowkeep=1,       /* keep 1 in every "lowkeep" records from calibration
                      file to fit transitions*/
  dsetin=water.regfile,    /* input dataset for fitting models (from lockperf.sas) */
  sumstat=yes,   /* produce summary statistics for accounts in
                    each state */
  catout=mltprob,    /* name of file to contain nultinomial logit equations */
  debug=no,         /* browse logit characteristics for debugging */
  mxobs=20000000,          /* maximum no. obs on input file to read */
  recs=no,         /* only allows certain sections to run when running for recs */
  varlimit=,  /* dataset containing statements with reasonable limits
                           to be imposed on variables */
  dorest=yes,   /* execute rest of macro routine under development */
  flow=flow,     /* defines the flow variable */
  rptflowvar=,      /*  defines a variable to include in report title  */
```

SAS Program “fitmod.sas”


```
  useflow=no,     /* determines if flow data is used and modifies variable names */
   );

  options dquote mprint macrogen;

  libname water  "&path";

   /*********
  %if %upcase(&useflow)=NO %then %do;
    %let  modout=NFtprob;
    %let  flow=;
    %let  timeout=NFt  imes;
    %let  rptflowvar=WithoutFlowData;
  %end;
        ********/

  %if %upcase(&recs)=YES %then %do;
     %let  timeout=timesREC;
  %end;

  %let tmodel=%upcase(&tmodel);
  %let catmod=%upcase(&catmod);

* THIS SECTION OF PROGRAM transforms explanatory variables for models;
 %if %upcase(&regen)=YES %then %do;
  data regfile
     single double knockout jacknife othtype   ;
   set  &dsetin;

  *restrict to desired dates;
   if datepart(parrtime) ge &start and datepart(parrtime) le &end;

 * Defining dummy variables for seasonal variations;
 length jan feb mar apr may jun jul aug sep oct nov dec 3;

    if month=01 then jan=1;else jan=0;
    if month=02 then feb=1;else feb=0;
    if month=03 then mar=1;else mar=0;
    if month=04 then apr=1;else apr=0;
    if month=05 then may=1;else may=0;
    if month=06 then jun=1;else jun=0;
    if month=07 then jul=1;else jul=0;
    if month=08 then aug=1;else aug=0;
    if month=09 then sep=1;else sep=0;
    if month=10 then oct=1;else oct=0;
    if month=11 then nov=1;else nov=0;
    if month=12 then dec=1;else dec=0;

    if month in (1,3,5,7,8,10,12) then m31day=1; else m31day=0;
    if month in (4,6,9,11) then m30day=1; else m30day=0;

    if month in (1,2,3) then qtr1=1; else qtr1=0;
    if month in (4,5,6) then qtr2=1; else qtr2=0;
    if month in (7,8,9) then qtr3=1; else qtr3=0;
    if month in (10,11,12) then qtr4=1; else qtr4=0;

   *** impose limit and reasonable test;
```

SAS Program “fitmod.sas” (cont.)

```
 %if &varlimit ne %str() %then %include "&path.&varlimit";   ;


*****************************************************************;
* be careful to put all computations of variables before the output
  stmts below or those data sets will not contain the new
  variables;

   *** variables to describe tow configuration at previous lock;

   length psingle pdouble pknockout pjacknife pothtype 3 ;
   psingle=0; pdouble=0;  pknockout=0; pjacknife=0; pothtype=0;
  if plockagetype eq 'S' then psingle=1;
   else if plockagetype eq 'C' then pdouble=1;
    else if plockagetype eq 'K' then pknockout=1;
     else if plockagetype eq 'V' then pjacknife=1;
       else pothtype=1;

    length pconfig $10;
    if pdouble then  pconfig='1:double';
    if psingle  then  pconfig='2:single';
    if pknockout then  pconfig='3:knockout';
    if pjacknife then  pconfig='4:jacknife';
    if pconfig eq ' ' then pconfig='5:Other';

    length exchange turnback 3;
    if popstype='EXCHANGE' then pexchange=1;  else pexchange=0;
    if popstype='TURNBACK' then pturnback=1;  else pturnback=0;

   *** variables to describe tow configuration at next lock;

   length single double knockout jacknife othtype 4.;
   single=0; double=0;  knockout=0; jacknife=0; othtype=0;
  if lockage_type eq 'S' then single=1;
   else if lockage_type eq 'C' then double=1;
    else if lockage_type eq 'K' then knockout=1;
     else if lockage_type eq 'V' then jacknife=1;
       else othtype=1;

  if lockage_type eq 'S' then output single;
   else if lockage_type eq 'C' then output double;
    else if lockage_type eq 'K' then output knockout;
     else if lockage_type eq 'V' then output jacknife;
       else output othtype;

   *** variables to describe next step;

  length contthru return contstop kill 3;
     if upcase(nxtstep) eq 'CONTNOSTOP'  THEN CONTTHRU=1; ELSE CONTTHRU=0;
     if upcase(nxtstep) eq 'CONTSTOP'  THEN contstop=1; ELSE contstop=0;
     if upcase(nxtstep) eq 'RETURN'  THEN return=1; ELSE return=0;
     if return eq 0 and contstop eq 0 and contthru eq 0 then kill=1; else kill=0;

    length nextstep  $8;
     if contthru eq 1 then nextstep='1:contthru';
     if contstop eq 1 then nextstep='2:contstop';
     if return eq 1 then nextstep='3:return';
```

SAS Program “fitmod.sas” (cont.)

A.4 Statistical Models
A.4.3 Simulation Enhancement Level 2

```
      if kill eq 1 then nextstep='4:kill';

    length doutcome $12;
    if contthru eq 1 then doutcome='1:contsame';
    if double and contstop then doutcome='2:contdouble';
    if single and contstop then doutcome='3:contsingle';
    if knockout and contstop then doutcome='4:contko';
    if jacknife and contstop then doutcome='5:contjk';
    if double and return then doutcome='6:retdouble';
    if single and return then doutcome='7:retsingle';
    if knockout and return then doutcome='8:retko';
    if jacknife and return then doutcome='9:retjk';
    if doutcome eq ' ' then doutcome='x:kill';

    length contsame contdouble contsingle contko contjk retdouble
           retsingle retko retjk xkill 3;

     if  doutcome='1:contsame'   then contsame=1; else contsame=0;
     if  doutcome='2:contdouble' then contdouble=1; else contdouble=0;
     if  doutcome='3:contsingle' then contsingle=1; else contsingle=0;
     if  doutcome='4:contko' then contko=1; else contko=0;
     if  doutcome='5:contjk' then contjk=1; else contjk=0;
     if  doutcome='6:retdouble' then retdouble=1; else retdouble=0;
     if  doutcome='7:retsingle' then retsingle=1; else retsingle=0;
     if  doutcome='8:retko' then retko=1; else retko=0;
     if  doutcome='9:retjk' then retjk=1; else retjk=0;
     if  doutcome='x:kill' then xkill=1; else xkill=0;

     transithrs=(arrtime-pdeptime)/3600;
     if transithrs gt 0 then do;
        logtrnhrs=log(transithrs);
     end;

     plockhrs=(pdeptime-pstrtlcktime)/3660;
     if plockhrs gt 0 then do;
        loglckhrs=log(plockhrs);
     end;

/*     plockmin=(pdeptime-pstrtlcktime)/60;
     if plockmin gt 0 then do;
        loglckmin=log(plockmin);
     end;  */  ** changed by DAL per request Dr Sweeney;

     ** selected interactions between original configuration and next event;
     thrusingle=contsame*psingle;
     thruother=contsame*(1-psingle)*(1-pdouble);
     contother= contstop*(1-contdouble)*(1-contsingle);
     retother= return*(1-retdouble)*(1-retsingle);

     thrudoubnite=contsame*pdouble*pcttrannite/100;
     thrusingnite=contsame*psingle*pcttrannite/100;
     thruothnite=thruother*pcttrannite/100;


     ** selected interactions between lockage configurations and nighttime;
     pdoubnite=pdouble*pctplcknite/100;
     psingnite=psingle*pctplcknite/100;
```

SAS Program “fitmod.sas” (cont.)

```
     pothnite=(1-pdouble)*(1-psingle)* pctplcknite/100;

   %if &intopool ne %str() %then if pnewpool eq "%upcase(&intopool)"   ; ;

   ** output datasets for model building;

       %subset;

   ** output all observations in regfile;

      output regfile;

   ** output subsets for different configurations;

   if plockagetype eq 'S' then output single;
    else if plockagetype eq 'C' then output double;
     else if plockagetype eq 'K' then output knockout;
      else if plockagetype eq 'V' then output jacknife;
        else output othtype;

  run;

 %if %upcase(&sumstat)=YES %then %do;

    title "resulting regfile for &start to &end ";
    proc means data=regfile n nmiss sum mean min max;
    proc freq data= regfile;
     tables pnewpool * pconfig * doutcome  pnewpool * pconfig * nextstep;
    run;
 %end; *of  sumstat;
 %end; * of regen;

 %if %upcase(&sumstat)=YES %then %do;

 proc means data = single  n nmiss sum mean min max ;
 title "Statistics from &dsetin for regfile"  ;
  ;

 %end; *of  sumstat;

*** macros for fitting and writing equations;
 %macro where; %mend;
** macro for regression on specified variables only;
%macro autoreg;
 proc reg data= %data  outest=modelest outsscp=sscp;
   model %depvar = %indvar ;
  %where ;
 run;
data tempa; set modelest;
 array vars (i)  %indvar ;
 file %modlfile  %newmod ;
 put " * model  fitted   &sysdate &systime   ;"  ;
 put " %eqnvar = " ;
 put intercept  ;
 do over vars;
   if vars=. then vars=0;
   length varname $16;
```

SAS Program “fitmod.sas” (cont.)


```
   call vname(vars,varname);
   put '+ ( ' vars ')  * ' varname ;
 end;
 put '   ; '/;
 put ' * stderr = ' _rmse_ ' ;'/;
 run;
data tempb; set sscp;
 if _n_ gt 1 then stop;
 file %modlfile  mod ;
 meanval = %depvar /intercept ;
 put " %eqnmvar = " meanval ";" ;
 put " *  based on " intercept comma15. " observations; "// ;
run;
%mend;


 ** macro for automatic addition or deletion of variables according to degree
    of statistical significance;

 * specify approach to building model (forward backward or stepwise);
 %macro select; stepwise %mend;


%macro autostep;
 proc reg data= %data  outest=modelest outsscp=sscp;
   model %depvar = %indvar/ selection=%select
      slentry=&alpha slstay=&alpha ;
  %where ;
 run;
data tempa; set modelest;
 array vars (i)  %indvar ;
 file %modlfile  %newmod ;
 put " * model  fitted   &sysdate &systime   ;"  ;
 put "%eqnvar="@;
 put intercept@;
 do over vars;
   if vars=. then vars=0;
   length varname $16;
   call vname(vars,varname);
   put'+('vars')*'varname@;
 end;
 put '   ; '/;

 put ' * stderr = ' _rmse_ ' ;'/ ;
 run;
data tempb; set sscp;
 if _n_ gt 1 then stop;
 file %modlfile  mod ;
 meanval = %depvar /intercept ;
 put " %eqnmvar = " meanval ";" ;
 put " *  based on " intercept comma15. " observations; "/
     " * with alpha = &alpha for stepwise addition and elimination of
 variables; "// ;
run;
%mend;

 ** macro for printing zero probabilitiy for nonocurring states;
```

SAS Program “fitmod.sas” (cont.)

```
%macro nullout;
  data tempa;
   file %modlfile  %newmod ;
   put " * model  fitted   &sysdate &systime   ;"  ;
   put " %eqnvar = 0; " ;
   put " %eqnmvar = 0;" ;
  run;
 %mend;

%macro screen;
  proc univariate data = %data noprint;
    var  %depvar;
    output out= screen
       &&loscreen =loval
       &&hiscreen = hival;
    run;
  data screen; set screen;
   call symput ('loval',put(loval,8.3));
   call symput ('hival',put(hival,8.3));
  run;
 %mend;

 ***** macro for fitting specified logistic model;

%macro autolog;
 proc logistic data= %data  outest=modelest covout      ;
   model %depvar = %indvar;       %where;  %weight;
 run;
data tempa; set modelest;
 array vars (i)  %indvar ;
 file %modlfile  %newmod ;
 if _n_ eq 1 then do;
 put " * model  fitted   &sysdate &systime   ;"  ;
 put " %eqnvar =  1/(1+exp( " ;
 put intercpt  ;
 do over vars;
   if vars=. then vars=0;
   length varname $16;
   call vname(vars,varname);
   put '+ ( ' vars ')  * ' varname ;
 end;
 put ' )) ; '/;
 end; * of model parameter values;
 run;
 ** determine mean value of dependent variable;
 proc univariate data=%data noprint;
  var %depvar;
  output out=meandep n=numobs mean=meanval;
 run;
data tempb; set meandep;
 file %modlfile  mod ;
 put " %eqnmvar = " meanval ";" ;
 put " *  based on all " numobs comma13. " observations; "//;
run;
%mend;

 ** stepwise logit with automatic output of equation;
```

SAS Program “fitmod.sas” (cont.)


```
%macro asteplog;
 proc logistic data= %data  outest=modelest covout      ;
   model %depvar = %indvar/ selection= %select
      slentry=&alpha slstay=&alpha ;    %where; %weight;
     %where;  %weight;
 run;
data tempa; set modelest;
 time=datetime();    * changed from &sysdate &systime;
 array vars (i)  %indvar ;
 file %modlfile  %newmod ;
 if _n_ eq 1 then do;
 put " * model  fitted " time datetime16.  " ;" ;
 put " %eqnvar =  1/(1+exp( " ;
 put intercpt  ;
 do over vars;
   if vars=. then vars=0;
   length varname $16;
   call vname(vars,varname);
   put '+ ( ' vars ')  * ' varname ;
 end;
 put ' )) ; '/
 " * with alpha = &alpha for stepwise addition and elimination of variables; "// ;
 end; * of model parameter values;
 run;
 ** determine mean value of dependent variable;
 proc univariate data=%data noprint;
  var %depvar;
  output out=meandep n=numobs mean=meanval;
 run;
data tempb; set meandep;
 file %modlfile  mod ;
 put " %eqnmvar = " meanval ";" ;
 put " *  based on all " numobs comma13. " observations; "//;
run;
%mend;


%macro data; regfile %mend;
%macro  depvar;  descending nxtstep;  %mend;

***  identify explanatory variables to be considered for transition models;
%macro indvar;
  feb -- dec  single jacknife  knockout othtype;
%mend;

* set where and weight to null for logit modeling;
%macro where; %mend;
%macro weight; %mend;

%if %upcase(&tmodel) eq YES %then %do;

** count number of outcomes in each ending state and
   save as macro variables to control model building;
 data temp; set regfile (keep=  contthru return contstop kill
    contsame contdouble contsingle contko contjk retdouble
           retsingle retko retjk xkill ) end=eof;
    ncontthru+ contthru ;
```

SAS Program “fitmod.sas” (cont.)

```
    nreturn +    return;
    ncontstop+ contstop;
    nkill + kill;
    ncontsame +contsame;
    ncontdouble +contdouble ;
    ncontsingle +contsingle;
    ncontko+contko;
    ncontjk +contjk;
    nretdouble + retdouble;
    nretsingle + retsingle;
    nretko  + retko;
    nretjk +  retjk ;
    nxkill +  xkill;


   if eof then do;
    output;
    call symput('ncontthru',put(ncontthru,7.));
    call symput('nreturn',put(nreturn,7.));
    call symput('ncontstop',put(ncontstop,7.));
    call symput('nkill',put(nkill,7.));
    call symput('ncontsame',put(ncontsame,7.));
    call symput('ncontdouble',put(ncontdouble,7.));
    call symput('ncontsingle',put(ncontsingle,7.));
    call symput('ncontko',put(ncontko,7.));
    call symput('ncontjk',put(ncontjk,7.));
    call symput('nretdouble',put(nretdouble,7.));
    call symput('nretsingle',put(nretsingle,7.));
    call symput('nretko',put(nretko,7.));
    call symput('nretjk',put(nretjk,7.));
    call symput('nxkill',put(nxkill,7.));

   end;
  run;
 %put " ***** ";
 %put " ncontthru=&ncontthru nreturn = &nreturn ncontstop=&ncontstop nkill=&nkill " ;
 %put " ncontsame=&ncontsame  ncontdouble=&ncontdouble ncontsingle=&ncontsingle";
 %put " ncontko=&ncontko ncontjk=&ncontjk nretdouble=&nretdouble  nretsingle=&nretsingle";
 %put " nretko=&nretko nretjk=&nretjk nxkill=&nxkill";
 %put " ***** ";


%if %upcase(&recs)=NO %then %do;    *** restriction when running for recs;

%if %upcase(&ols)=YES %then %do;

* outcomes on entry into pool  ;
%macro data; regfile %mend;
%macro modlfile; "&path&modout.&intopool..sas" %mend;


%macro where; where pnewpool eq "&intopool"  %mend;
%macro  depvar; contsame %mend;
%macro indvar; feb -- dec  psingle pjacknife  pknockout pothtype %mend;
%macro eqnvar; pcontsame %mend;
%macro eqnmvar; mcontsame %mend;
/***  %macro newmod; new %mend;   ***/
```

SAS Program “fitmod.sas” (cont.)

A.4 Statistical Models
A.4.3 Simulation Enhancement Level 2

```
%macro newmod; mod %mend;

  title 'Transition models using key variables from stepwise proc'  ;
  title2 'transitions  to contthru';
 data null;
   file %modlfile %newmod ;
    put " ***** probabilities of outcomes after entering pool &intopool ; " ;
    put " ***** based on data from &start to &end &rptflowvar; " //;
 run;

%macro newmod; mod %mend;

 %if %eval(&ncontsame) gt 0 %then  &modmacro; %else %nullout;

%macro  depvar; contdouble%mend;
%macro eqnvar; pcontdouble %mend;
%macro eqnmvar; mcontdouble %mend;

/*****

 %if %eval(&ncontdouble) gt 0 %then  &modmacro; %else %nullout;

%macro  depvar; contsingle %mend;
%macro eqnvar; pcontsingle %mend;
%macro eqnmvar; mcontsingle %mend;

 %if %eval(&ncontsingle) gt 0 %then  &modmacro; %else %nullout;

%macro  depvar; contko %mend;
%macro eqnvar; pcontko %mend;
%macro eqnmvar; mcontko %mend;

 %if %eval(&ncontko) gt 0 %then  &modmacro; %else %nullout;

%macro  depvar; contjk %mend;
%macro eqnvar; pcontjk %mend;
%macro eqnmvar; mcontjk %mend;

 %if %eval(&ncontjk) gt 0 %then  &modmacro; %else %nullout;

%macro  depvar; retdouble %mend;
%macro eqnvar; pretdouble %mend;
%macro eqnmvar; mretdouble %mend;

 %if %eval(&nretdouble) gt 0 %then  &modmacro; %else %nullout;

%macro  depvar; retsingle %mend;
%macro eqnvar; pretsingle %mend;
%macro eqnmvar; mretsingle %mend;

 %if %eval(&nretsingle) gt 0 %then  &modmacro; %else %nullout;

%macro  depvar; retko %mend;
%macro eqnvar; pretko %mend;
%macro eqnmvar; mretko %mend;

 %if %eval(&nretko) gt 0 %then  &modmacro; %else %nullout;
```

SAS Program “fitmod.sas” (cont.)

```
%macro  depvar; retjk %mend;
%macro eqnvar; pretjk %mend;
%macro eqnmvar; mretjk %mend;

 %if %eval(&nretjk) gt 0 %then  &modmacro; %else %nullout;

%macro  depvar; xkill %mend;
%macro eqnvar; pxkill %mend;
%macro eqnmvar; mxkill %mend;

 %if %eval(&nxkill) gt 0 %then  &modmacro; %else %nullout;
*******/

%end; * of logistic or ols fits;

%end;   ****** end of recs macro;

 %if %upcase(&dorest)=YES %then %do;

%macro weight; %mend;
%macro out; %mend;
%macro varfmt; %mend;
%macro data; temp1 %mend;
%macro begstate; %mend;
%macro where;  %mend;

*** catmod fits ;
%MACRO CATMOD;

 * erase dataset with parameters from previous model;
 proc datasets lib=work;
   delete logitparm;
 run;

 ** determine frequencies with nonmissing indep vars;
 data nonmiss; set %data;
  array indvars (i) %indvar;
  missing=0;
  do over indvars;
   if indvars eq . then missing=1;
  end;
  if missing eq 1 then delete;
 run;

 proc freq data = nonmiss; %varfmt;
  tables %depvar /out=frqout;
*title3 individual frequencies of categories to be predicted with nonmissing indep vars;
run;
 proc means n nmiss mean sum min max data = nonmiss;
 *title3 summary statistics for individual explanatory variables;
run;
** initialiaze relevant states to null;
%do i = 1 %to 9;
  %let state&i = %str(0);
%end;
```

SAS Program “fitmod.sas” (cont.)

A.4 Statistical Models
A.4.3 Simulation Enhancement Level 2

```
** count parameters and identify associated logits;
 data frqout2; set frqout end=eof;
   retain nvars;
  if _n_ eq 1 then do;
    * count indep vars;
     length %indvar $16;
     array indvars (i) %indvar;
       nvars=0;
      do over indvars;
       nvars+1;
      end;
  end;
    length logitnm logitch $6;

   ** identify logit if category has more than nvars outcomes;
  if count gt nvars then do;
        numcat+1;  numobs+count;
   logitch='logit'||substr(status,2,1);
   logitnm='logit'||put(numcat,1.);
   * create macro variable with name of logit expression;
   call symput(logitnm,logitch);
   pctnm='pct'||put(numcat,1.);
   call symput(pctnm,put(percent,7.4));
   cntnm='cnt'||put(numcat,1.);
   call symput(cntnm,left(put(count,6.)));
   statenm='state'||put(numcat,1.);
   call symput(statenm,substr(status,2,1));
   end;
   if eof then do;

         nparms=(nvars+1)*(numcat-1);
         if nparms lt 10 then
               call symput('numcoeff',put(nparms,1.));
           else if nparms lt 100 then
               call symput('numcoeff',put(nparms,2.));
                 else
               call symput('numcoeff',put(nparms,3.));
         length numexpr $1;
     numexpr=numcat-1;
     call symput('numexpr',put(numexpr,1.));
         call symput('numcats',put(numcat,1.));
         call symput('nvars',put(nvars,2.));
         call symput('numobs',put(numobs,comma9.));
    output;
   end;
  run;
 /* for debugging */

  data frqout2; set frqout2;
    length numobsc $ 9;
   %do n=1 %to &numcats;
         length logit&n $6 ;
         logit&n = "&&logit&n";
     pct&n = &&pct&n;
         cnt&n = &&cnt&n;
        %end;
         numobsc="&numobs";
```

SAS Program “fitmod.sas” (cont.)

```
       run;

 %if %upcase(&debug)=YES %then %do;
   proc fsbrowse data=frqout2;
   run;
 %end;

 PROC CATMOD DATA= %DATA;
  %where;
 DIRECT %INDVAR ;
 MODEL %DEPVAR = %INDVAR /
    ML NODESIGN NOPROFILE maxiter=&maxiter;  %WEIGHT  ;
  %where ;
 %OUT;
 RESPONSE logits / outest=logitparm;

 RUN;

** bring in multinomial logit parameters;

 data parmvals; set logitparm;

   if _type_ eq 'PARMS';
  keep b1-b&numcoeff;
  run;
** erase previous version of model file ???;
/***proc datasets ddname=&path;
 delete %modlfile;
 run;***/



** write equations for transitions;
 data parmvals;
   set parmvals;
   array lcoeff {*} b1-b&numcoeff;
   length varname  $16;
   array lvars (j) %indvar ;
   file %modlfile  new;
   put "* %begstate transition model  fitted  &sysdate &systime   ;"  ;
   %do i=1 %to &numcats -1;
     put "&&logit&i =  " lcoeff{&i};
           do j=1 to &nvars;
             call vname(lvars,varname);
         put "   + (" lcoeff{&i+(&numcats-1)*j} ') * ' varname ;
       end;
           put "   ;  * for &&pct&i pct of transitions;" ;
    %end;
   put "&&logit&numcats = log(1) ; * for &&pct&numcats pct of transitions;" ;
  put " *  based on &numobs observations; "/;

  totacc=&nunut+&nlow+&nmed+&nhic+&novc+&ndhid+&ndovd+&ndflt+&npdoff;
  mprb1 = &nunut/totacc;
  mprb2 = &nlow/totacc;
  mprb3 = &nmed/totacc;
  mprb4 = &nhic/totacc;
  mprb5 = &novc/totacc;
```

SAS Program “fitmod.sas” (cont.)


```
  mprb6 = &ndhid/totacc;
  mprb7 = &ndovd/totacc;
  mprb8 = &ndflt/totacc;
  mprb9 = &npdoff/totacc;
   put /' * mean probs including obs with nonmissing indep vars;'/;
   %do i=1 %to 9;
    put "mprb&i = " mprb&i ';' ;
   %end;
run;


%mend;  ** of catmod with writing of equations to flat file;


%if %upcase(&catmod)=YES %then %do;

%macro where;  where intopool eq '&intopool' and substr(doutcome,2,1)
       substr(doutcome,2,1) in  ("&state1","&state2","&state3",
   "&state4","&state5","&state6","&state7","&state8","&state9") %mend;


  * transitions on entering pool ;
%macro data; regfile %mend;
%macro  depvar; doutcome   %mend;
%macro begstate; &&intopool %mend;
%macro modlfile; "&path.&catout..&&intopool" %mend;
%macro newmod; new %mend;   ** to overwrite;
title 'Multinomial Logistic models using key variables'  ;
%macro indvar; feb -- dec  single jacknife  knockout othtype %mend;

  %catmod;


%end;  * of catmod fits;
%end; ** of dorest;
%end;  ** of tmodel ;

 %if %upcase(&times)=YES %then %do;

* average times for activities after arrival for lockage ;

%if %upcase(&recs)=NO %then %do;    *** restriction when running for recs;

  ****** lockage time for double lockages;

%macro data; regfile %mend;
%macro modlfile; "&path.lock.&timeout.&intopool..sas" %mend;


%macro  depvar; plockhrs %mend;
%macro indvar; feb -- dec  pctlcknite
        pturnback pexchange pctlckdn  %mend;
%macro eqnvar; dlockhrs %mend;
%macro eqnmvar; mdlckhrs %mend;
/** %macro newmod; new %mend;  **/
%macro newmod; mod %mend;
 data %data; set %data;
```

SAS Program “fitmod.sas” (cont.)

```
   if pnewpool eq "&intopool" ;
 run;

%if %upcase(&screen)=YES %then %screen ;;

%macro where; where pdouble eq 1 and %depvar ge &&loval and %depvar le &&hival and pctplckdn le &mxlpdn %mend;

  title 'Activity times using key variables from stepwise proc'  ;
 data null;
   file %modlfile %newmod ;
    put " ***** lockage  times (hours) for double lockages entering pool &intopool ; "  ;
    put " ***** based on data from &start to &end &rptflowvar; " ;
    put " *** with time screen between &loscreen = &&loval and &hiscreen = &&hival and impair pct le &mxlpdn  ;"
//;
 run;

%macro newmod; mod %mend;

  %autostep ;

* logarithms of average times for activities after arrival for lockage ;
%macro data; regfile %mend;
%macro modlfile; "&path.lock.&timeout.&intopool..sas" %mend;


%macro  depvar; loglckhrs %mend;
%macro indvar; feb -- dec   pctlcknite
          pturnback pexchange pctlckdn %mend;
%macro eqnvar; lgdlckhrs %mend;
%macro eqnmvar; mlgdlckhrs %mend;
 data %data; set %data;
   if pnewpool eq "&intopool" ;
 run;

%if %upcase(&screen)=YES %then %screen ;;

%macro where; where pdouble eq 1 and %depvar ge &&loval and %depvar le &&hival and pctplckdn le &mxlpdn %mend;

  title 'Logarithms of double lockage times using key variables from stepwise proc'  ;
 data null;
   file %modlfile %newmod ;
    put " ***** log(lockage times) for double lockages entering pool &intopool ; "  ;
    put " ***** based on data from &start to &end; " ;
    put " *** with screen between &loscreen = &&loval and &hiscreen = &&hival and impair pct le &mxlpdn  ;" //;
 run;

%macro newmod; mod %mend;

  %autostep ;

%end;  ** end of recs macro;

  *******  single lockage times;
%macro data; regfile %mend;
%macro modlfile; "&path.lock.&timeout.&intopool..sas" %mend;
```

SAS Program “fitmod.sas” (cont.)

A.4 Statistical Models
A.4.3 Simulation Enhancement Level 2

```
%macro  depvar; plockhrs %mend;
%macro indvar; feb -- dec  pjacknife pknockout pothtype pctlcknite
           pothnite  pturnback pexchange pctlckdn  %mend;
%macro eqnvar; slockhrs %mend;
%macro eqnmvar; mslckhrs %mend;
%macro newmod; mod %mend;
 data %data; set %data;
   if pnewpool eq "&intopool" ;
 run;

%if %upcase(&screen)=YES %then %screen ;;

%macro where; where psingle eq 1 and %depvar ge &&loval and %depvar le &&hival and pctplckdn le &mxlpdn %mend;

  title 'Activity times using key variables from stepwise proc'  ;
 data null;
   file %modlfile %newmod ;
    put " ***** lockage  times (hours) for single lockages entering pool &intopool ; "  ;
    put " ***** based on data from &start to &end &rptflowvar; " ;
    put " *** with time screen between &loscreen = &&loval and &hiscreen = &&hival and impair pct le &mxlpdn  ;"
//;
 run;

%macro newmod; mod %mend;

  %autostep ;

* logarithms of average times for activities after arrival for lockage ;
%macro data; regfile %mend;
%macro modlfile; "&path.lock.&timeout.&intopool..sas" %mend;


%macro  depvar; loglckhrs %mend;
%macro indvar; feb -- dec pjacknife pknockout pothtype pctlcknite
          pothnite  pturnback pexchange pctlckdn  %mend;
%macro eqnvar; lgslckhrs %mend;
%macro eqnmvar; mlgslckhrs %mend;
 data %data; set %data;
   if pnewpool eq "&intopool" ;
 run;

%if %upcase(&screen)=YES %then %screen ;;

%macro where; where psingle eq 1 and %depvar ge &&loval and %depvar le &&hival and pctplckdn le &mxlpdn %mend;

  title 'Logarithms of single lockage times using key variables from stepwise proc'  ;
 data null;
   file %modlfile %newmod ;
    put " ***** log(lockage times) for single lockages entering pool &intopool ; "  ;
    put " ***** based on data from &start to &end &rptflowvar; " ;
    put " *** with screen between &loscreen = &&loval and &hiscreen = &&hival and impair pct le &mxlpdn  ;" //;
 run;

%macro newmod; mod %mend;

  %autostep ;
```

SAS Program “fitmod.sas” (cont.)

```
  /*******  comment out  modeling for combined movements
  title Transit times for all movements;
%macro data; regfile %mend;
%macro  depvar; transithrs %mend;
%macro eqnvar; transithrs %mend;
%macro eqnmvar; mtransithrs %mend;
%macro indvar; feb -- dec  contsame thrusingle thrudoubnite
      thrusingnite thruothnite contdouble contsingle contother retdouble retsingle
        retother  pcttrandn pcttrannite  waitmin  %mend;

%if %upcase(&screen)=YES %then %screen ;;

%macro where; where %depvar ge &&loval and %depvar le &&hival and pcttrandn le &mxtpdn  %mend;

%macro modlfile; "&path.thru.&timeout.&intopool..sas" %mend;


 data null;
   file %modlfile %newmod ;
    put " ***** transit times for all movements on entering pool &intopool ; " ;
    put " ***** based on data from &start to &end &rptflowvar; " ;
    put " *** with screen for values between &loscreen = &&loval and &hiscreen = &&hival and impair pct le
&mxtpdn  ;" // ;
 run;

%macro newmod; mod %mend;

* %autostep ;
           ********** end comment out of modeling for all mocvement *****/

 data regthru; set regfile; where contthru eq 1; run;

%if %upcase(&recs)=NO %then %do;    *** restriction when running for recs;

***************  transit equations for doubles;

%macro data; regthru %mend;
%macro  depvar; transithrs %mend;
%macro eqnvar; nstransithrs %mend;
%macro eqnmvar; mnstransithrs %mend;
%macro modlfile; "&path.thru.&timeout.&intopool..sas" %mend;

%macro indvar; feb -- dec  thrusingle thruother thrudoubnite
      thrusingnite thruothnite  pcttrandn pcttrannite waitmin
           %mend;
%macro newmod; new %mend;


%if %upcase(&screen)=YES %then %screen ;;

%macro where; where pdouble eq 1 and %depvar ge &&loval and %depvar le &&hival and pcttrandn le &mxtpdn  %mend;
 data null;
   file %modlfile %newmod ;
    put " ***** transit times for doubles continuing nonstop on entering pool &intopool ; " ;
    put " ***** based on data from &start to &end &rptflowvar; " ;
    put " *** with screen for values between &loscreen = &&loval and &hiscreen = &&hival and impair pct le
&mxtpdn  ;"// ;
```



```
 run;

%macro newmod; mod %mend;
  %autostep ;


%macro data; regthru %mend;
%macro  depvar; logtrnhrs %mend;
%macro eqnvar; lognstrnhrs %mend;
%macro eqnmvar; mlognstrnhrs %mend;
%macro modlfile; "&path.thru.&timeout.&intopool..sas" %mend;


%macro indvar; feb -- dec
           %mend;

%if %upcase(&screen)=YES %then %screen ;;

%macro where; where pdouble eq 1 and %depvar ge &&loval and %depvar le &&hival   %mend;
 data null;
   file %modlfile %newmod ;
    put " ***** log(transit times) for doubles continuing straight through on entering pool &intopool ; " ;
    put " ***** based on data from &start to &end &rptflowvar; " ;
    put " *** with screen between &loscreen = &&loval and &hiscreen = &&hival   ;" //;
 run;

%macro newmod; mod %mend;
  %autostep ;

***************** transit equations for singles;

%macro data; regthru %mend;
%macro  depvar; transithrs %mend;
%macro eqnvar; nstransithrs %mend;
%macro eqnmvar; mnstransithrs %mend;
%macro modlfile; "&path.thru.&timeout.&intopool..sas" %mend;


%macro indvar; feb -- dec  thruother
           %mend;
%macro newmod; mod %mend;

%if %upcase(&screen)=YES %then %screen ;;

%macro where; where psingle eq 1 and %depvar ge &&loval and %depvar le &&hival   %mend;
 data null;
   file %modlfile %newmod ;
    put " ***** transit times for singles continuing nonstop on entering pool &intopool ; " ;
    put " ***** based on data from &start to &end &rptflowvar; " ;
    put " *** with screen between &loscreen = &&loval and &hiscreen = &&hival   ;" //;
 run;

%macro newmod; mod %mend;
  %autostep ;


%macro data; regthru %mend;
```

```
%macro  depvar; logtrnhrs %mend;
%macro eqnvar; lognstrnhrs %mend;
%macro eqnmvar; mlognstrnhrs %mend;
%macro modlfile; "&path.thru.&timeout.&intopool..sas" %mend;


%macro indvar; feb -- dec  thrusingle thruother thrudoubnite
      thrusingnite thruothnite pcttrandn pcttrannite  waitmin
           %mend;

%if %upcase(&screen)=YES %then %screen ;;

%macro where; where psingle eq 1 and %depvar ge &&loval and %depvar le &&hival and pcttrandn le &mxtpdn  %mend;
 data null;
   file %modlfile %newmod ;
    put " ***** log(transit times) for singles continuing straight through on entering pool &intopool ; " ;
    put " ***** based on data from &start to &end &rptflowvar; " ;
    put " *** with screen for values between &loscreen = &&loval and &hiscreen = &&hival and impair pct le
&mxtpdn  ;"// ;
 run;

%macro newmod; mod %mend;
  %autostep ;

%end;   ****** end of recs macro;


 data regstop; set regfile; where contthru ne 1; run;

%macro data; regstop %mend;

%macro  depvar; transithrs %mend;
%macro eqnvar; transithrs %mend;
%macro eqnmvar; mtransithrs %mend;
%macro modlfile; "~/waterway/stop.&timeout.&intopool..sas" %mend;
%macro indvar; feb -- dec
      contsingle contother retdouble retsingle
        retother pcttrandn  pcttrannite  %mend;
%macro newmod; new %mend;

%if %upcase(&screen)=YES %then %screen ;;

%macro where; where %depvar ge &&loval and %depvar le &&hival and pcttrandn le &mxtpdn %mend;

 data null;
   file %modlfile %newmod ;
    put " ***** activity times for vessels that stop before next lockage after entering pool &intopool ; " ;
    put " ***** based on data from &start to &end &rptflowvar; " ;
    put " *** with screen for values between &&loval and &&hival and impair pct le &mxtpdn  ;"// ;
 run;
%macro newmod; mod %mend;

  %autostep ;


%macro  depvar; logtrnhrs %mend;
%macro eqnvar; logtrnhrs %mend;
```

SAS Program “fitmod.sas” (cont.)

A.4 Statistical Models
A.4.3 Simulation Enhancement Level 2

```
%macro eqnmvar; mlogtrnthrs %mend;
%macro modlfile; "~/waterway/stop.&timeout.&intopool..sas" %mend;
%macro indvar; feb -- dec
      contsingle contother retdouble retsingle
        retother pcttrandn pcttrannite  %mend;

%if %upcase(&screen)=YES %then %screen ;;

%macro where; where %depvar ge &&loval and %depvar le &&hival and pcttrandn le &mxtpdn %mend;

 data null;
   file %modlfile %newmod ;
    put " ***** log(activity times) for vessels that stop before next lockage after entering pool &intopool ; "
;
    put " ***** based on data from &start to &end &rptflowvar; " ;
    put " *** with screen for values between &&loval and &&hival and impair pct le &mxtpdn  ;"// ;
 run;
%macro newmod; mod %mend;

  %autostep ;

 %end;  ** of estimating activity times;



%mend; * of fitmod;

 %fitmod(intopool=MI2OU);
 %fitmod(intopool=MI21D);
 %fitmod(intopool=MI21U);
 %fitmod(intopool=MI22D);
 %fitmod(intopool=MI22U);
 %fitmod(intopool=MI24D);
 %fitmod(intopool=MI24U);
 %fitmod(intopool=MI25D);
 %fitmod(intopool=MI25U);
 %fitmod(intopool=MI26D);
```

SAS Program “fitmod.sas” (cont.)

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 20:21 Tuesday, June 28, 2005 1

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	5914	0	24410412236	4127563.79	3618336.00	4329186.00
strtlcktime	Start/lockge/time	5914	0	7.8440829E12	1326358293	1266837900	1388488500
arrtime	Arriv/time	5914	0	7.8440669E12	1326355573	1266837900	1388488500
deptime	Leave/lockge/time	5914	0	7.8441053E12	1326362077	1266840600	1388490300
BOW_OVER_SILL	BOW_OVER_SILL	5914	0	7.8440908E12	1326359629	1266838680	1388489400
END_OF_ENTRY	END_OF_ENTRY	5914	0	7.8440942E12	1326360204	1266838980	1388489700
START_OF_EXIT	START_OF_EXIT	5914	0	7.8441016E12	1326361447	1266840300	1388490000
SIGNAL_DATE	SIGNAL_DATE	0	5914	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	5914	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	5306	608	23810.00	4.4873728	0	16.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	5306	608	38531.00	7.2617791	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	5914	.	.	.	.
vess_no		5914	0	4348821385	735343.49	2611.00	8888864.00
vss_hp		5893	21	26633781.00	4519.56	75.0000000	81800.00
frsttime		5914	0	7.8440669E12	1326355573	1266837900	1388488500
lasttime		5914	0	7.8441053E12	1326362077	1266840600	1388490300
newpoolno		5914	0	113383.00	19.1719648	4.0000000	27.0000000
oldpoolno		5914	0	118395.00	20.0194454	5.0000000	28.0000000
waitmin	Wait/before/lockge	5914	0	268103.00	45.3336152	0	985.0000000
lockmin	Wait/lockge/time	5914	0	372938.00	63.0601961	7.0000000	675.0000000
year		5914	0	11836710.00	2001.47	2000.00	2003.00
fly		5914	0	2614.00	0.4420020	0	1.0000000
turnback		5914	0	1507.00	0.2548191	0	1.0000000
exchange		5914	0	1793.00	0.3031789	0	1.0000000
lock		5914	0	112932.00	19.0957051	4.0000000	27.0000000
totmin		5914	0	641041.00	108.3938113	7.0000000	1119.00
month		5914	0	42576.00	7.1991884	2.0000000	12.0000000
day		5914	0	93128.00	15.7470409	1.0000000	31.0000000
sunrise		5914	0	135238944	22867.59	19973.00	27155.00
sunset		5914	0	409591159	69257.89	59760.00	74334.00
sequpstr		5914	0	3810.00	0.6442340	0	1.0000000
seqdstr		5914	0	0	0	0	0
plock		5914	0	118280.00	20.0000000	20.0000000	20.0000000
pempty		5299	615	40361.00	7.6167201	0	50.0000000
pfull		5299	615	23787.00	4.4889602	0	16.0000000
parrtime		5914	0	7.8437319E12	1326298928	1266823800	1388476800
pstrtlcktime		5914	0	7.8437733E12	1326305927	1266823800	1388476800
pdeptime		5914	0	7.8438039E12	1326311104	1266826020	1388479200
birth		5914	0	0	0	0	0
transithrs		5914	0	73052.22	12.3524208	-9.1000000	2501.38
reclock		5914	0	0	0	0	0
i		5914	0	1066037.00	180.2565100	58.0000000	401.0000000
pctpsysdn		5914	0	5746.71	0.9717125	0	91.4920000
pctplckdn		5914	0	3197.61	0.5406853	0	98.0740000
cumdown		5905	9	291120.00	49.3005927	0	39720.00
pctdown		5905	9	2290.09	0.3878224	0	98.0740000
pcttrandn		5892	22	5850.55	0.9929649	0	100.0000000
pctsysdn		5905	9	4932.89	0.8353751	0	89.0200000
pctlckdn		5905	9	2290.09	0.3878224	0	98.0740000
stime		5914	0	260068860	43975.12	60.0000002	86340.00
etime		5914	0	260499540	44047.94	0	86340.00
sdate		5914	0	90784987.00	15350.86	14662.00	16070.00

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 20:21 Tuesday, June 28, 2005 2

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		5914	0	90785241.00	15350.90	14662.00	16070.00
hrsduration		5914	0	6215.63	1.0510033	0.1166667	11.2500000
ndays		5914	0	0	0	0	0
pctday		5914	0	326270.51	55.1691772	0	100.0000000
pctpsysnite		5914	0	269276.75	45.5320844	0	100.0000000
pctplcknite		5914	0	270930.00	45.8116341	0	100.0000000
pcttrannite		5914	0	272612.21	46.0960791	0	100.0000000
pctsysnite		5914	0	263608.28	44.5736015	0	100.0000000
pctlcknite		5914	0	265129.49	44.8308228	0	100.0000000
stage		575	5339	6535.28	11.3657043	8.5400000	27.0700000
flow		565	5349	45394153.10	80343.63	16265.90	263826.81
jan		5914	0	0	0	0	0
feb		5914	0	30.0000000	0.0050727	0	1.0000000
mar		5914	0	586.0000000	0.0990869	0	1.0000000
apr		5914	0	601.0000000	0.1016233	0	1.0000000
may		5914	0	552.0000000	0.0933378	0	1.0000000
jun		5914	0	713.0000000	0.1205614	0	1.0000000
jul		5914	0	757.0000000	0.1280014	0	1.0000000
aug		5914	0	625.0000000	0.1056814	0	1.0000000
sep		5914	0	554.0000000	0.0936760	0	1.0000000
oct		5914	0	648.0000000	0.1095705	0	1.0000000
nov		5914	0	625.0000000	0.1056814	0	1.0000000
dec		5914	0	223.0000000	0.0377071	0	1.0000000
m31day		5914	0	3391.00	0.5733852	0	1.0000000
m30day		5914	0	2493.00	0.4215421	0	1.0000000
qtr1		5914	0	616.0000000	0.1041596	0	1.0000000
qtr2		5914	0	1866.00	0.3155225	0	1.0000000
qtr3		5914	0	1936.00	0.3273588	0	1.0000000
qtr4		5914	0	1496.00	0.2529591	0	1.0000000
psingle		5914	0	1544.00	0.2610754	0	1.0000000
pdouble		5914	0	4162.00	0.7037538	0	1.0000000
pknockout		5914	0	92.0000000	0.0155563	0	1.0000000
pjacknife		5914	0	116.0000000	0.0196145	0	1.0000000
pothtype		5914	0	0	0	0	0
pexchange		5914	0	2225.00	0.3762259	0	1.0000000
pturnback		5914	0	1936.00	0.3273588	0	1.0000000
single		5914	0	5848.00	0.9888400	0	1.0000000
double		5914	0	58.0000000	0.0098072	0	1.0000000
knockout		5914	0	5.0000000	0.000845451	0	1.0000000
jacknife		5914	0	2.0000000	0.000338181	0	1.0000000
othtype		5914	0	1.0000000	0.000169090	0	1.0000000
contthru		5914	0	3810.00	0.6442340	0	1.0000000
return		5914	0	426.0000000	0.0720325	0	1.0000000
contstop		5914	0	1477.00	0.2497464	0	1.0000000
kill		5914	0	201.0000000	0.0339871	0	1.0000000
contsame		5914	0	3810.00	0.6442340	0	1.0000000
contdouble		5914	0	0	0	0	0
contsingle		5914	0	1476.00	0.2495773	0	1.0000000
contko		5914	0	0	0	0	0
contjk		5914	0	1.0000000	0.000169090	0	1.0000000
retdouble		5914	0	50.0000000	0.0084545	0	1.0000000
retsingle		5914	0	370.0000000	0.0625634	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		5914	0	5.0000000	0.000845451	0	1.0000000
retjk		5914	0	1.0000000	0.000169090	0	1.0000000
xkill		5914	0	201.0000000	0.0339871	0	1.0000000
logtrnhrs		5900	14	9617.02	1.6300041	-2.9957323	7.8245992
plockhrs		5914	0	8366.08	1.4146233	0.1147541	12.5245902
loglckhrs		5914	0	911.7298548	0.1541647	-2.1649637	2.5276939
thrusingle		5914	0	580.0000000	0.0980724	0	1.0000000
thruother		5914	0	193.0000000	0.0326344	0	1.0000000
contother		5914	0	1.0000000	0.000169090	0	1.0000000
retother		5914	0	6.0000000	0.0010145	0	1.0000000
thrudoubnite		5914	0	1334.22	0.2256030	0	1.0000000
thrusingnite		5914	0	339.2911600	0.0573708	0	1.0000000
thruothnite		5914	0	90.0542400	0.0152273	0	1.0000000
pdoubnite		5914	0	1867.73	0.3158152	0	1.0000000
psingnite		5914	0	745.8011100	0.1261077	0	1.0000000
pothnite		5914	0	95.7676800	0.0161934	0	1.0000000

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 20:21 Tuesday, June 28, 2005 4

The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI2OU

pconfig / doutcome	1:contasame	3:contsingle	5:contjk	6:retdouble	7:retsingle	8:retko	9:retjk	x:kill	Total
1:double	3037	1069	0	35	9	0	0	12	4162
	51.35	18.08	0.00	0.59	0.15	0.00	0.00	0.20	70.38
	72.97	25.68	0.00	0.84	0.22	0.00	0.00	0.29	
	79.71	72.43	0.00	70.00	2.43	0.00	0.00	5.97	
2:single	580	394	1	15	359	5	1	189	1544
	9.81	6.66	0.02	0.25	6.07	0.08	0.02	3.20	26.11
	37.56	25.52	0.06	0.97	23.25	0.32	0.06	12.24	
	15.22	26.69	100.00	30.00	97.03	100.00	100.00	94.03	
3:knockout	83	9	0	0	0	0	0	0	92
	1.40	0.15	0.00	0.00	0.00	0.00	0.00	0.00	1.56
	90.22	9.78	0.00	0.00	0.00	0.00	0.00	0.00	
	2.18	0.61	0.00	0.00	0.00	0.00	0.00	0.00	
4:jacknife	110	4	0	0	2	0	0	0	116
	1.86	0.07	0.00	0.00	0.03	0.00	0.00	0.00	1.96
	94.83	3.45	0.00	0.00	1.72	0.00	0.00	0.00	
	2.89	0.27	0.00	0.00	0.54	0.00	0.00	0.00	
Total	3810	1476	1	50	370	5	1	201	5914
	64.42	24.96	0.02	0.85	6.26	0.08	0.02	3.40	100.00

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 20:21 Tuesday, June 28, 2005 5

The FREQ Procedure

Table 1 of pconfig by nextstep
Controlling for pnewpool=MI2OU

pconfig nextstep

Frequency Percent Row Pct Col Pct	1:contth	2:contst	3:return	4:kill	Total
1:double	3037 51.35 72.97 79.71	1069 18.08 25.68 72.38	44 0.74 1.06 10.33	12 0.20 0.29 5.97	4162 70.38
2:single	580 9.81 37.56 15.22	395 6.68 25.58 26.74	380 6.43 24.61 89.20	189 3.20 12.24 94.03	1544 26.11
3:knockout	83 1.40 90.22 2.18	9 0.15 9.78 0.61	0 0.00 0.00 0.00	0 0.00 0.00 0.00	92 1.56
4:jacknife	110 1.86 94.83 2.89	4 0.07 3.45 0.27	2 0.03 1.72 0.47	0 0.00 0.00 0.00	116 1.96
Total	3810 64.42	1477 24.97	426 7.20	201 3.40	5914 100.00

Statistics from water.regfile for regfile 20:21 Tuesday, June 28, 2005 6

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	85977	0	365397133107	4249940.49	3515664.00	4331559.00
strtlcktime	Start/lockge/time	85977	0	1.1409703E14	1327064545	1262306700	1388533680
arrtime	Arriv/time	85977	0	1.1409675E14	1327061321	1262306700	1388530800
deptime	Leave/lockge/time	85977	0	1.1409725E14	1327067111	1262307720	1388536080
BOW_OVER_SILL	BOW_OVER_SILL	85977	0	1.140971E14	1327065374	1262307000	1388534700
END_OF_ENTRY	END_OF_ENTRY	85977	0	1.1409714E14	1327065848	1262307060	1388535000
START_OF_EXIT	START_OF_EXIT	85977	0	1.140972E14	1327066583	1262307660	1388535600
SIGNAL_DATE	SIGNAL_DATE	0	85977	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	85977	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	74681	11296	464454.00	6.2191722	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	74681	11296	245302.00	3.2846641	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	85977	.	.	.	.
vess_no		85977	0	69288333012	805893.82	2611.00	8888864.00
vss_hp		85271	706	332133565	3895.04	60.0000000	81800.00
frsttime		85977	0	1.1409675E14	1327061321	1262306700	1388530800
lasttime		85977	0	1.1409725E14	1327067111	1262307720	1388536080
newpoolno		85977	0	2150101.00	25.0078626	1.0000000	28.0000000
oldpoolno		85977	0	2153026.00	25.0418833	1.0000000	28.0000000
waitmin	Wait/before/lockge	85977	0	4620512.00	53.7412564	0	7423.00
lockmin	Wait/lockge/time	85977	0	3676735.00	42.7641695	4.0000000	1823.00
year		85977	0	172082972	2001.50	2000.00	2003.00
fly		85977	0	36690.00	0.4267420	0	1.0000000
turnback		85977	0	26770.00	0.3113623	0	1.0000000
exchange		85977	0	22516.00	0.2618840	0	1.0000000
lock		85977	0	2108575.00	24.5248729	1.0000000	27.0000000
totmin		85977	0	8297247.00	96.5054259	4.0000000	7490.00
month		85977	0	613697.00	7.1379206	1.0000000	12.0000000
day		85977	0	1348329.00	15.6824383	1.0000000	31.0000000
sunrise		85276	701	1975511316	23166.09	19414.00	27155.00
sunset		85276	701	5792228885	67923.32	59694.00	75152.00
sequpstr		85977	0	14614.00	0.1699757	0	1.0000000
seqdstr		85977	0	20442.00	0.2377613	0	1.0000000
plock		85977	0	2017136.00	23.4613443	1.0000000	27.0000000
pempty		75036	10941	193639.00	2.5806146	0	50.0000000
pfull		75036	10941	516650.00	6.8853617	0	28.0000000
parrtime		85977	0	1.1407226E14	1326776489	1262304600	1388521920
pstrtlcktime		85977	0	1.1407272E14	1326781774	1262304600	1388521920
pdeptime		85977	0	1.1407299E14	1326784970	1262305620	1388523540
birth		85977	0	0	0	0	0
transithrs		85977	0	6599960.80	76.7642602	-249.0333333	8099.42
reclock		85977	0	0	0	0	0
i		85977	0	19738750.00	229.5817486	58.0000000	401.0000000
pctpsysdn		80261	5716	78589.90	0.9791791	0	98.9510000
pctplckdn		80261	5716	37608.21	0.4685738	0	98.3000000
cumdown		85209	768	3350160.00	39.3169736	0	107520.00
pctdown		85209	768	32044.51	0.3760696	0	98.3000000
pcttrandn		84956	1021	113138.48	1.3317303	0	100.0000000
pctsysdn		85209	768	73645.06	0.8642873	0	98.6320000
pctlckdn		85209	768	32044.51	0.3760696	0	98.3000000
stime		85977	0	3804415920	44249.23	0	86340.00
etime		85977	0	3814808820	44370.11	0	86340.00
sdate		85977	0	1320523426	15359.03	14610.00	16070.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		85977	0	1320525859	15359.06	14610.00	16071.00
hrsduration		85977	0	61278.92	0.7127362	0.0666667	30.3833333
ndays		85977	0	1.0000000	0.000011631	0	1.0000000
pctday		85959	18	4695747.93	54.6277636	0	100.0000000
pctpsysnite		85927	50	3875798.58	45.1057127	0	100.0000000
pctplcknite		85956	21	3886391.89	45.2137359	0	100.0000000
pcttrannite		85411	566	4039538.85	47.2952998	0	100.0000000
pctsysnite		85895	82	3880027.20	45.1717469	0	100.0000000
pctlcknite		85959	18	3900152.07	45.3722364	0	100.0000000
stage		40318	45659	866798.93	21.4990558	8.3500000	33.0800000
flow		8221	77756	677628808	82426.57	16077.99	306262.78
jan		85977	0	3062.00	0.0356142	0	1.0000000
feb		85977	0	3419.00	0.0397664	0	1.0000000
mar		85977	0	6941.00	0.0807309	0	1.0000000
apr		85977	0	7568.00	0.0880235	0	1.0000000
may		85977	0	7240.00	0.0842086	0	1.0000000
jun		85977	0	8513.00	0.0990149	0	1.0000000
jul		85977	0	8681.00	0.1009689	0	1.0000000
aug		85977	0	8038.00	0.0934901	0	1.0000000
sep		85977	0	7730.00	0.0899078	0	1.0000000
oct		85977	0	8626.00	0.1003292	0	1.0000000
nov		85977	0	9385.00	0.1091571	0	1.0000000
dec		85977	0	6774.00	0.0787885	0	1.0000000
m31day		85977	0	49362.00	0.5741303	0	1.0000000
m30day		85977	0	33196.00	0.3861033	0	1.0000000
qtr1		85977	0	13422.00	0.1561115	0	1.0000000
qtr2		85977	0	23321.00	0.2712470	0	1.0000000
qtr3		85977	0	24449.00	0.2843667	0	1.0000000
qtr4		85977	0	24785.00	0.2882748	0	1.0000000
psingle		85977	0	66168.00	0.7696012	0	1.0000000
pdouble		85977	0	15912.00	0.1850728	0	1.0000000
pknockout		85977	0	1445.00	0.0168068	0	1.0000000
pjacknife		85977	0	529.0000000	0.0061528	0	1.0000000
pothtype		85977	0	1923.00	0.0223664	0	1.0000000
pexchange		85977	0	23634.00	0.2748875	0	1.0000000
pturnback		85977	0	27782.00	0.3231329	0	1.0000000
single		85977	0	85952.00	0.9997092	0	1.0000000
double		85977	0	18.0000000	0.000209358	0	1.0000000
knockout		85977	0	5.0000000	0.000058155	0	1.0000000
jacknife		85977	0	2.0000000	0.000023262	0	1.0000000
othtype		85977	0	0	0	0	0
contthru		1544	84433	580.0000000	0.3756477	0	1.0000000
return		1544	84433	380.0000000	0.2461140	0	1.0000000
contstop		1544	84433	395.0000000	0.2558290	0	1.0000000
kill		1544	84433	189.0000000	0.1224093	0	1.0000000
contsame		1544	84433	580.0000000	0.3756477	0	1.0000000
contdouble		1544	84433	0	0	0	0
contsingle		1544	84433	394.0000000	0.2551813	0	1.0000000
contko		1544	84433	0	0	0	0
contjk		1544	84433	1.0000000	0.000647668	0	1.0000000
retdouble		1544	84433	15.0000000	0.0097150	0	1.0000000
retsingle		1544	84433	359.0000000	0.2325130	0	1.0000000

Statistics from water.regfile for regfile 20:21 Tuesday, June 28, 2005 8

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1544	84433	5.0000000	0.0032383	0	1.0000000
retjk		1544	84433	1.0000000	0.000647668	0	1.0000000
xkill		1544	84433	189.0000000	0.1224093	0	1.0000000
logtrnhrs		1535	84442	3119.38	2.0321664	-2.9957323	7.8245992
plockhrs		1544	84433	707.0655738	0.4579440	0.1147541	12.5245902
loglckhrs		1544	84433	-1398.26	-0.9056067	-2.1649637	2.5276939
thrusingle		1544	84433	580.0000000	0.3756477	0	1.0000000
thruother		1544	84433	0	0	0	0
contother		1544	84433	1.0000000	0.000647668	0	1.0000000
retother		1544	84433	6.0000000	0.0038860	0	1.0000000
thrudoubnite		1544	84433	0	0	0	0
thrusingnite		1544	84433	339.2911600	0.2197482	0	1.0000000
thruothnite		1544	84433	0	0	0	0
pdoubnite		1544	84433	0	0	0	0
psingnite		1544	84433	745.8011100	0.4830318	0	1.0000000
pothnite		1544	84433	0	0	0	0

Transition models using key variables from stepwise proc transitions to contthru 20:21 Tuesday, June 28, 2005 9

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 1

Variable psingle Entered: R-Square = 0.1112 and C(p) = 81.7130

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	150.73533	150.73533	739.71	<.0001
Error	5912	1204.73305	0.20378		
Corrected Total	5913	1355.46838			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.73913	0.00683	2387.39130	11715.7	<.0001
psingle	-0.36348	0.01336	150.73533	739.71	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pjacknife Entered: R-Square = 0.1151 and C(p) = 57.7892

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	155.94774	77.97387	384.24	<.0001
Error	5911	1199.52064	0.20293		
Corrected Total	5913	1355.46838			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.73343	0.00691	2288.29337	11276.3	<.0001
psingle	-0.35778	0.01338	145.01000	714.58	<.0001
pjacknife	0.21485	0.04239	5.21241	25.69	<.0001

Bounds on condition number: 1.0071, 4.0285

Stepwise Selection: Step 3

Transition models using key variables from stepwise proc transitions to contthru 20:21 Tuesday, June 28, 2005 10

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 3

Variable dec Entered: R-Square = 0.1188 and C(p) = 34.2364

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	161.08555	53.69518	265.69	<.0001
Error	5910	1194.38283	0.20210		
Corrected Total	5913	1355.46838			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.73562	0.00691	2292.86214	11345.5	<.0001
dec	-0.15832	0.03140	5.13781	25.42	<.0001
psingle	-0.34326	0.01366	127.55182	631.15	<.0001
pjacknife	0.21402	0.04231	5.17209	25.59	<.0001

Bounds on condition number: 1.0539, 9.3241

Stepwise Selection: Step 4

Variable pknockout Entered: R-Square = 0.1209 and C(p) = 22.4446

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	163.85863	40.96466	203.14	<.0001
Error	5909	1191.60975	0.20166		
Corrected Total	5913	1355.46838			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.73185	0.00697	2221.00368	11013.6	<.0001
dec	-0.15980	0.03137	5.23324	25.95	<.0001
psingle	-0.33933	0.01369	123.89895	614.39	<.0001
pjacknife	0.21781	0.04227	5.35369	26.55	<.0001
pknockout	0.17554	0.04734	2.77308	13.75	0.0002

Transition models using key variables from stepwise proc transitions to contthru 20:21 Tuesday, June 28, 2005 11

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 4

Bounds on condition number: 1.0603, 16.486

Stepwise Selection: Step 5

Variable nov Entered: R-Square = 0.1221 and C(p) = 16.4771

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	165.46063	33.09213	164.29	<.0001
Error	5908	1190.00775	0.20142		
Corrected Total	5913	1355.46838			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.73631	0.00715	2137.76437	10613.3	<.0001
nov	-0.05424	0.01923	1.60200	7.95	0.0048
dec	-0.16835	0.03150	5.75435	28.57	<.0001
psingle	-0.33383	0.01382	117.53062	583.50	<.0001
pjacknife	0.22323	0.04229	5.61206	27.86	<.0001
pknockout	0.17842	0.04732	2.86366	14.22	0.0002

Bounds on condition number: 1.0818, 25.908

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	psingle		1	0.1112	0.1112	81.7130	739.71	<.0001
2	pjacknife		2	0.0038	0.1151	57.7892	25.69	<.0001
3	dec		3	0.0038	0.1188	34.2364	25.42	<.0001
4	pknockout		4	0.0020	0.1209	22.4446	13.75	0.0002
5	nov		5	0.0012	0.1221	16.4771	7.95	0.0048

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.1751 and C(p) = 275.6307

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	91.70363	91.70363	869.84	<.0001
Error	4099	432.14019	0.10543		
Corrected Total	4100	523.84382			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.85966	0.00630	9181.86592	87093.2	<.0001
pturnback	-0.31298	0.01061	91.70363	869.84	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable oct Entered: R-Square = 0.1996 and C(p) = 147.4887

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	104.56536	52.28268	511.01	<.0001
Error	4098	419.27846	0.10231		
Corrected Total	4100	523.84382			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.83824	0.00650	8195.42073	80101.5	<.0001
oct	0.18404	0.01641	12.86173	125.71	<.0001
pturnback	-0.30633	0.01047	87.56276	855.83	<.0001

Bounds on condition number: 1.0032, 4.0129

Stepwise Selection: Step 3

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable sep Entered: R-Square = 0.2168 and C(p) = 58.4729

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	113.56031	37.85344	378.00	<.0001
Error	4097	410.28351	0.10014		
Corrected Total	4100	523.84382			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.82127	0.00667	7465.36077	74547.4	<.0001
sep	0.17466	0.01843	8.99495	89.82	<.0001
oct	0.19982	0.01632	15.00422	149.83	<.0001
pturnback	-0.30198	0.01037	84.92867	848.08	<.0001

Bounds on condition number: 1.0138, 9.0929

Stepwise Selection: Step 4

Variable nov Entered: R-Square = 0.2195 and C(p) = 46.2841

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	114.96256	28.74064	287.91	<.0001
Error	4096	408.88126	0.09982		
Corrected Total	4100	523.84382			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.81392	0.00694	6813.68947	68256.7	<.0001
sep	0.18155	0.01849	9.62259	96.40	<.0001
oct	0.20674	0.01640	15.85773	158.86	<.0001
nov	0.06871	0.01833	1.40225	14.05	0.0002
pturnback	-0.30038	0.01036	83.88867	840.36	<.0001

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0268, 16.31

Stepwise Selection: Step 5

Variable aug Entered: R-Square = 0.2229 and C(p) = 30.0985

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	116.75982	23.35196	234.91	<.0001
Error	4095	407.08400	0.09941		
Corrected Total	4100	523.84382			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.80334	0.00736	5965.98942	60014.0	<.0001
aug	0.06820	0.01604	1.79726	18.08	<.0001
sep	0.19189	0.01861	10.56627	106.29	<.0001
oct	0.21709	0.01655	17.10715	172.09	<.0001
nov	0.07904	0.01846	1.82333	18.34	<.0001
pturnback	-0.29957	0.01034	83.40866	839.04	<.0001

Bounds on condition number: 1.0495, 25.916

Stepwise Selection: Step 6

Variable pexchange Entered: R-Square = 0.2251 and C(p) = 20.4590

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	117.91013	19.65169	198.19	<.0001
Error	4094	405.93369	0.09915		
Corrected Total	4100	523.84382			

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.77860	0.01034	2936.51201	29615.9	<.0001
aug	0.06512	0.01605	1.63303	16.47	<.0001
sep	0.19443	0.01860	10.83125	109.24	<.0001
oct	0.21763	0.01653	17.19007	173.37	<.0001
nov	0.07691	0.01844	1.72425	17.39	<.0001
pturnback	-0.27455	0.01267	46.52185	469.19	<.0001
pexchange	0.04244	0.01246	1.15031	11.60	0.0007

Bounds on condition number: 1.5168, 43.284

Stepwise Selection: Step 7

Variable pctlcknite Entered: R-Square = 0.2264 and C(p) = 15.4594

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	118.60189	16.94313	171.13	<.0001
Error	4093	405.24194	0.09901		
Corrected Total	4100	523.84382			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.78970	0.01115	2551.49318	25770.4	<.0001
aug	0.06541	0.01603	1.64788	16.64	<.0001
sep	0.19587	0.01860	10.98196	110.92	<.0001
oct	0.22090	0.01656	17.61265	177.89	<.0001
nov	0.08118	0.01850	1.90662	19.26	<.0001
pctlcknite	-0.00027242	0.00010306	0.69176	6.99	0.0082
pturnback	-0.27441	0.01267	46.47339	469.39	<.0001
pexchange	0.04258	0.01245	1.15791	11.70	0.0006

Bounds on condition number: 1.5168, 57.688

Stepwise Selection: Step 8

Variable jun Entered: R-Square = 0.2277 and C(p) = 10.7711

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 8

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	119.26289	14.90786	150.78	<.0001
Error	4092	404.58094	0.09887		
Corrected Total	4100	523.84382			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.79757	0.01155	2395.15892	24225.0	<.0001
jun	-0.03914	0.01514	0.66100	6.69	0.0098
aug	0.05679	0.01637	1.19048	12.04	0.0005
sep	0.18758	0.01886	9.78093	98.93	<.0001
oct	0.21260	0.01686	15.71983	158.99	<.0001
nov	0.07279	0.01877	1.48717	15.04	0.0001
pctlcknite	-0.00028641	0.00010313	0.76254	7.71	0.0055
pturnback	-0.27349	0.01266	46.12532	466.52	<.0001
pexchange	0.04486	0.01247	1.27844	12.93	0.0003

Bounds on condition number: 1.5225, 76.107

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.1751	0.1751	275.631	869.84	<.0001
2	oct		2	0.0246	0.1996	147.489	125.71	<.0001
3	sep		3	0.0172	0.2168	58.4729	89.82	<.0001
4	nov		4	0.0027	0.2195	46.2841	14.05	0.0002
5	aug		5	0.0034	0.2229	30.0985	18.08	<.0001
6	pexchange		6	0.0022	0.2251	20.4590	11.60	0.0007
7	pctlcknite		7	0.0013	0.2264	15.4594	6.99	0.0082
8	jun		8	0.0013	0.2277	10.7711	6.69	0.0098

Logarithms of double lockage times using key variables from stepwise proc 17
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.1877 and C(p) = 259.6383

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	32.32976	32.32976	946.99	<.0001
Error	4099	139.93840	0.03414		
Corrected Total	4100	172.26816			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.60390	0.00359	968.27148	28362.1	<.0001
pturnback	-0.18584	0.00604	32.32976	946.99	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable oct Entered: R-Square = 0.2100 and C(p) = 141.8074

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	36.17881	18.08941	544.72	<.0001
Error	4098	136.08935	0.03321		
Corrected Total	4100	172.26816			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.59218	0.00370	850.51313	25611.1	<.0001
oct	0.10068	0.00935	3.84905	115.90	<.0001
pturnback	-0.18220	0.00597	30.97551	932.75	<.0001

Bounds on condition number: 1.0032, 4.0129

Stepwise Selection: Step 3

Logarithms of double lockage times using key variables from stepwise proc 18
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable sep Entered: R-Square = 0.2273 and C(p) = 51.1771

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	39.15417	13.05139	401.70	<.0001
Error	4097	133.11399	0.03249		
Corrected Total	4100	172.26816			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.58243	0.00380	763.45350	23497.7	<.0001
sep	0.10045	0.01050	2.97535	91.58	<.0001
oct	0.10975	0.00930	4.52671	139.32	<.0001
pturnback	-0.17969	0.00591	30.07226	925.57	<.0001

Bounds on condition number: 1.0138, 9.0929

Stepwise Selection: Step 4

Variable nov Entered: R-Square = 0.2298 and C(p) = 39.6134

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	39.58984	9.89746	305.55	<.0001
Error	4096	132.67832	0.03239		
Corrected Total	4100	172.26816			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.57833	0.00395	692.61759	21382.3	<.0001
sep	0.10429	0.01053	3.17552	98.03	<.0001
oct	0.11361	0.00934	4.78895	147.84	<.0001
nov	0.03830	0.01044	0.43568	13.45	0.0002
pturnback	-0.17880	0.00590	29.72403	917.63	<.0001

Logarithms of double lockage times using key variables from stepwise proc 19
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0268, 16.31

Stepwise Selection: Step 5

Variable aug Entered: R-Square = 0.2329 and C(p) = 24.9406

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	40.12538	8.02508	248.69	<.0001
Error	4095	132.14278	0.03227		
Corrected Total	4100	172.26816			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.57255	0.00419	601.39447	18636.7	<.0001
aug	0.03723	0.00914	0.53554	16.60	<.0001
sep	0.10994	0.01060	3.46827	107.48	<.0001
oct	0.11926	0.00943	5.16298	160.00	<.0001
nov	0.04394	0.01051	0.56345	17.46	<.0001
pturnback	-0.17836	0.00589	29.56721	916.26	<.0001

Bounds on condition number: 1.0495, 25.916

Stepwise Selection: Step 6

Variable pexchange Entered: R-Square = 0.2344 and C(p) = 19.0283

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	40.37953	6.72992	208.91	<.0001
Error	4094	131.88863	0.03222		
Corrected Total	4100	172.26816			

Logarithms of double lockage times using key variables from stepwise proc 20
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.56093	0.00589	292.06791	9066.18	<.0001
aug	0.03578	0.00915	0.49303	15.30	<.0001
sep	0.11113	0.01060	3.53853	109.84	<.0001
oct	0.11951	0.00942	5.18432	160.93	<.0001
nov	0.04293	0.01051	0.53740	16.68	<.0001
pturnback	-0.16660	0.00722	17.13028	531.75	<.0001
pexchange	0.01995	0.00710	0.25415	7.89	0.0050

Bounds on condition number: 1.5168, 43.284

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.1877	0.1877	259.638	946.99	<.0001
2	oct		2	0.0223	0.2100	141.807	115.90	<.0001
3	sep		3	0.0173	0.2273	51.1771	91.58	<.0001
4	nov		4	0.0025	0.2298	39.6134	13.45	0.0002
5	aug		5	0.0031	0.2329	24.9406	16.60	<.0001
6	pexchange		6	0.0015	0.2344	19.0283	7.89	0.0050

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0465 and C(p) = 34.2091

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	2.75262	2.75262	70.20	<.0001
Error	1441	56.49949	0.03921		
Corrected Total	1442	59.25211			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.48473	0.00599	256.58241	6544.05	<.0001
pturnback	-0.10180	0.01215	2.75262	70.20	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable sep Entered: R-Square = 0.0542 and C(p) = 24.2927

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	3.20963	1.60481	41.24	<.0001
Error	1440	56.04248	0.03892		
Corrected Total	1442	59.25211			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.47745	0.00634	220.95546	5677.40	<.0001
sep	0.05196	0.01516	0.45701	11.74	0.0006
pturnback	-0.10088	0.01211	2.70207	69.43	<.0001

Bounds on condition number: 1.0005, 4.0019

Stepwise Selection: Step 3

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable oct Entered: R-Square = 0.0599 and C(p) = 17.4182

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	3.54998	1.18333	30.57	<.0001
Error	1439	55.70213	0.03871		
Corrected Total	1442	59.25211			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.47093	0.00669	191.75225	4953.70	<.0001
sep	0.05860	0.01529	0.56879	14.69	0.0001
oct	0.04768	0.01608	0.34035	8.79	0.0031
pturnback	-0.10143	0.01208	2.73060	70.54	<.0001

Bounds on condition number: 1.0224, 9.1362

Stepwise Selection: Step 4

Variable nov Entered: R-Square = 0.0660 and C(p) = 9.9902

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	3.91155	0.97789	25.41	<.0001
Error	1438	55.34056	0.03848		
Corrected Total	1442	59.25211			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.46105	0.00741	148.99546	3871.58	<.0001
sep	0.06843	0.01558	0.74279	19.30	<.0001
oct	0.05751	0.01635	0.47600	12.37	0.0005
nov	0.04412	0.01439	0.36158	9.40	0.0022
pturnback	-0.10120	0.01204	2.71836	70.64	<.0001

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0735, 16.82

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0465	0.0465	34.2091	70.20	<.0001
2	sep		2	0.0077	0.0542	24.2927	11.74	0.0006
3	oct		3	0.0057	0.0599	17.4182	8.79	0.0031
4	nov		4	0.0061	0.0660	9.9902	9.40	0.0022

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Logarithms of single lockage times using key variables from stepwise proc                    24
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                                The REG Procedure
                                  Model: MODEL1
                           Dependent Variable: loglckhrs

                             Stepwise Selection: Step 1

          Variable pturnback Entered: R-Square = 0.0458 and C(p) = 45.2077


                                Analysis of Variance

                                       Sum of           Mean
Source                    DF          Squares         Square    F Value    Pr > F

Model                      1         11.12744       11.12744      70.81    <.0001
Error                   1475        231.80006        0.15715
Corrected Total         1476        242.92751


                     Parameter     Standard
      Variable        Estimate        Error   Type II SS  F Value  Pr > F

      Intercept       -0.82671      0.01186    764.09593  4862.13  <.0001
      pturnback       -0.20236      0.02405     11.12744    70.81  <.0001

                          Bounds on condition number: 1, 1
-------------------------------------------------------------------------------------------------------------------------------

                             Stepwise Selection: Step 2


                Variable sep Entered: R-Square = 0.0539 and C(p) = 34.3389


                                Analysis of Variance

                                       Sum of           Mean
Source                    DF          Squares         Square    F Value    Pr > F

Model                      2         13.09225        6.54613      41.98    <.0001
Error                   1474        229.83526        0.15593
Corrected Total         1476        242.92751


                     Parameter     Standard
      Variable        Estimate        Error   Type II SS  F Value  Pr > F

      Intercept       -0.84168      0.01254    702.40821  4504.75  <.0001
      sep              0.10663      0.03004      1.96481    12.60  0.0004
      pturnback       -0.20016      0.02396     10.87927    69.77  <.0001

                    Bounds on condition number: 1.0007, 4.0027
-------------------------------------------------------------------------------------------------------------------------------

                             Stepwise Selection: Step 3
```

SAS Program Output from “fitmod.sas” for Tows Only (cont.)

Logarithms of single lockage times using key variables from stepwise proc 25
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable nov Entered: R-Square = 0.0606 and C(p) = 25.7216

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	14.71330	4.90443	31.66	<.0001
Error	1473	228.21421	0.15493		
Corrected Total	1476	242.92751			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.85913	0.01361	616.94200	3982.03	<.0001
sep	0.12393	0.03042	2.57188	16.60	<.0001
nov	0.09077	0.02806	1.62105	10.46	0.0012
pturnback	-0.19944	0.02389	10.80104	69.71	<.0001

Bounds on condition number: 1.0326, 9.1957

Stepwise Selection: Step 4

Variable oct Entered: R-Square = 0.0671 and C(p) = 17.2862

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	16.30659	4.07665	26.48	<.0001
Error	1472	226.62092	0.15395		
Corrected Total	1476	242.92751			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.87671	0.01463	552.82295	3590.82	<.0001
sep	0.14168	0.03082	3.25371	21.13	<.0001
oct	0.10446	0.03247	1.59329	10.35	0.0013
nov	0.10854	0.02851	2.23091	14.49	0.0001
pturnback	-0.20025	0.02381	10.88690	70.72	<.0001

Logarithms of single lockage times using key variables from stepwise proc 26
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0722, 16.806

Stepwise Selection: Step 5

Variable pexchange Entered: R-Square = 0.0718 and C(p) = 11.8143

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	17.44740	3.48948	22.76	<.0001
Error	1471	225.48011	0.15328		
Corrected Total	1476	242.92751			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.84591	0.01846	322.04245	2100.96	<.0001
sep	0.13714	0.03080	3.03977	19.83	<.0001
oct	0.10768	0.03242	1.69080	11.03	0.0009
nov	0.11158	0.02847	2.35379	15.36	<.0001
pturnback	-0.23141	0.02636	11.80972	77.04	<.0001
pexchange	-0.06415	0.02351	1.14081	7.44	0.0064

Bounds on condition number: 1.2366, 28.377

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0458	0.0458	45.2077	70.81	<.0001
2	sep		2	0.0081	0.0539	34.3389	12.60	0.0004
3	nov		3	0.0067	0.0606	25.7216	10.46	0.0012
4	oct		4	0.0066	0.0671	17.2862	10.35	0.0013
5	pexchange		5	0.0047	0.0718	11.8143	7.44	0.0064

Logarithms of single lockage times using key variables from stepwise proc 27
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable waitmin Entered: R-Square = 0.0540 and C(p) = 76.3124

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	165.40105	165.40105	171.31	<.0001
Error	2999	2895.52605	0.96550		
Corrected Total	3000	3060.92710			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.32789	0.02194	37564	38906.7	<.0001
waitmin	-0.00367	0.00028023	165.40105	171.31	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable mar Entered: R-Square = 0.0588 and C(p) = 62.9646

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	179.86099	89.93050	93.58	<.0001
Error	2998	2881.06611	0.96100		
Corrected Total	3000	3060.92710			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.35402	0.02290	34732	36142.0	<.0001
mar	-0.22705	0.05853	14.45994	15.05	0.0001
waitmin	-0.00372	0.00027990	169.76693	176.66	<.0001

Bounds on condition number: 1.0023, 4.0094

Stepwise Selection: Step 3

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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 3

Variable pcttrandn Entered: R-Square = 0.0636 and C(p) = 49.3028

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	194.61680	64.87227	67.83	<.0001
Error	2997	2866.31030	0.95639		
Corrected Total	3000	3060.92710			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.35579	0.02285	34747	36331.3	<.0001
mar	-0.23357	0.05842	15.29034	15.99	<.0001
pcttrandn	0.01062	0.00270	14.75580	15.43	<.0001
waitmin	-0.00395	0.00028505	183.21646	191.57	<.0001

Bounds on condition number: 1.0446, 9.2706

Stepwise Selection: Step 4

Variable nov Entered: R-Square = 0.0683 and C(p) = 36.1087

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	208.93190	52.23298	54.87	<.0001
Error	2996	2851.99520	0.95193		
Corrected Total	3000	3060.92710			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.37840	0.02353	32953	34616.4	<.0001
mar	-0.25525	0.05855	18.09353	19.01	<.0001
nov	-0.27084	0.06984	14.31510	15.04	0.0001
pcttrandn	0.01068	0.00270	14.92127	15.67	<.0001
waitmin	-0.00397	0.00028448	185.71121	195.09	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0452, 16.439

Stepwise Selection: Step 5

Variable dec Entered: R-Square = 0.0711 and C(p) = 28.8071

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	217.69543	43.53909	45.86	<.0001
Error	2995	2843.23167	0.94933		
Corrected Total	3000	3060.92710			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.38687	0.02367	32621	34362.2	<.0001
mar	-0.26281	0.05852	19.14595	20.17	<.0001
nov	-0.27825	0.06979	15.09035	15.90	<.0001
dec	-0.49727	0.16367	8.76353	9.23	0.0024
pcttrandn	0.01075	0.00269	15.11888	15.93	<.0001
waitmin	-0.00400	0.00028424	188.12350	198.17	<.0001

Bounds on condition number: 1.0463, 25.588

Stepwise Selection: Step 6

Variable thrudoubnite Entered: R-Square = 0.0737 and C(p) = 22.2690

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	225.73957	37.62326	39.73	<.0001
Error	2994	2835.18753	0.94696		
Corrected Total	3000	3060.92710			

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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.33592	0.02940	20599	21753.1	<.0001
mar	-0.27152	0.05852	20.38376	21.53	<.0001
nov	-0.30442	0.07028	17.76813	18.76	<.0001
dec	-0.52196	0.16368	9.62929	10.17	0.0014
thrudoubnite	0.12155	0.04170	8.04414	8.49	0.0036
pcttrandn	0.01111	0.00269	16.10361	17.01	<.0001
waitmin	-0.00399	0.00028390	187.16119	197.64	<.0001

Bounds on condition number: 1.0465, 36.99

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Label	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	waitmin		Wait/before/lockge	1	0.0540	0.0540	76.3124	171.31	<.0001
2	mar			2	0.0047	0.0588	62.9646	15.05	0.0001
3	pcttrandn			3	0.0048	0.0636	49.3028	15.43	<.0001
4	nov			4	0.0047	0.0683	36.1087	15.04	0.0001
5	dec			5	0.0029	0.0711	28.8071	9.23	0.0024
6	thrudoubnite			6	0.0026	0.0737	22.2690	8.49	0.0036

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable mar Entered: R-Square = 0.0043 and C(p) = 29.9909

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.67077	0.67077	13.09	0.0003
Error	3002	153.84427	0.05125		
Corrected Total	3003	154.51504			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.40429	0.00437	5302.77016	103474	<.0001
mar	-0.04877	0.01348	0.67077	13.09	0.0003

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable nov Entered: R-Square = 0.0091 and C(p) = 17.6509

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	1.39887	0.69943	13.71	<.0001
Error	3001	153.11617	0.05102		
Corrected Total	3003	154.51504			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.40910	0.00454	4918.24874	96395.2	<.0001
mar	-0.05359	0.01351	0.80251	15.73	<.0001
nov	-0.06106	0.01616	0.72810	14.27	0.0002

Bounds on condition number: 1.009, 4.0359

Stepwise Selection: Step 3

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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable dec Entered: R-Square = 0.0117 and C(p) = 11.5531

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	1.81002	0.60334	11.85	<.0001
Error	3000	152.70502	0.05090		
Corrected Total	3003	154.51504			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.41067	0.00457	4857.53762	95429.8	<.0001
mar	-0.05515	0.01351	0.84865	16.67	<.0001
nov	-0.06262	0.01615	0.76500	15.03	0.0001
dec	-0.10765	0.03788	0.41115	8.08	0.0045

Bounds on condition number: 1.0107, 9.0702

Stepwise Selection: Step 4

Variable sep Entered: R-Square = 0.0141 and C(p) = 6.1513

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	2.18584	0.54646	10.76	<.0001
Error	2999	152.32920	0.05079		
Corrected Total	3003	154.51504			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.40662	0.00480	4364.72319	85931.0	<.0001
mar	-0.05110	0.01357	0.71982	14.17	0.0002
sep	0.04207	0.01547	0.37582	7.40	0.0066
nov	-0.05858	0.01621	0.66361	13.06	0.0003
dec	-0.10360	0.03787	0.38021	7.49	0.0063

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.023, 16.263

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	mar		1	0.0043	0.0043	29.9909	13.09	0.0003
2	nov		2	0.0047	0.0091	17.6509	14.27	0.0002
3	dec		3	0.0027	0.0117	11.5531	8.08	0.0045
4	sep		4	0.0024	0.0141	6.1513	7.40	0.0066

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Logarithms of single lockage times using key variables from stepwise proc                    34
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                              The REG Procedure
                                Model: MODEL1
                       Dependent Variable: transithrs

 No variable met the 0.0100 significance level for entry into the model.
```

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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable waitmin Entered: R-Square = 0.0241 and C(p) = 19.7513

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.70854	0.70854	13.39	0.0003
Error	541	28.63480	0.05293		
Corrected Total	542	29.34335			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.25933	0.01240	545.72807	10310.5	<.0001
waitmin	-0.00065079	0.00017787	0.70854	13.39	0.0003

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jun Entered: R-Square = 0.0377 and C(p) = 13.9829

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	1.10666	0.55333	10.58	<.0001
Error	540	28.23669	0.05229		
Corrected Total	542	29.34335			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.25188	0.01262	514.59838	9841.21	<.0001
jun	0.09463	0.03430	0.39812	7.61	0.0060
waitmin	-0.00067660	0.00017704	0.76372	14.61	0.0001

Bounds on condition number: 1.0028, 4.0112

All variables left in the model are significant at the 0.0100 level.

Logarithms of single lockage times using key variables from stepwise proc 36
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 2

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Label	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	waitmin		Wait/before/lockge	1	0.0241	0.0241	19.7513	13.39	0.0003
2	jun			2	0.0136	0.0377	13.9829	7.61	0.0060

Logarithms of single lockage times using key variables from stepwise proc 37
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable contsingle Entered: R-Square = 0.1736 and C(p) = 74.4813

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	566543	566543	431.05	<.0001
Error	2052	2697038	1314.34622		
Corrected Total	2053	3263581			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	44.99986	1.49509	1190693	905.92	<.0001
contsingle	-36.74184	1.76970	566543	431.05	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable retdouble Entered: R-Square = 0.1924 and C(p) = 28.1180

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	627940	313970	244.32	<.0001
Error	2051	2635641	1285.05172		
Corrected Total	2053	3263581			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	48.04642	1.54264	1246568	970.05	<.0001
contsingle	-39.78840	1.80452	624755	486.17	<.0001
retdouble	-37.32038	5.39923	61397	47.78	<.0001

Bounds on condition number: 1.0634, 4.2538

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 38
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 3

Variable dec Entered: R-Square = 0.1973 and C(p) = 17.5204

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	643933	214644	167.97	<.0001
Error	2050	2619648	1277.87726		
Corrected Total	2053	3263581			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	49.22884	1.57422	1249683	977.94	<.0001
dec	-11.00873	3.11187	15993	12.52	0.0004
contsingle	-40.36257	1.80678	637728	499.05	<.0001
retdouble	-37.58540	5.38465	62260	48.72	<.0001

Bounds on condition number: 1.0721, 9.4318

Stepwise Selection: Step 4

Variable retother Entered: R-Square = 0.2001 and C(p) = 12.2613

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	653148	163287	128.17	<.0001
Error	2049	2610433	1274.00334		
Corrected Total	2053	3263581			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	49.68753	1.58105	1258267	987.65	<.0001
dec	-11.20124	3.10797	16548	12.99	0.0003
contsingle	-40.81062	1.81172	646453	507.42	<.0001
retdouble	-38.02805	5.37900	63676	49.98	<.0001
retother	-39.42086	14.65720	9215.53367	7.23	0.0072

Logarithms of single lockage times using key variables from stepwise proc 39
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0812, 16.654

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	contsingle		1	0.1736	0.1736	74.4813	431.05	<.0001
2	retdouble		2	0.0188	0.1924	28.1180	47.78	<.0001
3	dec		3	0.0049	0.1973	17.5204	12.52	0.0004
4	retother		4	0.0028	0.2001	12.2613	7.23	0.0072

Logarithms of single lockage times using key variables from stepwise proc 40
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable contsingle Entered: R-Square = 0.3205 and C(p) = 157.9691

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	762.42062	762.42062	962.12	<.0001
Error	2040	1616.57309	0.79244		
Corrected Total	2041	2378.99371			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.04330	0.03706	5343.97335	6743.71	<.0001
contsingle	-1.35712	0.04375	762.42062	962.12	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable retdouble Entered: R-Square = 0.3502 and C(p) = 63.8418

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	833.18517	416.59259	549.51	<.0001
Error	2039	1545.80854	0.75812		
Corrected Total	2041	2378.99371			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.14879	0.03786	5244.95949	6918.37	<.0001
contsingle	-1.46261	0.04417	831.43027	1096.70	<.0001
retdouble	-1.26808	0.13125	70.76455	93.34	<.0001

Bounds on condition number: 1.0651, 4.2604

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 41
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable dec Entered: R-Square = 0.3590 and C(p) = 37.5012

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	854.04830	284.68277	380.46	<.0001
Error	2038	1524.94542	0.74826		
Corrected Total	2041	2378.99371			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.19115	0.03846	5152.55341	6886.09	<.0001
dec	-0.40021	0.07579	20.86313	27.88	<.0001
contsingle	-1.48285	0.04404	848.12731	1133.47	<.0001
retdouble	-1.27710	0.13041	71.76202	95.91	<.0001

Bounds on condition number: 1.0732, 9.4386

Stepwise Selection: Step 4

Variable nov Entered: R-Square = 0.3631 and C(p) = 26.1782

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	863.85605	215.96401	290.35	<.0001
Error	2037	1515.13766	0.74381		
Corrected Total	2041	2378.99371			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.21868	0.03908	5044.59938	6782.12	<.0001
nov	-0.20552	0.05660	9.80775	13.19	0.0003
dec	-0.42905	0.07598	23.71684	31.89	<.0001
contsingle	-1.48017	0.04392	844.82053	1135.80	<.0001
retdouble	-1.28510	0.13004	72.64295	97.66	<.0001

Logarithms of single lockage times using key variables from stepwise proc 42
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0735, 16.681

Stepwise Selection: Step 5

Variable pcttrannite Entered: R-Square = 0.3657 and C(p) = 19.8715

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	869.97108	173.99422	234.76	<.0001
Error	2036	1509.02263	0.74117		
Corrected Total	2041	2378.99371			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.15494	0.04488	3662.11755	4940.99	<.0001
nov	-0.22189	0.05679	11.31713	15.27	<.0001
dec	-0.45409	0.07635	26.21947	35.38	<.0001
contsingle	-1.48097	0.04384	845.70088	1141.03	<.0001
retdouble	-1.27731	0.12984	71.73457	96.79	<.0001
pcttrannite	0.00148	0.00051526	6.11503	8.25	0.0041

Bounds on condition number: 1.0736, 26.081

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	contsingle		1	0.3205	0.3205	157.969	962.12	<.0001
2	retdouble		2	0.0297	0.3502	63.8418	93.34	<.0001
3	dec		3	0.0088	0.3590	37.5012	27.88	<.0001
4	nov		4	0.0041	0.3631	26.1782	13.19	0.0003
5	pcttrannite		5	0.0026	0.3657	19.8715	8.25	0.0041

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 20:21 Tuesday, June 28, 2005 43

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	5870	0	24446910845	4164720.76	3980886.00	4286852.00
strtlcktime	Start/lockge/time	5870	0	7.7907446E12	1327213726	1267403400	1388476800
arrtime	Arriv/time	5870	0	7.790706E12	1327207150	1267403400	1388476800
deptime	Leave/lockge/time	5870	0	7.790779E12	1327219598	1267409580	1388479200
BOW_OVER_SILL	BOW_OVER_SILL	5870	0	7.7907655E12	1327217294	1267407420	1388478000
END_OF_ENTRY	END_OF_ENTRY	5870	0	7.7907689E12	1327217867	1267408080	1388478300
START_OF_EXIT	START_OF_EXIT	5870	0	7.790771E12	1327218229	1267408380	1388478780
SIGNAL_DATE	SIGNAL_DATE	0	5870	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	5870	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	5409	461	62007.00	11.4636717	0	15.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	5409	461	3693.00	0.6827510	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	5870	.	.	.	.
vess_no		5870	0	4311390495	734478.79	11040.00	8888864.00
vss_hp		5851	19	26713781.00	4565.68	75.0000000	81800.00
frsttime		5870	0	7.790706E12	1327207150	1267403400	1388476800
lasttime		5870	0	7.790779E12	1327219598	1267409580	1388479200
newpoolno		5870	0	128252.00	21.8487223	12.0000000	27.0000000
oldpoolno		5870	0	123238.00	20.9945486	13.0000000	26.0000000
waitmin	Wait/before/lockge	5870	0	643368.00	109.6027257	0	5955.00
lockmin	Wait/lockge/time	5870	0	574396.00	97.8528109	8.0000000	653.0000000
year		5870	0	11748621.00	2001.47	2000.00	2003.00
fly		5870	0	1755.00	0.2989779	0	1.0000000
turnback		5870	0	1931.00	0.3289608	0	1.0000000
exchange		5870	0	2184.00	0.3720613	0	1.0000000
lock		5870	0	122810.00	20.9216354	12.0000000	26.0000000
totmin		5870	0	1217764.00	207.4555366	9.0000000	6060.00
month		5870	0	44458.00	7.5737649	1.0000000	12.0000000
day		5870	0	91883.00	15.6529813	1.0000000	31.0000000
sunrise		5870	0	135224398	23036.52	20119.00	27155.00
sunset		5870	0	404860387	68971.11	60000.00	74318.00
sequpstr		5870	0	0	0	0	0
seqdstr		5870	0	4220.00	0.7189097	0	1.0000000
plock		5870	0	117400.00	20.0000000	20.0000000	20.0000000
pempty		5389	481	3185.00	0.5910187	0	50.0000000
pfull		5389	481	60958.00	11.3115606	0	16.0000000
parrtime		5870	0	7.7904241E12	1327159128	1267299900	1388416440
pstrtlcktime		5870	0	7.7904708E12	1327167091	1267301700	1388416440
pdeptime		5870	0	7.7905036E12	1327172668	1267305300	1388417520
birth		5870	0	0	0	0	0
transithrs		5870	0	56226.00	9.5785349	-71.5000000	3171.67
reclock		5870	0	0	0	0	0
i		5870	0	626690.00	106.7614991	101.0000000	295.0000000
pctpsysdn		5870	0	5701.67	0.9713230	0	95.9480000
pctplckdn		5870	0	3863.20	0.6581264	0	95.9480000
cumdown		5869	1	378420.00	64.4777645	0	29400.00
pctdown		5869	1	2262.17	0.3854445	0	84.2110000
pcttrandn		5853	17	3398.31	0.5806091	0	100.0000000
pctsysdn		5869	1	3310.35	0.5640392	0	82.3940000
pctlckdn		5869	1	2262.17	0.3854445	0	84.2110000
stime		5870	0	260046360	44300.91	60.0000002	86340.00
etime		5870	0	257530920	43872.39	60.0000002	86340.00
sdate		5870	0	90167645.00	15360.76	14669.00	16070.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		5870	0	90168073.00	15360.83	14669.00	16070.00
hrsduration		5870	0	9573.27	1.6308802	0.1333333	10.8833333
ndays		5870	0	0	0	0	0
pctday		5870	0	320874.31	54.6634266	0	100.0000000
pctpsysnite		5870	0	264798.18	45.1104233	0	100.0000000
pctplcknite		5870	0	262519.29	44.7221956	0	100.0000000
pcttrannite		5870	0	267162.81	45.5132562	0	100.0000000
pctsysnite		5870	0	264331.74	45.0309612	0	100.0000000
pctlcknite		5870	0	266125.69	45.3365734	0	100.0000000
stage		5806	64	74194.79	12.7789855	8.5800000	31.3100000
flow		5798	72	506593345	87373.81	16077.99	282860.41
jan		5870	0	1.0000000	0.000170358	0	1.0000000
feb		5870	0	13.0000000	0.0022147	0	1.0000000
mar		5870	0	392.0000000	0.0667802	0	1.0000000
apr		5870	0	558.0000000	0.0950596	0	1.0000000
may		5870	0	509.0000000	0.0867121	0	1.0000000
jun		5870	0	705.0000000	0.1201022	0	1.0000000
jul		5870	0	742.0000000	0.1264055	0	1.0000000
aug		5870	0	671.0000000	0.1143101	0	1.0000000
sep		5870	0	551.0000000	0.0938671	0	1.0000000
oct		5870	0	627.0000000	0.1068143	0	1.0000000
nov		5870	0	755.0000000	0.1286201	0	1.0000000
dec		5870	0	346.0000000	0.0589438	0	1.0000000
m31day		5870	0	3288.00	0.5601363	0	1.0000000
m30day		5870	0	2569.00	0.4376491	0	1.0000000
qtr1		5870	0	406.0000000	0.0691652	0	1.0000000
qtr2		5870	0	1772.00	0.3018739	0	1.0000000
qtr3		5870	0	1964.00	0.3345826	0	1.0000000
qtr4		5870	0	1728.00	0.2943782	0	1.0000000
psingle		5870	0	1296.00	0.2207836	0	1.0000000
pdouble		5870	0	4358.00	0.7424191	0	1.0000000
pknockout		5870	0	126.0000000	0.0214651	0	1.0000000
pjacknife		5870	0	86.0000000	0.0146508	0	1.0000000
pothtype		5870	0	4.0000000	0.000681431	0	1.0000000
pexchange		5870	0	2179.00	0.3712095	0	1.0000000
pturnback		5870	0	1952.00	0.3325383	0	1.0000000
single		5870	0	1227.00	0.2090290	0	1.0000000
double		5870	0	4446.00	0.7574106	0	1.0000000
knockout		5870	0	115.0000000	0.0195911	0	1.0000000
jacknife		5870	0	79.0000000	0.0134583	0	1.0000000
othtype		5870	0	3.0000000	0.000511073	0	1.0000000
contthru		5870	0	4220.00	0.7189097	0	1.0000000
return		5870	0	403.0000000	0.0686542	0	1.0000000
contstop		5870	0	1146.00	0.1952300	0	1.0000000
kill		5870	0	101.0000000	0.0172061	0	1.0000000
contsame		5870	0	4220.00	0.7189097	0	1.0000000
contdouble		5870	0	856.0000000	0.1458262	0	1.0000000
contsingle		5870	0	278.0000000	0.0473595	0	1.0000000
contko		5870	0	9.0000000	0.0015332	0	1.0000000
contjk		5870	0	1.0000000	0.000170358	0	1.0000000
retdouble		5870	0	45.0000000	0.0076661	0	1.0000000
retsingle		5870	0	357.0000000	0.0608177	0	1.0000000

SAS Program Output from “fitmod.sas” for Tows Only (cont.)

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		5870	0	0	0	0	0
retjk		5870	0	1.0000000	0.000170358	0	1.0000000
xkill		5870	0	103.0000000	0.0175468	0	1.0000000
logtrnhrs		5854	16	5954.19	1.0171155	-4.0943446	8.0620125
plockhrs		5870	0	8944.38	1.5237440	0.1147541	27.6885246
loglckhrs		5870	0	1433.51	0.2442093	-2.1649637	3.3210181
thrusingle		5870	0	500.0000000	0.0851789	0	1.0000000
thruother		5870	0	186.0000000	0.0316865	0	1.0000000
contother		5870	0	12.0000000	0.0020443	0	1.0000000
retother		5870	0	1.0000000	0.000170358	0	1.0000000
thrudoubnite		5870	0	1594.93	0.2717088	0	1.0000000
thrusingnite		5870	0	226.6358000	0.0386092	0	1.0000000
thruothnite		5870	0	75.7076400	0.0128974	0	1.0000000
pdoubnite		5870	0	1993.34	0.3395809	0	1.0000000
psingnite		5870	0	540.4901400	0.0920767	0	1.0000000
pothnite		5870	0	91.3631400	0.0155644	0	1.0000000

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The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI21D

pconfig / doutcome Frequency Percent Row Pct Col Pct	1:contsame	2:contdouble	3:contsingle	4:contko	5:contjk	6:retdouble	7:retsingle	9:retjk	x:kill	Total
1:double	3534 60.20 81.09 83.74	758 12.91 17.39 88.55	6 0.10 0.14 2.16	1 0.02 0.02 11.11	0 0.00 0.00 0.00	40 0.68 0.92 88.89	6 0.10 0.14 1.68	0 0.00 0.00 0.00	13 0.22 0.30 12.62	4358 74.24
2:single	500 8.52 38.58 11.85	75 1.28 5.79 8.76	272 4.63 20.99 97.84	6 0.10 0.46 66.67	0 0.00 0.00 0.00	4 0.07 0.31 8.89	351 5.98 27.08 98.32	1 0.02 0.08 100.00	87 1.48 6.71 84.47	1296 22.08
3:knockout	100 1.70 79.37 2.37	22 0.37 17.46 2.57	0 0.00 0.00 0.00	2 0.03 1.59 22.22	0 0.00 0.00 0.00	1 0.02 0.79 2.22	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02 0.79 0.97	126 2.15
4:jacknife	83 1.41 96.51 1.97	1 0.02 1.16 0.12	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02 1.16 100.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02 1.16 0.97	86 1.47
5:Other	3 0.05 75.00 0.07	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02 25.00 0.97	4 0.07
Total	4220 71.89	856 14.58	278 4.74	9 0.15	1 0.02	45 0.77	357 6.08	1 0.02	103 1.75	5870 100.00

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The FREQ Procedure

Table 1 of pconfig by nextstep
Controlling for pnewpool=MI21D

pconfig nextstep

Frequency Percent Row Pct Col Pct	1:contth	2:contst	3:return	4:kill	Total
1:double	3534 60.20 81.09 83.74	766 13.05 17.58 66.84	46 0.78 1.06 11.41	12 0.20 0.28 11.88	4358 74.24
2:single	500 8.52 38.58 11.85	353 6.01 27.24 30.80	356 6.06 27.47 88.34	87 1.48 6.71 86.14	1296 22.08
3:knockout	100 1.70 79.37 2.37	24 0.41 19.05 2.09	1 0.02 0.79 0.25	1 0.02 0.79 0.99	126 2.15
4:jacknife	83 1.41 96.51 1.97	2 0.03 2.33 0.17	0 0.00 0.00 0.00	1 0.02 1.16 0.99	86 1.47
5:Other	3 0.05 75.00 0.07	1 0.02 25.00 0.09	0 0.00 0.00 0.00	0 0.00 0.00 0.00	4 0.07
Total	4220 71.89	1146 19.52	403 6.87	101 1.72	5870 100.00

Statistics from water.regfile for regfile 20:21 Tuesday, June 28, 2005 48

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	85729	0	364407961196	4250696.51	3515664.00	4331559.00
strtlcktime	Start/lockge/time	85729	0	1.1376536E14	1327034777	1262306700	1388533680
arrtime	Arriv/time	85729	0	1.1376509E14	1327031520	1262306700	1388530800
deptime	Leave/lockge/time	85729	0	1.1376558E14	1327037338	1262307720	1388536080
BOW_OVER_SILL	BOW_OVER_SILL	85729	0	1.1376544E14	1327035609	1262307000	1388534700
END_OF_ENTRY	END_OF_ENTRY	85729	0	1.1376548E14	1327036085	1262307060	1388535000
START_OF_EXIT	START_OF_EXIT	85729	0	1.1376554E14	1327036809	1262307660	1388535600
SIGNAL_DATE	SIGNAL_DATE	0	85729	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	85729	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	74581	11148	464732.00	6.2312385	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	74581	11148	245224.00	3.2880224	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	85729	.	.	.	.
vess_no		85729	0	69122944544	806295.94	2611.00	8888864.00
vss_hp		85024	705	331284875	3896.37	60.0000000	81800.00
frsttime		85729	0	1.1376509E14	1327031520	1262306700	1388530800
lasttime		85729	0	1.1376558E14	1327037338	1262307720	1388536080
newpoolno		85729	0	2147602.00	25.0510562	1.0000000	28.0000000
oldpoolno		85729	0	2149231.00	25.0700580	1.0000000	28.0000000
waitmin	Wait/before/lockge	85729	0	4653248.00	54.2785755	0	7423.00
lockmin	Wait/lockge/time	85729	0	3659774.00	42.6900349	4.0000000	1823.00
year		85729	0	171586618	2001.50	2000.00	2003.00
fly		85729	0	36476.00	0.4254803	0	1.0000000
turnback		85729	0	26811.00	0.3127413	0	1.0000000
exchange		85729	0	22441.00	0.2617667	0	1.0000000
lock		85729	0	2105552.00	24.5605571	1.0000000	27.0000000
totmin		85729	0	8313022.00	96.9686104	4.0000000	7490.00
month		85729	0	610730.00	7.1239604	1.0000000	12.0000000
day		85729	0	1344823.00	15.6869087	1.0000000	31.0000000
sunrise		85028	701	1969393823	23161.71	19414.00	27155.00
sunset		85028	701	5776513284	67936.60	59694.00	75152.00
sequpstr		85729	0	14034.00	0.1637019	0	1.0000000
seqdstr		85729	0	20942.00	0.2442814	0	1.0000000
plock		85729	0	2012176.00	23.4713574	1.0000000	27.0000000
pempty		74923	10806	193340.00	2.5805160	0	50.0000000
pfull		74923	10806	516772.00	6.8973746	0	28.0000000
parrtime		85729	0	1.1374063E14	1326746258	1262304600	1388521920
pstrtlcktime		85729	0	1.1374108E14	1326751564	1262304600	1388521920
pdeptime		85729	0	1.1374136E14	1326754764	1262305620	1388523540
birth		85729	0	0	0	0	0
transithrs		85729	0	6590564.80	76.8767255	-249.0333333	8099.42
reclock		85729	0	0	0	0	0
i		85729	0	19628078.00	228.9549394	58.0000000	401.0000000
pctpsysdn		80013	5716	78429.20	0.9802057	0	98.9510000
pctplckdn		80013	5716	37680.92	0.4709349	0	98.3000000
cumdown		84969	760	3308340.00	38.9358472	0	107520.00
pctdown		84969	760	31711.29	0.3732101	0	98.3000000
pcttrandn		84717	1012	113055.04	1.3345024	0	100.0000000
pctsysdn		84969	760	73413.80	0.8640068	0	98.6320000
pctlckdn		84969	760	31711.29	0.3732101	0	98.3000000
stime		85729	0	3796790580	44288.29	0	86340.00
etime		85729	0	3806857020	44405.71	0	86340.00
sdate		85729	0	1316684810	15358.69	14610.00	16070.00

Statistics from water.regfile for regfile 20:21 Tuesday, June 28, 2005 49

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		85729	0	1316687235	15358.71	14610.00	16071.00
hrsduration		85729	0	60996.23	0.7115006	0.0666667	30.3833333
ndays		85729	0	1.0000000	0.000011665	0	1.0000000
pctday		85711	18	4687776.13	54.6928181	0	100.0000000
pctpsysnite		85679	50	3855889.42	45.0039032	0	100.0000000
pctplcknite		85708	21	3865860.79	45.1050169	0	100.0000000
pcttrannite		85163	566	4020263.45	47.2066913	0	100.0000000
pctsysnite		85647	82	3862208.39	45.0944970	0	100.0000000
pctlcknite		85711	18	3883323.87	45.3071819	0	100.0000000
stage		41068	44661	876629.98	21.3458162	8.3500000	33.0800000
flow		8973	76756	740260659	82498.68	16077.99	306262.78
jan		85729	0	3062.00	0.0357172	0	1.0000000
feb		85729	0	3418.00	0.0398698	0	1.0000000
mar		85729	0	6981.00	0.0814310	0	1.0000000
apr		85729	0	7598.00	0.0886281	0	1.0000000
may		85729	0	7236.00	0.0844055	0	1.0000000
jun		85729	0	8493.00	0.0990680	0	1.0000000
jul		85729	0	8647.00	0.1008644	0	1.0000000
aug		85729	0	8031.00	0.0936789	0	1.0000000
sep		85729	0	7697.00	0.0897829	0	1.0000000
oct		85729	0	8612.00	0.1004561	0	1.0000000
nov		85729	0	9259.00	0.1080031	0	1.0000000
dec		85729	0	6695.00	0.0780949	0	1.0000000
m31day		85729	0	49264.00	0.5746480	0	1.0000000
m30day		85729	0	33047.00	0.3854822	0	1.0000000
qtr1		85729	0	13461.00	0.1570180	0	1.0000000
qtr2		85729	0	23327.00	0.2721016	0	1.0000000
qtr3		85729	0	24375.00	0.2843262	0	1.0000000
qtr4		85729	0	24566.00	0.2865541	0	1.0000000
psingle		85729	0	65920.00	0.7689347	0	1.0000000
pdouble		85729	0	15912.00	0.1856081	0	1.0000000
pknockout		85729	0	1445.00	0.0168554	0	1.0000000
pjacknife		85729	0	529.0000000	0.0061706	0	1.0000000
pothtype		85729	0	1923.00	0.0224311	0	1.0000000
pexchange		85729	0	23476.00	0.2738397	0	1.0000000
pturnback		85729	0	27798.00	0.3242543	0	1.0000000
single		85729	0	85640.00	0.9989618	0	1.0000000
double		85729	0	79.0000000	0.000921508	0	1.0000000
knockout		85729	0	8.0000000	0.000093317	0	1.0000000
jacknife		85729	0	2.0000000	0.000023329	0	1.0000000
othtype		85729	0	0	0	0	0
contthru		1296	84433	500.0000000	0.3858025	0	1.0000000
return		1296	84433	356.0000000	0.2746914	0	1.0000000
contstop		1296	84433	353.0000000	0.2723765	0	1.0000000
kill		1296	84433	87.0000000	0.0671296	0	1.0000000
contsame		1296	84433	500.0000000	0.3858025	0	1.0000000
contdouble		1296	84433	75.0000000	0.0578704	0	1.0000000
contsingle		1296	84433	272.0000000	0.2098765	0	1.0000000
contko		1296	84433	6.0000000	0.0046296	0	1.0000000
contjk		1296	84433	0	0	0	0
retdouble		1296	84433	4.0000000	0.0030864	0	1.0000000
retsingle		1296	84433	351.0000000	0.2708333	0	1.0000000

SAS Program Output from “fitmod.sas” for Tows Only (cont.)

Statistics from water.regfile for regfile 20:21 Tuesday, June 28, 2005 50

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1296	84433	0	0	0	0
retjk		1296	84433	1.0000000	0.000771605	0	1.0000000
xkill		1296	84433	87.0000000	0.0671296	0	1.0000000
logtrnhrs		1288	84441	1453.61	1.1285779	-4.0943446	8.0620125
plockhrs		1296	84433	585.6721311	0.4519075	0.1147541	10.1147541
loglckhrs		1296	84433	-1188.49	-0.9170472	-2.1649637	2.3139952
thrusingle		1296	84433	500.0000000	0.3858025	0	1.0000000
thruother		1296	84433	0	0	0	0
contother		1296	84433	6.0000000	0.0046296	0	1.0000000
retother		1296	84433	1.0000000	0.000771605	0	1.0000000
thrudoubnite		1296	84433	0	0	0	0
thrusingnite		1296	84433	226.6358000	0.1748733	0	1.0000000
thruothnite		1296	84433	0	0	0	0
pdoubnite		1296	84433	0	0	0	0
psingnite		1296	84433	540.4901400	0.4170449	0	1.0000000
pothnite		1296	84433	0	0	0	0

```
Transition models using key variables from stepwise proc      20:21 Tuesday, June 28, 2005  51
                        transitions  to contthru

                                The REG Procedure
                                  Model: MODEL1
                            Dependent Variable: contsame

                              Stepwise Selection: Step 1

                   Variable psingle Entered: R-Square = 0.1556 and C(p) = 87.5551


                                   Analysis of Variance

                                          Sum of           Mean
Source                      DF         Squares         Square    F Value    Pr > F

Model                        1      184.55044      184.55044    1081.16    <.0001
Error                     5868     1001.65058        0.17070
Corrected Total           5869     1186.20102


                        Parameter     Standard
      Variable           Estimate        Error   Type II SS  F Value  Pr > F

      Intercept           0.81329      0.00611   3025.44819  17724.1  <.0001
      psingle            -0.42749      0.01300    184.55044  1081.16  <.0001

                           Bounds on condition number: 1, 1
------------------------------------------------------------------------------------------------------------------------

                              Stepwise Selection: Step 2

                      Variable mar Entered: R-Square = 0.1588 and C(p) = 66.7423


                                   Analysis of Variance

                                          Sum of           Mean
Source                      DF         Squares         Square    F Value    Pr > F

Model                        2      188.38857       94.19428     553.85    <.0001
Error                     5867      997.81245        0.17007
Corrected Total           5869     1186.20102


                        Parameter     Standard
      Variable           Estimate        Error   Type II SS  F Value  Pr > F

      Intercept           0.81872      0.00620   2961.98087  17416.0  <.0001
      mar                -0.10301      0.02168      3.83813     22.57  <.0001
      psingle            -0.42092      0.01305    176.90574  1040.18  <.0001

                       Bounds on condition number: 1.0114, 4.0455
------------------------------------------------------------------------------------------------------------------------

                              Stepwise Selection: Step 3
```

Transition models using key variables from stepwise proc transitions to contthru 20:21 Tuesday, June 28, 2005 52

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 3

Variable sep Entered: R-Square = 0.1620 and C(p) = 46.6295

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	192.10891	64.03630	377.87	<.0001
Error	5866	994.09211	0.16947		
Corrected Total	5869	1186.20102			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.82652	0.00641	2815.41262	16613.4	<.0001
mar	-0.11254	0.02174	4.54128	26.80	<.0001
sep	-0.08688	0.01854	3.72034	21.95	<.0001
psingle	-0.41641	0.01306	172.19528	1016.10	<.0001

Bounds on condition number: 1.0203, 9.1505

Stepwise Selection: Step 4

Variable feb Entered: R-Square = 0.1637 and C(p) = 36.3360

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	194.17722	48.54430	287.00	<.0001
Error	5865	992.02381	0.16914		
Corrected Total	5869	1186.20102			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.82690	0.00641	2817.19838	16655.7	<.0001
feb	-0.40051	0.11453	2.06831	12.23	0.0005
mar	-0.11423	0.02173	4.67644	27.65	<.0001
sep	-0.08829	0.01853	3.84042	22.71	<.0001
psingle	-0.41301	0.01309	168.46582	996.00	<.0001

Transition models using key variables from stepwise proc transitions to contthru 20:21 Tuesday, June 28, 2005 53

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 4

Bounds on condition number: 1.0225, 16.251

Stepwise Selection: Step 5

Variable oct Entered: R-Square = 0.1653 and C(p) = 26.8232

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	196.11418	39.22284	232.31	<.0001
Error	5864	990.08684	0.16884		
Corrected Total	5869	1186.20102			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.83399	0.00673	2589.01699	15334.0	<.0001
feb	-0.40982	0.11446	2.16439	12.82	0.0003
mar	-0.12234	0.02184	5.29897	31.38	<.0001
sep	-0.09618	0.01866	4.48613	26.57	<.0001
oct	-0.05961	0.01760	1.93697	11.47	0.0007
psingle	-0.41038	0.01310	165.73928	981.63	<.0001

Bounds on condition number: 1.0332, 25.614

Stepwise Selection: Step 6

Variable pjacknife Entered: R-Square = 0.1670 and C(p) = 17.0571

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	198.09376	33.01563	195.90	<.0001
Error	5863	988.10726	0.16853		
Corrected Total	5869	1186.20102			

Transition models using key variables from stepwise proc transitions to contthru 20:21 Tuesday, June 28, 2005 54

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.83117	0.00678	2533.82338	15034.6	<.0001
feb	-0.40940	0.11436	2.15990	12.82	0.0003
mar	-0.12061	0.02182	5.14767	30.54	<.0001
sep	-0.09672	0.01864	4.53672	26.92	<.0001
oct	-0.06073	0.01759	2.00940	11.92	0.0006
psingle	-0.40755	0.01311	162.82099	966.11	<.0001
pjacknife	0.15325	0.04471	1.97958	11.75	0.0006

Bounds on condition number: 1.0338, 36.799

Stepwise Selection: Step 7

Variable apr Entered: R-Square = 0.1680 and C(p) = 11.9129

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	199.29572	28.47082	169.11	<.0001
Error	5862	986.90530	0.16836		
Corrected Total	5869	1186.20102			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.83749	0.00718	2292.90481	13619.3	<.0001
feb	-0.41647	0.11433	2.23402	13.27	0.0003
mar	-0.12728	0.02195	5.65836	33.61	<.0001
apr	-0.04978	0.01863	1.20196	7.14	0.0076
sep	-0.10330	0.01879	5.08633	30.21	<.0001
oct	-0.06727	0.01775	2.41903	14.37	0.0002
psingle	-0.40666	0.01311	162.00280	962.26	<.0001
pjacknife	0.15265	0.04469	1.96429	11.67	0.0006

Bounds on condition number: 1.0478, 50.589

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Transition models using key variables from stepwise proc transitions to contthru 20:21 Tuesday, June 28, 2005 55

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	psingle		1	0.1556	0.1556	87.5551	1081.16	<.0001
2	mar		2	0.0032	0.1588	66.7423	22.57	<.0001
3	sep		3	0.0031	0.1620	46.6295	21.95	<.0001
4	feb		4	0.0017	0.1637	36.3360	12.23	0.0005
5	oct		5	0.0016	0.1653	26.8232	11.47	0.0007
6	pjacknife		6	0.0017	0.1670	17.0571	11.75	0.0006
7	apr		7	0.0010	0.1680	11.9129	7.14	0.0076

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 56

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0308 and C(p) = 148.4523

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	10.21442	10.21442	136.69	<.0001
Error	4301	321.40026	0.07473		
Corrected Total	4302	331.61468			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.85746	0.00511	9860.49810	131954	<.0001
pturnback	-0.10316	0.00882	10.21442	136.69	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.0485 and C(p) = 69.0920

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	16.09401	8.04701	109.67	<.0001
Error	4300	315.52066	0.07338		
Corrected Total	4302	331.61468			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.91139	0.00787	4325.62499	58950.8	<.0001
pturnback	-0.15710	0.01062	16.06042	218.88	<.0001
pexchange	-0.09208	0.01029	5.87959	80.13	<.0001

Bounds on condition number: 1.4748, 5.8992

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 57

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable jun Entered: R-Square = 0.0538 and C(p) = 46.7926

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	17.85004	5.95001	81.52	<.0001
Error	4299	313.76464	0.07299		
Corrected Total	4302	331.61468			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.91791	0.00796	4233.71866	58007.7	<.0001
jun	-0.05988	0.01221	1.75603	24.06	<.0001
pturnback	-0.15633	0.01059	15.90004	217.85	<.0001
pexchange	-0.08927	0.01027	5.50878	75.48	<.0001

Bounds on condition number: 1.4794, 11.874

Stepwise Selection: Step 4

Variable dec Entered: R-Square = 0.0580 and C(p) = 29.6603

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	19.23265	4.80816	66.15	<.0001
Error	4298	312.38202	0.07268		
Corrected Total	4302	331.61468			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.91058	0.00812	4021.37383	55329.3	<.0001
jun	-0.05512	0.01223	1.47657	20.32	<.0001
dec	0.07912	0.01814	1.38261	19.02	<.0001
pturnback	-0.15423	0.01058	15.44349	212.48	<.0001
pexchange	-0.08508	0.01030	4.96129	68.26	<.0001

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 58

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.4923, 20

Stepwise Selection: Step 5

Variable may Entered: R-Square = 0.0597 and C(p) = 23.7865

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	19.80167	3.96033	54.58	<.0001
Error	4297	311.81301	0.07257		
Corrected Total	4302	331.61468			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.91537	0.00829	3869.75369	53327.9	<.0001
may	-0.04008	0.01431	0.56901	7.84	0.0051
jun	-0.05972	0.01233	1.70213	23.46	<.0001
dec	0.07453	0.01820	1.21702	16.77	<.0001
pturnback	-0.15475	0.01057	15.54300	214.19	<.0001
pexchange	-0.08516	0.01029	4.97034	68.49	<.0001

Bounds on condition number: 1.4923, 30.257

Stepwise Selection: Step 6

Variable pctlcknite Entered: R-Square = 0.0615 and C(p) = 17.4520

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	20.40397	3.40066	46.94	<.0001
Error	4296	311.21071	0.07244		
Corrected Total	4302	331.61468			

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 59

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.92736	0.00927	3130.09017	43208.2	<.0001
may	-0.04157	0.01431	0.61113	8.44	0.0037
jun	-0.06262	0.01236	1.85931	25.67	<.0001
dec	0.07786	0.01822	1.32276	18.26	<.0001
pctlcknite	-0.00025302	0.00008775	0.60230	8.31	0.0040
pturnback	-0.15414	0.01057	15.41633	212.81	<.0001
pexchange	-0.08553	0.01028	5.01315	69.20	<.0001

Bounds on condition number: 1.4926, 42.476

Stepwise Selection: Step 7

Variable jul Entered: R-Square = 0.0634 and C(p) = 10.8426

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	21.02614	3.00373	41.54	<.0001
Error	4295	310.58854	0.07231		
Corrected Total	4302	331.61468			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.93389	0.00953	2978.92086	41194.3	<.0001
may	-0.04861	0.01450	0.81276	11.24	0.0008
jun	-0.06992	0.01260	2.22782	30.81	<.0001
jul	-0.03632	0.01238	0.62217	8.60	0.0034
dec	0.07160	0.01833	1.10362	15.26	<.0001
pctlcknite	-0.00027622	0.00008803	0.71201	9.85	0.0017
pturnback	-0.15231	0.01058	14.99969	207.42	<.0001
pexchange	-0.08330	0.01030	4.72810	65.38	<.0001

Bounds on condition number: 1.5008, 57.87

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 60

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0308	0.0308	148.452	136.69	<.0001
2	pexchange		2	0.0177	0.0485	69.0920	80.13	<.0001
3	jun		3	0.0053	0.0538	46.7926	24.06	<.0001
4	dec		4	0.0042	0.0580	29.6603	19.02	<.0001
5	may		5	0.0017	0.0597	23.7865	7.84	0.0051
6	pctlcknite		6	0.0018	0.0615	17.4520	8.31	0.0040
7	jul		7	0.0019	0.0634	10.8426	8.60	0.0034

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Logarithms of double lockage times using key variables from stepwise proc                    61
                                                                                 20:21 Tuesday, June 28, 2005

                                The REG Procedure
                                  Model: MODEL1
                            Dependent Variable: loglckhrs

                              Stepwise Selection: Step 1

          Variable pturnback Entered: R-Square = 0.0313 and C(p) = 142.9719


                                 Analysis of Variance

                                        Sum of           Mean
      Source                   DF        Squares         Square    F Value    Pr > F

      Model                     1        3.15774        3.15774     139.05    <.0001
      Error                  4299       97.63013        0.02271
      Corrected Total        4300      100.78786


                        Parameter     Standard
           Variable       Estimate        Error   Type II SS  F Value  Pr > F

           Intercept       0.60781      0.00282   1055.11066  46460.3  <.0001
           pturnback      -0.05737      0.00486      3.15774   139.05  <.0001

                            Bounds on condition number: 1, 1
-------------------------------------------------------------------------------------------------------------------------------

                              Stepwise Selection: Step 2


           Variable pexchange Entered: R-Square = 0.0489 and C(p) = 64.5508


                                 Analysis of Variance

                                        Sum of           Mean
      Source                   DF        Squares         Square    F Value    Pr > F

      Model                     2        4.92611        2.46305     110.43    <.0001
      Error                  4298       95.86176        0.02230
      Corrected Total        4300      100.78786


                        Parameter     Standard
           Variable       Estimate        Error   Type II SS  F Value  Pr > F

           Intercept       0.63740      0.00434    480.63401  21549.4  <.0001
           pturnback      -0.08696      0.00586      4.91864   220.53  <.0001
           pexchange      -0.05052      0.00567      1.76837    79.29  <.0001

                        Bounds on condition number: 1.4751, 5.9005
-------------------------------------------------------------------------------------------------------------------------------

                              Stepwise Selection: Step 3
```

SAS Program Output from “fitmod.sas” for Tows Only (cont.)

Logarithms of double lockage times using key variables from stepwise proc 62
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable jun Entered: R-Square = 0.0538 and C(p) = 43.8223

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	5.42588	1.80863	81.50	<.0001
Error	4297	95.36198	0.02219		
Corrected Total	4300	100.78786			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.64089	0.00439	472.33573	21283.4	<.0001
jun	-0.03194	0.00673	0.49977	22.52	<.0001
pturnback	-0.08655	0.00584	4.87161	219.51	<.0001
pexchange	-0.04902	0.00567	1.65972	74.79	<.0001

Bounds on condition number: 1.4797, 11.876

Stepwise Selection: Step 4

Variable dec Entered: R-Square = 0.0578 and C(p) = 27.8650

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	5.82074	1.45519	65.83	<.0001
Error	4296	94.96712	0.02211		
Corrected Total	4300	100.78786			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.63696	0.00448	446.56086	20200.9	<.0001
jun	-0.02940	0.00675	0.42007	19.00	<.0001
dec	0.04228	0.01000	0.39486	17.86	<.0001
pturnback	-0.08542	0.00584	4.73579	214.23	<.0001
pexchange	-0.04678	0.00568	1.49854	67.79	<.0001

Logarithms of double lockage times using key variables from stepwise proc 63
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.4927, 20.003

Stepwise Selection: Step 5

Variable oct Entered: R-Square = 0.0595 and C(p) = 21.8224

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	5.99759	1.19952	54.35	<.0001
Error	4295	94.79027	0.02207		
Corrected Total	4300	100.78786			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.63421	0.00458	422.74662	19154.9	<.0001
jun	-0.02676	0.00680	0.34133	15.47	<.0001
oct	0.02164	0.00764	0.17685	8.01	0.0047
dec	0.04500	0.01004	0.44316	20.08	<.0001
pturnback	-0.08549	0.00583	4.74280	214.90	<.0001
pexchange	-0.04650	0.00568	1.48021	67.07	<.0001

Bounds on condition number: 1.4931, 30.284

Stepwise Selection: Step 6

Variable pctlcknite Entered: R-Square = 0.0613 and C(p) = 15.5783

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	6.17887	1.02981	46.74	<.0001
Error	4294	94.60899	0.02203		
Corrected Total	4300	100.78786			

Logarithms of double lockage times using key variables from stepwise proc 64
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.64054	0.00508	349.91189	15881.4	<.0001
jun	-0.02811	0.00681	0.37491	17.02	<.0001
oct	0.02288	0.00765	0.19703	8.94	0.0028
dec	0.04707	0.01006	0.48245	21.90	<.0001
pctlcknite	-0.00013896	0.00004845	0.18128	8.23	0.0041
pturnback	-0.08515	0.00583	4.70352	213.48	<.0001
pexchange	-0.04668	0.00567	1.49172	67.70	<.0001

Bounds on condition number: 1.4933, 42.527

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0313	0.0313	142.972	139.05	<.0001
2	pexchange		2	0.0175	0.0489	64.5508	79.29	<.0001
3	jun		3	0.0050	0.0538	43.8223	22.52	<.0001
4	dec		4	0.0039	0.0578	27.8650	17.86	<.0001
5	oct		5	0.0018	0.0595	21.8224	8.01	0.0047
6	pctlcknite		6	0.0018	0.0613	15.5783	8.23	0.0041

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 65

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0190 and C(p) = 30.0540

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.98463	0.98463	23.52	<.0001
Error	1215	50.87176	0.04187		
Corrected Total	1216	51.85639			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.47179	0.00705	187.64204	4481.56	<.0001
pturnback	-0.06165	0.01271	0.98463	23.52	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable feb Entered: R-Square = 0.0355 and C(p) = 11.1651

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	1.83950	0.91975	22.32	<.0001
Error	1214	50.01689	0.04120		
Corrected Total	1216	51.85639			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.46868	0.00702	183.41357	4451.78	<.0001
feb	0.32846	0.07211	0.85487	20.75	<.0001
pturnback	-0.05853	0.01263	0.88498	21.48	<.0001

Bounds on condition number: 1.0029, 4.0118

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 66

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable may Entered: R-Square = 0.0423 and C(p) = 4.4813

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	2.19489	0.73163	17.87	<.0001
Error	1213	49.66150	0.04094		
Corrected Total	1216	51.85639			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.47265	0.00713	179.87246	4393.45	<.0001
feb	0.32449	0.07189	0.83404	20.37	<.0001
may	-0.06907	0.02344	0.35539	8.68	0.0033
pturnback	-0.05659	0.01261	0.82506	20.15	<.0001

Bounds on condition number: 1.0057, 9.0365

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0190	0.0190	30.0540	23.52	<.0001
2	feb		2	0.0165	0.0355	11.1651	20.75	<.0001
3	may		3	0.0069	0.0423	4.4813	8.68	0.0033

Logarithms of single lockage times using key variables from stepwise proc 67
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0171 and C(p) = 18.5868

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	3.50956	3.50956	21.64	<.0001
Error	1244	201.77527	0.16220		
Corrected Total	1245	205.28483			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.85712	0.01370	634.73486	3913.31	<.0001
pturnback	-0.11511	0.02475	3.50956	21.64	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable may Entered: R-Square = 0.0272 and C(p) = 7.5969

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	5.58879	2.79439	17.39	<.0001
Error	1243	199.69604	0.16066		
Corrected Total	1245	205.28483			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.84762	0.01389	598.34130	3724.35	<.0001
may	-0.16405	0.04560	2.07923	12.94	0.0003
pturnback	-0.11043	0.02466	3.22109	20.05	<.0001

Bounds on condition number: 1.0028, 4.0112

All variables left in the model are significant at the 0.0100 level.

Logarithms of single lockage times using key variables from stepwise proc 68
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 2

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0171	0.0171	18.5868	21.64	<.0001
2	may		2	0.0101	0.0272	7.5969	12.94	0.0003

Logarithms of single lockage times using key variables from stepwise proc 69
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0344 and C(p) = 312.4327

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	58.73100	58.73100	124.74	<.0001
Error	3501	1648.31768	0.47081		
Corrected Total	3502	1707.04868			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.43360	0.01250	17850	37913.5	<.0001
jun	-0.37362	0.03345	58.73100	124.74	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable may Entered: R-Square = 0.0567 and C(p) = 226.4898

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	96.76335	48.38167	105.16	<.0001
Error	3500	1610.28533	0.46008		
Corrected Total	3502	1707.04868			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.47366	0.01312	16362	35563.7	<.0001
may	-0.35508	0.03905	38.03235	82.66	<.0001
jun	-0.41367	0.03336	70.74351	153.76	<.0001

Bounds on condition number: 1.0177, 4.071

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 70
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.0806 and C(p) = 134.1186

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	137.57578	45.85859	102.24	<.0001
Error	3499	1569.47290	0.44855		
Corrected Total	3502	1707.04868			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.53313	0.01437	13931	31057.3	<.0001
may	-0.41455	0.03906	50.51739	112.62	<.0001
jun	-0.47314	0.03352	89.34409	199.18	<.0001
jul	-0.31613	0.03314	40.81243	90.99	<.0001

Bounds on condition number: 1.0548, 9.4602

Stepwise Selection: Step 4

Variable apr Entered: R-Square = 0.0941 and C(p) = 82.9022

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	160.59007	40.14752	90.81	<.0001
Error	3498	1546.45861	0.44210		
Corrected Total	3502	1707.04868			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.57711	0.01552	12194	27581.6	<.0001
apr	-0.28502	0.03950	23.01429	52.06	<.0001
may	-0.45853	0.03926	60.31477	136.43	<.0001
jun	-0.51712	0.03384	103.26203	233.57	<.0001
jul	-0.36011	0.03346	51.20071	115.81	<.0001

Logarithms of single lockage times using key variables from stepwise proc 71
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 4

Bounds on condition number: 1.091, 17.281

Stepwise Selection: Step 5

Variable waitmin Entered: R-Square = 0.1039 and C(p) = 46.1920

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	177.33095	35.46619	81.08	<.0001
Error	3497	1529.71773	0.43744		
Corrected Total	3502	1707.04868			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.61106	0.01638	11112	25403.1	<.0001
apr	-0.28277	0.03930	22.65164	51.78	<.0001
may	-0.45537	0.03905	59.47586	135.96	<.0001
jun	-0.50891	0.03368	99.85429	228.27	<.0001
jul	-0.33220	0.03359	42.78512	97.81	<.0001
waitmin	-0.00033397	0.00005398	16.74088	38.27	<.0001

Bounds on condition number: 1.1111, 26.805

Stepwise Selection: Step 6

Variable mar Entered: R-Square = 0.1074 and C(p) = 34.2090

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	183.37815	30.56303	70.13	<.0001
Error	3496	1523.67052	0.43583		
Corrected Total	3502	1707.04868			

Logarithms of single lockage times using key variables from stepwise proc 72
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.62951	0.01709	10323	23685.7	<.0001
mar	-0.20015	0.05373	6.04720	13.88	0.0002
apr	-0.30085	0.03952	25.25332	57.94	<.0001
may	-0.47343	0.03928	63.30835	145.26	<.0001
jun	-0.52692	0.03397	104.87832	240.64	<.0001
jul	-0.35001	0.03387	46.54891	106.80	<.0001
waitmin	-0.00033741	0.00005389	17.08312	39.20	<.0001

Bounds on condition number: 1.1337, 38.923

Stepwise Selection: Step 7

Variable nov Entered: R-Square = 0.1105 and C(p) = 24.2179

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	188.56389	26.93770	62.00	<.0001
Error	3495	1518.48479	0.43447		
Corrected Total	3502	1707.04868			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.66515	0.01994	7764.59554	17871.3	<.0001
mar	-0.23593	0.05464	8.10059	18.64	<.0001
apr	-0.33666	0.04080	29.58224	68.09	<.0001
may	-0.50925	0.04057	68.46584	157.58	<.0001
jun	-0.56277	0.03547	109.39463	251.79	<.0001
jul	-0.38594	0.03538	51.70555	119.01	<.0001
nov	-0.12254	0.03547	5.18574	11.94	0.0006
waitmin	-0.00033584	0.00005381	16.92289	38.95	<.0001

Bounds on condition number: 1.2409, 56.733

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Logarithms of single lockage times using key variables from stepwise proc 73
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Label	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun			1	0.0344	0.0344	312.433	124.74	<.0001
2	may			2	0.0223	0.0567	226.490	82.66	<.0001
3	jul			3	0.0239	0.0806	134.119	90.99	<.0001
4	apr			4	0.0135	0.0941	82.9022	52.06	<.0001
5	waitmin		Wait/before/lockge	5	0.0098	0.1039	46.1920	38.27	<.0001
6	mar			6	0.0035	0.1074	34.2090	13.88	0.0002
7	nov			7	0.0030	0.1105	24.2179	11.94	0.0006

Logarithms of single lockage times using key variables from stepwise proc 74
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0537 and C(p) = 384.0751

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	10.91489	10.91489	198.58	<.0001
Error	3501	192.42780	0.05496		
Corrected Total	3502	203.34270			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.85837	0.00427	2220.70046	40403.1	<.0001
jun	-0.16107	0.01143	10.91489	198.58	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable may Entered: R-Square = 0.0852 and C(p) = 256.7243

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	17.32494	8.66247	162.99	<.0001
Error	3500	186.01776	0.05315		
Corrected Total	3502	203.34270			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.87481	0.00446	2046.40201	38503.9	<.0001
may	-0.14577	0.01327	6.41005	120.61	<.0001
jun	-0.17751	0.01134	13.02622	245.09	<.0001

Bounds on condition number: 1.0177, 4.071

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 75
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.1201 and C(p) = 115.5746

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	24.41880	8.13960	159.18	<.0001
Error	3499	178.92390	0.05114		
Corrected Total	3502	203.34270			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.89960	0.00485	1756.96387	34358.8	<.0001
may	-0.17057	0.01319	8.55227	167.25	<.0001
jun	-0.20230	0.01132	16.33389	319.42	<.0001
jul	-0.13180	0.01119	7.09386	138.73	<.0001

Bounds on condition number: 1.0548, 9.4602

Stepwise Selection: Step 4

Variable apr Entered: R-Square = 0.1386 and C(p) = 41.5416

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	28.18665	7.04666	140.73	<.0001
Error	3498	175.15604	0.05007		
Corrected Total	3502	203.34270			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.91740	0.00522	1545.21764	30859.2	<.0001
apr	-0.11532	0.01329	3.76786	75.25	<.0001
may	-0.18836	0.01321	10.17840	203.27	<.0001
jun	-0.22010	0.01139	18.70638	373.58	<.0001
jul	-0.14959	0.01126	8.83553	176.45	<.0001

Logarithms of single lockage times using key variables from stepwise proc 76
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.091, 17.281

Stepwise Selection: Step 5

Variable mar Entered: R-Square = 0.1422 and C(p) = 28.8640

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	28.91401	5.78280	115.94	<.0001
Error	3497	174.42869	0.04988		
Corrected Total	3502	203.34270			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.92367	0.00547	1424.80233	28564.9	<.0001
mar	-0.06941	0.01818	0.72735	14.58	0.0001
apr	-0.12160	0.01337	4.12578	82.71	<.0001
may	-0.19464	0.01329	10.70167	214.55	<.0001
jun	-0.22637	0.01148	19.38305	388.60	<.0001
jul	-0.15587	0.01136	9.39161	188.29	<.0001

Bounds on condition number: 1.1144, 27.233

Stepwise Selection: Step 6

Variable nov Entered: R-Square = 0.1450 and C(p) = 19.5521

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	29.47458	4.91243	98.78	<.0001
Error	3496	173.86812	0.04973		
Corrected Total	3502	203.34270			

Logarithms of single lockage times using key variables from stepwise proc 77
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.93545	0.00649	1034.32206	20797.3	<.0001
mar	-0.08118	0.01848	0.95921	19.29	<.0001
apr	-0.13337	0.01380	4.64302	93.36	<.0001
may	-0.20641	0.01372	11.24970	226.20	<.0001
jun	-0.23815	0.01199	19.61704	394.44	<.0001
jul	-0.16764	0.01187	9.91615	199.39	<.0001
nov	-0.04029	0.01200	0.56057	11.27	0.0008

Bounds on condition number: 1.2209, 42.378

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun		1	0.0537	0.0537	384.075	198.58	<.0001
2	may		2	0.0315	0.0852	256.724	120.61	<.0001
3	jul		3	0.0349	0.1201	115.575	138.73	<.0001
4	apr		4	0.0185	0.1386	41.5416	75.25	<.0001
5	mar		5	0.0036	0.1422	28.8640	14.58	0.0001
6	nov		6	0.0028	0.1450	19.5521	11.27	0.0008

```
Logarithms of single lockage times using key variables from stepwise proc                    78
                                                                                 20:21 Tuesday, June 28, 2005

                              The REG Procedure
                                Model: MODEL1
                       Dependent Variable: transithrs

 No variable met the 0.0100 significance level for entry into the model.
```

Logarithms of single lockage times using key variables from stepwise proc 79
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0179 and C(p) = 3.5976

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.09577	1.09577	8.22	0.0043
Error	452	60.23810	0.13327		
Corrected Total	453	61.33388			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.59846	0.01801	147.20245	1104.54	<.0001
jun	-0.16778	0.05851	1.09577	8.22	0.0043

Bounds on condition number: 1, 1

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Label	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun			1	0.0179	0.0179	3.5976	8.22	0.0043

Logarithms of single lockage times using key variables from stepwise proc 80
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable retsingle Entered: R-Square = 0.0084 and C(p) = 2.5175

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	20503	20503	13.64	0.0002
Error	1614	2425495	1502.78493		
Corrected Total	1615	2445998			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	11.01223	1.08438	154982	103.13	<.0001
retsingle	8.75793	2.37108	20503	13.64	0.0002

Bounds on condition number: 1, 1

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	retsingle		1	0.0084	0.0084	2.5175	13.64	0.0002

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable retsingle Entered: R-Square = 0.0457 and C(p) = 92.2379

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	99.41060	99.41060	76.55	<.0001
Error	1599	2076.61347	1.29870		
Corrected Total	1600	2176.02406			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.65219	0.03188	3488.59548	2686.23	<.0001
retsingle	-0.62093	0.07097	99.41060	76.55	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable contsingle Entered: R-Square = 0.0885 and C(p) = 18.4122

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	192.62459	96.31230	77.60	<.0001
Error	1598	1983.39947	1.24118		
Corrected Total	1600	2176.02406			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.79459	0.03523	3220.53712	2594.75	<.0001
contsingle	-0.65461	0.07554	93.21400	75.10	<.0001
retsingle	-0.76333	0.07130	142.25484	114.61	<.0001

Bounds on condition number: 1.0561, 4.2243

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 82
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable aug Entered: R-Square = 0.0926 and C(p) = 13.1322

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	201.57398	67.19133	54.35	<.0001
Error	1597	1974.45008	1.23635		
Corrected Total	1600	2176.02406			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.76553	0.03678	2848.49524	2303.96	<.0001
aug	0.23812	0.08851	8.94939	7.24	0.0072
contsingle	-0.65040	0.07541	91.97901	74.40	<.0001
retsingle	-0.75418	0.07124	138.55023	112.06	<.0001

Bounds on condition number: 1.0585, 9.3523

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	retsingle		1	0.0457	0.0457	92.2379	76.55	<.0001
2	contsingle		2	0.0428	0.0885	18.4122	75.10	<.0001
3	aug		3	0.0041	0.0926	13.1322	7.24	0.0072

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	5979	0	24786416492	4145578.94	3966964.00	4305942.00
strtlcktime	Start/lockge/time	5979	0	7.9256102E12	1325574541	1267123200	1387131660
arrtime	Arriv/time	5979	0	7.9255667E12	1325567267	1267123200	1387131660
deptime	Leave/lockge/time	5979	0	7.9256417E12	1325579808	1267127700	1387133940
BOW_OVER_SILL	BOW_OVER_SILL	5979	0	7.9256286E12	1325577621	1267126260	1387132560
END_OF_ENTRY	END_OF_ENTRY	5979	0	7.9256315E12	1325578111	1267126620	1387133160
START_OF_EXIT	START_OF_EXIT	5979	0	7.9256343E12	1325578576	1267127100	1387133760
SIGNAL_DATE	SIGNAL_DATE	0	5979	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	5979	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	5481	498	25375.00	4.6296296	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	5481	498	39953.00	7.2893633	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	5979	.	.	.	.
vess_no		5979	0	4663142032	779920.06	2611.00	8888864.00
vss_hp		5959	20	27300626.00	4581.41	75.0000000	81800.00
frsttime		5979	0	7.9255667E12	1325567267	1267123200	1387131660
lasttime		5979	0	7.9256417E12	1325579808	1267127700	1387133940
newpoolno		5979	0	120711.00	20.1891621	12.0000000	27.0000000
oldpoolno		5979	0	125548.00	20.9981602	13.0000000	28.0000000
waitmin	Wait/before/lockge	5979	0	724841.00	121.2311423	0	6206.00
lockmin	Wait/lockge/time	5979	0	524925.00	87.7947817	8.0000000	764.0000000
year		5979	0	11966677.00	2001.45	2000.00	2003.00
fly		5979	0	1721.00	0.2878408	0	1.0000000
turnback		5979	0	2009.00	0.3360094	0	1.0000000
exchange		5979	0	2249.00	0.3761499	0	1.0000000
lock		5979	0	120140.00	20.0936611	12.0000000	27.0000000
totmin		5979	0	1249766.00	209.0259241	9.0000000	6278.00
month		5979	0	42797.00	7.1578859	1.0000000	12.0000000
day		5979	0	94088.00	15.7364108	1.0000000	31.0000000
sunrise		5979	0	137069323	22925.13	19701.00	27155.00
sunset		5979	0	413738711	69198.65	59810.00	74318.00
sequpstr		5979	0	3992.00	0.6676702	0	1.0000000
seqdstr		5979	0	0	0	0	0
plock		5979	0	125559.00	21.0000000	21.0000000	21.0000000
pempty		5464	515	41938.00	7.6753294	0	50.0000000
pfull		5464	515	25077.00	4.5894949	0	28.0000000
parrtime		5979	0	7.925134E12	1325494897	1267101660	1387119960
pstrtlcktime		5979	0	7.9251744E12	1325501663	1267101660	1387119960
pdeptime		5979	0	7.9252063E12	1325506992	1267106880	1387121400
birth		5979	0	0	0	0	0
transithrs		5979	0	100106.33	16.7429894	-53.3833333	2195.03
reclock		5979	0	0	0	0	0
i		5979	0	959699.00	160.5116240	58.0000000	295.0000000
pctpsysdn		5979	0	3409.15	0.5701877	0	93.7500000
pctplckdn		5979	0	2032.31	0.3399073	0	89.7870000
cumdown		5972	7	580620.00	97.2237106	0	41940.00
pctdown		5972	7	3666.06	0.6138742	0	91.4920000
pcttrandn		5964	15	6620.26	1.1100366	0	100.0000000
pctsysdn		5972	7	6190.04	1.0365111	0	91.4920000
pctlckdn		5972	7	3666.06	0.6138742	0	91.4920000
stime		5979	0	264494460	44237.24	60.0000002	86340.00
etime		5979	0	265231560	44360.52	60.0000002	86340.00
sdate		5979	0	91728538.00	15341.79	14665.00	16054.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		5979	0	91728894.00	15341.85	14665.00	16054.00
hrsduration		5979	0	8748.75	1.4632464	0.1333333	12.7333333
ndays		5979	0	0	0	0	0
pctday		5979	0	323595.45	54.1220020	0	100.0000000
pctpsysnite		5979	0	267187.00	44.6875730	0	100.0000000
pctplcknite		5979	0	272201.70	45.5262912	0	100.0000000
pcttrannite		5979	0	274379.34	45.8905061	0	100.0000000
pctsysnite		5979	0	270820.79	45.2953322	0	100.0000000
pctlcknite		5979	0	274304.55	45.8779980	0	100.0000000
stage		5885	94	67174.85	11.4145879	8.3200000	27.1800000
flow		5870	109	519856591	88561.60	16415.00	301297.19
jan		5979	0	15.0000000	0.0025088	0	1.0000000
feb		5979	0	38.0000000	0.0063556	0	1.0000000
mar		5979	0	596.0000000	0.0996822	0	1.0000000
apr		5979	0	630.0000000	0.1053688	0	1.0000000
may		5979	0	574.0000000	0.0960027	0	1.0000000
jun		5979	0	710.0000000	0.1187490	0	1.0000000
jul		5979	0	739.0000000	0.1235993	0	1.0000000
aug		5979	0	625.0000000	0.1045325	0	1.0000000
sep		5979	0	526.0000000	0.0879746	0	1.0000000
oct		5979	0	653.0000000	0.1092156	0	1.0000000
nov		5979	0	645.0000000	0.1078776	0	1.0000000
dec		5979	0	228.0000000	0.0381335	0	1.0000000
m31day		5979	0	3430.00	0.5736745	0	1.0000000
m30day		5979	0	2511.00	0.4199699	0	1.0000000
qtr1		5979	0	649.0000000	0.1085466	0	1.0000000
qtr2		5979	0	1914.00	0.3201204	0	1.0000000
qtr3		5979	0	1890.00	0.3161064	0	1.0000000
qtr4		5979	0	1526.00	0.2552266	0	1.0000000
psingle		5979	0	1444.00	0.2415120	0	1.0000000
pdouble		5979	0	4293.00	0.7180130	0	1.0000000
pknockout		5979	0	109.0000000	0.0182305	0	1.0000000
pjacknife		5979	0	125.0000000	0.0209065	0	1.0000000
pothtype		5979	0	8.0000000	0.0013380	0	1.0000000
pexchange		5979	0	2388.00	0.3993979	0	1.0000000
pturnback		5979	0	1901.00	0.3179461	0	1.0000000
single		5979	0	1514.00	0.2532196	0	1.0000000
double		5979	0	4246.00	0.7101522	0	1.0000000
knockout		5979	0	103.0000000	0.0172270	0	1.0000000
jacknife		5979	0	115.0000000	0.0192340	0	1.0000000
othtype		5979	0	1.0000000	0.000167252	0	1.0000000
contthru		5979	0	3992.00	0.6676702	0	1.0000000
return		5979	0	546.0000000	0.0913196	0	1.0000000
contstop		5979	0	1323.00	0.2212745	0	1.0000000
kill		5979	0	118.0000000	0.0197357	0	1.0000000
contsame		5979	0	3992.00	0.6676702	0	1.0000000
contdouble		5979	0	870.0000000	0.1455093	0	1.0000000
contsingle		5979	0	440.0000000	0.0735909	0	1.0000000
contko		5979	0	12.0000000	0.0020070	0	1.0000000
contjk		5979	0	1.0000000	0.000167252	0	1.0000000
retdouble		5979	0	129.0000000	0.0215755	0	1.0000000
retsingle		5979	0	405.0000000	0.0677371	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		5979	0	11.0000000	0.0018398	0	1.0000000
retjk		5979	0	0	0	0	0
xkill		5979	0	119.0000000	0.0199030	0	1.0000000
logtrnhrs		5971	8	9297.41	1.5570935	-1.7917595	7.6939525
plockhrs		5979	0	8706.08	1.4561100	0.1475410	13.4098361
loglckhrs		5979	0	1136.66	0.1901082	-1.9136493	2.5959885
thrusingle		5979	0	559.0000000	0.0934939	0	1.0000000
thruother		5979	0	206.0000000	0.0344539	0	1.0000000
contother		5979	0	13.0000000	0.0021743	0	1.0000000
retother		5979	0	12.0000000	0.0020070	0	1.0000000
thrudoubnite		5979	0	1450.16	0.2425420	0	1.0000000
thrusingnite		5979	0	253.1197500	0.0423348	0	1.0000000
thruothnite		5979	0	91.2007900	0.0152535	0	1.0000000
pdoubnite		5979	0	1958.33	0.3275344	0	1.0000000
psingnite		5979	0	657.1598100	0.1099113	0	1.0000000
pothnite		5979	0	106.5287300	0.0178171	0	1.0000000

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The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI21U

pconfig / doutcome Frequency Percent Row Pct Col Pct	1:contsame	2:contdouble	3:contsingle	4:contko	5:contjk	6:retdouble	7:retsingle	8:retko	x:kill	Total
1:double	3227 53.97 75.17 80.84	857 14.33 19.96 98.51	69 1.15 1.61 15.68	11 0.18 0.26 91.67	0 0.00 0.00 0.00	87 1.46 2.03 67.44	24 0.40 0.56 5.93	2 0.03 0.05 18.18	16 0.27 0.37 13.45	4293 71.80
2:single	559 9.35 38.71 14.00	12 0.20 0.83 1.38	361 6.04 25.00 82.05	0 0.00 0.00 0.00	0 0.00 0.00 0.00	39 0.65 2.70 30.23	369 6.17 25.55 91.11	3 0.05 0.21 27.27	101 1.69 6.99 84.87	1444 24.15
3:knockout	86 1.44 78.90 2.15	1 0.02 0.92 0.11	8 0.13 7.34 1.82	1 0.02 0.92 8.33	0 0.00 0.00 0.00	3 0.05 2.75 2.33	8 0.13 7.34 1.98	1 0.02 0.92 9.09	1 0.02 0.92 0.84	109 1.82
4:jacknife	113 1.89 90.40 2.83	0 0.00 0.00 0.00	1 0.02 0.80 0.23	0 0.00 0.00 0.00	1 0.02 0.80 100.00	0 0.00 0.00 0.00	4 0.07 3.20 0.99	5 0.08 4.00 45.45	1 0.02 0.80 0.84	125 2.09
5:Other	7 0.12 87.50 0.18	0 0.00 0.00 0.00	1 0.02 12.50 0.23	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	8 0.13
Total	3992 66.77	870 14.55	440 7.36	12 0.20	1 0.02	129 2.16	405 6.77	11 0.18	119 1.99	5979 100.00

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The FREQ Procedure

Table 1 of pconfig by nextstep
Controlling for pnewpool=MI21U

pconfig nextstep

Frequency Percent Row Pct Col Pct	1:contth	2:contst	3:return	4:kill	Total
1:double	3227 53.97 75.17 80.84	937 15.67 21.83 70.82	113 1.89 2.63 20.70	16 0.27 0.37 13.56	4293 71.80
2:single	559 9.35 38.71 14.00	373 6.24 25.83 28.19	412 6.89 28.53 75.46	100 1.67 6.93 84.75	1444 24.15
3:knockout	86 1.44 78.90 2.15	10 0.17 9.17 0.76	12 0.20 11.01 2.20	1 0.02 0.92 0.85	109 1.82
4:jacknife	113 1.89 90.40 2.83	2 0.03 1.60 0.15	9 0.15 7.20 1.65	1 0.02 0.80 0.85	125 2.09
5:Other	7 0.12 87.50 0.18	1 0.02 12.50 0.08	0 0.00 0.00 0.00	0 0.00 0.00 0.00	8 0.13
Total	3992 66.77	1323 22.13	546 9.13	118 1.97	5979 100.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	85877	0	365010508135	4250387.28	3515664.00	4331559.00
strtlcktime	Start/lockge/time	85877	0	1.1396088E14	1327024470	1262306700	1388533680
arrtime	Arriv/time	85877	0	1.139606E14	1327021203	1262306700	1388530800
deptime	Leave/lockge/time	85877	0	1.139611E14	1327027030	1262307720	1388536080
BOW_OVER_SILL	BOW_OVER_SILL	85877	0	1.1396095E14	1327025301	1262307000	1388534700
END_OF_ENTRY	END_OF_ENTRY	85877	0	1.1396099E14	1327025777	1262307060	1388535000
START_OF_EXIT	START_OF_EXIT	85877	0	1.1396105E14	1327026502	1262307660	1388535600
SIGNAL_DATE	SIGNAL_DATE	0	85877	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	85877	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	74713	11164	464762.00	6.2206309	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	74713	11164	245131.00	3.2809685	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	85877	.	.	.	.
vess_no		85877	0	69500061187	809297.73	2611.00	8888864.00
vss_hp		85172	705	332071610	3898.84	60.0000000	81800.00
frsttime		85877	0	1.139606E14	1327021203	1262306700	1388530800
lasttime		85877	0	1.139611E14	1327027030	1262307720	1388536080
newpoolno		85877	0	2149588.00	25.0310095	1.0000000	28.0000000
oldpoolno		85877	0	2152349.00	25.0631601	1.0000000	28.0000000
waitmin	Wait/before/lockge	85877	0	4675956.00	54.4494568	0	7423.00
lockmin	Wait/lockge/time	85877	0	3664727.00	42.6741386	4.0000000	1823.00
year		85877	0	171882726	2001.50	2000.00	2003.00
fly		85877	0	36481.00	0.4248052	0	1.0000000
turnback		85877	0	26827.00	0.3123886	0	1.0000000
exchange		85877	0	22568.00	0.2627945	0	1.0000000
lock		85877	0	2108030.00	24.5470848	1.0000000	27.0000000
totmin		85877	0	8340683.00	97.1235954	4.0000000	7490.00
month		85877	0	612820.00	7.1360201	1.0000000	12.0000000
day		85877	0	1346830.00	15.6832446	1.0000000	31.0000000
sunrise		85176	701	1973229224	23166.49	19414.00	27155.00
sunset		85176	701	5785232313	67920.92	59694.00	75152.00
sequpstr		85877	0	14593.00	0.1699291	0	1.0000000
seqdstr		85877	0	20442.00	0.2380381	0	1.0000000
plock		85877	0	2016580.00	23.4821896	1.0000000	27.0000000
pempty		75036	10841	193505.00	2.5788288	0	50.0000000
pfull		75036	10841	516713.00	6.8862013	0	28.0000000
parrtime		85877	0	1.1393601E14	1326734913	1262304600	1388521920
pstrtlcktime		85877	0	1.1393647E14	1326740200	1262304600	1388521920
pdeptime		85877	0	1.1393674E14	1326743397	1262305620	1388523540
birth		85877	0	0	0	0	0
transithrs		85877	0	6626974.62	77.1682129	-249.0333333	8099.42
reclock		85877	0	0	0	0	0
i		85877	0	19678448.00	229.1468961	58.0000000	401.0000000
pctpsysdn		80161	5716	78301.90	0.9768079	0	98.9510000
pctplckdn		80161	5716	37584.43	0.4688618	0	98.3000000
cumdown		85110	767	3299100.00	38.7627776	0	107520.00
pctdown		85110	767	31756.12	0.3731186	0	98.3000000
pcttrandn		84863	1014	113046.82	1.3321097	0	100.0000000
pctsysdn		85110	767	73559.43	0.8642865	0	98.6320000
pctlckdn		85110	767	31756.12	0.3731186	0	98.3000000
stime		85877	0	3804910860	44306.52	0	86340.00
etime		85877	0	3816138480	44437.26	0	86340.00
sdate		85877	0	1318947633	15358.57	14610.00	16070.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		85877	0	1318950048	15358.59	14610.00	16071.00
hrsduration		85877	0	61078.78	0.7112356	0.0666667	30.3833333
ndays		85877	0	1.0000000	0.000011645	0	1.0000000
pctday		85859	18	4687736.77	54.5980825	0	100.0000000
pctpsysnite		85827	50	3865606.49	45.0395154	0	100.0000000
pctplcknite		85856	21	3877527.76	45.1631541	0	100.0000000
pcttrannite		85311	566	4028229.42	47.2181713	0	100.0000000
pctsysnite		85795	82	3874885.16	45.1644637	0	100.0000000
pctlcknite		85859	18	3898163.23	45.4019175	0	100.0000000
stage		41188	44689	877271.51	21.2992015	8.3500000	33.0800000
flow		9096	76781	745631399	81973.55	16077.99	306262.78
jan		85877	0	3069.00	0.0357372	0	1.0000000
feb		85877	0	3416.00	0.0397778	0	1.0000000
mar		85877	0	6930.00	0.0806968	0	1.0000000
apr		85877	0	7580.00	0.0882658	0	1.0000000
may		85877	0	7239.00	0.0842950	0	1.0000000
jun		85877	0	8507.00	0.0990603	0	1.0000000
jul		85877	0	8652.00	0.1007487	0	1.0000000
aug		85877	0	8028.00	0.0934825	0	1.0000000
sep		85877	0	7688.00	0.0895234	0	1.0000000
oct		85877	0	8618.00	0.1003528	0	1.0000000
nov		85877	0	9388.00	0.1093191	0	1.0000000
dec		85877	0	6762.00	0.0787405	0	1.0000000
m31day		85877	0	49298.00	0.5740536	0	1.0000000
m30day		85877	0	33163.00	0.3861686	0	1.0000000
qtr1		85877	0	13415.00	0.1562118	0	1.0000000
qtr2		85877	0	23326.00	0.2716210	0	1.0000000
qtr3		85877	0	24368.00	0.2837547	0	1.0000000
qtr4		85877	0	24768.00	0.2884125	0	1.0000000
psingle		85877	0	66068.00	0.7693329	0	1.0000000
pdouble		85877	0	15912.00	0.1852883	0	1.0000000
pknockout		85877	0	1445.00	0.0168264	0	1.0000000
pjacknife		85877	0	529.0000000	0.0061600	0	1.0000000
pothtype		85877	0	1923.00	0.0223925	0	1.0000000
pexchange		85877	0	23634.00	0.2752076	0	1.0000000
pturnback		85877	0	27797.00	0.3236839	0	1.0000000
single		85877	0	85818.00	0.9993130	0	1.0000000
double		85877	0	54.0000000	0.000628806	0	1.0000000
knockout		85877	0	4.0000000	0.000046578	0	1.0000000
jacknife		85877	0	0	0	0	0
othtype		85877	0	1.0000000	0.000011645	0	1.0000000
contthru		1444	84433	559.0000000	0.3871191	0	1.0000000
return		1444	84433	412.0000000	0.2853186	0	1.0000000
contstop		1444	84433	373.0000000	0.2583102	0	1.0000000
kill		1444	84433	100.0000000	0.0692521	0	1.0000000
contsame		1444	84433	559.0000000	0.3871191	0	1.0000000
contdouble		1444	84433	12.0000000	0.0083102	0	1.0000000
contsingle		1444	84433	361.0000000	0.2500000	0	1.0000000
contko		1444	84433	0	0	0	0
contjk		1444	84433	0	0	0	0
retdouble		1444	84433	39.0000000	0.0270083	0	1.0000000
retsingle		1444	84433	369.0000000	0.2555402	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1444	84433	3.0000000	0.0020776	0	1.0000000
retjk		1444	84433	0	0	0	0
xkill		1444	84433	101.0000000	0.0699446	0	1.0000000
logtrnhrs		1441	84436	3100.77	2.1518191	-1.7917595	7.6939525
plockhrs		1444	84433	651.6065574	0.4512511	0.1475410	3.8524590
loglckhrs		1444	84433	-1315.42	-0.9109556	-1.9136493	1.3487116
thrusingle		1444	84433	559.0000000	0.3871191	0	1.0000000
thruother		1444	84433	0	0	0	0
contother		1444	84433	0	0	0	0
retother		1444	84433	4.0000000	0.0027701	0	1.0000000
thrudoubnite		1444	84433	0	0	0	0
thrusingnite		1444	84433	253.1197500	0.1752907	0	1.0000000
thruothnite		1444	84433	0	0	0	0
pdoubnite		1444	84433	0	0	0	0
psingnite		1444	84433	657.1598100	0.4550968	0	1.0000000
pothnite		1444	84433	0	0	0	0

Transition models using key variables from stepwise proc transitions to contthru 20:21 Tuesday, June 28, 2005 91

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 1

Variable psingle Entered: R-Square = 0.1129 and C(p) = 168.0744

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	149.84502	149.84502	761.06	<.0001
Error	5977	1176.81563	0.19689		
Corrected Total	5978	1326.66065			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.75700	0.00659	2598.78479	13199.1	<.0001
psingle	-0.36988	0.01341	149.84502	761.06	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable dec Entered: R-Square = 0.1208 and C(p) = 115.9929

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	160.20529	80.10265	410.38	<.0001
Error	5976	1166.45535	0.19519		
Corrected Total	5978	1326.66065			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.76076	0.00658	2608.51697	13364.0	<.0001
dec	-0.22164	0.03042	10.36028	53.08	<.0001
psingle	-0.35047	0.01361	129.37354	662.81	<.0001

Bounds on condition number: 1.0398, 4.1594

Stepwise Selection: Step 3

Transition models using key variables from stepwise proc transitions to contthru 20:21 Tuesday, June 28, 2005 92

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.1248 and C(p) = 89.9669

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	165.57417	55.19139	284.02	<.0001
Error	5975	1161.08648	0.19432		
Corrected Total	5978	1326.66065			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.74840	0.00698	2237.09803	11512.2	<.0001
jul	0.09137	0.01738	5.36887	27.63	<.0001
dec	-0.21112	0.03042	9.35931	48.16	<.0001
psingle	-0.34768	0.01359	127.12866	654.21	<.0001

Bounds on condition number: 1.0444, 9.2789

Stepwise Selection: Step 4

Variable jun Entered: R-Square = 0.1282 and C(p) = 68.3822

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	170.09224	42.52306	219.64	<.0001
Error	5974	1156.56841	0.19360		
Corrected Total	5978	1326.66065			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.73540	0.00746	1879.53093	9708.30	<.0001
jun	0.08622	0.01785	4.51807	23.34	<.0001
jul	0.10375	0.01754	6.77472	34.99	<.0001
dec	-0.20036	0.03045	8.38464	43.31	<.0001
psingle	-0.34430	0.01359	124.34166	642.26	<.0001

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                    Transition models using key variables from stepwise proc      20:21 Tuesday, June 28, 2005  93
                                    transitions  to contthru

                                       The REG Procedure
                                         Model: MODEL1
                                 Dependent Variable: contsame

                                   Stepwise Selection: Step 4

                              Bounds on condition number: 1.05, 16.611
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                                   Stepwise Selection: Step 5


                 Variable pjacknife Entered: R-Square = 0.1304 and C(p) = 55.0059


                                      Analysis of Variance

                                             Sum of           Mean
          Source                   DF        Squares         Square    F Value    Pr > F

          Model                     5      173.03784       34.60757     179.18    <.0001
          Error                  5973     1153.62280        0.19314
          Corrected Total        5978     1326.66065


                              Parameter     Standard
                Variable       Estimate        Error   Type II SS  F Value  Pr > F

                Intercept       0.73088      0.00754   1812.82594  9386.09  <.0001
                jun             0.08691      0.01783      4.59100    23.77  <.0001
                jul             0.10475      0.01752      6.90363    35.74  <.0001
                dec            -0.20008      0.03041      8.36115    43.29  <.0001
                psingle        -0.33997      0.01362    120.42119   623.49  <.0001
                pjacknife       0.15569      0.03987      2.94561    15.25  <.0001

                              Bounds on condition number: 1.0512, 25.836
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                                   Stepwise Selection: Step 6


                    Variable feb Entered: R-Square = 0.1316 and C(p) = 48.7577


                                      Analysis of Variance

                                             Sum of           Mean
          Source                   DF        Squares         Square    F Value    Pr > F

          Model                     6      174.61793       29.10299     150.87    <.0001
          Error                  5972     1152.04271        0.19291
          Corrected Total        5978     1326.66065
```

Transition models using key variables from stepwise proc transitions to contthru 20:21 Tuesday, June 28, 2005 94

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.73274	0.00757	1808.64326	9375.71	<.0001
feb	-0.20484	0.07157	1.58009	8.19	0.0042
jun	0.08510	0.01783	4.39539	22.78	<.0001
jul	0.10293	0.01752	6.65699	34.51	<.0001
dec	-0.20188	0.03040	8.50859	44.11	<.0001
psingle	-0.34003	0.01361	120.47007	624.50	<.0001
pjacknife	0.15425	0.03985	2.89104	14.99	0.0001

Bounds on condition number: 1.0512, 37.039

Stepwise Selection: Step 7

Variable nov Entered: R-Square = 0.1329 and C(p) = 41.8369

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	176.32687	25.18955	130.75	<.0001
Error	5971	1150.33378	0.19265		
Corrected Total	5978	1326.66065			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.73977	0.00792	1679.84465	8719.51	<.0001
feb	-0.21325	0.07158	1.70983	8.88	0.0029
jun	0.07696	0.01802	3.51264	18.23	<.0001
jul	0.09476	0.01772	5.50673	28.58	<.0001
nov	-0.05647	0.01896	1.70894	8.87	0.0029
dec	-0.21281	0.03060	9.31882	48.37	<.0001
psingle	-0.33421	0.01374	114.02232	591.85	<.0001
pjacknife	0.15910	0.03985	3.07035	15.94	<.0001

Bounds on condition number: 1.0737, 51.357

Stepwise Selection: Step 8

Transition models using key variables from stepwise proc transitions to contthru 20:21 Tuesday, June 28, 2005 95

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 8

Variable oct Entered: R-Square = 0.1342 and C(p) = 34.8816

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	178.04242	22.25530	115.67	<.0001
Error	5970	1148.61822	0.19240		
Corrected Total	5978	1326.66065			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.74945	0.00855	1476.74740	7675.47	<.0001
feb	-0.22342	0.07161	1.87258	9.73	0.0018
jun	0.06681	0.01833	2.55571	13.28	0.0003
jul	0.08460	0.01804	4.23302	22.00	<.0001
oct	-0.05675	0.01901	1.71556	8.92	0.0028
nov	-0.06720	0.01929	2.33581	12.14	0.0005
dec	-0.22392	0.03080	10.16706	52.84	<.0001
psingle	-0.33212	0.01375	112.30269	583.70	<.0001
pjacknife	0.16503	0.03988	3.29548	17.13	<.0001

Bounds on condition number: 1.1123, 68.538

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	psingle		1	0.1129	0.1129	168.074	761.06	<.0001
2	dec		2	0.0078	0.1208	115.993	53.08	<.0001
3	jul		3	0.0040	0.1248	89.9669	27.63	<.0001
4	jun		4	0.0034	0.1282	68.3822	23.34	<.0001
5	pjacknife		5	0.0022	0.1304	55.0059	15.25	<.0001
6	feb		6	0.0012	0.1316	48.7577	8.19	0.0042
7	nov		7	0.0013	0.1329	41.8369	8.87	0.0029
8	oct		8	0.0013	0.1342	34.8816	8.92	0.0028

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.2299 and C(p) = 304.8208

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	126.22955	126.22955	1263.88	<.0001
Error	4233	422.77069	0.09987		
Corrected Total	4234	549.00024			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.89783	0.00594	10200	102130	<.0001
pturnback	-0.36680	0.01032	126.22955	1263.88	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable oct Entered: R-Square = 0.2491 and C(p) = 193.7385

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	136.76962	68.38481	702.05	<.0001
Error	4232	412.23061	0.09741		
Corrected Total	4234	549.00024			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.87928	0.00613	9155.29699	93989.2	<.0001
oct	0.16417	0.01578	10.54007	108.21	<.0001
pturnback	-0.36194	0.01020	122.64915	1259.13	<.0001

Bounds on condition number: 1.0021, 4.0084

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 97

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable sep Entered: R-Square = 0.2695 and C(p) = 75.6947

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	147.95856	49.31952	520.32	<.0001
Error	4231	401.04168	0.09479		
Corrected Total	4234	549.00024			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.86106	0.00628	8337.54408	87961.3	<.0001
sep	0.19125	0.01760	11.18894	118.04	<.0001
oct	0.18136	0.01565	12.73161	134.32	<.0001
pturnback	-0.35811	0.01007	119.91690	1265.13	<.0001

Bounds on condition number: 1.0125, 9.0811

Stepwise Selection: Step 4

Variable pctlcknite Entered: R-Square = 0.2740 and C(p) = 51.2086

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	150.42725	37.60681	399.12	<.0001
Error	4230	398.57298	0.09423		
Corrected Total	4234	549.00024			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.88318	0.00760	5780.22167	61344.7	<.0001
sep	0.19202	0.01755	11.27817	119.69	<.0001
oct	0.18537	0.01562	13.26743	140.81	<.0001
pctlcknite	-0.00051241	0.00010011	2.46869	26.20	<.0001
pturnback	-0.35685	0.01004	119.00569	1262.99	<.0001

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 98

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.015, 16.133

Stepwise Selection: Step 5

Variable aug Entered: R-Square = 0.2779 and C(p) = 30.5172

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	152.54225	30.50845	325.43	<.0001
Error	4229	396.45799	0.09375		
Corrected Total	4234	549.00024			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.87288	0.00789	5285.43620	56379.5	<.0001
aug	0.07304	0.01538	2.11500	22.56	<.0001
sep	0.20169	0.01762	12.27683	130.96	<.0001
oct	0.19499	0.01571	14.43664	154.00	<.0001
pctlcknite	-0.00050300	0.00009987	2.37794	25.37	<.0001
pturnback	-0.35615	0.01002	118.51587	1264.20	<.0001

Bounds on condition number: 1.0322, 25.466

Stepwise Selection: Step 6

Variable nov Entered: R-Square = 0.2795 and C(p) = 22.7649

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	153.45123	25.57521	273.37	<.0001
Error	4228	395.54900	0.09355		
Corrected Total	4234	549.00024			

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 99

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.86728	0.00808	4994.35149	53384.3	<.0001
aug	0.07925	0.01549	2.44845	26.17	<.0001
sep	0.20806	0.01772	12.89108	137.79	<.0001
oct	0.20155	0.01584	15.15208	161.96	<.0001
nov	0.05509	0.01767	0.90898	9.72	0.0018
pctlcknite	-0.00052941	0.00010013	2.61534	27.96	<.0001
pturnback	-0.35466	0.01002	117.24925	1253.27	<.0001

Bounds on condition number: 1.0507, 37.195

Stepwise Selection: Step 7

Variable apr Entered: R-Square = 0.2816 and C(p) = 12.2365

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	154.61897	22.08842	236.74	<.0001
Error	4227	394.38127	0.09330		
Corrected Total	4234	549.00024			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.85716	0.00856	4388.89890	47040.5	<.0001
apr	0.05351	0.01512	1.16774	12.52	0.0004
aug	0.08936	0.01573	3.01050	32.27	<.0001
sep	0.21822	0.01793	13.81667	148.09	<.0001
oct	0.21174	0.01608	16.18589	173.48	<.0001
nov	0.06530	0.01788	1.24374	13.33	0.0003
pctlcknite	-0.00053347	0.00010000	2.65524	28.46	<.0001
pturnback	-0.35412	0.01001	116.86666	1252.58	<.0001

Bounds on condition number: 1.0867, 51.885

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 100

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.2299	0.2299	304.821	1263.88	<.0001
2	oct		2	0.0192	0.2491	193.739	108.21	<.0001
3	sep		3	0.0204	0.2695	75.6947	118.04	<.0001
4	pctlcknite		4	0.0045	0.2740	51.2086	26.20	<.0001
5	aug		5	0.0039	0.2779	30.5172	22.56	<.0001
6	nov		6	0.0017	0.2795	22.7649	9.72	0.0018
7	apr		7	0.0021	0.2816	12.2365	12.52	0.0004

Logarithms of double lockage times using key variables from stepwise proc 101
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.2441 and C(p) = 298.4667

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	44.32838	44.32838	1365.84	<.0001
Error	4229	137.25282	0.03246		
Corrected Total	4230	181.58120			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.62510	0.00339	1105.05631	34048.7	<.0001
pturnback	-0.21742	0.00588	44.32838	1365.84	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable oct Entered: R-Square = 0.2617 and C(p) = 195.1945

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	47.52118	23.76059	749.36	<.0001
Error	4228	134.06002	0.03171		
Corrected Total	4230	181.58120			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.61490	0.00350	979.00943	30876.1	<.0001
oct	0.09045	0.00901	3.19280	100.69	<.0001
pturnback	-0.21476	0.00582	43.16067	1361.21	<.0001

Bounds on condition number: 1.0021, 4.0083

Stepwise Selection: Step 3

Logarithms of double lockage times using key variables from stepwise proc 102
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable sep Entered: R-Square = 0.2817 and C(p) = 77.3528

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	51.15586	17.05195	552.64	<.0001
Error	4227	130.42534	0.03086		
Corrected Total	4230	181.58120			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.60451	0.00358	878.54730	28473.1	<.0001
sep	0.10901	0.01004	3.63468	117.80	<.0001
oct	0.10026	0.00894	3.88255	125.83	<.0001
pturnback	-0.21256	0.00575	42.22970	1368.64	<.0001

Bounds on condition number: 1.0124, 9.081

Stepwise Selection: Step 4

Variable pctlcknite Entered: R-Square = 0.2858 and C(p) = 55.2258

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	51.88760	12.97190	422.68	<.0001
Error	4226	129.69360	0.03069		
Corrected Total	4230	181.58120			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.61655	0.00434	618.78914	20162.9	<.0001
sep	0.10943	0.01002	3.66221	119.33	<.0001
oct	0.10241	0.00892	4.04104	131.68	<.0001
pctlcknite	-0.00027911	0.00005716	0.73175	23.84	<.0001
pturnback	-0.21188	0.00573	41.93267	1366.35	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0149, 16.132

Stepwise Selection: Step 5

Variable aug Entered: R-Square = 0.2895 and C(p) = 35.0389

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	52.56051	10.51210	344.24	<.0001
Error	4225	129.02069	0.03054		
Corrected Total	4230	181.58120			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.61076	0.00450	561.57965	18389.9	<.0001
aug	0.04124	0.00879	0.67290	22.04	<.0001
sep	0.11488	0.01006	3.98250	130.41	<.0001
oct	0.10783	0.00898	4.40640	144.29	<.0001
pctlcknite	-0.00027397	0.00005703	0.70476	23.08	<.0001
pturnback	-0.21149	0.00572	41.77187	1367.89	<.0001

Bounds on condition number: 1.032, 25.464

Stepwise Selection: Step 6

Variable nov Entered: R-Square = 0.2914 and C(p) = 25.3359

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	52.91545	8.81924	289.53	<.0001
Error	4224	128.66575	0.03046		
Corrected Total	4230	181.58120			

Logarithms of double lockage times using key variables from stepwise proc 104
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.60726	0.00461	527.70856	17324.3	<.0001
aug	0.04512	0.00885	0.79221	26.01	<.0001
sep	0.11886	0.01011	4.20682	138.11	<.0001
oct	0.11194	0.00905	4.66419	153.12	<.0001
nov	0.03443	0.01009	0.35494	11.65	0.0006
pctlcknite	-0.00029049	0.00005716	0.78667	25.83	<.0001
pturnback	-0.21055	0.00572	41.30512	1356.02	<.0001

Bounds on condition number: 1.0505, 37.193

Stepwise Selection: Step 7

Variable apr Entered: R-Square = 0.2938 and C(p) = 13.0052

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	53.35008	7.62144	250.99	<.0001
Error	4223	128.23112	0.03036		
Corrected Total	4230	181.58120			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.60108	0.00489	459.24977	15124.3	<.0001
apr	0.03265	0.00863	0.43463	14.31	0.0002
aug	0.05130	0.00898	0.99011	32.61	<.0001
sep	0.12506	0.01023	4.53762	149.44	<.0001
oct	0.11816	0.00918	5.03026	165.66	<.0001
nov	0.04066	0.01020	0.48218	15.88	<.0001
pctlcknite	-0.00029298	0.00005708	0.80010	26.35	<.0001
pturnback	-0.21022	0.00571	41.16466	1355.66	<.0001

Bounds on condition number: 1.0868, 51.884

Stepwise Selection: Step 8

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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 8

Variable pexchange Entered: R-Square = 0.2950 and C(p) = 8.1509

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	53.55797	6.69475	220.78	<.0001
Error	4222	128.02323	0.03032		
Corrected Total	4230	181.58120			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.61157	0.00632	284.20567	9372.65	<.0001
apr	0.03240	0.00862	0.42817	14.12	0.0002
aug	0.05216	0.00898	1.02230	33.71	<.0001
sep	0.12373	0.01024	4.43034	146.11	<.0001
oct	0.11783	0.00917	5.00188	164.95	<.0001
nov	0.04155	0.01020	0.50292	16.59	<.0001
pctlcknite	-0.00029017	0.00005705	0.78452	25.87	<.0001
pturnback	-0.22084	0.00700	30.17122	995.00	<.0001
pexchange	-0.01758	0.00672	0.20789	6.86	0.0089

Bounds on condition number: 1.5159, 75.529

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.2441	0.2441	298.467	1365.84	<.0001
2	oct		2	0.0176	0.2617	195.195	100.69	<.0001
3	sep		3	0.0200	0.2817	77.3528	117.80	<.0001
4	pctlcknite		4	0.0040	0.2858	55.2258	23.84	<.0001
5	aug		5	0.0037	0.2895	35.0389	22.04	<.0001
6	nov		6	0.0020	0.2914	25.3359	11.65	0.0006
7	apr		7	0.0024	0.2938	13.0052	14.31	0.0002
8	pexchange		8	0.0011	0.2950	8.1509	6.86	0.0089

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0590 and C(p) = 100.4458

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	4.05287	4.05287	84.84	<.0001
Error	1354	64.68340	0.04777		
Corrected Total	1355	68.73627			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.49906	0.00698	244.32465	5114.38	<.0001
pturnback	-0.12223	0.01327	4.05287	84.84	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.0996 and C(p) = 39.7884

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	6.84326	3.42163	74.80	<.0001
Error	1353	61.89301	0.04575		
Corrected Total	1355	68.73627			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.55433	0.00983	145.34275	3177.24	<.0001
pturnback	-0.17750	0.01479	6.58986	144.06	<.0001
pexchange	-0.10673	0.01367	2.79039	61.00	<.0001

Bounds on condition number: 1.297, 5.188

Stepwise Selection: Step 3

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable pctlckdn Entered: R-Square = 0.1140 and C(p) = 19.5598

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	7.83319	2.61106	57.96	<.0001
Error	1352	60.90308	0.04505		
Corrected Total	1355	68.73627			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.55008	0.00980	141.90164	3150.10	<.0001
pturnback	-0.17525	0.01468	6.41700	142.45	<.0001
pexchange	-0.10249	0.01359	2.56134	56.86	<.0001
pctlckdn	0.00775	0.00165	0.98993	21.98	<.0001

Bounds on condition number: 1.3028, 10.817

Stepwise Selection: Step 4

Variable sep Entered: R-Square = 0.1191 and C(p) = 13.6597

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	8.18502	2.04625	45.66	<.0001
Error	1351	60.55125	0.04482		
Corrected Total	1355	68.73627			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.54340	0.01006	130.69314	2915.98	<.0001
sep	0.05122	0.01828	0.35183	7.85	0.0052
pturnback	-0.17529	0.01465	6.42033	143.25	<.0001
pexchange	-0.10004	0.01359	2.43029	54.22	<.0001
pctlckdn	0.00789	0.00165	1.02584	22.89	<.0001

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.3082, 18.473

Stepwise Selection: Step 5

Variable oct Entered: R-Square = 0.1249 and C(p) = 6.6163

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	8.58776	1.71755	38.55	<.0001
Error	1350	60.14851	0.04455		
Corrected Total	1355	68.73627			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.53615	0.01032	120.29339	2699.92	<.0001
sep	0.05852	0.01839	0.45137	10.13	0.0015
oct	0.05318	0.01769	0.40274	9.04	0.0027
pturnback	-0.17553	0.01460	6.43752	144.49	<.0001
pexchange	-0.09999	0.01355	2.42813	54.50	<.0001
pctlckdn	0.00790	0.00164	1.02831	23.08	<.0001

Bounds on condition number: 1.3082, 28.27

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0590	0.0590	100.446	84.84	<.0001
2	pexchange		2	0.0406	0.0996	39.7884	61.00	<.0001
3	pctlckdn		3	0.0144	0.1140	19.5598	21.98	<.0001
4	sep		4	0.0051	0.1191	13.6597	7.85	0.0052
5	oct		5	0.0059	0.1249	6.6163	9.04	0.0027

Logarithms of single lockage times using key variables from stepwise proc 109
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0506 and C(p) = 148.1238

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	13.63202	13.63202	73.75	<.0001
Error	1383	255.65174	0.18485		
Corrected Total	1384	269.28376			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.81805	0.01358	670.53810	3627.41	<.0001
pturnback	-0.22181	0.02583	13.63202	73.75	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.1245 and C(p) = 31.0653

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	33.53722	16.76861	98.30	<.0001
Error	1382	235.74654	0.17058		
Corrected Total	1384	269.28376			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.66929	0.01897	212.32746	1244.71	<.0001
pturnback	-0.37056	0.02838	29.08831	170.52	<.0001
pexchange	-0.28230	0.02613	19.90520	116.69	<.0001

Bounds on condition number: 1.308, 5.2322

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 110
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable sep Entered: R-Square = 0.1327 and C(p) = 19.8601

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	35.74499	11.91500	70.46	<.0001
Error	1381	233.53877	0.16911		
Corrected Total	1384	269.28376			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.68573	0.01943	210.66224	1245.72	<.0001
sep	0.12775	0.03536	2.20777	13.06	0.0003
pturnback	-0.37080	0.02825	29.12539	172.23	<.0001
pexchange	-0.27602	0.02608	18.94516	112.03	<.0001

Bounds on condition number: 1.3139, 10.884

Stepwise Selection: Step 4

Variable pctlckdn Entered: R-Square = 0.1404 and C(p) = 9.4448

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	37.82067	9.45517	56.37	<.0001
Error	1380	231.46309	0.16773		
Corrected Total	1384	269.28376			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.69236	0.01944	212.73720	1268.35	<.0001
sep	0.13156	0.03523	2.33938	13.95	0.0002
pturnback	-0.36750	0.02815	28.57759	170.38	<.0001
pexchange	-0.26970	0.02603	18.00035	107.32	<.0001
pctlckdn	0.01123	0.00319	2.07568	12.38	0.0004

Logarithms of single lockage times using key variables from stepwise proc 111
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.3202, 18.569

Stepwise Selection: Step 5

Variable oct Entered: R-Square = 0.1456 and C(p) = 3.1751

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	39.20327	7.84065	46.99	<.0001
Error	1379	230.08050	0.16685		
Corrected Total	1384	269.28376			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.70557	0.01993	209.21239	1253.93	<.0001
sep	0.14498	0.03544	2.79159	16.73	<.0001
oct	0.09713	0.03374	1.38259	8.29	0.0041
pturnback	-0.36796	0.02808	28.64884	171.71	<.0001
pexchange	-0.26988	0.02597	18.02446	108.03	<.0001
pctlckdn	0.01124	0.00318	2.08202	12.48	0.0004

Bounds on condition number: 1.3202, 28.388

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0506	0.0506	148.124	73.75	<.0001
2	pexchange		2	0.0739	0.1245	31.0653	116.69	<.0001
3	sep		3	0.0082	0.1327	19.8601	13.06	0.0003
4	pctlckdn		4	0.0077	0.1404	9.4448	12.38	0.0004
5	oct		5	0.0051	0.1456	3.1751	8.29	0.0041

Logarithms of single lockage times using key variables from stepwise proc 112
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable waitmin Entered: R-Square = 0.0283 and C(p) = 158.1900

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	146.96203	146.96203	92.57	<.0001
Error	3180	5048.75577	1.58766		
Corrected Total	3181	5195.71780			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.78750	0.02891	27259	17169.3	<.0001
waitmin	-0.00133	0.00013852	146.96203	92.57	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pcttrandn Entered: R-Square = 0.0508 and C(p) = 82.8369

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	264.02282	132.01141	85.10	<.0001
Error	3179	4931.69498	1.55134		
Corrected Total	3181	5195.71780			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.78438	0.02857	27210	17539.6	<.0001
pcttrandn	0.02127	0.00245	117.06078	75.46	<.0001
waitmin	-0.00153	0.00013876	188.12705	121.27	<.0001

Bounds on condition number: 1.027, 4.1079

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 113
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 3

Variable oct Entered: R-Square = 0.0592 and C(p) = 56.1918

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	307.37224	102.45741	66.61	<.0001
Error	3178	4888.34556	1.53818		
Corrected Total	3181	5195.71780			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.74554	0.02938	25001	16253.5	<.0001
oct	0.40507	0.07630	43.34943	28.18	<.0001
pcttrandn	0.02101	0.00244	114.27024	74.29	<.0001
waitmin	-0.00151	0.00013821	184.08001	119.67	<.0001

Bounds on condition number: 1.0275, 9.1667

Stepwise Selection: Step 4

Variable thrudoubnite Entered: R-Square = 0.0641 and C(p) = 41.2576

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	332.99934	83.24984	54.39	<.0001
Error	3177	4862.71846	1.53060		
Corrected Total	3181	5195.71780			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.65753	0.03635	15494	10123.1	<.0001
oct	0.38537	0.07627	39.07798	25.53	<.0001
thrudoubnite	0.20312	0.04964	25.62710	16.74	<.0001
pcttrandn	0.02095	0.00243	113.53707	74.18	<.0001
waitmin	-0.00152	0.00013788	186.06631	121.56	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0277, 16.257

Stepwise Selection: Step 5

Variable sep Entered: R-Square = 0.0688 and C(p) = 26.9242

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	357.71716	71.54343	46.97	<.0001
Error	3176	4838.00064	1.52330		
Corrected Total	3181	5195.71780			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.62406	0.03721	14453	9488.14	<.0001
sep	0.32849	0.08155	24.71781	16.23	<.0001
oct	0.41503	0.07644	44.90555	29.48	<.0001
thrudoubnite	0.19973	0.04953	24.77005	16.26	<.0001
pcttrandn	0.02080	0.00243	111.88010	73.45	<.0001
waitmin	-0.00147	0.00013807	173.17234	113.68	<.0001

Bounds on condition number: 1.0354, 25.492

Stepwise Selection: Step 6

Variable aug Entered: R-Square = 0.0723 and C(p) = 17.0628

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	375.66733	62.61122	41.24	<.0001
Error	3175	4820.05047	1.51813		
Corrected Total	3181	5195.71780			

Logarithms of single lockage times using key variables from stepwise proc 115
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.60075	0.03776	13808	9095.27	<.0001
aug	0.25335	0.07368	17.95017	11.82	0.0006
sep	0.35636	0.08181	28.80575	18.97	<.0001
oct	0.44496	0.07681	50.95299	33.56	<.0001
thrudoubnite	0.20103	0.04945	25.09283	16.53	<.0001
pcttrandn	0.02114	0.00242	115.37094	76.00	<.0001
waitmin	-0.00154	0.00013911	185.26959	122.04	<.0001

Bounds on condition number: 1.0547, 37.117

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Label	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	waitmin		Wait/before/lockge	1	0.0283	0.0283	158.190	92.57	<.0001
2	pcttrandn			2	0.0225	0.0508	82.8369	75.46	<.0001
3	oct			3	0.0083	0.0592	56.1918	28.18	<.0001
4	thrudoubnite			4	0.0049	0.0641	41.2576	16.74	<.0001
5	sep			5	0.0048	0.0688	26.9242	16.23	<.0001
6	aug			6	0.0035	0.0723	17.0628	11.82	0.0006

Logarithms of single lockage times using key variables from stepwise proc 116
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable oct Entered: R-Square = 0.0079 and C(p) = 49.9309

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	2.14370	2.14370	25.32	<.0001
Error	3179	269.14937	0.08466		
Corrected Total	3180	271.29308			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.22841	0.00541	4362.52227	51527.0	<.0001
oct	0.09019	0.01792	2.14370	25.32	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable sep Entered: R-Square = 0.0173 and C(p) = 21.3979

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	4.69038	2.34519	27.96	<.0001
Error	3178	266.60270	0.08389		
Corrected Total	3180	271.29308			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.21922	0.00564	3921.39685	46744.5	<.0001
sep	0.10503	0.01906	2.54667	30.36	<.0001
oct	0.09938	0.01792	2.58037	30.76	<.0001

Bounds on condition number: 1.0087, 4.035

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 117
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable jun Entered: R-Square = 0.0211 and C(p) = 11.0799

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	5.71779	1.90593	22.80	<.0001
Error	3177	265.57529	0.08359		
Corrected Total	3180	271.29308			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.22824	0.00619	3291.73061	39378.0	<.0001
jun	-0.05219	0.01489	1.02741	12.29	0.0005
sep	0.09601	0.01920	2.08974	25.00	<.0001
oct	0.09036	0.01807	2.08987	25.00	<.0001

Bounds on condition number: 1.0357, 9.2775

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	oct		1	0.0079	0.0079	49.9309	25.32	<.0001
2	sep		2	0.0094	0.0173	21.3979	30.36	<.0001
3	jun		3	0.0038	0.0211	11.0799	12.29	0.0005

```
Logarithms of single lockage times using key variables from stepwise proc                    118
                                                                                20:21 Tuesday, June 28, 2005

                              The REG Procedure
                                Model: MODEL1
                       Dependent Variable: transithrs

 No variable met the 0.0100 significance level for entry into the model.
```

Logarithms of single lockage times using key variables from stepwise proc 119
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable nov Entered: R-Square = 0.0139 and C(p) = 18.4361

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.97968	0.97968	7.39	0.0068
Error	523	69.29929	0.13250		
Corrected Total	524	70.27897			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.25488	0.01724	702.32662	5300.44	<.0001
nov	-0.12082	0.04443	0.97968	7.39	0.0068

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable thrusingnite Entered: R-Square = 0.0309 and C(p) = 11.1610

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	2.17121	1.08561	8.32	0.0003
Error	522	68.10776	0.13047		
Corrected Total	524	70.27897			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.20964	0.02273	369.52298	2832.14	<.0001
nov	-0.14528	0.04483	1.37032	10.50	0.0013
thrusingnite	0.10902	0.03608	1.19154	9.13	0.0026

Bounds on condition number: 1.0337, 4.1348

All variables left in the model are significant at the 0.0100 level.

Logarithms of single lockage times using key variables from stepwise proc 120
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 2

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Label	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	nov			1	0.0139	0.0139	18.4361	7.39	0.0068
2	thrusingnite			2	0.0170	0.0309	11.1610	9.13	0.0026

Logarithms of single lockage times using key variables from stepwise proc 121
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable retsingle Entered: R-Square = 0.2122 and C(p) = 18.4133

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	2809684	2809684	522.38	<.0001
Error	1939	10429142	5378.61912		
Corrected Total	1940	13238826			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	14.14812	1.85683	312264	58.06	<.0001
retsingle	95.78924	4.19106	2809684	522.38	<.0001

Bounds on condition number: 1, 1

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	retsingle		1	0.2122	0.2122	18.4133	522.38	<.0001

Logarithms of single lockage times using key variables from stepwise proc 122
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable retsingle Entered: R-Square = 0.3569 and C(p) = 101.2023

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1232.09753	1232.09753	1072.04	<.0001
Error	1932	2220.44892	1.14930		
Corrected Total	1933	3452.54645			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.77863	0.02716	4928.78328	4288.51	<.0001
retsingle	2.01685	0.06160	1232.09753	1072.04	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable contsingle Entered: R-Square = 0.3789 and C(p) = 33.5959

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	1308.18923	654.09462	589.01	<.0001
Error	1931	2144.35721	1.11049		
Corrected Total	1933	3452.54645			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.91618	0.03145	4123.35121	3713.09	<.0001
contsingle	-0.49263	0.05951	76.09170	68.52	<.0001
retsingle	1.87930	0.06279	994.85606	895.87	<.0001

Bounds on condition number: 1.0753, 4.3012

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 123
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable retother Entered: R-Square = 0.3824 and C(p) = 24.7160

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	1320.08271	440.02757	398.25	<.0001
Error	1930	2132.46373	1.10490		
Corrected Total	1933	3452.54645			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.90548	0.03154	4033.87918	3650.89	<.0001
contsingle	-0.48193	0.05945	72.60456	65.71	<.0001
retsingle	1.89000	0.06271	1003.49331	908.22	<.0001
retother	1.00091	0.30507	11.89348	10.76	0.0011

Bounds on condition number: 1.0786, 9.4839

Stepwise Selection: Step 4

Variable feb Entered: R-Square = 0.3854 and C(p) = 17.0470

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	1330.65262	332.66315	302.42	<.0001
Error	1929	2121.89383	1.10000		
Corrected Total	1933	3452.54645			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.91255	0.03155	4042.63250	3675.13	<.0001
feb	-0.71389	0.23030	10.56991	9.61	0.0020
contsingle	-0.48408	0.05932	73.24229	66.58	<.0001
retsingle	1.89622	0.06261	1009.07327	917.34	<.0001
retother	0.99385	0.30440	11.72544	10.66	0.0011

Logarithms of single lockage times using key variables from stepwise proc 124
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0793, 16.657

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	retsingle		1	0.3569	0.3569	101.202	1072.04	<.0001
2	contsingle		2	0.0220	0.3789	33.5959	68.52	<.0001
3	retother		3	0.0034	0.3824	24.7160	10.76	0.0011
4	feb		4	0.0031	0.3854	17.0470	9.61	0.0020

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	6018	0	25193070095	4186286.16	3698474.00	4328174.00
strtlcktime	Start/lockge/time	6018	0	7.9831724E12	1326549094	1267026420	1387119960
arrtime	Arriv/time	6018	0	7.983106E12	1326538047	1267026420	1387119960
deptime	Leave/lockge/time	6018	0	7.9832112E12	1326555540	1267028280	1387121400
BOW_OVER_SILL	BOW_OVER_SILL	6018	0	7.9831952E12	1326552870	1267027200	1387120500
END_OF_ENTRY	END_OF_ENTRY	6018	0	7.9831988E12	1326553478	1267027500	1387120800
START_OF_EXIT	START_OF_EXIT	6018	0	7.9832014E12	1326553898	1267028160	1387121100
SIGNAL_DATE	SIGNAL_DATE	0	6018	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	6018	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	5633	385	63800.00	11.3261140	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	5633	385	3812.00	0.6767264	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	6018	.	.	.	.
vess_no		6018	0	4592482486	763124.37	65506.00	8888864.00
vss_hp		5996	22	27390115.00	4568.06	75.0000000	81800.00
frsttime		6018	0	7.983106E12	1326538047	1267026420	1387119960
lasttime		6018	0	7.9832112E12	1326555540	1267028280	1387121400
newpoolno		6018	0	137054.00	22.7740113	7.0000000	27.0000000
oldpoolno		6018	0	132334.00	21.9896976	6.0000000	28.0000000
waitmin	Wait/before/lockge	6018	0	1108068.00	184.1256231	0	2871.00
lockmin	Wait/lockge/time	6018	0	646458.00	107.4207378	9.0000000	1087.00
year		6018	0	12044735.00	2001.45	2000.00	2003.00
fly		6018	0	1340.00	0.2226653	0	1.0000000
turnback		6018	0	2245.00	0.3730475	0	1.0000000
exchange		6018	0	2433.00	0.4042871	0	1.0000000
lock		6018	0	131685.00	21.8818544	6.0000000	27.0000000
totmin		6018	0	1754526.00	291.5463609	10.0000000	2892.00
month		6018	0	45271.00	7.5225989	1.0000000	12.0000000
day		6018	0	94574.00	15.7151878	1.0000000	31.0000000
sunrise		6016	2	138528846	23026.74	20156.00	27112.00
sunset		6016	2	414056258	68825.84	60091.00	74316.00
sequpstr		6018	0	0	0	0	0
seqdstr		6018	0	4580.00	0.7610502	0	1.0000000
plock		6018	0	126378.00	21.0000000	21.0000000	21.0000000
pempty		5635	383	3331.00	0.5911269	0	50.0000000
pfull		5635	383	63501.00	11.2690328	0	28.0000000
parrtime		6018	0	7.9827624E12	1326480956	1267016400	1387098660
pstrtlcktime		6018	0	7.9828033E12	1326487753	1267016400	1387098720
pdeptime		6018	0	7.9828387E12	1326493641	1267017600	1387100400
birth		6018	0	0	0	0	0
transithrs		6018	0	74232.05	12.3350033	-45.0333333	5802.60
reclock		6018	0	0	0	0	0
i		6018	0	1127358.00	187.3310070	58.0000000	401.0000000
pctpsysdn		6018	0	3779.48	0.6280291	0	82.3940000
pctplckdn		6018	0	2828.44	0.4699962	0	85.2380000
cumdown		6014	4	1180500.00	196.2919854	0	59880.00
pctdown		6014	4	5546.52	0.9222680	0	95.2250000
pcttrandn		5992	26	7689.86	1.2833541	0	100.0000000
pctsysdn		6014	4	8362.97	1.3905845	0	95.2250000
pctlckdn		6014	4	5546.52	0.9222680	0	95.2250000
stime		6018	0	273307380	45414.99	0	86340.00
etime		6018	0	271659660	45141.19	0	86340.00
sdate		6018	0	92394666.00	15353.05	14664.00	16054.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		6018	0	92395134.00	15353.13	14664.00	16054.00
hrsduration		6018	0	10774.30	1.7903456	0.1500000	18.1166667
ndays		6018	0	0	0	0	0
pctday		6018	0	329837.49	54.8084897	0	100.0000000
pctpsysnite		6018	0	269884.67	44.8462404	0	100.0000000
pctplcknite		6018	0	273676.51	45.4763225	0	100.0000000
pcttrannite		6016	2	274944.75	45.7022515	0	100.0000000
pctsysnite		6018	0	269149.53	44.7240828	0	100.0000000
pctlcknite		6018	0	271962.51	45.1915103	0	100.0000000
stage		5961	57	82150.06	13.7812548	10.0800000	32.7800000
flow		5941	77	571318641	96165.40	16415.00	306262.78
jan		6018	0	17.0000000	0.0028249	0	1.0000000
feb		6018	0	28.0000000	0.0046527	0	1.0000000
mar		6018	0	418.0000000	0.0694583	0	1.0000000
apr		6018	0	588.0000000	0.0977069	0	1.0000000
may		6018	0	526.0000000	0.0874045	0	1.0000000
jun		6018	0	726.0000000	0.1206381	0	1.0000000
jul		6018	0	728.0000000	0.1209704	0	1.0000000
aug		6018	0	675.0000000	0.1121635	0	1.0000000
sep		6018	0	525.0000000	0.0872383	0	1.0000000
oct		6018	0	634.0000000	0.1053506	0	1.0000000
nov		6018	0	791.0000000	0.1314390	0	1.0000000
dec		6018	0	362.0000000	0.0601529	0	1.0000000
m31day		6018	0	3360.00	0.5583250	0	1.0000000
m30day		6018	0	2630.00	0.4370223	0	1.0000000
qtr1		6018	0	463.0000000	0.0769359	0	1.0000000
qtr2		6018	0	1840.00	0.3057494	0	1.0000000
qtr3		6018	0	1928.00	0.3203722	0	1.0000000
qtr4		6018	0	1787.00	0.2969425	0	1.0000000
psingle		6018	0	1279.00	0.2125291	0	1.0000000
pdouble		6018	0	4531.00	0.7529079	0	1.0000000
pknockout		6018	0	126.0000000	0.0209372	0	1.0000000
pjacknife		6018	0	78.0000000	0.0129611	0	1.0000000
pothtype		6018	0	4.0000000	0.000664673	0	1.0000000
pexchange		6018	0	2260.00	0.3755400	0	1.0000000
pturnback		6018	0	2010.00	0.3339980	0	1.0000000
single		6018	0	1249.00	0.2075440	0	1.0000000
double		6018	0	4542.00	0.7547358	0	1.0000000
knockout		6018	0	145.0000000	0.0240944	0	1.0000000
jacknife		6018	0	77.0000000	0.0127949	0	1.0000000
othtype		6018	0	5.0000000	0.000830841	0	1.0000000
contthru		6018	0	4580.00	0.7610502	0	1.0000000
return		6018	0	623.0000000	0.1035228	0	1.0000000
contstop		6018	0	718.0000000	0.1193087	0	1.0000000
kill		6018	0	97.0000000	0.0161183	0	1.0000000
contsame		6018	0	4580.00	0.7610502	0	1.0000000
contdouble		6018	0	354.0000000	0.0588235	0	1.0000000
contsingle		6018	0	350.0000000	0.0581589	0	1.0000000
contko		6018	0	13.0000000	0.0021602	0	1.0000000
contjk		6018	0	1.0000000	0.000166168	0	1.0000000
retdouble		6018	0	76.0000000	0.0126288	0	1.0000000
retsingle		6018	0	545.0000000	0.0905616	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		6018	0	2.0000000	0.000332336	0	1.0000000
retjk		6018	0	0	0	0	0
xkill		6018	0	97.0000000	0.0161183	0	1.0000000
logtrnhrs		5997	21	7419.16	1.2371448	-2.9957323	8.6660614
plockhrs		6018	0	9681.69	1.6087884	0.1311475	10.7049180
loglckhrs		6018	0	1822.48	0.3028388	-2.0314323	2.3707033
thrusingle		6018	0	274.0000000	0.0455301	0	1.0000000
thruother		6018	0	193.0000000	0.0320705	0	1.0000000
contother		6018	0	14.0000000	0.0023264	0	1.0000000
retother		6018	0	2.0000000	0.000332336	0	1.0000000
thrudoubnite		6016	2	1872.83	0.3113085	0	1.0000000
thrusingnite		6016	2	112.8086900	0.0187514	0	1.0000000
thruothnite		6016	2	84.4059500	0.0140302	0	1.0000000
pdoubnite		6018	0	2084.08	0.3463071	0	1.0000000
psingnite		6018	0	571.7216900	0.0950019	0	1.0000000
pothnite		6018	0	80.9674200	0.0134542	0	1.0000000

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The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI22D

pconfig / doutcome Frequency Percent Row Pct Col Pct	1:contsame	2:contdouble	3:contsingle	4:contko	5:contjk	6:retdouble	7:retsingle	8:retko	x:kill	Total
1:double	4113 68.34 90.77 89.80	319 5.30 7.04 90.11	7 0.12 0.15 2.00	2 0.03 0.04 15.38	0 0.00 0.00 0.00	70 1.16 1.54 92.11	4 0.07 0.09 0.73	1 0.02 0.02 50.00	15 0.25 0.33 15.46	4531 75.29
2:single	274 4.55 21.42 5.98	30 0.50 2.35 8.47	341 5.67 26.66 97.43	8 0.13 0.63 61.54	0 0.00 0.00 0.00	6 0.10 0.47 7.89	538 8.94 42.06 98.72	1 0.02 0.08 50.00	81 1.35 6.33 83.51	1279 21.25
3:knockout	115 1.91 91.27 2.51	5 0.08 3.97 1.41	2 0.03 1.59 0.57	3 0.05 2.38 23.08	1 0.02 0.79 100.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	126 2.09
4:jacknife	76 1.26 97.44 1.66	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02 1.28 0.18	0 0.00 0.00 0.00	1 0.02 1.28 1.03	78 1.30
5:Other	2 0.03 50.00 0.04	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.03 50.00 0.37	0 0.00 0.00 0.00	0 0.00 0.00 0.00	4 0.07
Total	4580 76.11	354 5.88	350 5.82	13 0.22	1 0.02	76 1.26	545 9.06	2 0.03	97 1.61	6018 100.00

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 20:21 Tuesday, June 28, 2005 129

The FREQ Procedure

Table 1 of pconfig by nextstep
Controlling for pnewpool=MI22D

pconfig nextstep

Frequency Percent Row Pct Col Pct	1:contth	2:contst	3:return	4:kill	Total
1:double	4113 68.34 90.77 89.80	328 5.45 7.24 45.68	75 1.25 1.66 12.04	15 0.25 0.33 15.46	4531 75.29
2:single	274 4.55 21.42 5.98	379 6.30 29.63 52.79	545 9.06 42.61 87.48	81 1.35 6.33 83.51	1279 21.25
3:knockout	115 1.91 91.27 2.51	11 0.18 8.73 1.53	0 0.00 0.00 0.00	0 0.00 0.00 0.00	126 2.09
4:jacknife	76 1.26 97.44 1.66	0 0.00 0.00 0.00	1 0.02 1.28 0.16	1 0.02 1.28 1.03	78 1.30
5:Other	2 0.03 50.00 0.04	0 0.00 0.00 0.00	2 0.03 50.00 0.32	0 0.00 0.00 0.00	4 0.07
Total	4580 76.11	718 11.93	623 10.35	97 1.61	6018 100.00

Statistics from water.regfile for regfile 20:21 Tuesday, June 28, 2005 130

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	85712	0	364360192709	4250982.27	3515664.00	4331559.00
strtlcktime	Start/lockge/time	85712	0	1.137393E14	1326993904	1262306700	1388533680
arrtime	Arriv/time	85712	0	1.1373902E14	1326990620	1262306700	1388530800
deptime	Leave/lockge/time	85712	0	1.1373952E14	1326996468	1262307720	1388536080
BOW_OVER_SILL	BOW_OVER_SILL	85712	0	1.1373937E14	1326994738	1262307000	1388534700
END_OF_ENTRY	END_OF_ENTRY	85712	0	1.1373941E14	1326995214	1262307060	1388535000
START_OF_EXIT	START_OF_EXIT	85712	0	1.1373948E14	1326995939	1262307660	1388535600
SIGNAL_DATE	SIGNAL_DATE	0	85712	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	85712	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	74637	11075	464559.00	6.2242453	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	74637	11075	244995.00	3.2824872	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	85712	.	.	.	.
vess_no		85712	0	69328105871	808849.47	2611.00	8888864.00
vss_hp		85004	708	331181509	3896.07	60.0000000	81800.00
frsttime		85712	0	1.1373902E14	1326990620	1262306700	1388530800
lasttime		85712	0	1.1373952E14	1326996468	1262307720	1388536080
newpoolno		85712	0	2148095.00	25.0617766	1.0000000	28.0000000
oldpoolno		85712	0	2150119.00	25.0853906	1.0000000	28.0000000
waitmin	Wait/before/lockge	85712	0	4692155.00	54.7432682	0	7423.00
lockmin	Wait/lockge/time	85712	0	3662850.00	42.7343896	4.0000000	1823.00
year		85712	0	171552505	2001.50	2000.00	2003.00
fly		85712	0	36357.00	0.4241763	0	1.0000000
turnback		85712	0	26851.00	0.3132700	0	1.0000000
exchange		85712	0	22503.00	0.2625420	0	1.0000000
lock		85712	0	2106251.00	24.5735836	1.0000000	27.0000000
totmin		85712	0	8355005.00	97.4776577	4.0000000	7490.00
month		85712	0	610314.00	7.1205199	1.0000000	12.0000000
day		85712	0	1344850.00	15.6903351	1.0000000	31.0000000
sunrise		85009	703	1968891208	23160.97	19414.00	27155.00
sunset		85009	703	5775001097	67934.00	59694.00	75152.00
sequpstr		85712	0	14034.00	0.1637344	0	1.0000000
seqdstr		85712	0	20716.00	0.2416931	0	1.0000000
plock		85712	0	2013115.00	23.4869680	1.0000000	27.0000000
pempty		75006	10706	193363.00	2.5779671	0	50.0000000
pfull		75006	10706	516691.00	6.8886622	0	28.0000000
parrtime		85712	0	1.1371451E14	1326704691	1262304600	1388521920
pstrtlcktime		85712	0	1.1371497E14	1326709997	1262304600	1388521920
pdeptime		85712	0	1.1371524E14	1326713197	1262305620	1388523540
birth		85712	0	0	0	0	0
transithrs		85712	0	6605118.75	77.0617737	-249.0333333	8099.42
reclock		85712	0	0	0	0	0
i		85712	0	19664273.00	229.4226363	58.0000000	401.0000000
pctpsysdn		79996	5716	78195.55	0.9774932	0	98.9510000
pctplckdn		79996	5716	37415.49	0.4677170	0	98.3000000
cumdown		84949	763	3459840.00	40.7284371	0	107520.00
pctdown		84949	763	32248.08	0.3796170	0	98.3000000
pcttrandn		84697	1015	113236.72	1.3369626	0	100.0000000
pctsysdn		84949	763	74098.21	0.8722670	0	98.6320000
pctlckdn		84949	763	32248.08	0.3796170	0	98.3000000
stime		85712	0	3800903640	44345.06	0	86340.00
etime		85712	0	3812191440	44476.75	0	86340.00
sdate		85712	0	1316383109	15358.21	14610.00	16070.00

Statistics from water.regfile for regfile 20:21 Tuesday, June 28, 2005 131

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		85712	0	1316385522	15358.24	14610.00	16071.00
hrsduration		85712	0	61047.50	0.7122398	0.0666667	30.3833333
ndays		85712	0	1.0000000	0.000011667	0	1.0000000
pctday		85694	18	4690288.06	54.7329809	0	100.0000000
pctpsysnite		85662	50	3855680.76	45.0103986	0	100.0000000
pctplcknite		85691	21	3868983.94	45.1504119	0	100.0000000
pcttrannite		85144	568	4019110.35	47.2036826	0	100.0000000
pctsysnite		85630	82	3856938.07	45.0419020	0	100.0000000
pctlcknite		85694	18	3879111.94	45.2670191	0	100.0000000
stage		41058	44654	877971.46	21.3836880	8.3500000	33.0800000
flow		8953	76759	747018067	83437.74	16077.99	306262.78
jan		85712	0	3072.00	0.0358410	0	1.0000000
feb		85712	0	3423.00	0.0399361	0	1.0000000
mar		85712	0	6992.00	0.0815755	0	1.0000000
apr		85712	0	7609.00	0.0887740	0	1.0000000
may		85712	0	7244.00	0.0845156	0	1.0000000
jun		85712	0	8503.00	0.0992043	0	1.0000000
jul		85712	0	8620.00	0.1005693	0	1.0000000
aug		85712	0	8031.00	0.0936975	0	1.0000000
sep		85712	0	7658.00	0.0893457	0	1.0000000
oct		85712	0	8607.00	0.1004177	0	1.0000000
nov		85712	0	9270.00	0.1081529	0	1.0000000
dec		85712	0	6683.00	0.0779704	0	1.0000000
m31day		85712	0	49249.00	0.5745870	0	1.0000000
m30day		85712	0	33040.00	0.3854769	0	1.0000000
qtr1		85712	0	13487.00	0.1573525	0	1.0000000
qtr2		85712	0	23356.00	0.2724939	0	1.0000000
qtr3		85712	0	24309.00	0.2836126	0	1.0000000
qtr4		85712	0	24560.00	0.2865410	0	1.0000000
psingle		85712	0	65903.00	0.7688888	0	1.0000000
pdouble		85712	0	15912.00	0.1856450	0	1.0000000
pknockout		85712	0	1445.00	0.0168588	0	1.0000000
pjacknife		85712	0	529.0000000	0.0061718	0	1.0000000
pothtype		85712	0	1923.00	0.0224356	0	1.0000000
pexchange		85712	0	23513.00	0.2743256	0	1.0000000
pturnback		85712	0	27820.00	0.3245753	0	1.0000000
single		85712	0	85662.00	0.9994167	0	1.0000000
double		85712	0	38.0000000	0.000443345	0	1.0000000
knockout		85712	0	10.0000000	0.000116670	0	1.0000000
jacknife		85712	0	0	0	0	0
othtype		85712	0	2.0000000	0.000023334	0	1.0000000
contthru		1279	84433	274.0000000	0.2142299	0	1.0000000
return		1279	84433	545.0000000	0.4261142	0	1.0000000
contstop		1279	84433	379.0000000	0.2963253	0	1.0000000
kill		1279	84433	81.0000000	0.0633307	0	1.0000000
contsame		1279	84433	274.0000000	0.2142299	0	1.0000000
contdouble		1279	84433	30.0000000	0.0234558	0	1.0000000
contsingle		1279	84433	341.0000000	0.2666145	0	1.0000000
contko		1279	84433	8.0000000	0.0062549	0	1.0000000
contjk		1279	84433	0	0	0	0
retdouble		1279	84433	6.0000000	0.0046912	0	1.0000000
retsingle		1279	84433	538.0000000	0.4206411	0	1.0000000

SAS Program Output from “fitmod.sas” for Tows Only (cont.)

Statistics from water.regfile for regfile 20:21 Tuesday, June 28, 2005 132

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1279	84433	1.0000000	0.000781861	0	1.0000000
retjk		1279	84433	0	0	0	0
xkill		1279	84433	81.0000000	0.0633307	0	1.0000000
logtrnhrs		1272	84440	2143.55	1.6851769	-2.9957323	8.6660614
plockhrs		1279	84433	589.2295082	0.4606955	0.1311475	3.7377049
loglckhrs		1279	84433	-1131.62	-0.8847687	-2.0314323	1.3184718
thrusingle		1279	84433	274.0000000	0.2142299	0	1.0000000
thruother		1279	84433	0	0	0	0
contother		1279	84433	8.0000000	0.0062549	0	1.0000000
retother		1279	84433	1.0000000	0.000781861	0	1.0000000
thrudoubnite		1277	84435	0	0	0	0
thrusingnite		1277	84435	112.8086900	0.0883388	0	1.0000000
thruothnite		1277	84435	0	0	0	0
pdoubnite		1279	84433	0	0	0	0
psingnite		1279	84433	571.7216900	0.4470068	0	1.0000000
pothnite		1279	84433	0	0	0	0

```
Transition models using key variables from stepwise proc      20:21 Tuesday, June 28, 2005 133
                        transitions  to contthru

                              The REG Procedure
                                Model: MODEL1
                          Dependent Variable: contsame

                            Stepwise Selection: Step 1

                  Variable psingle Entered: R-Square = 0.4438 and C(p) = 41.6027

                                 Analysis of Variance

                                          Sum of           Mean
Source                       DF         Squares         Square    F Value    Pr > F

Model                         1       485.65213       485.65213    4799.57    <.0001
Error                      6016       608.73803         0.10119
Corrected Total            6017      1094.39016


                       Parameter     Standard
      Variable          Estimate        Error   Type II SS  F Value  Pr > F

      Intercept          0.90863      0.00462   3912.56299  38666.8  <.0001
      psingle           -0.69440      0.01002    485.65213  4799.57  <.0001

                          Bounds on condition number: 1, 1
------------------------------------------------------------------------------------------------------------------------

                            Stepwise Selection: Step 2

                     Variable apr Entered: R-Square = 0.4453 and C(p) = 26.8161

                                 Analysis of Variance

                                          Sum of           Mean
Source                       DF         Squares         Square    F Value    Pr > F

Model                         2       487.33960       243.66980    2414.42    <.0001
Error                      6015       607.05056         0.10092
Corrected Total            6017      1094.39016


                       Parameter     Standard
      Variable          Estimate        Error   Type II SS  F Value  Pr > F

      Intercept          0.91405      0.00480   3658.09281  36246.5  <.0001
      apr               -0.05640      0.01379     1.68747    16.72  <.0001
      psingle           -0.69395      0.01001    484.96456  4805.30  <.0001

                       Bounds on condition number: 1.0001, 4.0005
------------------------------------------------------------------------------------------------------------------------

                            Stepwise Selection: Step 3
```

Transition models using key variables from stepwise proc transitions to contthru 20:21 Tuesday, June 28, 2005 134

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 3

Variable pothtype Entered: R-Square = 0.4459 and C(p) = 21.9883

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	488.02596	162.67532	1613.44	<.0001
Error	6014	606.36420	0.10083		
Corrected Total	6017	1094.39016			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.91442	0.00480	3657.77917	36278.3	<.0001
apr	-0.05670	0.01379	1.70535	16.91	<.0001
psingle	-0.69430	0.01001	485.36430	4813.91	<.0001
pothtype	-0.41442	0.15884	0.68636	6.81	0.0091

Bounds on condition number: 1.0003, 9.0022

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	psingle		1	0.4438	0.4438	41.6027	4799.57	<.0001
2	apr		2	0.0015	0.4453	26.8161	16.72	<.0001
3	pothtype		3	0.0006	0.4459	21.9883	6.81	0.0091

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 135

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.1039 and C(p) = 1155.647

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	49.30621	49.30621	517.96	<.0001
Error	4468	425.32045	0.09519		
Corrected Total	4469	474.62666			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.99869	0.00565	11920	125223	<.0001
pturnback	-0.22294	0.00980	49.30621	517.96	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.2606 and C(p) = 174.6988

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	123.67375	61.83688	787.07	<.0001
Error	4467	350.95291	0.07857		
Corrected Total	4469	474.62666			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.18309	0.00789	6014.56919	76554.7	<.0001
pturnback	-0.40735	0.01073	113.24019	1441.34	<.0001
pexchange	-0.31955	0.01039	74.36754	946.57	<.0001

Bounds on condition number: 1.4536, 5.8145

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 136

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable jun Entered: R-Square = 0.2677 and C(p) = 131.9388

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	127.06019	42.35340	544.21	<.0001
Error	4466	347.56647	0.07783		
Corrected Total	4469	474.62666			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.19220	0.00797	5883.07145	75593.6	<.0001
jun	-0.08208	0.01244	3.38643	43.51	<.0001
pturnback	-0.40657	0.01068	112.79216	1449.30	<.0001
pexchange	-0.31627	0.01035	72.67635	933.84	<.0001

Bounds on condition number: 1.457, 11.74

Stepwise Selection: Step 4

Variable pctlcknite Entered: R-Square = 0.2729 and C(p) = 101.1314

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	129.54232	32.38558	419.03	<.0001
Error	4465	345.08434	0.07729		
Corrected Total	4469	474.62666			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.21583	0.00897	4712.87867	60979.3	<.0001
jun	-0.08701	0.01243	3.78690	49.00	<.0001
pctlcknite	-0.00050700	0.00008946	2.48213	32.12	<.0001
pturnback	-0.40564	0.01064	112.24887	1452.37	<.0001
pexchange	-0.31579	0.01031	72.45330	937.46	<.0001

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 137

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.4571, 19.696

Stepwise Selection: Step 5

Variable jul Entered: R-Square = 0.2790 and C(p) = 64.8818

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	132.43619	26.48724	345.54	<.0001
Error	4464	342.19047	0.07666		
Corrected Total	4469	474.62666			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.22661	0.00911	4582.14665	59775.8	<.0001
jun	-0.09946	0.01254	4.81925	62.87	<.0001
jul	-0.07598	0.01237	2.89387	37.75	<.0001
pctlcknite	-0.00055350	0.00008942	2.93706	38.32	<.0001
pturnback	-0.40183	0.01062	109.77785	1432.09	<.0001
pexchange	-0.31077	0.01030	69.72692	909.61	<.0001

Bounds on condition number: 1.4663, 30.051

Stepwise Selection: Step 6

Variable may Entered: R-Square = 0.2843 and C(p) = 33.5473

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	134.95820	22.49303	295.54	<.0001
Error	4463	339.66846	0.07611		
Corrected Total	4469	474.62666			

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 138

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.23796	0.00929	4420.45113	58081.6	<.0001
may	-0.08390	0.01458	2.52201	33.14	<.0001
jun	-0.11039	0.01264	5.80263	76.24	<.0001
jul	-0.08691	0.01247	3.69844	48.59	<.0001
pctlcknite	-0.00058219	0.00008924	3.23938	42.56	<.0001
pturnback	-0.40171	0.01058	109.71112	1441.53	<.0001
pexchange	-0.30936	0.01027	69.05650	907.35	<.0001

Bounds on condition number: 1.4671, 42.626

Stepwise Selection: Step 7

Variable aug Entered: R-Square = 0.2860 and C(p) = 25.2284

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	135.73890	19.39127	255.32	<.0001
Error	4462	338.88775	0.07595		
Corrected Total	4469	474.62666			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.24540	0.00956	4187.87330	55140.1	<.0001
may	-0.09175	0.01476	2.93316	38.62	<.0001
jun	-0.11834	0.01287	6.42104	84.54	<.0001
jul	-0.09494	0.01270	4.24202	55.85	<.0001
aug	-0.04309	0.01344	0.78070	10.28	0.0014
pctlcknite	-0.00059732	0.00008927	3.40033	44.77	<.0001
pturnback	-0.39982	0.01059	108.34439	1426.53	<.0001
pexchange	-0.30825	0.01027	68.48100	901.66	<.0001

Bounds on condition number: 1.4688, 58.173

Stepwise Selection: Step 8

Variable apr Entered: R-Square = 0.2876 and C(p) = 17.3749

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 139

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 8

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	136.48440	17.06055	225.07	<.0001
Error	4461	338.14226	0.07580		
Corrected Total	4469	474.62666			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.25411	0.00995	3891.45817	51338.7	<.0001
apr	-0.04612	0.01471	0.74550	9.84	0.0017
may	-0.10045	0.01501	3.39543	44.79	<.0001
jun	-0.12718	0.01316	7.07574	93.35	<.0001
jul	-0.10378	0.01300	4.83055	63.73	<.0001
aug	-0.05170	0.01370	1.07865	14.23	0.0002
pctlcknite	-0.00061610	0.00008938	3.60135	47.51	<.0001
pturnback	-0.39943	0.01058	108.11546	1426.33	<.0001
pexchange	-0.30667	0.01027	67.61634	892.04	<.0001

Bounds on condition number: 1.4724, 76.98

Stepwise Selection: Step 9

Variable mar Entered: R-Square = 0.2887 and C(p) = 12.3464

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	137.01616	15.22402	201.12	<.0001
Error	4460	337.61050	0.07570		
Corrected Total	4469	474.62666			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.26104	0.01028	3661.92004	48375.8	<.0001
mar	-0.05052	0.01906	0.53176	7.02	0.0081
apr	-0.05240	0.01489	0.93803	12.39	0.0004
may	-0.10673	0.01518	3.74006	49.41	<.0001
jun	-0.13346	0.01337	7.54722	99.70	<.0001
jul	-0.11003	0.01320	5.25651	69.44	<.0001
aug	-0.05791	0.01389	1.31476	17.37	<.0001

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 9

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
pctlcknite	-0.00062114	0.00008934	3.65876	48.33	<.0001
pturnback	-0.40041	0.01058	108.51345	1433.52	<.0001
pexchange	-0.30700	0.01026	67.75518	895.08	<.0001

Bounds on condition number: 1.4726, 97.848

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.1039	0.1039	1155.65	517.96	<.0001
2	pexchange		2	0.1567	0.2606	174.699	946.57	<.0001
3	jun		3	0.0071	0.2677	131.939	43.51	<.0001
4	pctlcknite		4	0.0052	0.2729	101.131	32.12	<.0001
5	jul		5	0.0061	0.2790	64.8818	37.75	<.0001
6	may		6	0.0053	0.2843	33.5473	33.14	<.0001
7	aug		7	0.0016	0.2860	25.2284	10.28	0.0014
8	apr		8	0.0016	0.2876	17.3749	9.84	0.0017
9	mar		9	0.0011	0.2887	12.3464	7.02	0.0081

Logarithms of double lockage times using key variables from stepwise proc 141
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.1059 and C(p) = 1129.218

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	13.26689	13.26689	529.10	<.0001
Error	4468	112.03172	0.02507		
Corrected Total	4469	125.29860			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.67908	0.00290	1376.07575	54880.1	<.0001
pturnback	-0.11565	0.00503	13.26689	529.10	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.2572 and C(p) = 184.2061

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	32.22869	16.11434	773.43	<.0001
Error	4467	93.06992	0.02083		
Corrected Total	4469	125.29860			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.77220	0.00406	752.51750	36118.0	<.0001
pturnback	-0.20876	0.00553	29.74169	1427.49	<.0001
pexchange	-0.16136	0.00535	18.96180	910.09	<.0001

Bounds on condition number: 1.4536, 5.8145

Stepwise Selection: Step 3

Logarithms of double lockage times using key variables from stepwise proc 142
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable jun Entered: R-Square = 0.2651 and C(p) = 136.7046

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	33.21984	11.07328	537.08	<.0001
Error	4466	92.07876	0.02062		
Corrected Total	4469	125.29860			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.77712	0.00410	739.30621	35857.8	<.0001
jun	-0.04441	0.00640	0.99116	48.07	<.0001
pturnback	-0.20834	0.00550	29.61768	1436.52	<.0001
pexchange	-0.15958	0.00533	18.50309	897.44	<.0001

Bounds on condition number: 1.457, 11.74

Stepwise Selection: Step 4

Variable jul Entered: R-Square = 0.2707 and C(p) = 104.0833

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	33.91306	8.47826	414.24	<.0001
Error	4465	91.38555	0.02047		
Corrected Total	4469	125.29860			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.78133	0.00415	724.72669	35409.4	<.0001
jun	-0.05026	0.00646	1.23887	60.53	<.0001
jul	-0.03705	0.00637	0.69321	33.87	<.0001
pturnback	-0.20653	0.00549	29.01013	1417.40	<.0001
pexchange	-0.15715	0.00532	17.83448	871.37	<.0001

Logarithms of double lockage times using key variables from stepwise proc 143
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.466, 19.929

Stepwise Selection: Step 5

Variable pctlcknite Entered: R-Square = 0.2769 and C(p) = 66.9428

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	34.69676	6.93935	341.91	<.0001
Error	4464	90.60185	0.02030		
Corrected Total	4469	125.29860			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.79503	0.00469	584.18062	28782.9	<.0001
jun	-0.05357	0.00645	1.39780	68.87	<.0001
jul	-0.04040	0.00636	0.81816	40.31	<.0001
pctlcknite	-0.00028591	0.00004601	0.78370	38.61	<.0001
pturnback	-0.20584	0.00546	28.80491	1419.23	<.0001
pexchange	-0.15667	0.00530	17.72020	873.08	<.0001

Bounds on condition number: 1.4663, 30.051

Stepwise Selection: Step 6

Variable may Entered: R-Square = 0.2824 and C(p) = 34.5864

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	35.38467	5.89744	292.73	<.0001
Error	4463	89.91394	0.02015		
Corrected Total	4469	125.29860			

Logarithms of double lockage times using key variables from stepwise proc 144
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.80096	0.00478	566.21287	28104.7	<.0001
may	-0.04382	0.00750	0.68791	34.15	<.0001
jun	-0.05928	0.00650	1.67296	83.04	<.0001
jul	-0.04611	0.00641	1.04097	51.67	<.0001
pctlcknite	-0.00030090	0.00004591	0.86531	42.95	<.0001
pturnback	-0.20577	0.00544	28.78706	1428.88	<.0001
pexchange	-0.15593	0.00528	17.54407	870.82	<.0001

Bounds on condition number: 1.4671, 42.626

Stepwise Selection: Step 7

Variable aug Entered: R-Square = 0.2842 and C(p) = 25.5070

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	35.60651	5.08664	253.05	<.0001
Error	4462	89.69210	0.02010		
Corrected Total	4469	125.29860			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.80492	0.00492	538.16318	26772.5	<.0001
may	-0.04800	0.00760	0.80289	39.94	<.0001
jun	-0.06351	0.00662	1.84946	92.01	<.0001
jul	-0.05039	0.00654	1.19492	59.45	<.0001
aug	-0.02297	0.00691	0.22184	11.04	0.0009
pctlcknite	-0.00030896	0.00004593	0.90975	45.26	<.0001
pturnback	-0.20477	0.00545	28.41752	1413.71	<.0001
pexchange	-0.15534	0.00528	17.39061	865.15	<.0001

Bounds on condition number: 1.4688, 58.173

Stepwise Selection: Step 8

Logarithms of double lockage times using key variables from stepwise proc 145
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 8

Variable apr Entered: R-Square = 0.2856 and C(p) = 18.7314

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	35.78222	4.47278	222.90	<.0001
Error	4461	89.51638	0.02007		
Corrected Total	4469	125.29860			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.80915	0.00512	501.44260	24989.1	<.0001
apr	-0.02239	0.00757	0.17571	8.76	0.0031
may	-0.05223	0.00772	0.91787	45.74	<.0001
jun	-0.06780	0.00677	2.01112	100.22	<.0001
jul	-0.05468	0.00669	1.34101	66.83	<.0001
aug	-0.02715	0.00705	0.29746	14.82	0.0001
pctlcknite	-0.00031808	0.00004599	0.95993	47.84	<.0001
pturnback	-0.20457	0.00544	28.36039	1413.32	<.0001
pexchange	-0.15457	0.00528	17.17752	856.03	<.0001

Bounds on condition number: 1.4724, 76.98

Stepwise Selection: Step 9

Variable mar Entered: R-Square = 0.2868 and C(p) = 12.9841

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	35.93734	3.99304	199.29	<.0001
Error	4460	89.36126	0.02004		
Corrected Total	4469	125.29860			

Logarithms of double lockage times using key variables from stepwise proc 146
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 9

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.81289	0.00529	473.32631	23623.6	<.0001
mar	-0.02729	0.00981	0.15512	7.74	0.0054
apr	-0.02578	0.00766	0.22710	11.33	0.0008
may	-0.05562	0.00781	1.01566	50.69	<.0001
jun	-0.07120	0.00688	2.14778	107.20	<.0001
jul	-0.05805	0.00679	1.46342	73.04	<.0001
aug	-0.03050	0.00715	0.36479	18.21	<.0001
pctlcknite	-0.00032080	0.00004596	0.97596	48.71	<.0001
pturnback	-0.20510	0.00544	28.47238	1421.05	<.0001
pexchange	-0.15475	0.00528	17.21551	859.22	<.0001

Bounds on condition number: 1.4726, 97.848

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.1059	0.1059	1129.22	529.10	<.0001
2	pexchange		2	0.1513	0.2572	184.206	910.09	<.0001
3	jun		3	0.0079	0.2651	136.705	48.07	<.0001
4	jul		4	0.0055	0.2707	104.083	33.87	<.0001
5	pctlcknite		5	0.0063	0.2769	66.9428	38.61	<.0001
6	may		6	0.0055	0.2824	34.5864	34.15	<.0001
7	aug		7	0.0018	0.2842	25.5070	11.04	0.0009
8	apr		8	0.0014	0.2856	18.7314	8.76	0.0031
9	mar		9	0.0012	0.2868	12.9841	7.74	0.0054

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0255 and C(p) = 123.3030

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.79083	1.79083	31.94	<.0001
Error	1219	68.35626	0.05608		
Corrected Total	1220	70.14709			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.49753	0.00826	203.47224	3628.53	<.0001
pturnback	-0.08165	0.01445	1.79083	31.94	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.0630 and C(p) = 73.7012

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	4.42255	2.21128	40.98	<.0001
Error	1218	65.72454	0.05396		
Corrected Total	1220	70.14709			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.55452	0.01150	125.45884	2324.99	<.0001
pturnback	-0.13865	0.01636	3.87784	71.86	<.0001
pexchange	-0.11317	0.01620	2.63172	48.77	<.0001

Bounds on condition number: 1.3316, 5.3263

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 148

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable pctlckdn Entered: R-Square = 0.0775 and C(p) = 55.8043

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	5.43731	1.81244	34.09	<.0001
Error	1217	64.70978	0.05317		
Corrected Total	1220	70.14709			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.55047	0.01145	122.82118	2309.90	<.0001
pturnback	-0.13686	0.01624	3.77630	71.02	<.0001
pexchange	-0.11089	0.01609	2.52431	47.47	<.0001
pctlckdn	0.00389	0.00088932	1.01476	19.08	<.0001

Bounds on condition number: 1.333, 11

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0255	0.0255	123.303	31.94	<.0001
2	pexchange		2	0.0375	0.0630	73.7012	48.77	<.0001
3	pctlckdn		3	0.0145	0.0775	55.8043	19.08	<.0001

Logarithms of single lockage times using key variables from stepwise proc 149
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0336 and C(p) = 98.1137

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	7.10654	7.10654	42.44	<.0001
Error	1219	204.13439	0.16746		
Corrected Total	1220	211.24094			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.79534	0.01427	519.96676	3105.01	<.0001
pturnback	-0.16265	0.02497	7.10654	42.44	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.0812 and C(p) = 35.3740

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	17.15556	8.57778	53.83	<.0001
Error	1218	194.08537	0.15935		
Corrected Total	1220	211.24094			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.68396	0.01976	190.86356	1197.78	<.0001
pturnback	-0.27403	0.02811	15.14814	95.06	<.0001
pexchange	-0.22114	0.02785	10.04902	63.06	<.0001

Bounds on condition number: 1.3316, 5.3263

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 150
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable pctlckdn Entered: R-Square = 0.0874 and C(p) = 28.9178

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	18.46814	6.15605	38.86	<.0001
Error	1217	192.77280	0.15840		
Corrected Total	1220	211.24094			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.68857	0.01977	192.17561	1213.23	<.0001
pturnback	-0.27200	0.02803	14.91521	94.16	<.0001
pexchange	-0.21855	0.02778	9.80492	61.90	<.0001
pctlckdn	0.00442	0.00153	1.31257	8.29	0.0041

Bounds on condition number: 1.333, 11

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0336	0.0336	98.1137	42.44	<.0001
2	pexchange		2	0.0476	0.0812	35.3740	63.06	<.0001
3	pctlckdn		3	0.0062	0.0874	28.9178	8.29	0.0041

Logarithms of single lockage times using key variables from stepwise proc 151
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0531 and C(p) = 651.2542

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	169.22731	169.22731	227.90	<.0001
Error	4062	3016.24113	0.74255		
Corrected Total	4063	3185.46844			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.05410	0.01449	32991	44429.9	<.0001
jun	-0.60742	0.04024	169.22731	227.90	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable waitmin Entered: R-Square = 0.0857 and C(p) = 491.1507

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	273.00928	136.50464	190.34	<.0001
Error	4061	2912.45916	0.71718		
Corrected Total	4063	3185.46844			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.18745	0.01805	22375	31198.5	<.0001
jun	-0.54420	0.03989	133.47875	186.12	<.0001
waitmin	-0.00068930	0.00005730	103.78198	144.71	<.0001

Bounds on condition number: 1.0177, 4.0706

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 152
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 3

Variable pcttrandn Entered: R-Square = 0.1243 and C(p) = 301.2048

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	395.89694	131.96565	192.07	<.0001
Error	4060	2789.57150	0.68709		
Corrected Total	4063	3185.46844			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.17749	0.01768	22196	32304.3	<.0001
jun	-0.52148	0.03908	122.33428	178.05	<.0001
pcttrandn	0.02097	0.00157	122.88766	178.85	<.0001
waitmin	-0.00078099	0.00005650	131.26805	191.05	<.0001

Bounds on condition number: 1.0329, 9.2045

Stepwise Selection: Step 4

Variable may Entered: R-Square = 0.1401 and C(p) = 224.7253

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	446.14117	111.53529	165.27	<.0001
Error	4059	2739.32727	0.67488		
Corrected Total	4063	3185.46844			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.21344	0.01801	21486	31837.5	<.0001
may	-0.39467	0.04574	50.24423	74.45	<.0001
jun	-0.56394	0.03904	140.79458	208.62	<.0001
pcttrandn	0.02075	0.00155	120.29792	178.25	<.0001
waitmin	-0.00075764	0.00005606	123.24598	182.62	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 4

Bounds on condition number: 1.036, 16.418

Stepwise Selection: Step 5

Variable jul Entered: R-Square = 0.1583 and C(p) = 135.8674

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	504.31024	100.86205	152.66	<.0001
Error	4058	2681.15820	0.66071		
Corrected Total	4063	3185.46844			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.26147	0.01854	20446	30945.4	<.0001
may	-0.46152	0.04582	67.04593	101.48	<.0001
jun	-0.63594	0.03939	172.24489	260.70	<.0001
jul	-0.36021	0.03839	58.16907	88.04	<.0001
pcttrandn	0.02012	0.00154	112.87777	170.84	<.0001
waitmin	-0.00067220	0.00005622	94.47061	142.98	<.0001

Bounds on condition number: 1.0769, 26.379

Stepwise Selection: Step 6

Variable apr Entered: R-Square = 0.1718 and C(p) = 70.7744

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	547.26455	91.21076	140.26	<.0001
Error	4057	2638.20389	0.65028		
Corrected Total	4063	3185.46844			

Logarithms of single lockage times using key variables from stepwise proc 154
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.30683	0.01922	19247	29597.2	<.0001
apr	-0.36954	0.04547	42.95431	66.05	<.0001
may	-0.51647	0.04595	82.14407	126.32	<.0001
jun	-0.69360	0.03971	198.35596	305.03	<.0001
jul	-0.41750	0.03873	75.55345	116.19	<.0001
pcttrandn	0.01967	0.00153	107.73579	165.67	<.0001
waitmin	-0.00062806	0.00005603	81.69678	125.63	<.0001

Bounds on condition number: 1.1124, 38.711

Stepwise Selection: Step 7

Variable mar Entered: R-Square = 0.1762 and C(p) = 50.7448

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	561.36830	80.19547	123.96	<.0001
Error	4056	2624.10014	0.64697		
Corrected Total	4063	3185.46844			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.33414	0.02004	17900	27667.7	<.0001
mar	-0.27308	0.05849	14.10375	21.80	<.0001
apr	-0.39423	0.04566	48.23017	74.55	<.0001
may	-0.54121	0.04614	89.01370	137.59	<.0001
jun	-0.71780	0.03995	208.86245	322.83	<.0001
jul	-0.44172	0.03898	83.07832	128.41	<.0001
pcttrandn	0.01953	0.00152	106.07763	163.96	<.0001
waitmin	-0.00063863	0.00005594	84.33091	130.35	<.0001

Bounds on condition number: 1.1323, 52.991

Stepwise Selection: Step 8

Logarithms of single lockage times using key variables from stepwise proc 155
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 8

Variable thrudoubnite Entered: R-Square = 0.1784 and C(p) = 41.7468

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	568.40948	71.05119	110.09	<.0001
Error	4055	2617.05896	0.64539		
Corrected Total	4063	3185.46844			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.28555	0.02484	11289	17491.0	<.0001
mar	-0.26775	0.05844	13.54829	20.99	<.0001
apr	-0.38912	0.04563	46.93408	72.72	<.0001
may	-0.52933	0.04622	84.62996	131.13	<.0001
jun	-0.70296	0.04015	197.80183	306.48	<.0001
jul	-0.42858	0.03914	77.39870	119.93	<.0001
thrudoubnite	0.09318	0.02821	7.04118	10.91	0.0010
pcttrandn	0.01959	0.00152	106.78184	165.45	<.0001
waitmin	-0.00063578	0.00005587	83.56131	129.47	<.0001

Bounds on condition number: 1.1458, 69.03

Stepwise Selection: Step 9

Variable sep Entered: R-Square = 0.1807 and C(p) = 32.7067

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	575.47754	63.94195	99.32	<.0001
Error	4054	2609.99090	0.64381		
Corrected Total	4063	3185.46844			

Logarithms of single lockage times using key variables from stepwise proc 156
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 9

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.25626	0.02634	9839.11505	15282.7	<.0001
mar	-0.24122	0.05891	10.79291	16.76	<.0001
apr	-0.36372	0.04621	39.87798	61.94	<.0001
may	-0.50353	0.04682	74.46559	115.66	<.0001
jun	-0.67770	0.04082	177.43371	275.60	<.0001
jul	-0.40328	0.03983	66.01131	102.53	<.0001
sep	0.15974	0.04821	7.06805	10.98	0.0009
thrudoubnite	0.09689	0.02820	7.60211	11.81	0.0006
pcttrandn	0.01938	0.00152	104.25330	161.93	<.0001
waitmin	-0.00062575	0.00005589	80.70705	125.36	<.0001

Bounds on condition number: 1.1878, 89.149

Stepwise Selection: Step 10

Variable dec Entered: R-Square = 0.1820 and C(p) = 27.9685

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	10	579.79150	57.97915	90.18	<.0001
Error	4053	2605.67694	0.64290		
Corrected Total	4063	3185.46844			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.23621	0.02744	8944.86967	13913.3	<.0001
mar	-0.22013	0.05943	8.81946	13.72	0.0002
apr	-0.34389	0.04681	34.69381	53.96	<.0001
may	-0.48396	0.04739	67.04162	104.28	<.0001
jun	-0.65893	0.04143	162.60809	252.93	<.0001
jul	-0.38434	0.04046	57.99868	90.21	<.0001
sep	0.18081	0.04886	8.80482	13.70	0.0002
dec	0.14316	0.05526	4.31396	6.71	0.0096
thrudoubnite	0.09196	0.02824	6.81632	10.60	0.0011
pcttrandn	0.01932	0.00152	103.67632	161.26	<.0001
waitmin	-0.00061504	0.00005600	77.54546	120.62	<.0001

Logarithms of single lockage times using key variables from stepwise proc 157
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 10

Bounds on condition number: 1.2279, 112.16

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Label	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun			1	0.0531	0.0531	651.254	227.90	<.0001
2	waitmin		Wait/before/lockge	2	0.0326	0.0857	491.151	144.71	<.0001
3	pcttrandn			3	0.0386	0.1243	301.205	178.85	<.0001
4	may			4	0.0158	0.1401	224.725	74.45	<.0001
5	jul			5	0.0183	0.1583	135.867	88.04	<.0001
6	apr			6	0.0135	0.1718	70.7744	66.05	<.0001
7	mar			7	0.0044	0.1762	50.7448	21.80	<.0001
8	thrudoubnite			8	0.0022	0.1784	41.7468	10.91	0.0010
9	sep			9	0.0022	0.1807	32.7067	10.98	0.0009
10	dec			10	0.0014	0.1820	27.9685	6.71	0.0096

Logarithms of single lockage times using key variables from stepwise proc 158
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0807 and C(p) = 565.1573

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	20.89770	20.89770	356.32	<.0001
Error	4060	238.11656	0.05865		
Corrected Total	4061	259.01426			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.08382	0.00407	4152.44160	70801.1	<.0001
jun	-0.21346	0.01131	20.89770	356.32	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jul Entered: R-Square = 0.1142 and C(p) = 398.3514

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	29.59208	14.79604	261.78	<.0001
Error	4059	229.42218	0.05652		
Corrected Total	4061	259.01426			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.10531	0.00436	3635.83311	64326.2	<.0001
jun	-0.23496	0.01124	24.71573	437.28	<.0001
jul	-0.13592	0.01096	8.69438	153.82	<.0001

Bounds on condition number: 1.0244, 4.0975

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 159
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable may Entered: R-Square = 0.1570 and C(p) = 185.2754

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	40.66961	13.55654	251.95	<.0001
Error	4058	218.34465	0.05381		
Corrected Total	4061	259.01426			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.12795	0.00454	3328.23985	61856.3	<.0001
may	-0.18710	0.01304	11.07753	205.88	<.0001
jun	-0.25759	0.01108	29.10415	540.91	<.0001
jul	-0.15856	0.01081	11.57891	215.20	<.0001

Bounds on condition number: 1.0467, 9.3871

Stepwise Selection: Step 4

Variable apr Entered: R-Square = 0.1808 and C(p) = 67.7917

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	46.82364	11.70591	223.81	<.0001
Error	4057	212.19062	0.05230		
Corrected Total	4061	259.01426			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.14760	0.00482	2959.27375	56580.1	<.0001
apr	-0.13934	0.01285	6.15402	117.66	<.0001
may	-0.20675	0.01298	13.26373	253.60	<.0001
jun	-0.27724	0.01107	32.81165	627.35	<.0001
jul	-0.17821	0.01081	14.21651	271.81	<.0001

Logarithms of single lockage times using key variables from stepwise proc 160
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0769, 17.069

Stepwise Selection: Step 5

Variable mar Entered: R-Square = 0.1854 and C(p) = 46.7628

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	48.00975	9.60195	184.57	<.0001
Error	4056	211.00451	0.05202		
Corrected Total	4061	259.01426			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.15496	0.00505	2718.54916	52256.9	<.0001
mar	-0.07910	0.01657	1.18611	22.80	<.0001
apr	-0.14670	0.01290	6.72381	129.25	<.0001
may	-0.21411	0.01304	14.02591	269.61	<.0001
jun	-0.28460	0.01115	33.91552	651.94	<.0001
jul	-0.18557	0.01089	15.10600	290.37	<.0001

Bounds on condition number: 1.0989, 26.931

Stepwise Selection: Step 6

Variable sep Entered: R-Square = 0.1884 and C(p) = 33.3689

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	48.80261	8.13377	156.90	<.0001
Error	4055	210.21165	0.05184		
Corrected Total	4061	259.01426			

Logarithms of single lockage times using key variables from stepwise proc 161
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.14626	0.00551	2241.52478	43239.2	<.0001
mar	-0.07040	0.01669	0.92282	17.80	<.0001
apr	-0.13800	0.01307	5.77748	111.45	<.0001
may	-0.20541	0.01321	12.54265	241.95	<.0001
jun	-0.27590	0.01135	30.64799	591.20	<.0001
jul	-0.17687	0.01110	13.17088	254.07	<.0001
sep	0.05341	0.01366	0.79286	15.29	<.0001

Bounds on condition number: 1.145, 39.932

Stepwise Selection: Step 7

Variable dec Entered: R-Square = 0.1917 and C(p) = 18.9862

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	49.64641	7.09234	137.33	<.0001
Error	4054	209.36785	0.05164		
Corrected Total	4061	259.01426			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.13706	0.00595	1883.77580	36475.6	<.0001
mar	-0.06121	0.01681	0.68476	13.26	0.0003
apr	-0.12881	0.01324	4.88485	94.59	<.0001
may	-0.19621	0.01338	11.11402	215.20	<.0001
jun	-0.26671	0.01155	27.52910	533.05	<.0001
jul	-0.16767	0.01131	11.35811	219.93	<.0001
sep	0.06261	0.01382	1.05980	20.52	<.0001
dec	0.06299	0.01558	0.84380	16.34	<.0001

Bounds on condition number: 1.1932, 55.758

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Logarithms of single lockage times using key variables from stepwise proc 162
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun		1	0.0807	0.0807	565.157	356.32	<.0001
2	jul		2	0.0336	0.1142	398.351	153.82	<.0001
3	may		3	0.0428	0.1570	185.275	205.88	<.0001
4	apr		4	0.0238	0.1808	67.7917	117.66	<.0001
5	mar		5	0.0046	0.1854	46.7628	22.80	<.0001
6	sep		6	0.0031	0.1884	33.3689	15.29	<.0001
7	dec		7	0.0033	0.1917	18.9862	16.34	<.0001

Logarithms of single lockage times using key variables from stepwise proc 163
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable dec Entered: R-Square = 0.0859 and C(p) = 12.1794

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	35.22880	35.22880	22.16	<.0001
Error	236	375.11095	1.58945		
Corrected Total	237	410.33975			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.49821	0.08424	1398.00071	879.55	<.0001
dec	1.63512	0.34732	35.22880	22.16	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable aug Entered: R-Square = 0.1153 and C(p) = 6.2585

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	47.29815	23.64907	15.31	<.0001
Error	235	363.04160	1.54486		
Corrected Total	237	410.33975			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.39832	0.09041	1087.12053	703.70	<.0001
aug	0.63929	0.22872	12.06935	7.81	0.0056
dec	1.73501	0.34427	39.23712	25.40	<.0001

Bounds on condition number: 1.0109, 4.0436

All variables left in the model are significant at the 0.0100 level.

Logarithms of single lockage times using key variables from stepwise proc 164
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 2

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	dec		1	0.0859	0.0859	12.1794	22.16	<.0001
2	aug		2	0.0294	0.1153	6.2585	7.81	0.0056

Logarithms of single lockage times using key variables from stepwise proc 165
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0580 and C(p) = 31.4678

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.42890	1.42890	14.48	0.0002
Error	235	23.19383	0.09870		
Corrected Total	236	24.62273			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.90301	0.02158	172.87066	1751.53	<.0001
jun	-0.25278	0.06643	1.42890	14.48	0.0002

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable dec Entered: R-Square = 0.1051 and C(p) = 20.2508

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	2.58803	1.29401	13.74	<.0001
Error	234	22.03470	0.09417		
Corrected Total	236	24.62273			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.88411	0.02175	155.54885	1651.87	<.0001
jun	-0.23388	0.06511	1.21485	12.90	0.0004
dec	0.30820	0.08784	1.15913	12.31	0.0005

Bounds on condition number: 1.0069, 4.0276

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 166
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable aug Entered: R-Square = 0.1422 and C(p) = 11.8391

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	3.50113	1.16704	12.87	<.0001
Error	233	21.12159	0.09065		
Corrected Total	236	24.62273			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.85282	0.02351	119.27702	1315.79	<.0001
jun	-0.20258	0.06464	0.89030	9.82	0.0019
aug	0.17792	0.05606	0.91311	10.07	0.0017
dec	0.33950	0.08675	1.38829	15.31	0.0001

Bounds on condition number: 1.0342, 9.2555

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Label	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun			1	0.0580	0.0580	31.4678	14.48	0.0002
2	dec			2	0.0471	0.1051	20.2508	12.31	0.0005
3	aug			3	0.0371	0.1422	11.8391	10.07	0.0017

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Logarithms of single lockage times using key variables from stepwise proc                    167
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                              The REG Procedure
                                Model: MODEL1
                       Dependent Variable: transithrs

 No variable met the 0.0100 significance level for entry into the model.
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Logarithms of single lockage times using key variables from stepwise proc 168
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable apr Entered: R-Square = 0.0131 and C(p) = 33.6116

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	28.96885	28.96885	18.42	<.0001
Error	1385	2177.79737	1.57242		
Corrected Total	1386	2206.76622			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.85947	0.03599	4197.54069	2669.48	<.0001
apr	-0.43739	0.10190	28.96885	18.42	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable mar Entered: R-Square = 0.0234 and C(p) = 20.9177

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	51.55831	25.77916	16.55	<.0001
Error	1384	2155.20791	1.55723		
Corrected Total	1386	2206.76622			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.91299	0.03847	3849.84628	2472.24	<.0001
mar	-0.40114	0.10532	22.58946	14.51	0.0001
apr	-0.49092	0.10238	35.80561	22.99	<.0001

Bounds on condition number: 1.0192, 4.0768

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 169
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable contsingle Entered: R-Square = 0.0308 and C(p) = 12.2995

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	67.88192	22.62731	14.63	<.0001
Error	1383	2138.88430	1.54655		
Corrected Total	1386	2206.76622			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.96872	0.04200	3397.48251	2196.81	<.0001
mar	-0.35817	0.10579	17.72802	11.46	0.0007
apr	-0.47623	0.10213	33.62917	21.74	<.0001
contsingle	-0.25378	0.07811	16.32360	10.55	0.0012

Bounds on condition number: 1.0354, 9.2197

Stepwise Selection: Step 4

Variable retsingle Entered: R-Square = 0.0388 and C(p) = 2.7784

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	85.59367	21.39842	13.94	<.0001
Error	1382	2121.17255	1.53486		
Corrected Total	1386	2206.76622			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.10360	0.05768	2041.14788	1329.86	<.0001
mar	-0.36181	0.10540	18.08779	11.78	0.0006
apr	-0.50554	0.10211	37.62435	24.51	<.0001
contsingle	-0.38388	0.08673	30.06743	19.59	<.0001
retsingle	-0.26131	0.07692	17.71175	11.54	0.0007

Logarithms of single lockage times using key variables from stepwise proc 170
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.2629, 18.335

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	apr		1	0.0131	0.0131	33.6116	18.42	<.0001
2	mar		2	0.0102	0.0234	20.9177	14.51	0.0001
3	contsingle		3	0.0074	0.0308	12.2995	10.55	0.0012
4	retsingle		4	0.0080	0.0388	2.7784	11.54	0.0007

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	5756	0	23990257707	4167869.65	4052116.00	4298138.00
strtlcktime	Start/lockge/time	5756	0	7.6299052E12	1325556843	1267013820	1387104960
arrtime	Arriv/time	5756	0	7.629863E12	1325549519	1267013820	1387104960
deptime	Leave/lockge/time	5756	0	7.6299371E12	1325562392	1267014900	1387106700
BOW_OVER_SILL	BOW_OVER_SILL	5756	0	7.6299242E12	1325560141	1267014180	1387105800
END_OF_ENTRY	END_OF_ENTRY	5756	0	7.6299275E12	1325560711	1267014240	1387106100
START_OF_EXIT	START_OF_EXIT	5756	0	7.6299295E12	1325561062	1267014780	1387106400
SIGNAL_DATE	SIGNAL_DATE	0	5756	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	5756	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	5368	388	25936.00	4.8315946	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	5368	388	40664.00	7.5752608	0	48.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	5756	.	.	.	.
vess_no		5756	0	4328034117	751916.98	2611.00	8888846.00
vss_hp		5733	23	26983179.00	4706.64	75.0000000	81800.00
frsttime		5756	0	7.629863E12	1325549519	1267013820	1387104960
lasttime		5756	0	7.6299371E12	1325562392	1267014900	1387106700
newpoolno		5756	0	121788.00	21.1584434	15.0000000	28.0000000
oldpoolno		5756	0	126612.00	21.9965254	16.0000000	28.0000000
waitmin	Wait/before/lockge	5756	0	702618.00	122.0670605	0	5414.00
lockmin	Wait/lockge/time	5756	0	532289.00	92.4755038	9.0000000	1823.00
year		5756	0	11520366.00	2001.45	2000.00	2003.00
fly		5756	0	1578.00	0.2741487	0	1.0000000
turnback		5756	0	1877.00	0.3260945	0	1.0000000
exchange		5756	0	2301.00	0.3997568	0	1.0000000
lock		5756	0	121322.00	21.0774844	15.0000000	27.0000000
totmin		5756	0	1234907.00	214.5425643	14.0000000	5526.00
month		5756	0	40998.00	7.1226546	1.0000000	12.0000000
day		5756	0	90944.00	15.7998610	1.0000000	31.0000000
sunrise		5756	0	131801210	22898.06	20142.00	27112.00
sunset		5756	0	398348904	69205.86	59998.00	74308.00
sequpstr		5756	0	4452.00	0.7734538	0	1.0000000
seqdstr		5756	0	0	0	0	0
plock		5756	0	126632.00	22.0000000	22.0000000	22.0000000
pempty		5373	383	42424.00	7.8957752	0	48.0000000
pfull		5373	383	24941.00	4.6419133	0	28.0000000
parrtime		5756	0	7.6294863E12	1325484074	1267002300	1386932400
pstrtlcktime		5756	0	7.6295581E12	1325496538	1267002300	1386932400
pdeptime		5756	0	7.6295931E12	1325502623	1267003500	1386938100
birth		5756	0	0	0	0	0
transithrs		5756	0	74982.53	13.0268473	-24.6166667	6019.10
reclock		5756	0	0	0	0	0
i		5756	0	629395.00	109.3458999	58.0000000	383.0000000
pctpsysdn		5756	0	7633.94	1.3262587	0	98.1960000
pctplckdn		5756	0	4147.13	0.7204877	0	98.1960000
cumdown		5755	1	494700.00	85.9600348	0	107520.00
pctdown		5755	1	2186.43	0.3799180	0	98.3000000
pcttrandn		5737	19	3577.16	0.6235243	0	100.0000000
pctsysdn		5755	1	3556.42	0.6179712	0	98.3000000
pctlckdn		5755	1	2186.43	0.3799180	0	98.3000000
stime		5756	0	254088840	44143.30	60.0000002	86340.00
etime		5756	0	256650180	44588.29	60.0000002	86340.00
sdate		5756	0	88306147.00	15341.58	14664.00	16054.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		5756	0	88306487.00	15341.64	14664.00	16054.00
hrsduration		5756	0	8871.48	1.5412584	0.1500000	30.3833333
ndays		5756	0	1.0000000	0.000173732	0	1.0000000
pctday		5756	0	324754.06	56.4200936	0	100.0000000
pctpsysnite		5756	0	254900.53	44.2843176	0	100.0000000
pctplcknite		5756	0	252352.36	43.8416192	0	100.0000000
pcttrannite		5756	0	256243.84	44.5176927	0	100.0000000
pctsysnite		5756	0	245393.69	42.6326779	0	100.0000000
pctlcknite		5756	0	250845.94	43.5799064	0	100.0000000
stage		5702	54	74163.72	13.0066152	8.8500000	27.3400000
flow		5692	64	515830326	90623.74	16077.99	288497.84
jan		5756	0	19.0000000	0.0033009	0	1.0000000
feb		5756	0	50.0000000	0.0086866	0	1.0000000
mar		5756	0	574.0000000	0.0997220	0	1.0000000
apr		5756	0	599.0000000	0.1040653	0	1.0000000
may		5756	0	545.0000000	0.0946838	0	1.0000000
jun		5756	0	702.0000000	0.1219597	0	1.0000000
jul		5756	0	717.0000000	0.1245657	0	1.0000000
aug		5756	0	615.0000000	0.1068450	0	1.0000000
sep		5756	0	506.0000000	0.0879083	0	1.0000000
oct		5756	0	607.0000000	0.1054552	0	1.0000000
nov		5756	0	603.0000000	0.1047603	0	1.0000000
dec		5756	0	219.0000000	0.0380473	0	1.0000000
m31day		5756	0	3296.00	0.5726199	0	1.0000000
m30day		5756	0	2410.00	0.4186935	0	1.0000000
qtr1		5756	0	643.0000000	0.1117095	0	1.0000000
qtr2		5756	0	1846.00	0.3207088	0	1.0000000
qtr3		5756	0	1838.00	0.3193190	0	1.0000000
qtr4		5756	0	1429.00	0.2482627	0	1.0000000
psingle		5756	0	1176.00	0.2043085	0	1.0000000
pdouble		5756	0	4327.00	0.7517373	0	1.0000000
pknockout		5756	0	114.0000000	0.0198054	0	1.0000000
pjacknife		5756	0	136.0000000	0.0236275	0	1.0000000
pothtype		5756	0	3.0000000	0.000521195	0	1.0000000
pexchange		5756	0	2401.00	0.4171300	0	1.0000000
pturnback		5756	0	2243.00	0.3896803	0	1.0000000
single		5756	0	1225.00	0.2128214	0	1.0000000
double		5756	0	4287.00	0.7447880	0	1.0000000
knockout		5756	0	112.0000000	0.0194580	0	1.0000000
jacknife		5756	0	124.0000000	0.0215427	0	1.0000000
othtype		5756	0	8.0000000	0.0013899	0	1.0000000
contthru		5756	0	4452.00	0.7734538	0	1.0000000
return		5756	0	442.0000000	0.0767894	0	1.0000000
contstop		5756	0	797.0000000	0.1384642	0	1.0000000
kill		5756	0	65.0000000	0.0112926	0	1.0000000
contsame		5756	0	4452.00	0.7734538	0	1.0000000
contdouble		5756	0	331.0000000	0.0575052	0	1.0000000
contsingle		5756	0	460.0000000	0.0799166	0	1.0000000
contko		5756	0	5.0000000	0.000868659	0	1.0000000
contjk		5756	0	1.0000000	0.000173732	0	1.0000000
retdouble		5756	0	77.0000000	0.0133773	0	1.0000000
retsingle		5756	0	360.0000000	0.0625434	0	1.0000000

SAS Program Output from “fitmod.sas” for Tows Only (cont.)

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		5756	0	5.0000000	0.000868659	0	1.0000000
retjk		5756	0	0	0	0	0
xkill		5756	0	65.0000000	0.0112926	0	1.0000000
logtrnhrs		5738	18	9260.56	1.6139009	-4.0943446	8.7026930
plockhrs		5756	0	9568.31	1.6623196	0.1475410	14.5409836
loglckhrs		5756	0	1987.08	0.3452182	-1.9136493	2.6769711
thrusingle		5756	0	356.0000000	0.0618485	0	1.0000000
thruother		5756	0	227.0000000	0.0394371	0	1.0000000
contother		5756	0	6.0000000	0.0010424	0	1.0000000
retother		5756	0	5.0000000	0.000868659	0	1.0000000
thrudoubnite		5756	0	1700.41	0.2954159	0	1.0000000
thrusingnite		5756	0	167.0689400	0.0290252	0	1.0000000
thruothnite		5756	0	111.6980100	0.0194055	0	1.0000000
pdoubnite		5756	0	1907.14	0.3313313	0	1.0000000
psingnite		5756	0	489.9853200	0.0851260	0	1.0000000
pothnite		5756	0	126.3955900	0.0219589	0	1.0000000

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The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI22U

pconfig / doutcome Frequency Percent Row Pct Col Pct	1:contsame	2:contdouble	3:contsingle	4:contko	5:contjk	6:retdouble	7:retsingle	8:retko	x:kill	Total
1:double	3869 67.22 89.42 86.90	327 5.68 7.56 98.79	26 0.45 0.60 5.65	5 0.09 0.12 100.00	0 0.00 0.00 0.00	68 1.18 1.57 88.31	12 0.21 0.28 3.33	1 0.02 0.02 20.00	19 0.33 0.44 29.23	4327 75.17
2:single	356 6.18 30.27 8.00	3 0.05 0.26 0.91	430 7.47 36.56 93.48	0 0.00 0.00 0.00	0 0.00 0.00 0.00	7 0.12 0.60 9.09	334 5.80 28.40 92.78	0 0.00 0.00 0.00	46 0.80 3.91 70.77	1176 20.43
3:knockout	100 1.74 87.72 2.25	1 0.02 0.88 0.30	2 0.03 1.75 0.43	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.03 1.75 2.60	8 0.14 7.02 2.22	1 0.02 0.88 20.00	0 0.00 0.00 0.00	114 1.98
4:jacknife	124 2.15 91.18 2.79	0 0.00 0.00 0.00	2 0.03 1.47 0.43	0 0.00 0.00 0.00	1 0.02 0.74 100.00	0 0.00 0.00 0.00	6 0.10 4.41 1.67	3 0.05 2.21 60.00	0 0.00 0.00 0.00	136 2.36
5:Other	3 0.05 100.00 0.07	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.05
Total	4452 77.35	331 5.75	460 7.99	5 0.09	1 0.02	77 1.34	360 6.25	5 0.09	65 1.13	5756 100.00

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The FREQ Procedure

Table 1 of pconfig by nextstep
Controlling for pnewpool=MI22U

pconfig nextstep

Frequency Percent Row Pct Col Pct	1:contth	2:contst	3:return	4:kill	Total
1:double	3869 67.22 89.42 86.90	358 6.22 8.27 44.92	81 1.41 1.87 18.33	19 0.33 0.44 29.23	4327 75.17
2:single	356 6.18 30.27 8.00	433 7.52 36.82 54.33	341 5.92 29.00 77.15	46 0.80 3.91 70.77	1176 20.43
3:knockout	100 1.74 87.72 2.25	3 0.05 2.63 0.38	11 0.19 9.65 2.49	0 0.00 0.00 0.00	114 1.98
4:jacknife	124 2.15 91.18 2.79	3 0.05 2.21 0.38	9 0.16 6.62 2.04	0 0.00 0.00 0.00	136 2.36
5:Other	3 0.05 100.00 0.07	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.05
Total	4452 77.35	797 13.85	442 7.68	65 1.13	5756 100.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	85609	0	363924841672	4251011.48	3515664.00	4331559.00
strtlcktime	Start/lockge/time	85609	0	1.1360638E14	1327037821	1262306700	1388533680
arrtime	Arriv/time	85609	0	1.136061E14	1327034551	1262306700	1388530800
deptime	Leave/lockge/time	85609	0	1.136066E14	1327040384	1262307720	1388536080
BOW_OVER_SILL	BOW_OVER_SILL	85609	0	1.1360645E14	1327038653	1262307000	1388534700
END_OF_ENTRY	END_OF_ENTRY	85609	0	1.1360649E14	1327039130	1262307060	1388535000
START_OF_EXIT	START_OF_EXIT	85609	0	1.1360655E14	1327039854	1262307660	1388535600
SIGNAL_DATE	SIGNAL_DATE	0	85609	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	85609	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	74536	11073	464445.00	6.2311500	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	74536	11073	244568.00	3.2812064	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	85609	.	.	.	.
vess_no		85609	0	69127276579	807476.74	2611.00	8888864.00
vss_hp		84900	709	331491033	3904.49	60.0000000	81800.00
frsttime		85609	0	1.136061E14	1327034551	1262306700	1388530800
lasttime		85609	0	1.136066E14	1327040384	1262307720	1388536080
newpoolno		85609	0	2145251.00	25.0587088	1.0000000	28.0000000
oldpoolno		85609	0	2147894.00	25.0895817	1.0000000	28.0000000
waitmin	Wait/before/lockge	85609	0	4666186.00	54.5057879	0	7423.00
lockmin	Wait/lockge/time	85609	0	3657113.00	42.7187912	4.0000000	1823.00
year		85609	0	171346375	2001.50	2000.00	2003.00
fly		85609	0	36345.00	0.4245465	0	1.0000000
turnback		85609	0	26778.00	0.3127942	0	1.0000000
exchange		85609	0	22485.00	0.2626476	0	1.0000000
lock		85609	0	2103768.00	24.5741452	1.0000000	27.0000000
totmin		85609	0	8323299.00	97.2245792	4.0000000	7490.00
month		85609	0	610716.00	7.1337827	1.0000000	12.0000000
day		85609	0	1343175.00	15.6896471	1.0000000	31.0000000
sunrise		84908	701	1966900649	23165.08	19414.00	27155.00
sunset		84908	701	5766948462	67919.97	59694.00	75152.00
sequpstr		85609	0	14390.00	0.1680898	0	1.0000000
seqdstr		85609	0	20442.00	0.2387833	0	1.0000000
plock		85609	0	2012128.00	23.5036970	1.0000000	27.0000000
pempty		74900	10709	193234.00	2.5798932	0	50.0000000
pfull		74900	10709	516476.00	6.8955407	0	28.0000000
parrtime		85609	0	1.1358161E14	1326748521	1262304600	1388521920
pstrtlcktime		85609	0	1.1358207E14	1326753852	1262304600	1388521920
pdeptime		85609	0	1.1358235E14	1326757059	1262305620	1388523540
birth		85609	0	0	0	0	0
transithrs		85609	0	6598842.75	77.0811801	-249.0333333	8099.42
reclock		85609	0	0	0	0	0
i		85609	0	19622320.00	229.2086112	58.0000000	401.0000000
pctpsysdn		79893	5716	79296.08	0.9925285	0	98.9510000
pctplckdn		79893	5716	38166.50	0.4777202	0	98.3000000
cumdown		84849	760	3416220.00	40.2623484	0	107520.00
pctdown		84849	760	31919.68	0.3761940	0	98.3000000
pcttrandn		84603	1006	112843.11	1.3337956	0	100.0000000
pctsysdn		84849	760	73515.66	0.8664293	0	98.6320000
pctlckdn		84849	760	31919.68	0.3761940	0	98.3000000
stime		85609	0	3790553760	44277.51	0	86340.00
etime		85609	0	3802015740	44411.40	0	86340.00
sdate		85609	0	1314844795	15358.72	14610.00	16070.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		85609	0	1314847202	15358.75	14610.00	16071.00
hrsduration		85609	0	60951.88	0.7119799	0.0666667	30.3833333
ndays		85609	0	2.0000000	0.000023362	0	1.0000000
pctday		85591	18	4689569.66	54.7904530	0	100.0000000
pctpsysnite		85559	50	3850521.49	45.0042835	0	100.0000000
pctplcknite		85588	21	3860810.31	45.1092479	0	100.0000000
pcttrannite		85043	566	4012877.03	47.1864472	0	100.0000000
pctsysnite		85527	82	3846684.89	44.9762635	0	100.0000000
pctlcknite		85591	18	3869530.34	45.2095470	0	100.0000000
stage		40957	44652	876012.12	21.3885812	8.3500000	33.0800000
flow		8866	76743	730413390	82383.64	16077.99	306262.78
jan		85609	0	3073.00	0.0358958	0	1.0000000
feb		85609	0	3423.00	0.0399841	0	1.0000000
mar		85609	0	6904.00	0.0806457	0	1.0000000
apr		85609	0	7544.00	0.0881216	0	1.0000000
may		85609	0	7205.00	0.0841617	0	1.0000000
jun		85609	0	8496.00	0.0992419	0	1.0000000
jul		85609	0	8626.00	0.1007604	0	1.0000000
aug		85609	0	8017.00	0.0936467	0	1.0000000
sep		85609	0	7663.00	0.0895116	0	1.0000000
oct		85609	0	8562.00	0.1000128	0	1.0000000
nov		85609	0	9349.00	0.1092058	0	1.0000000
dec		85609	0	6747.00	0.0788118	0	1.0000000
m31day		85609	0	49134.00	0.5739350	0	1.0000000
m30day		85609	0	33052.00	0.3860809	0	1.0000000
qtr1		85609	0	13400.00	0.1565256	0	1.0000000
qtr2		85609	0	23245.00	0.2715252	0	1.0000000
qtr3		85609	0	24306.00	0.2839187	0	1.0000000
qtr4		85609	0	24658.00	0.2880305	0	1.0000000
psingle		85609	0	65800.00	0.7686108	0	1.0000000
pdouble		85609	0	15912.00	0.1858683	0	1.0000000
pknockout		85609	0	1445.00	0.0168791	0	1.0000000
pjacknife		85609	0	529.0000000	0.0061793	0	1.0000000
pothtype		85609	0	1923.00	0.0224626	0	1.0000000
pexchange		85609	0	23590.00	0.2755551	0	1.0000000
pturnback		85609	0	27755.00	0.3242066	0	1.0000000
single		85609	0	85592.00	0.9998014	0	1.0000000
double		85609	0	13.0000000	0.000151853	0	1.0000000
knockout		85609	0	1.0000000	0.000011681	0	1.0000000
jacknife		85609	0	0	0	0	0
othtype		85609	0	3.0000000	0.000035043	0	1.0000000
contthru		1176	84433	356.0000000	0.3027211	0	1.0000000
return		1176	84433	341.0000000	0.2899660	0	1.0000000
contstop		1176	84433	433.0000000	0.3681973	0	1.0000000
kill		1176	84433	46.0000000	0.0391156	0	1.0000000
contsame		1176	84433	356.0000000	0.3027211	0	1.0000000
contdouble		1176	84433	3.0000000	0.0025510	0	1.0000000
contsingle		1176	84433	430.0000000	0.3656463	0	1.0000000
contko		1176	84433	0	0	0	0
contjk		1176	84433	0	0	0	0
retdouble		1176	84433	7.0000000	0.0059524	0	1.0000000
retsingle		1176	84433	334.0000000	0.2840136	0	1.0000000

Statistics from water.regfile for regfile 20:21 Tuesday, June 28, 2005 178

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1176	84433	0	0	0	0
retjk		1176	84433	0	0	0	0
xkill		1176	84433	46.0000000	0.0391156	0	1.0000000
logtrnhrs		1174	84435	2297.24	1.9567596	-4.0943446	8.7026930
plockhrs		1176	84433	647.8852459	0.5509228	0.1475410	14.5409836
loglckhrs		1176	84433	-895.7139592	-0.7616615	-1.9136493	2.6769711
thrusingle		1176	84433	356.0000000	0.3027211	0	1.0000000
thruother		1176	84433	0	0	0	0
contother		1176	84433	0	0	0	0
retother		1176	84433	0	0	0	0
thrudoubnite		1176	84433	0	0	0	0
thrusingnite		1176	84433	167.0689400	0.1420654	0	1.0000000
thruothnite		1176	84433	0	0	0	0
pdoubnite		1176	84433	0	0	0	0
psingnite		1176	84433	489.9853200	0.4166542	0	1.0000000
pothnite		1176	84433	0	0	0	0

Transition models using key variables from stepwise proc transitions to contthru 20:21 Tuesday, June 28, 2005 179

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 1

Variable psingle Entered: R-Square = 0.3247 and C(p) = 4.5270

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	327.50004	327.50004	2766.82	<.0001
Error	5754	681.08369	0.11837		
Corrected Total	5755	1008.58374			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.89432	0.00508	3663.14760	30947.4	<.0001
psingle	-0.59160	0.01125	327.50004	2766.82	<.0001

Bounds on condition number: 1, 1

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	psingle		1	0.3247	0.3247	4.5270	2766.82	<.0001

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 180

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.2072 and C(p) = 400.8911

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	158.31374	158.31374	1116.59	<.0001
Error	4273	605.84233	0.14178		
Corrected Total	4274	764.15607			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.10183	0.00751	11115	78393.1	<.0001
pturnback	-0.39106	0.01170	158.31374	1116.59	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable sep Entered: R-Square = 0.2249 and C(p) = 298.7321

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	171.82090	85.91045	619.60	<.0001
Error	4272	592.33517	0.13866		
Corrected Total	4274	764.15607			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.08335	0.00766	10267	74048.2	<.0001
sep	0.20850	0.02112	13.50715	97.42	<.0001
pturnback	-0.38621	0.01158	154.13464	1111.64	<.0001

Bounds on condition number: 1.0018, 4.0072

Stepwise Selection: Step 3

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable oct Entered: R-Square = 0.2454 and C(p) = 179.4661

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	187.54645	62.51548	463.06	<.0001
Error	4271	576.60962	0.13501		
Corrected Total	4274	764.15607			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.05827	0.00790	9155.04362	67812.2	<.0001
sep	0.23146	0.02095	16.47400	122.02	<.0001
oct	0.20065	0.01859	15.72555	116.48	<.0001
pturnback	-0.37996	0.01144	148.81086	1102.26	<.0001

Bounds on condition number: 1.0126, 9.0875

Stepwise Selection: Step 4

Variable pexchange Entered: R-Square = 0.2565 and C(p) = 116.0251

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	196.03273	49.00818	368.34	<.0001
Error	4270	568.12335	0.13305		
Corrected Total	4274	764.15607			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.14748	0.01365	3292.62045	24747.2	<.0001
sep	0.21882	0.02086	14.63954	110.03	<.0001
oct	0.20168	0.01846	15.88670	119.40	<.0001
pturnback	-0.46844	0.01587	115.94419	871.43	<.0001
pexchange	-0.12668	0.01586	8.48627	63.78	<.0001

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.9593, 23.781

Stepwise Selection: Step 5

Variable pctlcknite Entered: R-Square = 0.2662 and C(p) = 60.9717

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	203.43130	40.68626	309.76	<.0001
Error	4269	560.72477	0.13135		
Corrected Total	4274	764.15607			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.18569	0.01449	2989.63838	22761.2	<.0001
sep	0.22361	0.02074	15.27328	116.28	<.0001
oct	0.21117	0.01838	17.33441	131.97	<.0001
pctlcknite	-0.00088655	0.00011813	7.39857	56.33	<.0001
pturnback	-0.46778	0.01577	115.61252	880.20	<.0001
pexchange	-0.12552	0.01576	8.33120	63.43	<.0001

Bounds on condition number: 1.9594, 34.783

Stepwise Selection: Step 6

Variable aug Entered: R-Square = 0.2706 and C(p) = 37.2912

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	206.76151	34.46025	263.86	<.0001
Error	4268	557.39457	0.13060		
Corrected Total	4274	764.15607			

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 183

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.17387	0.01463	2881.80472	22066.1	<.0001
aug	0.09117	0.01806	3.33021	25.50	<.0001
sep	0.23569	0.02082	16.74416	128.21	<.0001
oct	0.22337	0.01849	19.06421	145.98	<.0001
pctlcknite	-0.00088909	0.00011779	7.44076	56.97	<.0001
pturnback	-0.46707	0.01572	115.25605	882.52	<.0001
pexchange	-0.12656	0.01572	8.46839	64.84	<.0001

Bounds on condition number: 1.9595, 48.103

Stepwise Selection: Step 7

Variable nov Entered: R-Square = 0.2723 and C(p) = 29.2359

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	208.06546	29.72364	228.08	<.0001
Error	4267	556.09061	0.13032		
Corrected Total	4274	764.15607			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.16686	0.01479	2798.83025	21476.0	<.0001
aug	0.09875	0.01819	3.83878	29.46	<.0001
sep	0.24351	0.02094	17.62449	135.24	<.0001
oct	0.23138	0.01864	20.07878	154.07	<.0001
nov	0.06597	0.02086	1.30395	10.01	0.0016
pctlcknite	-0.00091995	0.00011807	7.91199	60.71	<.0001
pturnback	-0.46459	0.01573	113.74718	872.81	<.0001
pexchange	-0.12692	0.01570	8.51566	65.34	<.0001

Bounds on condition number: 1.9644, 63.92

Stepwise Selection: Step 8

Variable apr Entered: R-Square = 0.2741 and C(p) = 20.4688

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 8

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	209.46171	26.18271	201.36	<.0001
Error	4266	554.69436	0.13003		
Corrected Total	4274	764.15607			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.15598	0.01514	2637.69326	20285.8	<.0001
apr	0.05853	0.01786	1.39625	10.74	0.0011
aug	0.10967	0.01848	4.58084	35.23	<.0001
sep	0.25450	0.02118	18.76833	144.34	<.0001
oct	0.24238	0.01892	21.33976	164.12	<.0001
nov	0.07700	0.02110	1.73109	13.31	0.0003
pctlcknite	-0.00092623	0.00011795	8.01821	61.67	<.0001
pturnback	-0.46417	0.01571	113.53495	873.17	<.0001
pexchange	-0.12677	0.01568	8.49555	65.34	<.0001

Bounds on condition number: 1.9646, 82.726

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.2072	0.2072	400.891	1116.59	<.0001
2	sep		2	0.0177	0.2249	298.732	97.42	<.0001
3	oct		3	0.0206	0.2454	179.466	116.48	<.0001
4	pexchange		4	0.0111	0.2565	116.025	63.78	<.0001
5	pctlcknite		5	0.0097	0.2662	60.9717	56.33	<.0001
6	aug		6	0.0044	0.2706	37.2912	25.50	<.0001
7	nov		7	0.0017	0.2723	29.2359	10.01	0.0016
8	apr		8	0.0018	0.2741	20.4688	10.74	0.0011

Logarithms of double lockage times using key variables from stepwise proc 185
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.2236 and C(p) = 385.4999

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	45.31843	45.31843	1230.36	<.0001
Error	4273	157.38895	0.03683		
Corrected Total	4274	202.70739			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.72568	0.00383	1324.95227	35971.5	<.0001
pturnback	-0.20923	0.00596	45.31843	1230.36	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable sep Entered: R-Square = 0.2401 and C(p) = 288.4940

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	48.66482	24.33241	674.80	<.0001
Error	4272	154.04257	0.03606		
Corrected Total	4274	202.70739			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.71648	0.00390	1214.33172	33676.6	<.0001
sep	0.10378	0.01077	3.34638	92.80	<.0001
pturnback	-0.20681	0.00591	44.19938	1225.76	<.0001

Bounds on condition number: 1.0018, 4.0072

Stepwise Selection: Step 3

Logarithms of double lockage times using key variables from stepwise proc 186
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable oct Entered: R-Square = 0.2589 and C(p) = 177.5454

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	52.48246	17.49415	497.37	<.0001
Error	4271	150.22492	0.03517		
Corrected Total	4274	202.70739			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.70412	0.00403	1071.40760	30460.9	<.0001
sep	0.11509	0.01069	4.07324	115.80	<.0001
oct	0.09886	0.00949	3.81765	108.54	<.0001
pturnback	-0.20374	0.00584	42.78484	1216.40	<.0001

Bounds on condition number: 1.0126, 9.0875

Stepwise Selection: Step 4

Variable pexchange Entered: R-Square = 0.2694 and C(p) = 116.7299

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	54.60562	13.65140	393.59	<.0001
Error	4270	148.10177	0.03468		
Corrected Total	4274	202.70739			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.74875	0.00697	400.27018	11540.4	<.0001
sep	0.10877	0.01065	3.61719	104.29	<.0001
oct	0.09938	0.00942	3.85737	111.21	<.0001
pturnback	-0.24799	0.00810	32.49489	936.88	<.0001
pexchange	-0.06336	0.00810	2.12315	61.21	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.9593, 23.781

Stepwise Selection: Step 5

Variable pctlcknite Entered: R-Square = 0.2787 and C(p) = 62.6189

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	56.50216	11.30043	329.96	<.0001
Error	4269	146.20523	0.03425		
Corrected Total	4274	202.70739			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.76809	0.00740	369.20555	10780.3	<.0001
sep	0.11120	0.01059	3.77678	110.28	<.0001
oct	0.10418	0.00939	4.21928	123.20	<.0001
pctlcknite	-0.00044886	0.00006032	1.89654	55.38	<.0001
pturnback	-0.24766	0.00805	32.40594	946.21	<.0001
pexchange	-0.06278	0.00805	2.08388	60.85	<.0001

Bounds on condition number: 1.9594, 34.783

Stepwise Selection: Step 6

Variable aug Entered: R-Square = 0.2829 and C(p) = 39.8884

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	57.33805	9.55634	280.57	<.0001
Error	4268	145.36934	0.03406		
Corrected Total	4274	202.70739			

Logarithms of double lockage times using key variables from stepwise proc 188
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.76217	0.00747	354.24386	10400.5	<.0001
aug	0.04568	0.00922	0.83589	24.54	<.0001
sep	0.11725	0.01063	4.14368	121.66	<.0001
oct	0.11030	0.00944	4.64818	136.47	<.0001
pctlcknite	-0.00045013	0.00006015	1.90724	56.00	<.0001
pturnback	-0.24730	0.00803	32.31125	948.65	<.0001
pexchange	-0.06330	0.00803	2.11826	62.19	<.0001

Bounds on condition number: 1.9595, 48.103

Stepwise Selection: Step 7

Variable nov Entered: R-Square = 0.2848 and C(p) = 30.1918

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	57.73339	8.24763	242.75	<.0001
Error	4267	144.97400	0.03398		
Corrected Total	4274	202.70739			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.75831	0.00755	342.77466	10088.8	<.0001
aug	0.04985	0.00929	0.97823	28.79	<.0001
sep	0.12155	0.01069	4.39152	129.26	<.0001
oct	0.11471	0.00952	4.93466	145.24	<.0001
nov	0.03633	0.01065	0.39534	11.64	0.0007
pctlcknite	-0.00046713	0.00006028	2.03997	60.04	<.0001
pturnback	-0.24593	0.00803	31.87461	938.16	<.0001
pexchange	-0.06349	0.00802	2.13129	62.73	<.0001

Bounds on condition number: 1.9644, 63.92

Stepwise Selection: Step 8

Logarithms of double lockage times using key variables from stepwise proc 189
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 8

Variable apr Entered: R-Square = 0.2866 and C(p) = 21.2099

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	58.10458	7.26307	214.27	<.0001
Error	4266	144.60281	0.03390		
Corrected Total	4274	202.70739			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.75270	0.00773	321.49978	9484.73	<.0001
apr	0.03018	0.00912	0.37118	10.95	0.0009
aug	0.05548	0.00943	1.17231	34.58	<.0001
sep	0.12722	0.01082	4.68983	138.36	<.0001
oct	0.12038	0.00966	5.26365	155.29	<.0001
nov	0.04201	0.01077	0.51533	15.20	<.0001
pctlcknite	-0.00047036	0.00006022	2.06779	61.00	<.0001
pturnback	-0.24572	0.00802	31.81663	938.64	<.0001
pexchange	-0.06342	0.00801	2.12611	62.72	<.0001

Bounds on condition number: 1.9646, 82.726

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.2236	0.2236	385.500	1230.36	<.0001
2	sep		2	0.0165	0.2401	288.494	92.80	<.0001
3	oct		3	0.0188	0.2589	177.545	108.54	<.0001
4	pexchange		4	0.0105	0.2694	116.730	61.21	<.0001
5	pctlcknite		5	0.0094	0.2787	62.6189	55.38	<.0001
6	aug		6	0.0041	0.2829	39.8884	24.54	<.0001
7	nov		7	0.0020	0.2848	30.1918	11.64	0.0007
8	apr		8	0.0018	0.2866	21.2099	10.95	0.0009

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0458 and C(p) = 137.1114

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	3.52638	3.52638	52.40	<.0001
Error	1091	73.42671	0.06730		
Corrected Total	1092	76.95310			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.57505	0.00928	258.59306	3842.27	<.0001
pturnback	-0.12589	0.01739	3.52638	52.40	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.1309 and C(p) = 29.7770

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	10.07397	5.03698	82.09	<.0001
Error	1090	66.87913	0.06136		
Corrected Total	1092	76.95310			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.69423	0.01455	139.76866	2277.96	<.0001
pturnback	-0.24507	0.02022	9.01325	146.90	<.0001
pexchange	-0.18944	0.01834	6.54759	106.71	<.0001

Bounds on condition number: 1.4827, 5.9309

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 191

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable pctlckdn Entered: R-Square = 0.1421 and C(p) = 17.3847

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	10.93586	3.64529	60.13	<.0001
Error	1089	66.01724	0.06062		
Corrected Total	1092	76.95310			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.69115	0.01448	138.09039	2277.90	<.0001
pturnback	-0.24377	0.02010	8.91508	147.06	<.0001
pexchange	-0.18843	0.01823	6.47684	106.84	<.0001
pctlckdn	0.00475	0.00126	0.86189	14.22	0.0002

Bounds on condition number: 1.4832, 11.9

Stepwise Selection: Step 4

Variable sep Entered: R-Square = 0.1479 and C(p) = 11.9944

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	11.37843	2.84461	47.20	<.0001
Error	1088	65.57466	0.06027		
Corrected Total	1092	76.95310			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.68152	0.01487	126.60036	2100.52	<.0001
sep	0.06303	0.02326	0.44257	7.34	0.0068
pturnback	-0.24209	0.02005	8.78361	145.74	<.0001
pexchange	-0.18448	0.01824	6.16863	102.35	<.0001
pctlckdn	0.00485	0.00126	0.89880	14.91	0.0001

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.4926, 19.944

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0458	0.0458	137.111	52.40	<.0001
2	pexchange		2	0.0851	0.1309	29.7770	106.71	<.0001
3	pctlckdn		3	0.0112	0.1421	17.3847	14.22	0.0002
4	sep		4	0.0058	0.1479	11.9944	7.34	0.0068

Logarithms of single lockage times using key variables from stepwise proc 193
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0676 and C(p) = 190.3770

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	15.76247	15.76247	81.92	<.0001
Error	1130	217.42563	0.19241		
Corrected Total	1131	233.18810			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.66841	0.01554	356.08043	1850.61	<.0001
pturnback	-0.25851	0.02856	15.76247	81.92	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.1834 and C(p) = 28.6396

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	42.76590	21.38295	126.78	<.0001
Error	1129	190.42220	0.16866		
Corrected Total	1131	233.18810			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.42635	0.02403	53.07725	314.69	<.0001
pturnback	-0.50058	0.03288	39.09378	231.78	<.0001
pexchange	-0.38203	0.03019	27.00343	160.10	<.0001

Bounds on condition number: 1.5118, 6.0472

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 194
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable sep Entered: R-Square = 0.1901 and C(p) = 21.1855

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	44.32507	14.77502	88.25	<.0001
Error	1128	188.86304	0.16743		
Corrected Total	1131	233.18810			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.44434	0.02466	54.35576	324.64	<.0001
sep	0.11678	0.03827	1.55916	9.31	0.0023
pturnback	-0.49618	0.03279	38.33499	228.96	<.0001
pexchange	-0.37467	0.03018	25.80723	154.14	<.0001

Bounds on condition number: 1.5215, 12.128

Stepwise Selection: Step 4

Variable pctlcknite Entered: R-Square = 0.1974 and C(p) = 12.8946

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	46.02223	11.50556	69.28	<.0001
Error	1127	187.16588	0.16607		
Corrected Total	1131	233.18810			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.47493	0.02636	53.91442	324.64	<.0001
sep	0.12566	0.03821	1.79591	10.81	0.0010
pctlcknite	0.00081756	0.00025575	1.69716	10.22	0.0014
pturnback	-0.49381	0.03267	37.95036	228.51	<.0001
pexchange	-0.37768	0.03007	26.19790	157.75	<.0001

Logarithms of single lockage times using key variables from stepwise proc 195
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.523, 20.238

Stepwise Selection: Step 5

Variable oct Entered: R-Square = 0.2021 and C(p) = 8.2061

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	47.12529	9.42506	57.04	<.0001
Error	1126	186.06282	0.16524		
Corrected Total	1131	233.18810			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.48754	0.02674	54.92313	332.38	<.0001
sep	0.13741	0.03839	2.11732	12.81	0.0004
oct	0.10467	0.04051	1.10306	6.68	0.0099
pctlcknite	0.00079871	0.00025521	1.61847	9.79	0.0018
pturnback	-0.49007	0.03262	37.30351	225.75	<.0001
pexchange	-0.37700	0.03000	26.10070	157.95	<.0001

Bounds on condition number: 1.5231, 30.48

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0676	0.0676	190.377	81.92	<.0001
2	pexchange		2	0.1158	0.1834	28.6396	160.10	<.0001
3	sep		3	0.0067	0.1901	21.1855	9.31	0.0023
4	pctlcknite		4	0.0073	0.1974	12.8946	10.22	0.0014
5	oct		5	0.0047	0.2021	8.2061	6.68	0.0099

Logarithms of single lockage times using key variables from stepwise proc 196
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable pcttrandn Entered: R-Square = 0.0322 and C(p) = 160.9911

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	198.45080	198.45080	127.11	<.0001
Error	3822	5966.97956	1.56122		
Corrected Total	3823	6165.43036			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.58577	0.02033	79417	50868.3	<.0001
pcttrandn	0.04333	0.00384	198.45080	127.11	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable waitmin Entered: R-Square = 0.0405 and C(p) = 128.6370

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	249.94304	124.97152	80.72	<.0001
Error	3821	5915.48732	1.54815		
Corrected Total	3823	6165.43036			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.64138	0.02243	66311	42832.6	<.0001
pcttrandn	0.04427	0.00383	206.77976	133.57	<.0001
waitmin	-0.00045363	0.00007866	51.49223	33.26	<.0001

Bounds on condition number: 1.0018, 4.0073

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 197
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 3

Variable feb Entered: R-Square = 0.0454 and C(p) = 110.5173

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	280.09983	93.36661	60.60	<.0001
Error	3820	5885.33053	1.54066		
Corrected Total	3823	6165.43036			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.63279	0.02246	65571	42560.5	<.0001
feb	1.04320	0.23579	30.15680	19.57	<.0001
pcttrandn	0.04350	0.00383	199.22001	129.31	<.0001
waitmin	-0.00044222	0.00007851	48.88143	31.73	<.0001

Bounds on condition number: 1.0039, 9.0295

Stepwise Selection: Step 4

Variable mar Entered: R-Square = 0.0498 and C(p) = 94.5357

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	307.05193	76.76298	50.04	<.0001
Error	3819	5858.37843	1.53401		
Corrected Total	3823	6165.43036			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.66466	0.02366	59612	38860.0	<.0001
feb	1.00864	0.23543	28.15730	18.36	<.0001
mar	-0.26789	0.06391	26.95209	17.57	<.0001
pcttrandn	0.04450	0.00382	207.65836	135.37	<.0001
waitmin	-0.00046134	0.00007847	53.01904	34.56	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0079, 16.105

Stepwise Selection: Step 5

Variable nov Entered: R-Square = 0.0547 and C(p) = 76.4584

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	337.14513	67.42903	44.17	<.0001
Error	3818	5828.28523	1.52653		
Corrected Total	3823	6165.43036			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.69478	0.02456	55777	36538.6	<.0001
feb	0.97853	0.23495	26.47881	17.35	<.0001
mar	-0.29732	0.06410	32.84437	21.52	<.0001
nov	-0.33815	0.07616	30.09320	19.71	<.0001
pcttrandn	0.04459	0.00382	208.52021	136.60	<.0001
waitmin	-0.00047110	0.00007831	55.24220	36.19	<.0001

Bounds on condition number: 1.0188, 25.254

Stepwise Selection: Step 6

Variable apr Entered: R-Square = 0.0590 and C(p) = 60.5616

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	363.97004	60.66167	39.91	<.0001
Error	3817	5801.46032	1.51990		
Corrected Total	3823	6165.43036			

Logarithms of single lockage times using key variables from stepwise proc 199
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.73460	0.02628	49344	32465.6	<.0001
feb	0.93894	0.23463	24.34023	16.01	<.0001
mar	-0.33626	0.06463	41.14870	27.07	<.0001
apr	-0.26533	0.06316	26.82492	17.65	<.0001
nov	-0.37685	0.07655	36.83350	24.23	<.0001
pcttrandn	0.04463	0.00381	208.83702	137.40	<.0001
waitmin	-0.00048204	0.00007818	57.77552	38.01	<.0001

Bounds on condition number: 1.0402, 36.742

Stepwise Selection: Step 7

Variable thrudoubnite Entered: R-Square = 0.0635 and C(p) = 44.1547

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	391.55947	55.93707	36.97	<.0001
Error	3816	5773.87089	1.51307		
Corrected Total	3823	6165.43036			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.65072	0.03276	30491	20152.0	<.0001
feb	0.93040	0.23411	23.89762	15.79	<.0001
mar	-0.34796	0.06454	43.98081	29.07	<.0001
apr	-0.26951	0.06302	27.66943	18.29	<.0001
nov	-0.40689	0.07670	42.58004	28.14	<.0001
thrudoubnite	0.19979	0.04679	27.58943	18.23	<.0001
pcttrandn	0.04461	0.00380	208.70734	137.94	<.0001
waitmin	-0.00047919	0.00007801	57.08830	37.73	<.0001

Bounds on condition number: 1.0421, 50.011

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Logarithms of single lockage times using key variables from stepwise proc 200
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Label	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pcttrandn			1	0.0322	0.0322	160.991	127.11	<.0001
2	waitmin		Wait/before/lockge	2	0.0084	0.0405	128.637	33.26	<.0001
3	feb			3	0.0049	0.0454	110.517	19.57	<.0001
4	mar			4	0.0044	0.0498	94.5357	17.57	<.0001
5	nov			5	0.0049	0.0547	76.4584	19.71	<.0001
6	apr			6	0.0044	0.0590	60.5616	17.65	<.0001
7	thrudoubnite			7	0.0045	0.0635	44.1547	18.23	<.0001

Logarithms of single lockage times using key variables from stepwise proc 201
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable mar Entered: R-Square = 0.0053 and C(p) = 82.4260

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.09341	1.09341	20.51	<.0001
Error	3824	203.87917	0.05332		
Corrected Total	3825	204.97258			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.50502	0.00396	7701.32696	144448	<.0001
mar	-0.05374	0.01187	1.09341	20.51	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable nov Entered: R-Square = 0.0114 and C(p) = 60.7103

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	2.33178	1.16589	22.00	<.0001
Error	3823	202.64080	0.05301		
Corrected Total	3825	204.97258			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.51083	0.00413	7103.46878	134013	<.0001
mar	-0.05955	0.01189	1.32872	25.07	<.0001
nov	-0.06854	0.01418	1.23838	23.36	<.0001

Bounds on condition number: 1.0103, 4.0412

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 202
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable apr Entered: R-Square = 0.0157 and C(p) = 45.6917

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	3.22045	1.07348	20.34	<.0001
Error	3822	201.75213	0.05279		
Corrected Total	3825	204.97258			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.51774	0.00445	6141.23318	116340	<.0001
mar	-0.06646	0.01199	1.62238	30.73	<.0001
apr	-0.04823	0.01175	0.88867	16.83	<.0001
nov	-0.07545	0.01425	1.47976	28.03	<.0001

Bounds on condition number: 1.0312, 9.2595

Stepwise Selection: Step 4

Variable feb Entered: R-Square = 0.0192 and C(p) = 33.9389

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	3.93858	0.98465	18.71	<.0001
Error	3821	201.03400	0.05261		
Corrected Total	3825	204.97258			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.51605	0.00447	6063.20170	115242	<.0001
feb	0.16100	0.04358	0.71814	13.65	0.0002
mar	-0.06477	0.01198	1.53863	29.24	<.0001
apr	-0.04654	0.01174	0.82619	15.70	<.0001
nov	-0.07376	0.01423	1.41272	26.85	<.0001

Logarithms of single lockage times using key variables from stepwise proc 203
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0328, 16.375

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	mar		1	0.0053	0.0053	82.4260	20.51	<.0001
2	nov		2	0.0060	0.0114	60.7103	23.36	<.0001
3	apr		3	0.0043	0.0157	45.6917	16.83	<.0001
4	feb		4	0.0035	0.0192	33.9389	13.65	0.0002

Logarithms of single lockage times using key variables from stepwise proc 204
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable feb Entered: R-Square = 0.0373 and C(p) = 34.6719

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	55.55245	55.55245	12.20	0.0005
Error	315	1433.99587	4.55237		
Corrected Total	316	1489.54831			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.34542	0.12060	5910.27906	1298.29	<.0001
feb	3.75041	1.07361	55.55245	12.20	0.0005

Bounds on condition number: 1, 1

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	feb		1	0.0373	0.0373	34.6719	12.20	0.0005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable feb Entered: R-Square = 0.0336 and C(p) = 45.3641

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.23606	1.23606	11.00	0.0010
Error	316	35.51282	0.11238		
Corrected Total	317	36.74888			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.39969	0.01892	615.16353	5473.84	<.0001
feb	0.55942	0.16868	1.23606	11.00	0.0010

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pcttrannite Entered: R-Square = 0.0599 and C(p) = 37.5947

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	2.20148	1.10074	10.04	<.0001
Error	315	34.54740	0.10967		
Corrected Total	317	36.74888			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.34123	0.02716	267.51323	2439.16	<.0001
feb	0.59136	0.16698	1.37551	12.54	0.0005
pcttrannite	0.00126	0.00042429	0.96542	8.80	0.0032

Bounds on condition number: 1.0042, 4.0167

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 206
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable nov Entered: R-Square = 0.0799 and C(p) = 32.1424

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	2.93793	0.97931	9.09	<.0001
Error	314	33.81095	0.10768		
Corrected Total	317	36.74888			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.36190	0.02805	253.90926	2358.04	<.0001
feb	0.56881	0.16568	1.26913	11.79	0.0007
nov	-0.11993	0.04586	0.73645	6.84	0.0093
pcttrannite	0.00135	0.00042180	1.10013	10.22	0.0015

Bounds on condition number: 1.0108, 9.0829

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Label	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	feb			1	0.0336	0.0336	45.3641	11.00	0.0010
2	pcttrannite			2	0.0263	0.0599	37.5947	8.80	0.0032
3	nov			3	0.0200	0.0799	32.1424	6.84	0.0093

Logarithms of single lockage times using key variables from stepwise proc 207
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable mar Entered: R-Square = 0.0060 and C(p) = 3.4270

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	41339	41339	7.68	0.0057
Error	1270	6835458	5382.25072		
Corrected Total	1271	6876797			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	17.25415	2.13933	350102	65.05	<.0001
mar	21.58161	7.78729	41339	7.68	0.0057

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable may Entered: R-Square = 0.0116 and C(p) = -1.6890

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	79596	39798	7.43	0.0006
Error	1269	6797201	5356.34471		
Corrected Total	1271	6876797			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	15.55366	2.22701	261270	48.78	<.0001
mar	23.28211	7.79454	47789	8.92	0.0029
may	20.83106	7.79454	38257	7.14	0.0076

Bounds on condition number: 1.0067, 4.0268

All variables left in the model are significant at the 0.0100 level.

Logarithms of single lockage times using key variables from stepwise proc 208
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 2

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	mar		1	0.0060	0.0060	3.4270	7.68	0.0057
2	may		2	0.0056	0.0116	-1.6890	7.14	0.0076

Logarithms of single lockage times using key variables from stepwise proc 209
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable retsingle Entered: R-Square = 0.0725 and C(p) = 68.6079

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	89.75502	89.75502	98.47	<.0001
Error	1259	1147.60071	0.91152		
Corrected Total	1260	1237.35573			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.83380	0.03165	3060.18459	3357.24	<.0001
retsingle	0.59527	0.05999	89.75502	98.47	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pcttrannite Entered: R-Square = 0.0890 and C(p) = 47.0934

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	110.11184	55.05592	61.44	<.0001
Error	1258	1127.24389	0.89606		
Corrected Total	1260	1237.35573			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.66940	0.04663	1148.44092	1281.66	<.0001
retsingle	0.63343	0.06001	99.82367	111.40	<.0001
pcttrannite	0.00343	0.00071957	20.35682	22.72	<.0001

Bounds on condition number: 1.0181, 4.0725

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 210
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable nov Entered: R-Square = 0.1012 and C(p) = 31.6337

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	125.22705	41.74235	47.18	<.0001
Error	1257	1112.12868	0.88475		
Corrected Total	1260	1237.35573			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.70526	0.04714	1157.71823	1308.53	<.0001
nov	-0.30450	0.07367	15.11521	17.08	<.0001
retsingle	0.61333	0.05983	92.97068	105.08	<.0001
pcttrannite	0.00383	0.00072143	24.88923	28.13	<.0001

Bounds on condition number: 1.0365, 9.2683

Stepwise Selection: Step 4

Variable dec Entered: R-Square = 0.1107 and C(p) = 20.0885

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	136.95330	34.23833	39.08	<.0001
Error	1256	1100.40243	0.87612		
Corrected Total	1260	1237.35573			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.73436	0.04758	1164.10073	1328.71	<.0001
nov	-0.34402	0.07410	18.88269	21.55	<.0001
dec	-0.34757	0.09500	11.72625	13.38	0.0003
retsingle	0.60645	0.05957	90.80625	103.65	<.0001
pcttrannite	0.00403	0.00072004	27.43453	31.31	<.0001

Logarithms of single lockage times using key variables from stepwise proc 211
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0504, 16.579

Stepwise Selection: Step 5

Variable retother Entered: R-Square = 0.1207 and C(p) = 7.7986

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	149.32429	29.86486	34.45	<.0001
Error	1255	1088.03144	0.86696		
Corrected Total	1260	1237.35573			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.72741	0.04737	1153.04155	1329.99	<.0001
nov	-0.33707	0.07374	18.11643	20.90	<.0001
dec	-0.35742	0.09454	12.39102	14.29	0.0002
retsingle	0.61433	0.05929	93.06505	107.35	<.0001
retother	1.76397	0.46697	12.37099	14.27	0.0002
pcttrannite	0.00401	0.00071629	27.10554	31.27	<.0001

Bounds on condition number: 1.0511, 25.753

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	retsingle		1	0.0725	0.0725	68.6079	98.47	<.0001
2	pcttrannite		2	0.0165	0.0890	47.0934	22.72	<.0001
3	nov		3	0.0122	0.1012	31.6337	17.08	<.0001
4	dec		4	0.0095	0.1107	20.0885	13.38	0.0003
5	retother		5	0.0100	0.1207	7.7986	14.27	0.0002

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 20:21 Tuesday, June 28, 2005 212

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	5800	0	24469894722	4218947.37	3750091.00	4331083.00
strtlcktime	Start/lockge/time	5800	0	7.6943397E12	1326610294	1267044900	1387015500
arrtime	Arriv/time	5800	0	7.69427E12	1326598270	1267038000	1387014900
deptime	Leave/lockge/time	5800	0	7.6943774E12	1326616799	1267046700	1387017900
BOW_OVER_SILL	BOW_OVER_SILL	5800	0	7.6943614E12	1326614040	1267045200	1387016100
END_OF_ENTRY	END_OF_ENTRY	5800	0	7.6943646E12	1326614579	1267045500	1387016880
START_OF_EXIT	START_OF_EXIT	5800	0	7.6943681E12	1326615194	1267046220	1387017480
SIGNAL_DATE	SIGNAL_DATE	0	5800	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	5800	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	5532	268	65927.00	11.9173897	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	5532	268	3286.00	0.5939986	0	48.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	5800	.	.	.	.
vess_no		5800	0	4333030926	747074.30	2611.00	8888846.00
vss_hp		5771	29	27089676.00	4694.10	75.0000000	81800.00
frsttime		5800	0	7.69427E12	1326598270	1267038000	1387014900
lasttime		5800	0	7.6943774E12	1326616799	1267046700	1387017900
newpoolno		5800	0	144271.00	24.8743103	7.0000000	28.0000000
oldpoolno		5800	0	138957.00	23.9581034	8.0000000	28.0000000
waitmin	Wait/before/lockge	5800	0	1162353.00	200.4056897	0	3434.00
lockmin	Wait/lockge/time	5800	0	628746.00	108.4044828	9.0000000	790.0000000
year		5800	0	11608431.00	2001.45	2000.00	2003.00
fly		5800	0	1154.00	0.1989655	0	1.0000000
turnback		5800	0	2402.00	0.4141379	0	1.0000000
exchange		5800	0	2243.00	0.3867241	0	1.0000000
lock		5800	0	138714.00	23.9162069	7.0000000	27.0000000
totmin		5800	0	1791099.00	308.8101724	11.0000000	3510.00
month		5800	0	43594.00	7.5162069	1.0000000	12.0000000
day		5800	0	91811.00	15.8294828	1.0000000	31.0000000
sunrise		5799	1	133037499	22941.46	20128.00	26978.00
sunset		5799	1	398854323	68779.85	59999.00	74161.00
sequpstr		5800	0	0	0	0	0
seqdstr		5800	0	4618.00	0.7962069	0	1.0000000
plock		5800	0	127600.00	22.0000000	22.0000000	22.0000000
pempty		5530	270	2567.00	0.4641953	0	48.0000000
pfull		5530	270	64660.00	11.6925859	0	28.0000000
parrtime		5800	0	7.6939821E12	1326548637	1267013820	1386989940
pstrtlcktime		5800	0	7.6940499E12	1326560332	1267013820	1386989940
pdeptime		5800	0	7.6940888E12	1326567041	1267014900	1386994800
birth		5800	0	0	0	0	0
transithrs		5800	0	50313.85	8.6748017	-20.6666667	3604.90
reclock		5800	0	0	0	0	0
i		5800	0	1688968.00	291.2013793	101.0000000	401.0000000
pctpsysdn		5800	0	8516.28	1.4683243	0	98.3000000
pctplckdn		5800	0	5715.65	0.9854564	0	98.3000000
cumdown		5797	3	1043460.00	180.0000000	0	41940.00
pctdown		5797	3	5019.39	0.8658606	0	95.7530000
pcttrandn		5778	22	10460.34	1.8103745	0	100.0000000
pctsysdn		5797	3	9195.30	1.5862167	0	92.5830000
pctlckdn		5797	3	5019.39	0.8658606	0	95.7530000
stime		5800	0	260127180	44849.51	60.0000002	86340.00
etime		5800	0	258626340	44590.75	60.0000002	86340.00
sdate		5800	0	89051847.00	15353.77	14664.00	16053.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		5800	0	89052301.00	15353.85	14664.00	16053.00
hrsduration		5800	0	10479.10	1.8067414	0.1500000	13.1666667
ndays		5800	0	0	0	0	0
pctday		5800	0	315052.03	54.3193157	0	100.0000000
pctpsysnite		5800	0	247721.40	42.7105859	0	100.0000000
pctplcknite		5800	0	250431.47	43.1778400	0	100.0000000
pcttrannite		5799	1	259837.26	44.8072535	0	100.0000000
pctsysnite		5800	0	262111.65	45.1916645	0	100.0000000
pctlcknite		5800	0	264947.97	45.6806843	0	100.0000000
stage		5792	8	150970.73	26.0653885	12.2300000	32.5700000
flow		237	5563	22925212.86	96730.86	17514.61	280143.91
jan		5800	0	23.0000000	0.0039655	0	1.0000000
feb		5800	0	33.0000000	0.0056897	0	1.0000000
mar		5800	0	378.0000000	0.0651724	0	1.0000000
apr		5800	0	574.0000000	0.0989655	0	1.0000000
may		5800	0	495.0000000	0.0853448	0	1.0000000
jun		5800	0	707.0000000	0.1218966	0	1.0000000
jul		5800	0	724.0000000	0.1248276	0	1.0000000
aug		5800	0	663.0000000	0.1143103	0	1.0000000
sep		5800	0	512.0000000	0.0882759	0	1.0000000
oct		5800	0	589.0000000	0.1015517	0	1.0000000
nov		5800	0	736.0000000	0.1268966	0	1.0000000
dec		5800	0	366.0000000	0.0631034	0	1.0000000
m31day		5800	0	3238.00	0.5582759	0	1.0000000
m30day		5800	0	2529.00	0.4360345	0	1.0000000
qtr1		5800	0	434.0000000	0.0748276	0	1.0000000
qtr2		5800	0	1776.00	0.3062069	0	1.0000000
qtr3		5800	0	1899.00	0.3274138	0	1.0000000
qtr4		5800	0	1691.00	0.2915517	0	1.0000000
psingle		5800	0	1024.00	0.1765517	0	1.0000000
pdouble		5800	0	4546.00	0.7837931	0	1.0000000
pknockout		5800	0	147.0000000	0.0253448	0	1.0000000
pjacknife		5800	0	78.0000000	0.0134483	0	1.0000000
pothtype		5800	0	5.0000000	0.000862069	0	1.0000000
pexchange		5800	0	2347.00	0.4046552	0	1.0000000
pturnback		5800	0	2238.00	0.3858621	0	1.0000000
single		5800	0	936.0000000	0.1613793	0	1.0000000
double		5800	0	4610.00	0.7948276	0	1.0000000
knockout		5800	0	171.0000000	0.0294828	0	1.0000000
jacknife		5800	0	79.0000000	0.0136207	0	1.0000000
othtype		5800	0	4.0000000	0.000689655	0	1.0000000
contthru		5800	0	4618.00	0.7962069	0	1.0000000
return		5800	0	224.0000000	0.0386207	0	1.0000000
contstop		5800	0	897.0000000	0.1546552	0	1.0000000
kill		5800	0	61.0000000	0.0105172	0	1.0000000
contsame		5800	0	4618.00	0.7962069	0	1.0000000
contdouble		5800	0	605.0000000	0.1043103	0	1.0000000
contsingle		5800	0	237.0000000	0.0408621	0	1.0000000
contko		5800	0	54.0000000	0.0093103	0	1.0000000
contjk		5800	0	0	0	0	0
retdouble		5800	0	80.0000000	0.0137931	0	1.0000000
retsingle		5800	0	138.0000000	0.0237931	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		5800	0	3.0000000	0.000517241	0	1.0000000
retjk		5800	0	2.0000000	0.000344828	0	1.0000000
xkill		5800	0	63.0000000	0.0108621	0	1.0000000
logtrnhrs		5781	19	8377.65	1.4491702	-4.0943446	8.1900493
plockhrs		5800	0	10630.75	1.8328886	0.1639344	29.8852459
loglckhrs		5800	0	2670.23	0.4603843	-1.8082888	3.3973649
thrusingle		5800	0	518.0000000	0.0893103	0	1.0000000
thruother		5800	0	201.0000000	0.0346552	0	1.0000000
contother		5800	0	55.0000000	0.0094828	0	1.0000000
retother		5800	0	6.0000000	0.0010345	0	1.0000000
thrudoubnite		5799	1	1804.28	0.3111370	0	1.0000000
thrusingnite		5799	1	186.5387400	0.0321674	0	1.0000000
thruothnite		5799	1	91.9904100	0.0158632	0	1.0000000
pdoubnite		5800	0	2104.08	0.3627731	0	1.0000000
psingnite		5800	0	296.6843600	0.0511525	0	1.0000000
pothnite		5800	0	103.5463700	0.0178528	0	1.0000000

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 20:21 Tuesday, June 28, 2005 215

The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI24D

pconfig / doutcome Frequency Percent Row Pct Col Pct	1:contasame	2:contdouble	3:contsingle	4:contko	6:retdouble	7:retsingle	8:retko	9:retjk	x:kill	Total
1:double	3899 67.22 85.77 84.43	534 9.21 11.75 88.26	4 0.07 0.09 1.69	0 0.00 0.00 0.00	79 1.36 1.74 98.75	10 0.17 0.22 7.25	0 0.00 0.00 0.00	1 0.02 0.02 50.00	19 0.33 0.42 30.16	4546 78.38
2:single	518 8.93 50.59 11.22	52 0.90 5.08 8.60	233 4.02 22.75 98.31	49 0.84 4.79 90.74	1 0.02 0.10 1.25	126 2.17 12.30 91.30	2 0.03 0.20 66.67	0 0.00 0.00 0.00	43 0.74 4.20 68.25	1024 17.66
3:knockout	121 2.09 82.31 2.62	18 0.31 12.24 2.98	0 0.00 0.00 0.00	4 0.07 2.72 7.41	0 0.00 0.00 0.00	1 0.02 0.68 0.72	1 0.02 0.68 33.33	1 0.02 0.68 50.00	1 0.02 0.68 1.59	147 2.53
4:jacknife	76 1.31 97.44 1.65	1 0.02 1.28 0.17	0 0.00 0.00 0.00	1 0.02 1.28 1.85	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	78 1.34
5:Other	4 0.07 80.00 0.09	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02 20.00 0.72	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5 0.09
Total	4618 79.62	605 10.43	237 4.09	54 0.93	80 1.38	138 2.38	3 0.05	2 0.03	63 1.09	5800 100.00

```
resulting regfile for mdy(1,1,2000) to mdy(12,31,2003)        20:21 Tuesday, June 28, 2005 216

                  The FREQ Procedure

            Table 1 of pconfig by nextstep
            Controlling for pnewpool=MI24D

pconfig     nextstep

Frequency  |
Percent    |
Row Pct    |
Col Pct    |1:contth|2:contst|3:return|4:kill   |  Total
-----------+--------+--------+--------+--------+
1:double   |   3899 |    539 |     90 |     18 |   4546
           |  67.22 |   9.29 |   1.55 |   0.31 |  78.38
           |  85.77 |  11.86 |   1.98 |   0.40 |
           |  84.43 |  60.09 |  40.18 |  29.51 |
-----------+--------+--------+--------+--------+
2:single   |    518 |    334 |    130 |     42 |   1024
           |   8.93 |   5.76 |   2.24 |   0.72 |  17.66
           |  50.59 |  32.62 |  12.70 |   4.10 |
           |  11.22 |  37.24 |  58.04 |  68.85 |
-----------+--------+--------+--------+--------+
3:knockout |    121 |     22 |      3 |      1 |    147
           |   2.09 |   0.38 |   0.05 |   0.02 |   2.53
           |  82.31 |  14.97 |   2.04 |   0.68 |
           |   2.62 |   2.45 |   1.34 |   1.64 |
-----------+--------+--------+--------+--------+
4:jacknife |     76 |      2 |      0 |      0 |     78
           |   1.31 |   0.03 |   0.00 |   0.00 |   1.34
           |  97.44 |   2.56 |   0.00 |   0.00 |
           |   1.65 |   0.22 |   0.00 |   0.00 |
-----------+--------+--------+--------+--------+
5:Other    |      4 |      0 |      1 |      0 |      5
           |   0.07 |   0.00 |   0.02 |   0.00 |   0.09
           |  80.00 |   0.00 |  20.00 |   0.00 |
           |   0.09 |   0.00 |   0.45 |   0.00 |
-----------+--------+--------+--------+--------+
Total          4618      897      224       61     5800
              79.62    15.47     3.86     1.05   100.00
```

Statistics from water.regfile for regfile 20:21 Tuesday, June 28, 2005 217

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	85457	0	363334429228	4251663.75	3515664.00	4331559.00
strtlcktime	Start/lockge/time	85457	0	1.1340177E14	1327003838	1262306700	1388533680
arrtime	Arriv/time	85457	0	1.1340149E14	1327000549	1262306700	1388530800
deptime	Leave/lockge/time	85457	0	1.1340199E14	1327006406	1262307720	1388536080
BOW_OVER_SILL	BOW_OVER_SILL	85457	0	1.1340184E14	1327004669	1262307000	1388534700
END_OF_ENTRY	END_OF_ENTRY	85457	0	1.1340188E14	1327005146	1262307060	1388535000
START_OF_EXIT	START_OF_EXIT	85457	0	1.1340194E14	1327005875	1262307660	1388535600
SIGNAL_DATE	SIGNAL_DATE	0	85457	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	85457	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	74503	10954	465181.00	6.2437888	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	74503	10954	244373.00	3.2800424	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	85457	.	.	.	.
vess_no		85457	0	69032277196	807801.32	2611.00	8888864.00
vss_hp		84742	715	330615040	3901.43	60.0000000	81800.00
frsttime		85457	0	1.1340149E14	1327000549	1262306700	1388530800
lasttime		85457	0	1.1340199E14	1327006406	1262307720	1388536080
newpoolno		85457	0	2145047.00	25.1008928	1.0000000	28.0000000
oldpoolno		85457	0	2146486.00	25.1177317	1.0000000	28.0000000
waitmin	Wait/before/lockge	85457	0	4684503.00	54.8170776	0	7423.00
lockmin	Wait/lockge/time	85457	0	3658376.00	42.8095533	4.0000000	1823.00
year		85457	0	171042164	2001.50	2000.00	2003.00
fly		85457	0	36224.00	0.4238857	0	1.0000000
turnback		85457	0	26797.00	0.3135729	0	1.0000000
exchange		85457	0	22434.00	0.2625180	0	1.0000000
lock		85457	0	2103038.00	24.6093123	1.0000000	27.0000000
totmin		85457	0	8342879.00	97.6266309	4.0000000	7490.00
month		85457	0	608314.00	7.1183636	1.0000000	12.0000000
day		85457	0	1341202.00	15.6944662	1.0000000	31.0000000
sunrise		84755	702	1962844170	23159.04	19414.00	27155.00
sunset		84755	702	5757808993	67934.74	59694.00	75152.00
sequpstr		85457	0	14034.00	0.1642229	0	1.0000000
seqdstr		85457	0	20960.00	0.2452696	0	1.0000000
plock		85457	0	2008784.00	23.5063716	1.0000000	27.0000000
pempty		74861	10596	192668.00	2.5736765	0	50.0000000
pfull		74861	10596	516932.00	6.9052243	0	28.0000000
parrtime		85457	0	1.1337709E14	1326715088	1262304600	1388521920
pstrtlcktime		85457	0	1.1337755E14	1326720434	1262304600	1388521920
pdeptime		85457	0	1.1337782E14	1326723647	1262305620	1388523540
birth		85457	0	0	0	0	0
transithrs		85457	0	6573116.20	76.9172356	-249.0333333	8099.42
reclock		85457	0	0	0	0	0
i		85457	0	19756464.00	231.1860234	58.0000000	401.0000000
pctpsysdn		79741	5716	79113.62	0.9921322	0	98.9510000
pctplckdn		79741	5716	38242.91	0.4795891	0	98.3000000
cumdown		84696	761	3445320.00	40.6786625	0	107520.00
pctdown		84696	761	32194.74	0.3801211	0	98.3000000
pcttrandn		84448	1009	113884.24	1.3485723	0	100.0000000
pctsysdn		84696	761	74496.13	0.8795708	0	98.6320000
pctlckdn		84696	761	32194.74	0.3801211	0	98.3000000
stime		85457	0	3785955540	44302.46	0	86340.00
etime		85457	0	3797234100	44434.44	0	86340.00
sdate		85457	0	1312476632	15358.33	14610.00	16070.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		85457	0	1312479042	15358.36	14610.00	16071.00
hrsduration		85457	0	60972.93	0.7134926	0.0666667	30.3833333
ndays		85457	0	1.0000000	0.000011702	0	1.0000000
pctday		85439	18	4676336.89	54.7330480	0	100.0000000
pctpsysnite		85407	50	3829162.49	44.8342934	0	100.0000000
pctplcknite		85436	21	3841480.21	44.9632498	0	100.0000000
pcttrannite		84890	567	3999412.04	47.1128760	0	100.0000000
pctsysnite		85375	82	3846028.84	45.0486541	0	100.0000000
pctlcknite		85439	18	3867563.11	45.2669520	0	100.0000000
stage		40813	44644	886226.16	21.7143106	8.3500000	33.0800000
flow		7845	77612	649332139	82770.19	16077.99	306262.78
jan		85457	0	3078.00	0.0360181	0	1.0000000
feb		85457	0	3427.00	0.0401020	0	1.0000000
mar		85457	0	6951.00	0.0813392	0	1.0000000
apr		85457	0	7584.00	0.0887464	0	1.0000000
may		85457	0	7217.00	0.0844518	0	1.0000000
jun		85457	0	8492.00	0.0993716	0	1.0000000
jul		85457	0	8608.00	0.1007290	0	1.0000000
aug		85457	0	8009.00	0.0937196	0	1.0000000
sep		85457	0	7643.00	0.0894368	0	1.0000000
oct		85457	0	8559.00	0.1001556	0	1.0000000
nov		85457	0	9217.00	0.1078554	0	1.0000000
dec		85457	0	6672.00	0.0780744	0	1.0000000
m31day		85457	0	49094.00	0.5744878	0	1.0000000
m30day		85457	0	32936.00	0.3854102	0	1.0000000
qtr1		85457	0	13456.00	0.1574593	0	1.0000000
qtr2		85457	0	23293.00	0.2725698	0	1.0000000
qtr3		85457	0	24260.00	0.2838855	0	1.0000000
qtr4		85457	0	24448.00	0.2860854	0	1.0000000
psingle		85457	0	65648.00	0.7681992	0	1.0000000
pdouble		85457	0	15912.00	0.1861989	0	1.0000000
pknockout		85457	0	1445.00	0.0169091	0	1.0000000
pjacknife		85457	0	529.0000000	0.0061902	0	1.0000000
pothtype		85457	0	1923.00	0.0225025	0	1.0000000
pexchange		85457	0	23443.00	0.2743251	0	1.0000000
pturnback		85457	0	27804.00	0.3253566	0	1.0000000
single		85457	0	85349.00	0.9987362	0	1.0000000
double		85457	0	55.0000000	0.000643599	0	1.0000000
knockout		85457	0	52.0000000	0.000608493	0	1.0000000
jacknife		85457	0	0	0	0	0
othtype		85457	0	1.0000000	0.000011702	0	1.0000000
contthru		1024	84433	518.0000000	0.5058594	0	1.0000000
return		1024	84433	130.0000000	0.1269531	0	1.0000000
contstop		1024	84433	334.0000000	0.3261719	0	1.0000000
kill		1024	84433	42.0000000	0.0410156	0	1.0000000
contsame		1024	84433	518.0000000	0.5058594	0	1.0000000
contdouble		1024	84433	52.0000000	0.0507813	0	1.0000000
contsingle		1024	84433	233.0000000	0.2275391	0	1.0000000
contko		1024	84433	49.0000000	0.0478516	0	1.0000000
contjk		1024	84433	0	0	0	0
retdouble		1024	84433	1.0000000	0.000976563	0	1.0000000
retsingle		1024	84433	126.0000000	0.1230469	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1024	84433	2.0000000	0.0019531	0	1.0000000
retjk		1024	84433	0	0	0	0
xkill		1024	84433	43.0000000	0.0419922	0	1.0000000
logtrnhrs		1020	84437	1578.48	1.5475260	-4.0943446	7.3991432
plockhrs		1024	84433	646.9180328	0.6317559	0.1639344	29.8852459
loglckhrs		1024	84433	-680.7543302	-0.6647992	-1.8082888	3.3973649
thrusingle		1024	84433	518.0000000	0.5058594	0	1.0000000
thruother		1024	84433	0	0	0	0
contother		1024	84433	49.0000000	0.0478516	0	1.0000000
retother		1024	84433	3.0000000	0.0029297	0	1.0000000
thrudoubnite		1023	84434	0	0	0	0
thrusingnite		1023	84434	186.5387400	0.1823448	0	1.0000000
thruothnite		1023	84434	0	0	0	0
pdoubnite		1024	84433	0	0	0	0
psingnite		1024	84433	296.6843600	0.2897308	0	1.0000000
pothnite		1024	84433	0	0	0	0

Transition models using key variables from stepwise proc transitions to contthru 20:21 Tuesday, June 28, 2005 220

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 1

Variable psingle Entered: R-Square = 0.1114 and C(p) = 44.3458

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	104.83345	104.83345	726.82	<.0001
Error	5798	836.28310	0.14424		
Corrected Total	5799	941.11655			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.85846	0.00550	3519.68174	24402.2	<.0001
psingle	-0.35260	0.01308	104.83345	726.82	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable mar Entered: R-Square = 0.1137 and C(p) = 30.8828

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	107.04760	53.52380	372.00	<.0001
Error	5797	834.06895	0.14388		
Corrected Total	5799	941.11655			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.86274	0.00560	3419.70135	23767.8	<.0001
mar	-0.07955	0.02028	2.21415	15.39	<.0001
psingle	-0.34748	0.01313	100.80526	700.62	<.0001

Bounds on condition number: 1.01, 4.0399

Stepwise Selection: Step 3

Transition models using key variables from stepwise proc transitions to contthru 20:21 Tuesday, June 28, 2005 221

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 3

Variable nov Entered: R-Square = 0.1156 and C(p) = 20.6862

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	108.79404	36.26468	252.53	<.0001
Error	5796	832.32251	0.14360		
Corrected Total	5799	941.11655			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.85528	0.00599	2931.54588	20414.3	<.0001
mar	-0.07275	0.02035	1.83450	12.77	0.0004
nov	0.05245	0.01504	1.74644	12.16	0.0005
psingle	-0.34543	0.01313	99.42225	692.34	<.0001

Bounds on condition number: 1.0194, 9.1308

Stepwise Selection: Step 4

Variable pjacknife Entered: R-Square = 0.1166 and C(p) = 15.9898

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	109.75291	27.43823	191.26	<.0001
Error	5795	831.36365	0.14346		
Corrected Total	5799	941.11655			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.85350	0.00602	2881.18918	20083.3	<.0001
mar	-0.07182	0.02035	1.78735	12.46	0.0004
nov	0.05174	0.01504	1.69886	11.84	0.0006
psingle	-0.34370	0.01314	98.17107	684.30	<.0001
pjacknife	0.11183	0.04326	0.95886	6.68	0.0098

Transition models using key variables from stepwise proc transitions to contthru 20:21 Tuesday, June 28, 2005 222

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 4

Bounds on condition number: 1.0197, 16.202

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	psingle		1	0.1114	0.1114	44.3458	726.82	<.0001
2	mar		2	0.0024	0.1137	30.8828	15.39	<.0001
3	nov		3	0.0019	0.1156	20.6862	12.16	0.0005
4	pjacknife		4	0.0010	0.1166	15.9898	6.68	0.0098

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0886 and C(p) = 671.1323

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	60.95995	60.95995	436.70	<.0001
Error	4493	627.18266	0.13959		
Corrected Total	4494	688.14261			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.17261	0.00710	13070	93632.8	<.0001
pturnback	-0.23944	0.01146	60.95995	436.70	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.1878 and C(p) = 111.2548

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	129.22628	64.61314	519.29	<.0001
Error	4492	558.91633	0.12442		
Corrected Total	4494	688.14261			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.39611	0.01166	5253.33842	42221.0	<.0001
pturnback	-0.46295	0.01442	128.16223	1030.04	<.0001
pexchange	-0.33381	0.01425	68.26633	548.66	<.0001

Bounds on condition number: 1.778, 7.1121

Stepwise Selection: Step 3

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable jun Entered: R-Square = 0.1921 and C(p) = 89.0558

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	132.16639	44.05546	355.87	<.0001
Error	4491	555.97622	0.12380		
Corrected Total	4494	688.14261			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.40250	0.01171	5215.13374	42126.2	<.0001
jun	-0.07692	0.01578	2.94010	23.75	<.0001
pturnback	-0.45913	0.01441	125.68530	1015.25	<.0001
pexchange	-0.32912	0.01425	66.05940	533.61	<.0001

Bounds on condition number: 1.7862, 13.723

Stepwise Selection: Step 4

Variable jul Entered: R-Square = 0.1974 and C(p) = 61.0241

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	135.81514	33.95378	276.02	<.0001
Error	4490	552.32747	0.12301		
Corrected Total	4494	688.14261			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.41029	0.01176	5171.24910	42038.3	<.0001
jun	-0.09060	0.01593	3.97723	32.33	<.0001
jul	-0.08460	0.01553	3.64875	29.66	<.0001
pturnback	-0.45217	0.01442	120.94488	983.19	<.0001
pexchange	-0.32249	0.01425	62.95999	511.82	<.0001

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 225

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.7993, 22.64

Stepwise Selection: Step 5

Variable pctlcknite Entered: R-Square = 0.2029 and C(p) = 31.8599

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	139.60150	27.92030	228.49	<.0001
Error	4489	548.54111	0.12220		
Corrected Total	4494	688.14261			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.44121	0.01297	4331.68217	35448.4	<.0001
jun	-0.09835	0.01594	4.65047	38.06	<.0001
jul	-0.09213	0.01554	4.29453	35.14	<.0001
pctlcknite	-0.00062473	0.00011223	3.78636	30.99	<.0001
pturnback	-0.44951	0.01438	119.39463	977.07	<.0001
pexchange	-0.32375	0.01421	63.43966	519.16	<.0001

Bounds on condition number: 1.7998, 33.476

Stepwise Selection: Step 6

Variable dec Entered: R-Square = 0.2045 and C(p) = 24.3335

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	140.75892	23.45982	192.35	<.0001
Error	4488	547.38369	0.12197		
Corrected Total	4494	688.14261			

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 226

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.43353	0.01319	4150.73643	34031.9	<.0001
jun	-0.09327	0.01601	4.13884	33.93	<.0001
jul	-0.08705	0.01561	3.79128	31.08	<.0001
dec	0.06800	0.02207	1.15743	9.49	0.0021
pctlcknite	-0.00064149	0.00011226	3.98288	32.66	<.0001
pturnback	-0.44685	0.01439	117.56170	963.89	<.0001
pexchange	-0.31909	0.01428	60.93272	499.59	<.0001

Bounds on condition number: 1.8202, 46.715

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0886	0.0886	671.132	436.70	<.0001
2	pexchange		2	0.0992	0.1878	111.255	548.66	<.0001
3	jun		3	0.0043	0.1921	89.0558	23.75	<.0001
4	jul		4	0.0053	0.1974	61.0241	29.66	<.0001
5	pctlcknite		5	0.0055	0.2029	31.8599	30.99	<.0001
6	dec		6	0.0017	0.2045	24.3335	9.49	0.0021

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0982 and C(p) = 669.1564

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	14.52087	14.52087	489.32	<.0001
Error	4493	133.33169	0.02968		
Corrected Total	4494	147.85256			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.76082	0.00327	1602.84217	54012.4	<.0001
pturnback	-0.11686	0.00528	14.52087	489.32	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.1966 and C(p) = 108.4256

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	29.06110	14.53055	549.46	<.0001
Error	4492	118.79146	0.02645		
Corrected Total	4494	147.85256			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.86397	0.00538	683.00161	25827.1	<.0001
pturnback	-0.22001	0.00665	28.94622	1094.58	<.0001
pexchange	-0.15406	0.00657	14.54023	549.83	<.0001

Bounds on condition number: 1.778, 7.1121

Stepwise Selection: Step 3

Logarithms of double lockage times using key variables from stepwise proc 228
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable jun Entered: R-Square = 0.2007 and C(p) = 86.4408

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	29.68083	9.89361	376.00	<.0001
Error	4491	118.17173	0.02631		
Corrected Total	4494	147.85256			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.86691	0.00540	679.02048	25805.5	<.0001
jun	-0.03532	0.00728	0.61973	23.55	<.0001
pturnback	-0.21826	0.00664	28.40281	1079.42	<.0001
pexchange	-0.15190	0.00657	14.07225	534.80	<.0001

Bounds on condition number: 1.7862, 13.723

Stepwise Selection: Step 4

Variable jul Entered: R-Square = 0.2065 and C(p) = 55.5675

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	30.53024	7.63256	292.10	<.0001
Error	4490	117.32232	0.02613		
Corrected Total	4494	147.85256			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.87067	0.00542	674.77534	25824.1	<.0001
jun	-0.04192	0.00734	0.85128	32.58	<.0001
jul	-0.04082	0.00716	0.84940	32.51	<.0001
pturnback	-0.21490	0.00665	27.31896	1045.51	<.0001
pexchange	-0.14870	0.00657	13.38698	512.33	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.7993, 22.64

Stepwise Selection: Step 5

Variable pctlcknite Entered: R-Square = 0.2120 and C(p) = 25.8277

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	31.35035	6.27007	241.59	<.0001
Error	4489	116.50221	0.02595		
Corrected Total	4494	147.85256			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.88505	0.00598	569.35917	21938.2	<.0001
jun	-0.04552	0.00735	0.99631	38.39	<.0001
jul	-0.04433	0.00716	0.99396	38.30	<.0001
pctlcknite	-0.00029075	0.00005172	0.82012	31.60	<.0001
pturnback	-0.21366	0.00663	26.97542	1039.40	<.0001
pexchange	-0.14929	0.00655	13.48995	519.79	<.0001

Bounds on condition number: 1.7998, 33.476

Stepwise Selection: Step 6

Variable dec Entered: R-Square = 0.2135 and C(p) = 19.4217

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	31.56755	5.26126	203.06	<.0001
Error	4488	116.28501	0.02591		
Corrected Total	4494	147.85256			

Logarithms of double lockage times using key variables from stepwise proc 230
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.88173	0.00608	544.90475	21030.5	<.0001
jun	-0.04332	0.00738	0.89290	34.46	<.0001
jul	-0.04212	0.00720	0.88771	34.26	<.0001
dec	0.02946	0.01017	0.21720	8.38	0.0038
pctlcknite	-0.00029801	0.00005174	0.85956	33.17	<.0001
pturnback	-0.21251	0.00663	26.58933	1026.21	<.0001
pexchange	-0.14727	0.00658	12.97982	500.95	<.0001

Bounds on condition number: 1.8202, 46.715

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0982	0.0982	669.156	489.32	<.0001
2	pexchange		2	0.0983	0.1966	108.426	549.83	<.0001
3	jun		3	0.0042	0.2007	86.4408	23.55	<.0001
4	jul		4	0.0057	0.2065	55.5675	32.51	<.0001
5	pctlcknite		5	0.0055	0.2120	25.8277	31.60	<.0001
6	dec		6	0.0015	0.2135	19.4217	8.38	0.0038

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0268 and C(p) = 123.5671

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	2.04981	2.04981	26.13	<.0001
Error	950	74.52898	0.07845		
Corrected Total	951	76.57879			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.62258	0.01165	224.03770	2855.75	<.0001
pturnback	-0.09501	0.01859	2.04981	26.13	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.1273 and C(p) = 14.8898

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	9.74757	4.87378	69.21	<.0001
Error	949	66.83122	0.07042		
Corrected Total	951	76.57879			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.76251	0.01735	136.05094	1931.92	<.0001
pturnback	-0.23493	0.02212	7.94470	112.81	<.0001
pexchange	-0.23510	0.02249	7.69776	109.31	<.0001

Bounds on condition number: 1.5775, 6.3101

Stepwise Selection: Step 3

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable apr Entered: R-Square = 0.1361 and C(p) = 7.1818

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	10.42277	3.47426	49.79	<.0001
Error	948	66.15602	0.06978		
Corrected Total	951	76.57879			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.77024	0.01745	136.00646	1948.94	<.0001
apr	-0.08615	0.02770	0.67520	9.68	0.0019
pturnback	-0.23299	0.02203	7.80753	111.88	<.0001
pexchange	-0.23307	0.02239	7.55858	108.31	<.0001

Bounds on condition number: 1.5789, 12.476

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0268	0.0268	123.567	26.13	<.0001
2	pexchange		2	0.1005	0.1273	14.8898	109.31	<.0001
3	apr		3	0.0088	0.1361	7.1818	9.68	0.0019

Logarithms of single lockage times using key variables from stepwise proc 233
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pexchange Entered: R-Square = 0.0332 and C(p) = 161.9000

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	5.58754	5.58754	33.30	<.0001
Error	971	162.93860	0.16780		
Corrected Total	972	168.52615			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.58403	0.01645	211.48001	1260.27	<.0001
pexchange	-0.15761	0.02731	5.58754	33.30	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pturnback Entered: R-Square = 0.1574 and C(p) = 18.6088

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	26.52090	13.26045	90.58	<.0001
Error	970	142.00524	0.14640		
Corrected Total	972	168.52615			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.35045	0.02485	29.10684	198.82	<.0001
pturnback	-0.37813	0.03162	20.93336	142.99	<.0001
pexchange	-0.39120	0.03213	21.70012	148.23	<.0001

Bounds on condition number: 1.5863, 6.3452

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 234
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable apr Entered: R-Square = 0.1638 and C(p) = 13.1078

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	27.60163	9.20054	63.26	<.0001
Error	969	140.92451	0.14543		
Corrected Total	972	168.52615			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.34080	0.02502	26.97659	185.49	<.0001
apr	-0.10884	0.03993	1.08073	7.43	0.0065
pturnback	-0.37584	0.03153	20.66572	142.10	<.0001
pexchange	-0.38882	0.03204	21.42086	147.29	<.0001

Bounds on condition number: 1.5875, 12.527

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pexchange		1	0.0332	0.0332	161.900	33.30	<.0001
2	pturnback		2	0.1242	0.1574	18.6088	142.99	<.0001
3	apr		3	0.0064	0.1638	13.1078	7.43	0.0065

Logarithms of single lockage times using key variables from stepwise proc 235
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0334 and C(p) = 562.7743

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	145.75385	145.75385	133.00	<.0001
Error	3850	4219.25534	1.09591		
Corrected Total	3851	4365.00919			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.96246	0.01810	52504	47909.4	<.0001
jun	-0.57489	0.04985	145.75385	133.00	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable waitmin Entered: R-Square = 0.0676 and C(p) = 408.4852

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	295.25668	147.62834	139.62	<.0001
Error	3849	4069.75250	1.05735		
Corrected Total	3851	4365.00919			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.12815	0.02259	35307	33391.8	<.0001
jun	-0.58344	0.04897	150.08743	141.95	<.0001
waitmin	-0.00075025	0.00006309	149.50284	141.39	<.0001

Bounds on condition number: 1.0002, 4.0009

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 236
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 3

Variable pcttrandn Entered: R-Square = 0.0876 and C(p) = 319.2629

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	382.51805	127.50602	123.20	<.0001
Error	3848	3982.49114	1.03495		
Corrected Total	3851	4365.00919			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.10418	0.02250	34428	33265.7	<.0001
jun	-0.57738	0.04845	146.95735	141.99	<.0001
pcttrandn	0.01777	0.00193	87.26137	84.31	<.0001
waitmin	-0.00077016	0.00006246	157.35274	152.04	<.0001

Bounds on condition number: 1.0014, 9.0097

Stepwise Selection: Step 4

Variable may Entered: R-Square = 0.1041 and C(p) = 246.1495

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	454.37003	113.59251	111.74	<.0001
Error	3847	3910.63916	1.01654		
Corrected Total	3851	4365.00919			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.16218	0.02334	32315	31789.5	<.0001
may	-0.47806	0.05686	71.85198	70.68	<.0001
jun	-0.62824	0.04840	171.27143	168.48	<.0001
pcttrandn	0.01773	0.00192	86.90501	85.49	<.0001
waitmin	-0.00080404	0.00006203	170.77909	168.00	<.0001

Logarithms of single lockage times using key variables from stepwise proc 237
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0199, 16.173

Stepwise Selection: Step 5

Variable jul Entered: R-Square = 0.1231 and C(p) = 161.3372

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	537.41283	107.48257	108.00	<.0001
Error	3846	3827.59635	0.99521		
Corrected Total	3851	4365.00919			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.22345	0.02405	30686	30833.9	<.0001
may	-0.55152	0.05683	93.71760	94.17	<.0001
jun	-0.70498	0.04862	209.22809	210.23	<.0001
jul	-0.44074	0.04825	83.04281	83.44	<.0001
pcttrandn	0.01738	0.00190	83.50101	83.90	<.0001
waitmin	-0.00072813	0.00006194	137.53209	138.19	<.0001

Bounds on condition number: 1.0675, 25.908

Stepwise Selection: Step 6

Variable apr Entered: R-Square = 0.1332 and C(p) = 117.5492

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	581.21276	96.86879	98.44	<.0001
Error	3845	3783.79643	0.98408		
Corrected Total	3851	4365.00919			

Logarithms of single lockage times using key variables from stepwise proc 238
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.28515	0.02564	27481	27925.2	<.0001
apr	-0.37897	0.05681	43.79992	44.51	<.0001
may	-0.60805	0.05715	111.40837	113.21	<.0001
jun	-0.76024	0.04905	236.37867	240.20	<.0001
jul	-0.49286	0.04861	101.16390	102.80	<.0001
pcttrandn	0.01732	0.00189	82.91573	84.26	<.0001
waitmin	-0.00075848	0.00006176	148.42735	150.83	<.0001

Bounds on condition number: 1.0958, 38.023

Stepwise Selection: Step 7

Variable thrudoubnite Entered: R-Square = 0.1411 and C(p) = 83.3421

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	615.84764	87.97823	90.20	<.0001
Error	3844	3749.16154	0.97533		
Corrected Total	3851	4365.00919			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.17427	0.03159	17030	17461.1	<.0001
apr	-0.36339	0.05661	40.18678	41.20	<.0001
may	-0.58916	0.05698	104.26996	106.91	<.0001
jun	-0.73294	0.04905	217.78452	223.29	<.0001
jul	-0.46419	0.04863	88.85676	91.10	<.0001
thrudoubnite	0.21829	0.03663	34.63489	35.51	<.0001
pcttrandn	0.01796	0.00188	88.83851	91.09	<.0001
waitmin	-0.00076605	0.00006150	151.33757	155.17	<.0001

Bounds on condition number: 1.1066, 51.707

Stepwise Selection: Step 8

Logarithms of single lockage times using key variables from stepwise proc 239
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 8

Variable sep Entered: R-Square = 0.1478 and C(p) = 54.4844

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	645.36550	80.67069	83.35	<.0001
Error	3843	3719.64369	0.96790		
Corrected Total	3851	4365.00919			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.11288	0.03337	14699	15186.5	<.0001
apr	-0.31128	0.05718	28.68344	29.63	<.0001
may	-0.53744	0.05753	84.46645	87.27	<.0001
jun	-0.68229	0.04971	182.30156	188.35	<.0001
jul	-0.41690	0.04920	69.50138	71.81	<.0001
sep	0.33886	0.06136	29.51785	30.50	<.0001
thrudoubnite	0.22952	0.03655	38.17210	39.44	<.0001
pcttrandn	0.01755	0.00188	84.69136	87.50	<.0001
waitmin	-0.00073307	0.00006155	137.28222	141.83	<.0001

Bounds on condition number: 1.1412, 69.005

Stepwise Selection: Step 9

Variable mar Entered: R-Square = 0.1510 and C(p) = 41.9801

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	659.23999	73.24889	75.94	<.0001
Error	3842	3705.76920	0.96454		
Corrected Total	3851	4365.00919			

Logarithms of single lockage times using key variables from stepwise proc 240
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 9

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.14888	0.03464	13835	14343.3	<.0001
mar	-0.28940	0.07630	13.87449	14.38	0.0002
apr	-0.34345	0.05771	34.16461	35.42	<.0001
may	-0.56920	0.05804	92.77388	96.18	<.0001
jun	-0.71302	0.05029	193.92391	201.05	<.0001
jul	-0.44509	0.04967	77.44516	80.29	<.0001
sep	0.30616	0.06186	23.62756	24.50	<.0001
thrudoubnite	0.22881	0.03648	37.93625	39.33	<.0001
pcttrandn	0.01768	0.00187	85.93451	89.09	<.0001
waitmin	-0.00075769	0.00006179	145.04007	150.37	<.0001

Bounds on condition number: 1.1674, 88.534

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Label	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun			1	0.0334	0.0334	562.774	133.00	<.0001
2	waitmin		Wait/before/lockge	2	0.0343	0.0676	408.485	141.39	<.0001
3	pcttrandn			3	0.0200	0.0876	319.263	84.31	<.0001
4	may			4	0.0165	0.1041	246.149	70.68	<.0001
5	jul			5	0.0190	0.1231	161.337	83.44	<.0001
6	apr			6	0.0100	0.1332	117.549	44.51	<.0001
7	thrudoubnite			7	0.0079	0.1411	83.3421	35.51	<.0001
8	sep			8	0.0068	0.1478	54.4844	30.50	<.0001
9	mar			9	0.0032	0.1510	41.9801	14.38	0.0002

Logarithms of single lockage times using key variables from stepwise proc 241
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0448 and C(p) = 366.3043

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	9.89675	9.89675	180.37	<.0001
Error	3850	211.24401	0.05487		
Corrected Total	3851	221.14075			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.34652	0.00405	6063.05398	110501	<.0001
jun	-0.14980	0.01115	9.89675	180.37	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jul Entered: R-Square = 0.0719 and C(p) = 248.5482

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	15.89958	7.94979	149.09	<.0001
Error	3849	205.24118	0.05332		
Corrected Total	3851	221.14075			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.36489	0.00435	5244.10311	98345.5	<.0001
jun	-0.16817	0.01113	12.17067	228.24	<.0001
jul	-0.11610	0.01094	6.00283	112.57	<.0001

Bounds on condition number: 1.0248, 4.0991

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 242
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable may Entered: R-Square = 0.0997 and C(p) = 127.6764

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	22.05859	7.35286	142.12	<.0001
Error	3848	199.08217	0.05174		
Corrected Total	3851	221.14075			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.38260	0.00458	4706.30161	90966.7	<.0001
may	-0.14124	0.01295	6.15901	119.05	<.0001
jun	-0.18588	0.01108	14.55036	281.24	<.0001
jul	-0.13381	0.01090	7.79715	150.71	<.0001

Bounds on condition number: 1.048, 9.4016

Stepwise Selection: Step 4

Variable apr Entered: R-Square = 0.1109 and C(p) = 80.6167

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	24.51773	6.12943	119.92	<.0001
Error	3847	196.62303	0.05111		
Corrected Total	3851	221.14075			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.39566	0.00493	4096.33888	80146.3	<.0001
apr	-0.08955	0.01291	2.45914	48.11	<.0001
may	-0.15430	0.01300	7.19641	140.80	<.0001
jun	-0.19894	0.01118	16.19361	316.83	<.0001
jul	-0.14687	0.01100	9.11784	178.39	<.0001

Logarithms of single lockage times using key variables from stepwise proc 243
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0797, 17.12

Stepwise Selection: Step 5

Variable sep Entered: R-Square = 0.1189 and C(p) = 47.1299

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	26.29652	5.25930	103.81	<.0001
Error	3846	194.84423	0.05066		
Corrected Total	3851	221.14075			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.38368	0.00531	3442.38426	67948.7	<.0001
apr	-0.07757	0.01301	1.80072	35.54	<.0001
may	-0.14232	0.01310	5.97674	117.97	<.0001
jun	-0.18696	0.01131	13.84530	273.29	<.0001
jul	-0.13489	0.01113	7.43767	146.81	<.0001
sep	0.08259	0.01394	1.77879	35.11	<.0001

Bounds on condition number: 1.1165, 27.407

Stepwise Selection: Step 6

Variable dec Entered: R-Square = 0.1219 and C(p) = 36.0065

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	26.95434	4.49239	88.95	<.0001
Error	3845	194.18642	0.05050		
Corrected Total	3851	221.14075			

Logarithms of single lockage times using key variables from stepwise proc 244
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.37626	0.00568	2960.46782	58618.9	<.0001
apr	-0.07016	0.01315	1.43689	28.45	<.0001
may	-0.13490	0.01324	5.24073	103.77	<.0001
jun	-0.17955	0.01148	12.35926	244.72	<.0001
jul	-0.12748	0.01130	6.42276	127.17	<.0001
sep	0.09001	0.01407	2.06752	40.94	<.0001
dec	0.05675	0.01572	0.65782	13.03	0.0003

Bounds on condition number: 1.1546, 40.285

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun		1	0.0448	0.0448	366.304	180.37	<.0001
2	jul		2	0.0271	0.0719	248.548	112.57	<.0001
3	may		3	0.0279	0.0997	127.676	119.05	<.0001
4	apr		4	0.0111	0.1109	80.6167	48.11	<.0001
5	sep		5	0.0080	0.1189	47.1299	35.11	<.0001
6	dec		6	0.0030	0.1219	36.0065	13.03	0.0003

Logarithms of single lockage times using key variables from stepwise proc 245
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0204 and C(p) = 206.2289

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	7.66381	7.66381	9.98	0.0017
Error	478	367.22240	0.76825		
Corrected Total	479	374.88620			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.12694	0.04188	4282.65790	5574.58	<.0001
jun	-0.44718	0.14158	7.66381	9.98	0.0017

Bounds on condition number: 1, 1

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun		1	0.0204	0.0204	206.229	9.98	0.0017

Logarithms of single lockage times using key variables from stepwise proc 246
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0320 and C(p) = 141.2493

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.75410	0.75410	15.76	<.0001
Error	476	22.78247	0.04786		
Corrected Total	477	23.53657			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.11279	0.01048	539.89465	11280.2	<.0001
jun	-0.14030	0.03535	0.75410	15.76	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable mar Entered: R-Square = 0.0521 and C(p) = 130.4924

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	1.22648	0.61324	13.06	<.0001
Error	475	22.31009	0.04697		
Corrected Total	477	23.53657			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.12339	0.01090	498.49171	10613.3	<.0001
mar	-0.11277	0.03556	0.47238	10.06	0.0016
jun	-0.15091	0.03517	0.86452	18.41	<.0001

Bounds on condition number: 1.0091, 4.0365

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 247
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.0712 and C(p) = 120.3300

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	1.67685	0.55895	12.12	<.0001
Error	474	21.85972	0.04612		
Corrected Total	477	23.53657			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.13425	0.01135	460.57126	9986.90	<.0001
mar	-0.12363	0.03541	0.56224	12.19	0.0005
jun	-0.16176	0.03503	0.98360	21.33	<.0001
jul	-0.11589	0.03708	0.45037	9.77	0.0019

Bounds on condition number: 1.0191, 9.1681

Stepwise Selection: Step 4

Variable apr Entered: R-Square = 0.0875 and C(p) = 111.9974

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	2.05947	0.51487	11.34	<.0001
Error	473	21.47711	0.04541		
Corrected Total	477	23.53657			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.14695	0.01208	409.12155	9010.27	<.0001
mar	-0.13634	0.03540	0.67332	14.83	0.0001
apr	-0.09680	0.03335	0.38261	8.43	0.0039
jun	-0.17447	0.03503	1.12636	24.81	<.0001
jul	-0.12860	0.03706	0.54683	12.04	0.0006

Logarithms of single lockage times using key variables from stepwise proc 248
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0379, 16.561

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Label	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun			1	0.0320	0.0320	141.249	15.76	<.0001
2	mar			2	0.0201	0.0521	130.492	10.06	0.0016
3	jul			3	0.0191	0.0712	120.330	9.77	0.0019
4	apr			4	0.0163	0.0875	111.997	8.43	0.0039

Logarithms of single lockage times using key variables from stepwise proc 249
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable retsingle Entered: R-Square = 0.0413 and C(p) = 3.0022

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	100029	100029	49.43	<.0001
Error	1148	2323259	2023.74443		
Corrected Total	1149	2423288			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	12.10564	1.40650	149917	74.08	<.0001
retsingle	29.75591	4.23240	100029	49.43	<.0001

Bounds on condition number: 1, 1

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	retsingle		1	0.0413	0.0413	3.0022	49.43	<.0001

Logarithms of single lockage times using key variables from stepwise proc 250
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable contsingle Entered: R-Square = 0.1526 and C(p) = 56.8894

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	145.41306	145.41306	204.77	<.0001
Error	1137	807.42719	0.71014		
Corrected Total	1138	952.84026			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.20815	0.02804	4402.95420	6200.14	<.0001
contsingle	-0.88158	0.06161	145.41306	204.77	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable retsingle Entered: R-Square = 0.1733 and C(p) = 29.7423

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	165.15831	82.57915	119.10	<.0001
Error	1136	787.68195	0.69338		
Corrected Total	1138	952.84026			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.15082	0.02972	3631.41954	5237.26	<.0001
contsingle	-0.82425	0.06182	123.27540	177.79	<.0001
retsingle	0.43873	0.08222	19.74524	28.48	<.0001

Bounds on condition number: 1.0311, 4.1246

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 251
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable pcttrannite Entered: R-Square = 0.1885 and C(p) = 10.3926

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	179.62131	59.87377	87.89	<.0001
Error	1135	773.21895	0.68125		
Corrected Total	1138	952.84026			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.00492	0.04325	1464.03383	2149.04	<.0001
contsingle	-0.79566	0.06159	113.70339	166.90	<.0001
retsingle	0.47411	0.08185	22.85542	33.55	<.0001
pcttrannite	0.00308	0.00066948	14.46300	21.23	<.0001

Bounds on condition number: 1.0417, 9.295

Stepwise Selection: Step 4

Variable pcttrandn Entered: R-Square = 0.1939 and C(p) = 4.7871

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	184.77354	46.19339	68.20	<.0001
Error	1134	768.06671	0.67731		
Corrected Total	1138	952.84026			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.98969	0.04348	1418.62648	2094.51	<.0001
contsingle	-0.79760	0.06141	114.24587	168.68	<.0001
retsingle	0.48050	0.08165	23.45668	34.63	<.0001
pcttrandn	0.00600	0.00217	5.15223	7.61	0.0059
pcttrannite	0.00305	0.00066767	14.11493	20.84	<.0001

Logarithms of single lockage times using key variables from stepwise proc 252
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0419, 16.405

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	contsingle		1	0.1526	0.1526	56.8894	204.77	<.0001
2	retsingle		2	0.0207	0.1733	29.7423	28.48	<.0001
3	pcttrannite		3	0.0152	0.1885	10.3926	21.23	<.0001
4	pcttrandn		4	0.0054	0.1939	4.7871	7.61	0.0059

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	5987	0	25091386443	4190978.19	3616291.00	4328554.00
strtlcktime	Start/lockge/time	5987	0	7.9359367E12	1325528101	1262656500	1386997320
arrtime	Arriv/time	5987	0	7.9358646E12	1325516045	1262644500	1386996420
deptime	Leave/lockge/time	5987	0	7.9359726E12	1325534098	1262658900	1387007100
BOW_OVER_SILL	BOW_OVER_SILL	5987	0	7.9359578E12	1325531620	1262657280	1387002600
END_OF_ENTRY	END_OF_ENTRY	5987	0	7.9359613E12	1325532204	1262657700	1387003380
START_OF_EXIT	START_OF_EXIT	5987	0	7.9359637E12	1325532609	1262658480	1387004160
SIGNAL_DATE	SIGNAL_DATE	0	5987	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	5987	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	5568	419	26637.00	4.7839440	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	5568	419	41894.00	7.5240661	0	17.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	5987	.	.	.	.
vess_no		5987	0	3994098773	667128.57	2611.00	8888846.00
vss_hp		5964	23	27734834.00	4650.37	75.0000000	8800.00
frsttime		5987	0	7.9358646E12	1325516045	1262644500	1386996420
lasttime		5987	0	7.9359726E12	1325534098	1262658900	1387007100
newpoolno		5987	0	133064.00	22.2254886	3.0000000	28.0000000
oldpoolno		5987	0	138123.00	23.0704861	4.0000000	28.0000000
waitmin	Wait/before/lockge	5987	0	1203012.00	200.9373643	0	3805.00
lockmin	Wait/lockge/time	5987	0	598319.00	99.9363621	8.0000000	887.0000000
year		5987	0	11982712.00	2001.46	2000.00	2003.00
fly		5987	0	1231.00	0.2056122	0	1.0000000
turnback		5987	0	2284.00	0.3814932	0	1.0000000
exchange		5987	0	2472.00	0.4128946	0	1.0000000
lock		5987	0	132600.00	22.1479873	3.0000000	27.0000000
totmin		5987	0	1801331.00	300.8737264	10.0000000	3900.00
month		5987	0	42448.00	7.0900284	1.0000000	12.0000000
day		5987	0	94454.00	15.7765158	1.0000000	31.0000000
sunrise		5985	2	136883234	22871.05	19392.00	27046.00
sunset		5985	2	413878384	69152.61	59910.00	74992.00
sequpstr		5987	0	4123.00	0.6886588	0	1.0000000
seqdstr		5987	0	0	0	0	0
plock		5987	0	143688.00	24.0000000	24.0000000	24.0000000
pempty		5567	420	44687.00	8.0271241	0	17.0000000
pfull		5567	420	25948.00	4.6610383	0	28.0000000
parrtime		5987	0	7.9355077E12	1325456431	1262586600	1386897300
pstrtlcktime		5987	0	7.9355816E12	1325468786	1262586600	1386897300
pdeptime		5987	0	7.9356142E12	1325474223	1262589600	1386903300
birth		5987	0	0	0	0	0
transithrs		5987	0	69553.27	11.6173821	-249.0333333	4115.92
reclock		5987	0	0	0	0	0
i		5987	0	1230563.00	205.5391682	58.0000000	401.0000000
pctpsysdn		5987	0	8188.62	1.3677336	0	94.9670000
pctplckdn		5987	0	2776.04	0.4636785	0	80.2860000
cumdown		5982	5	822180.00	137.4423270	0	52260.00
pctdown		5982	5	4619.07	0.7721615	0	98.1960000
pcttrandn		5940	47	8694.32	1.4636902	0	100.0000000
pctsysdn		5982	5	7934.68	1.3264266	0	98.1960000
pctlckdn		5982	5	4619.07	0.7721615	0	98.1960000
stime		5987	0	262458480	43838.06	0	86340.00
etime		5987	0	262242420	43801.97	0	86340.00
sdate		5987	0	91848082.00	15341.25	14614.00	16053.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		5987	0	91848500.00	15341.32	14614.00	16053.00
hrsduration		5987	0	9971.98	1.6656060	0.1333333	14.7833333
ndays		5987	0	0	0	0	0
pctday		5987	0	338156.52	56.4817977	0	100.0000000
pctpsysnite		5986	1	259547.28	43.3590518	0	100.0000000
pctplcknite		5987	0	261553.85	43.6869634	0	100.0000000
pcttrannite		5987	0	267936.29	44.7530124	0	100.0000000
pctsysnite		5986	1	262653.43	43.8779536	0	100.0000000
pctlcknite		5987	0	260543.48	43.5182023	0	100.0000000
stage		5932	55	88358.84	14.8952866	9.2700000	32.8400000
flow		5452	535	544076009	99793.84	17865.30	306262.78
jan		5987	0	28.0000000	0.0046768	0	1.0000000
feb		5987	0	62.0000000	0.0103558	0	1.0000000
mar		5987	0	589.0000000	0.0983798	0	1.0000000
apr		5987	0	623.0000000	0.1040588	0	1.0000000
may		5987	0	602.0000000	0.1005512	0	1.0000000
jun		5987	0	727.0000000	0.1214298	0	1.0000000
jul		5987	0	732.0000000	0.1222649	0	1.0000000
aug		5987	0	623.0000000	0.1040588	0	1.0000000
sep		5987	0	526.0000000	0.0878570	0	1.0000000
oct		5987	0	624.0000000	0.1042258	0	1.0000000
nov		5987	0	629.0000000	0.1050610	0	1.0000000
dec		5987	0	222.0000000	0.0370803	0	1.0000000
m31day		5987	0	3420.00	0.5712377	0	1.0000000
m30day		5987	0	2505.00	0.4184065	0	1.0000000
qtr1		5987	0	679.0000000	0.1134124	0	1.0000000
qtr2		5987	0	1952.00	0.3260398	0	1.0000000
qtr3		5987	0	1881.00	0.3141807	0	1.0000000
qtr4		5987	0	1475.00	0.2463671	0	1.0000000
psingle		5987	0	1267.00	0.2116252	0	1.0000000
pdouble		5987	0	4457.00	0.7444463	0	1.0000000
pknockout		5987	0	124.0000000	0.0207115	0	1.0000000
pjacknife		5987	0	136.0000000	0.0227159	0	1.0000000
pothtype		5987	0	3.0000000	0.000501086	0	1.0000000
pexchange		5987	0	2410.00	0.4025388	0	1.0000000
pturnback		5987	0	2334.00	0.3898447	0	1.0000000
single		5987	0	1308.00	0.2184734	0	1.0000000
double		5987	0	4411.00	0.7367630	0	1.0000000
knockout		5987	0	131.0000000	0.0218807	0	1.0000000
jacknife		5987	0	135.0000000	0.0225489	0	1.0000000
othtype		5987	0	2.0000000	0.000334057	0	1.0000000
contthru		5987	0	4123.00	0.6886588	0	1.0000000
return		5987	0	452.0000000	0.0754969	0	1.0000000
contstop		5987	0	1340.00	0.2238183	0	1.0000000
kill		5987	0	72.0000000	0.0120261	0	1.0000000
contsame		5987	0	4123.00	0.6886588	0	1.0000000
contdouble		5987	0	881.0000000	0.1471522	0	1.0000000
contsingle		5987	0	450.0000000	0.0751629	0	1.0000000
contko		5987	0	8.0000000	0.0013362	0	1.0000000
contjk		5987	0	1.0000000	0.000167029	0	1.0000000
retdouble		5987	0	175.0000000	0.0292300	0	1.0000000
retsingle		5987	0	257.0000000	0.0429263	0	1.0000000

SAS Program Output from “fitmod.sas” for Tows Only (cont.)

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		5987	0	20.0000000	0.0033406	0	1.0000000
retjk		5987	0	0	0	0	0
xkill		5987	0	72.0000000	0.0120261	0	1.0000000
logtrnhrs		5943	44	10147.32	1.7074410	-4.0943446	8.3226169
plockhrs		5987	0	8892.48	1.4852974	0.1311475	11.4754098
loglckhrs		5987	0	1482.00	0.2475363	-2.0314323	2.4402065
thrusingle		5987	0	541.0000000	0.0903625	0	1.0000000
thruother		5987	0	241.0000000	0.0402539	0	1.0000000
contother		5987	0	9.0000000	0.0015033	0	1.0000000
retother		5987	0	20.0000000	0.0033406	0	1.0000000
thrudoubnite		5987	0	1503.34	0.2511009	0	1.0000000
thrusingnite		5987	0	255.7334300	0.0427148	0	1.0000000
thruothnite		5987	0	118.3899700	0.0197745	0	1.0000000
pdoubnite		5987	0	2007.93	0.3353814	0	1.0000000
psingnite		5987	0	488.4049700	0.0815776	0	1.0000000
pothnite		5987	0	119.2048700	0.0199106	0	1.0000000

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 20:21 Tuesday, June 28, 2005 256

The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI24U

pconfig / doutcome Frequency Percent Row Pct Col Pct	1:contsame	2:contdouble	3:contsingle	4:contko	5:contjk	6:retdouble	7:retsingle	8:retko	x:kill	Total
1:double	3341 55.80 74.96 81.03	875 14.61 19.63 99.32	52 0.87 1.17 11.56	5 0.08 0.11 62.50	1 0.02 0.02 100.00	142 2.37 3.19 81.14	14 0.23 0.31 5.45	4 0.07 0.09 20.00	23 0.38 0.52 31.94	4457 74.44
2:single	541 9.04 42.70 13.12	5 0.08 0.39 0.57	394 6.58 31.10 87.56	2 0.03 0.16 25.00	0 0.00 0.00 0.00	31 0.52 2.45 17.71	232 3.88 18.31 90.27	14 0.23 1.10 70.00	48 0.80 3.79 66.67	1267 21.16
3:knockout	106 1.77 85.48 2.57	1 0.02 0.81 0.11	4 0.07 3.23 0.89	1 0.02 0.81 12.50	0 0.00 0.00 0.00	2 0.03 1.61 1.14	8 0.13 6.45 3.11	2 0.03 1.61 10.00	0 0.00 0.00 0.00	124 2.07
4:jacknife	133 2.22 97.79 3.23	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.03 1.47 0.78	0 0.00 0.00 0.00	1 0.02 0.74 1.39	136 2.27
5:Other	2 0.03 66.67 0.05	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02 33.33 0.39	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.05
Total	4123 68.87	881 14.72	450 7.52	8 0.13	1 0.02	175 2.92	257 4.29	20 0.33	72 1.20	5987 100.00

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 20:21 Tuesday, June 28, 2005 257

The FREQ Procedure

Table 1 of pconfig by nextstep
Controlling for pnewpool=MI24U

pconfig nextstep

Frequency Percent Row Pct Col Pct	1:contth	2:contst	3:return	4:kill	Total
1:double	3341 55.80 74.96 81.03	933 15.58 20.93 69.63	160 2.67 3.59 35.40	23 0.38 0.52 31.94	4457 74.44
2:single	541 9.04 42.70 13.12	401 6.70 31.65 29.93	277 4.63 21.86 61.28	48 0.80 3.79 66.67	1267 21.16
3:knockout	106 1.77 85.48 2.57	6 0.10 4.84 0.45	12 0.20 9.68 2.65	0 0.00 0.00 0.00	124 2.07
4:jacknife	133 2.22 97.79 3.23	0 0.00 0.00 0.00	2 0.03 1.47 0.44	1 0.02 0.74 1.39	136 2.27
5:Other	2 0.03 66.67 0.05	0 0.00 0.00 0.00	1 0.02 33.33 0.22	0 0.00 0.00 0.00	3 0.05
Total	4123 68.87	1340 22.38	452 7.55	72 1.20	5987 100.00

Statistics from water.regfile for regfile 20:21 Tuesday, June 28, 2005 258

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	85700	0	364333645640	4251267.74	3515664.00	4331559.00
strtlcktime	Start/lockge/time	85700	0	1.1372726E14	1327039254	1262306700	1388533680
arrtime	Arriv/time	85700	0	1.1372698E14	1327035971	1262306700	1388530800
deptime	Leave/lockge/time	85700	0	1.1372748E14	1327041818	1262307720	1388536080
BOW_OVER_SILL	BOW_OVER_SILL	85700	0	1.1372734E14	1327040086	1262307000	1388534700
END_OF_ENTRY	END_OF_ENTRY	85700	0	1.1372738E14	1327040562	1262307060	1388535000
START_OF_EXIT	START_OF_EXIT	85700	0	1.1372744E14	1327041287	1262307660	1388535600
SIGNAL_DATE	SIGNAL_DATE	0	85700	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	85700	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	74601	11099	464425.00	6.2254527	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	74601	11099	244702.00	3.2801437	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	85700	.	.	.	.
vess_no		85700	0	68712425589	801778.59	2611.00	8888864.00
vss_hp		84991	709	331462548	3899.97	60.0000000	81800.00
frsttime		85700	0	1.1372698E14	1327035971	1262306700	1388530800
lasttime		85700	0	1.1372748E14	1327041818	1262307720	1388536080
newpoolno		85700	0	2148576.00	25.0708985	1.0000000	28.0000000
oldpoolno		85700	0	2151460.00	25.1045508	1.0000000	28.0000000
waitmin	Wait/before/lockge	85700	0	4687853.00	54.7007351	0	7423.00
lockmin	Wait/lockge/time	85700	0	3662631.00	42.7378180	4.0000000	1823.00
year		85700	0	171528526	2001.50	2000.00	2003.00
fly		85700	0	36355.00	0.4242124	0	1.0000000
turnback		85700	0	26784.00	0.3125321	0	1.0000000
exchange		85700	0	22560.00	0.2632439	0	1.0000000
lock		85700	0	2107168.00	24.5877246	1.0000000	27.0000000
totmin		85700	0	8350484.00	97.4385531	4.0000000	7490.00
month		85700	0	611247.00	7.1324037	1.0000000	12.0000000
day		85700	0	1344317.00	15.6863127	1.0000000	31.0000000
sunrise		84998	702	1968924810	23164.37	19414.00	27155.00
sunset		84998	702	5773071688	67920.09	59694.00	75152.00
sequpstr		85700	0	14575.00	0.1700700	0	1.0000000
seqdstr		85700	0	20442.00	0.2385298	0	1.0000000
plock		85700	0	2016664.00	23.5316686	1.0000000	27.0000000
pempty		74954	10746	193170.00	2.5771807	0	50.0000000
pfull		74954	10746	516502.00	6.8909198	0	28.0000000
parrtime		85700	0	1.1370255E14	1326750924	1262304600	1388521920
pstrtlcktime		85700	0	1.1370301E14	1326756238	1262304600	1388521920
pdeptime		85700	0	1.1370328E14	1326759439	1262305620	1388523540
birth		85700	0	0	0	0	0
transithrs		85700	0	6582996.90	76.8144329	-249.0333333	8099.42
reclock		85700	0	0	0	0	0
i		85700	0	19745669.00	230.4045391	58.0000000	401.0000000
pctpsysdn		79984	5716	78769.63	0.9848174	0	98.9510000
pctplckdn		79984	5716	37590.93	0.4699807	0	98.3000000
cumdown		84939	761	3448980.00	40.6053756	0	107520.00
pctdown		84939	761	32721.22	0.3852320	0	98.3000000
pcttrandn		84671	1029	114513.45	1.3524518	0	100.0000000
pctsysdn		84939	761	74784.12	0.8804451	0	98.6320000
pctlckdn		84939	761	32721.22	0.3852320	0	98.3000000
stime		85700	0	3793224960	44261.67	0	86340.00
etime		85700	0	3803894820	44386.17	0	86340.00
sdate		85700	0	1316243875	15358.74	14610.00	16070.00

Statistics from water.regfile for regfile 20:21 Tuesday, June 28, 2005 259

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		85700	0	1316246295	15358.77	14610.00	16071.00
hrsduration		85700	0	61043.85	0.7122970	0.0666667	30.3833333
ndays		85700	0	1.0000000	0.000011669	0	1.0000000
pctday		85682	18	4691060.90	54.7496663	0	100.0000000
pctpsysnite		85650	50	3851679.90	44.9699930	0	100.0000000
pctplcknite		85679	21	3860652.27	45.0594927	0	100.0000000
pcttrannite		85134	566	4014507.18	47.1551575	0	100.0000000
pctsysnite		85617	83	3856687.22	45.0458112	0	100.0000000
pctlcknite		85682	18	3877139.10	45.2503337	0	100.0000000
stage		41049	44651	881945.43	21.4851867	8.3500000	33.0800000
flow		8661	77039	718859843	82999.64	16077.99	306262.78
jan		85700	0	3078.00	0.0359160	0	1.0000000
feb		85700	0	3425.00	0.0399650	0	1.0000000
mar		85700	0	6910.00	0.0806301	0	1.0000000
apr		85700	0	7571.00	0.0883431	0	1.0000000
may		85700	0	7222.00	0.0842707	0	1.0000000
jun		85700	0	8504.00	0.0992299	0	1.0000000
jul		85700	0	8629.00	0.1006884	0	1.0000000
aug		85700	0	8015.00	0.0935239	0	1.0000000
sep		85700	0	7666.00	0.0894516	0	1.0000000
oct		85700	0	8573.00	0.1000350	0	1.0000000
nov		85700	0	9360.00	0.1092182	0	1.0000000
dec		85700	0	6747.00	0.0787281	0	1.0000000
m31day		85700	0	49174.00	0.5737923	0	1.0000000
m30day		85700	0	33101.00	0.3862427	0	1.0000000
qtr1		85700	0	13413.00	0.1565111	0	1.0000000
qtr2		85700	0	23297.00	0.2718436	0	1.0000000
qtr3		85700	0	24310.00	0.2836639	0	1.0000000
qtr4		85700	0	24680.00	0.2879813	0	1.0000000
psingle		85700	0	65891.00	0.7688565	0	1.0000000
pdouble		85700	0	15912.00	0.1856709	0	1.0000000
pknockout		85700	0	1445.00	0.0168611	0	1.0000000
pjacknife		85700	0	529.0000000	0.0061727	0	1.0000000
pothtype		85700	0	1923.00	0.0224387	0	1.0000000
pexchange		85700	0	23605.00	0.2754376	0	1.0000000
pturnback		85700	0	27782.00	0.3241774	0	1.0000000
single		85700	0	85645.00	0.9993582	0	1.0000000
double		85700	0	38.0000000	0.000443407	0	1.0000000
knockout		85700	0	16.0000000	0.000186698	0	1.0000000
jacknife		85700	0	0	0	0	0
othtype		85700	0	1.0000000	0.000011669	0	1.0000000
contthru		1267	84433	541.0000000	0.4269929	0	1.0000000
return		1267	84433	277.0000000	0.2186267	0	1.0000000
contstop		1267	84433	401.0000000	0.3164957	0	1.0000000
kill		1267	84433	48.0000000	0.0378848	0	1.0000000
contsame		1267	84433	541.0000000	0.4269929	0	1.0000000
contdouble		1267	84433	5.0000000	0.0039463	0	1.0000000
contsingle		1267	84433	394.0000000	0.3109708	0	1.0000000
contko		1267	84433	2.0000000	0.0015785	0	1.0000000
contjk		1267	84433	0	0	0	0
retdouble		1267	84433	31.0000000	0.0244672	0	1.0000000
retsingle		1267	84433	232.0000000	0.1831097	0	1.0000000

SAS Program Output from “fitmod.sas” for Tows Only (cont.)

Statistics from water.regfile for regfile 20:21 Tuesday, June 28, 2005 260

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1267	84433	14.0000000	0.0110497	0	1.0000000
retjk		1267	84433	0	0	0	0
xkill		1267	84433	48.0000000	0.0378848	0	1.0000000
logtrnhrs		1244	84456	2105.26	1.6923307	-4.0943446	8.3226169
plockhrs		1267	84433	599.8852459	0.4734690	0.1311475	1.6393443
loglckhrs		1267	84433	-1039.96	-0.8208045	-2.0314323	0.4942963
thrusingle		1267	84433	541.0000000	0.4269929	0	1.0000000
thruother		1267	84433	0	0	0	0
contother		1267	84433	2.0000000	0.0015785	0	1.0000000
retother		1267	84433	14.0000000	0.0110497	0	1.0000000
thrudoubnite		1267	84433	0	0	0	0
thrusingnite		1267	84433	255.7334300	0.2018417	0	1.0000000
thruothnite		1267	84433	0	0	0	0
pdoubnite		1267	84433	0	0	0	0
psingnite		1267	84433	488.4049700	0.3854814	0	1.0000000
pothnite		1267	84433	0	0	0	0

```
                    Transition models using key variables from stepwise proc      20:21 Tuesday, June 28, 2005 261
                                    transitions  to contthru

                                       The REG Procedure
                                         Model: MODEL1
                                 Dependent Variable: contsame

                                   Stepwise Selection: Step 1

                     Variable psingle Entered: R-Square = 0.0857 and C(p) = 70.4567


                                      Analysis of Variance

                                             Sum of           Mean
                 Source                   DF        Squares         Square    F Value    Pr > F

                 Model                     1      110.03682      110.03682     561.14    <.0001
                 Error                  5985     1173.62311        0.19609
                 Corrected Total        5986     1283.65993


                                Parameter     Standard
                      Variable      Estimate        Error   Type II SS  F Value  Pr > F

                      Intercept      0.75890      0.00645   2718.37373  13862.6  <.0001
                      psingle       -0.33191      0.01401    110.03682   561.14  <.0001

                                   Bounds on condition number: 1, 1
-----------------------------------------------------------------------------------------------------------------------------------

                                   Stepwise Selection: Step 2


                     Variable pjacknife Entered: R-Square = 0.0910 and C(p) = 37.8014


                                      Analysis of Variance

                                             Sum of           Mean
                 Source                   DF        Squares         Square    F Value    Pr > F

                 Model                     2      116.75566       58.37783     299.37    <.0001
                 Error                  5984     1166.90427        0.19500
                 Corrected Total        5986     1283.65993


                                Parameter     Standard
                      Variable      Estimate        Error   Type II SS  F Value  Pr > F

                      Intercept      0.75240      0.00652   2595.02640  13307.6  <.0001
                      psingle       -0.32541      0.01402    105.11005   539.01  <.0001
                      pjacknife      0.22554      0.03842      6.71884    34.45  <.0001

                               Bounds on condition number: 1.0063, 4.0251
-----------------------------------------------------------------------------------------------------------------------------------

                                   Stepwise Selection: Step 3
```

SAS Program Output from “fitmod.sas” for Tows Only (cont.)

Transition models using key variables from stepwise proc transitions to contthru 20:21 Tuesday, June 28, 2005 262

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 3

Variable mar Entered: R-Square = 0.0925 and C(p) = 29.4283

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	118.76675	39.58892	203.33	<.0001
Error	5983	1164.89318	0.19470		
Corrected Total	5986	1283.65993			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.74569	0.00684	2311.52638	11872.2	<.0001
mar	0.06166	0.01919	2.01109	10.33	0.0013
psingle	-0.32259	0.01403	102.89321	528.47	<.0001
pjacknife	0.22772	0.03840	6.84713	35.17	<.0001

Bounds on condition number: 1.0102, 9.0627

Stepwise Selection: Step 4

Variable dec Entered: R-Square = 0.0938 and C(p) = 23.0384

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	120.39336	30.09834	154.78	<.0001
Error	5982	1163.26657	0.19446		
Corrected Total	5986	1283.65993			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.74755	0.00687	2302.72392	11841.6	<.0001
mar	0.05868	0.01920	1.81612	9.34	0.0023
dec	-0.08906	0.03079	1.62661	8.36	0.0038
psingle	-0.31470	0.01429	94.35355	485.21	<.0001
pjacknife	0.23066	0.03839	7.02036	36.10	<.0001

Transition models using key variables from stepwise proc transitions to contthru 20:21 Tuesday, June 28, 2005 263

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 4

Bounds on condition number: 1.0484, 16.42

Stepwise Selection: Step 5

Variable pknockout Entered: R-Square = 0.0948 and C(p) = 18.1519

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	121.72849	24.34570	125.32	<.0001
Error	5981	1161.93144	0.19427		
Corrected Total	5986	1283.65993			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.74474	0.00695	2231.35959	11485.8	<.0001
mar	0.05837	0.01919	1.79665	9.25	0.0024
dec	-0.08953	0.03078	1.64371	8.46	0.0036
psingle	-0.31183	0.01432	92.09562	474.06	<.0001
pjacknife	0.23351	0.03839	7.18918	37.01	<.0001
pknockout	0.10520	0.04013	1.33512	6.87	0.0088

Bounds on condition number: 1.0546, 25.593

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	psingle		1	0.0857	0.0857	70.4567	561.14	<.0001
2	pjacknife		2	0.0052	0.0910	37.8014	34.45	<.0001
3	mar		3	0.0016	0.0925	29.4283	10.33	0.0013
4	dec		4	0.0013	0.0938	23.0384	8.36	0.0038
5	pknockout		5	0.0010	0.0948	18.1519	6.87	0.0088

```
Activity times using key variables from stepwise proc        20:21 Tuesday, June 28, 2005 264

                          The REG Procedure
                            Model: MODEL1
                      Dependent Variable: plockhrs

                        Stepwise Selection: Step 1

      Variable pturnback Entered: R-Square = 0.1155 and C(p) = 552.7077

                             Analysis of Variance

                                      Sum of           Mean
Source                    DF         Squares         Square    F Value    Pr > F

Model                      1        56.00247       56.00247     573.83    <.0001
Error                   4395       428.92602        0.09759
Corrected Total         4396       484.92849


                    Parameter     Standard
      Variable       Estimate        Error   Type II SS  F Value  Pr > F

      Intercept       1.85564      0.00615   8877.13125  90959.7  <.0001
      pturnback      -0.22915      0.00957     56.00247    573.83  <.0001

                       Bounds on condition number: 1, 1
-------------------------------------------------------------------------------------------------------------------

                        Stepwise Selection: Step 2

         Variable oct Entered: R-Square = 0.1471 and C(p) = 378.1617

                             Analysis of Variance

                                      Sum of           Mean
Source                    DF         Squares         Square    F Value    Pr > F

Model                      2        71.31376       35.65688     378.80    <.0001
Error                   4394       413.61474        0.09413
Corrected Total         4396       484.92849


                    Parameter     Standard
      Variable       Estimate        Error   Type II SS  F Value  Pr > F

      Intercept       1.83362      0.00628   8013.02388  85125.7  <.0001
      oct             0.19447      0.01525     15.31128    162.66  <.0001
      pturnback      -0.22423      0.00940     53.53259    568.70  <.0001

                  Bounds on condition number: 1.0017, 4.0067
-------------------------------------------------------------------------------------------------------------------

                        Stepwise Selection: Step 3
```

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 265

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable sep Entered: R-Square = 0.1694 and C(p) = 254.9788

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	82.17049	27.39016	298.75	<.0001
Error	4393	402.75800	0.09168		
Corrected Total	4396	484.92849			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.81492	0.00644	7291.09497	79526.1	<.0001
sep	0.18332	0.01685	10.85673	118.42	<.0001
oct	0.21136	0.01513	17.89506	195.19	<.0001
pturnback	-0.21912	0.00929	50.98708	556.13	<.0001

Bounds on condition number: 1.0128, 9.0881

Stepwise Selection: Step 4

Variable nov Entered: R-Square = 0.1903 and C(p) = 140.5134

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	92.27118	23.06779	258.02	<.0001
Error	4392	392.65732	0.08940		
Corrected Total	4396	484.92849			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.79770	0.00656	6716.72915	75128.8	<.0001
sep	0.20061	0.01672	12.87738	144.04	<.0001
oct	0.22864	0.01503	20.69679	231.50	<.0001
nov	0.17998	0.01693	10.10069	112.98	<.0001
pturnback	-0.21930	0.00918	51.07058	571.24	<.0001

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 266

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0243, 16.282

Stepwise Selection: Step 5

Variable aug Entered: R-Square = 0.1989 and C(p) = 94.0687

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	96.47263	19.29453	218.10	<.0001
Error	4391	388.45586	0.08847		
Corrected Total	4396	484.92849			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.78210	0.00691	5891.68777	66598.0	<.0001
aug	0.10257	0.01488	4.20146	47.49	<.0001
sep	0.21555	0.01677	14.61862	165.24	<.0001
oct	0.24355	0.01510	23.00223	260.01	<.0001
nov	0.19473	0.01698	11.63705	131.54	<.0001
pturnback	-0.21735	0.00913	50.12257	566.57	<.0001

Bounds on condition number: 1.0458, 25.86

Stepwise Selection: Step 6

Variable pctlcknite Entered: R-Square = 0.2063 and C(p) = 55.1463

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	100.02170	16.67028	190.13	<.0001
Error	4390	384.90679	0.08768		
Corrected Total	4396	484.92849			

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 267

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.80695	0.00791	4579.74699	52233.7	<.0001
aug	0.10349	0.01482	4.27709	48.78	<.0001
sep	0.22073	0.01671	15.29368	174.43	<.0001
oct	0.25064	0.01508	24.22675	276.31	<.0001
nov	0.20537	0.01699	12.81808	146.19	<.0001
pctlcknite	-0.00060908	0.00009573	3.54907	40.48	<.0001
pturnback	-0.21712	0.00909	50.01566	570.45	<.0001

Bounds on condition number: 1.0515, 37.232

Stepwise Selection: Step 7

Variable mar Entered: R-Square = 0.2085 and C(p) = 44.8099

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	101.09161	14.44166	165.13	<.0001
Error	4389	383.83689	0.08745		
Corrected Total	4396	484.92849			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.79886	0.00823	4180.46949	47801.8	<.0001
mar	0.05213	0.01490	1.06990	12.23	0.0005
aug	0.11246	0.01502	4.90351	56.07	<.0001
sep	0.22983	0.01689	16.18716	185.09	<.0001
oct	0.25979	0.01528	25.26573	288.90	<.0001
nov	0.21466	0.01717	13.66863	156.29	<.0001
pctlcknite	-0.00062816	0.00009577	3.76262	43.02	<.0001
pturnback	-0.21732	0.00908	50.10462	572.92	<.0001

Bounds on condition number: 1.0833, 51.819

Stepwise Selection: Step 8

Variable apr Entered: R-Square = 0.2116 and C(p) = 29.3961

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 268

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 8

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	102.60185	12.82523	147.20	<.0001
Error	4388	382.32664	0.08713		
Corrected Total	4396	484.92849			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.78532	0.00883	3559.41213	40851.7	<.0001
mar	0.06578	0.01523	1.62499	18.65	<.0001
apr	0.06210	0.01492	1.51024	17.33	<.0001
aug	0.12611	0.01535	5.88460	67.54	<.0001
sep	0.24363	0.01718	17.51256	200.99	<.0001
oct	0.27361	0.01561	26.75849	307.11	<.0001
nov	0.22847	0.01746	14.92460	171.29	<.0001
pctlcknite	-0.00064128	0.00009564	3.91723	44.96	<.0001
pturnback	-0.21616	0.00907	49.52172	568.37	<.0001

Bounds on condition number: 1.1355, 70.215

Stepwise Selection: Step 9

Variable dec Entered: R-Square = 0.2140 and C(p) = 17.8236

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	103.77895	11.53099	132.72	<.0001
Error	4387	381.14954	0.08688		
Corrected Total	4396	484.92849			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.77949	0.00896	3425.84531	39431.2	<.0001
mar	0.07121	0.01528	1.88631	21.71	<.0001
apr	0.06757	0.01497	1.77059	20.38	<.0001
aug	0.13159	0.01540	6.34737	73.06	<.0001
sep	0.24925	0.01723	18.18586	209.32	<.0001
oct	0.27923	0.01567	27.60370	317.72	<.0001
nov	0.23399	0.01750	15.53985	178.86	<.0001

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 9

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
dec	0.12818	0.03482	1.17710	13.55	0.0002
pctlcknite	-0.00064896	0.00009553	4.00969	46.15	<.0001
pturnback	-0.21441	0.00907	48.59441	559.32	<.0001

Bounds on condition number: 1.1468, 88.826

Stepwise Selection: Step 10

Variable pexchange Entered: R-Square = 0.2153 and C(p) = 12.6235

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	10	104.40339	10.44034	120.34	<.0001
Error	4386	380.52510	0.08676		
Corrected Total	4396	484.92849			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.80252	0.01241	1831.77464	21113.4	<.0001
mar	0.06596	0.01540	1.59250	18.36	<.0001
apr	0.06746	0.01496	1.76488	20.34	<.0001
aug	0.13187	0.01539	6.37340	73.46	<.0001
sep	0.24716	0.01723	17.84616	205.70	<.0001
oct	0.27888	0.01565	27.53282	317.35	<.0001
nov	0.23421	0.01748	15.56882	179.45	<.0001
dec	0.12837	0.03480	1.18057	13.61	0.0002
pctlcknite	-0.00063853	0.00009554	3.87538	44.67	<.0001
pturnback	-0.23716	0.01241	31.69176	365.28	<.0001
pexchange	-0.03363	0.01253	0.62444	7.20	0.0073

Bounds on condition number: 1.906, 126.82

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.1155	0.1155	552.708	573.83	<.0001
2	oct		2	0.0316	0.1471	378.162	162.66	<.0001
3	sep		3	0.0224	0.1694	254.979	118.42	<.0001
4	nov		4	0.0208	0.1903	140.513	112.98	<.0001
5	aug		5	0.0087	0.1989	94.0687	47.49	<.0001
6	pctlcknite		6	0.0073	0.2063	55.1463	40.48	<.0001
7	mar		7	0.0022	0.2085	44.8099	12.23	0.0005
8	apr		8	0.0031	0.2116	29.3961	17.33	<.0001
9	dec		9	0.0024	0.2140	17.8236	13.55	0.0002
10	pexchange		10	0.0013	0.2153	12.6235	7.20	0.0073

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.1157 and C(p) = 564.4958

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	18.11907	18.11907	573.23	<.0001
Error	4381	138.47754	0.03161		
Corrected Total	4382	156.59661			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.60057	0.00351	925.14549	29268.7	<.0001
pturnback	-0.13050	0.00545	18.11907	573.23	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable oct Entered: R-Square = 0.1468 and C(p) = 392.6895

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	22.98774	11.49387	376.79	<.0001
Error	4380	133.60887	0.03050		
Corrected Total	4382	156.59661			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.58814	0.00359	820.52633	26898.7	<.0001
oct	0.10990	0.00870	4.86867	159.61	<.0001
pturnback	-0.12775	0.00536	17.33393	568.25	<.0001

Bounds on condition number: 1.0017, 4.0066

Stepwise Selection: Step 3

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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable sep Entered: R-Square = 0.1701 and C(p) = 264.2047

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	26.64289	8.88096	299.26	<.0001
Error	4379	129.95372	0.02968		
Corrected Total	4382	156.59661			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.57724	0.00367	733.81476	24727.1	<.0001
sep	0.10639	0.00959	3.65515	123.17	<.0001
oct	0.11972	0.00863	5.71758	192.66	<.0001
pturnback	-0.12474	0.00529	16.48258	555.41	<.0001

Bounds on condition number: 1.0129, 9.0885

Stepwise Selection: Step 4

Variable nov Entered: R-Square = 0.1902 and C(p) = 154.0801

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	29.78373	7.44593	257.06	<.0001
Error	4378	126.81288	0.02897		
Corrected Total	4382	156.59661			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.56772	0.00374	667.37972	23040.2	<.0001
sep	0.11599	0.00952	4.30365	148.58	<.0001
oct	0.12933	0.00857	6.59429	227.66	<.0001
nov	0.10090	0.00969	3.14084	108.43	<.0001
pturnback	-0.12496	0.00523	16.54227	571.09	<.0001

Logarithms of double lockage times using key variables from stepwise proc 273
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0242, 16.281

Stepwise Selection: Step 5

Variable aug Entered: R-Square = 0.1993 and C(p) = 105.3009

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	31.20616	6.24123	217.86	<.0001
Error	4377	125.39045	0.02865		
Corrected Total	4382	156.59661			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.55867	0.00393	577.48669	20158.3	<.0001
aug	0.05985	0.00849	1.42243	49.65	<.0001
sep	0.12467	0.00954	4.88911	170.66	<.0001
oct	0.13799	0.00861	7.35421	256.71	<.0001
nov	0.10948	0.00971	3.63922	127.03	<.0001
pturnback	-0.12388	0.00520	16.24268	566.98	<.0001

Bounds on condition number: 1.0455, 25.854

Stepwise Selection: Step 6

Variable pctlcknite Entered: R-Square = 0.2068 and C(p) = 65.3276

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	32.38192	5.39699	190.13	<.0001
Error	4376	124.21469	0.02839		
Corrected Total	4382	156.59661			

Logarithms of double lockage times using key variables from stepwise proc 274
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.57298	0.00450	459.43610	16185.6	<.0001
aug	0.06040	0.00845	1.44873	51.04	<.0001
sep	0.12766	0.00951	5.11423	180.17	<.0001
oct	0.14208	0.00860	7.75393	273.17	<.0001
nov	0.11546	0.00971	4.01065	141.29	<.0001
pctlcknite	-0.00035111	0.00005456	1.17576	41.42	<.0001
pturnback	-0.12372	0.00518	16.19952	570.70	<.0001

Bounds on condition number: 1.0512, 37.219

Stepwise Selection: Step 7

Variable mar Entered: R-Square = 0.2095 and C(p) = 52.3177

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	32.80238	4.68605	165.61	<.0001
Error	4375	123.79423	0.02830		
Corrected Total	4382	156.59661			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.56791	0.00469	415.67860	14690.5	<.0001
mar	0.03271	0.00849	0.42046	14.86	0.0001
aug	0.06603	0.00857	1.68111	59.41	<.0001
sep	0.13337	0.00961	5.44936	192.59	<.0001
oct	0.14783	0.00871	8.14814	287.96	<.0001
nov	0.12128	0.00981	4.32061	152.69	<.0001
pctlcknite	-0.00036326	0.00005456	1.25432	44.33	<.0001
pturnback	-0.12382	0.00517	16.22512	573.41	<.0001

Bounds on condition number: 1.083, 51.801

Stepwise Selection: Step 8

Logarithms of double lockage times using key variables from stepwise proc 275
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 8

Variable apr Entered: R-Square = 0.2127 and C(p) = 36.3334

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	33.30616	4.16327	147.70	<.0001
Error	4374	123.29045	0.02819		
Corrected Total	4382	156.59661			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.56010	0.00503	349.83006	12411.0	<.0001
mar	0.04059	0.00867	0.61737	21.90	<.0001
apr	0.03595	0.00850	0.50378	17.87	<.0001
aug	0.07390	0.00875	2.01028	71.32	<.0001
sep	0.14132	0.00977	5.89191	209.03	<.0001
oct	0.15579	0.00890	8.64391	306.66	<.0001
nov	0.12923	0.00997	4.73119	167.85	<.0001
pctlcknite	-0.00037061	0.00005448	1.30428	46.27	<.0001
pturnback	-0.12317	0.00516	16.04245	569.14	<.0001

Bounds on condition number: 1.1344, 70.167

Stepwise Selection: Step 9

Variable dec Entered: R-Square = 0.2157 and C(p) = 21.3968

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	33.78059	3.75340	133.64	<.0001
Error	4373	122.81602	0.02809		
Corrected Total	4382	156.59661			

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 9

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.55640	0.00510	334.43945	11908.1	<.0001
mar	0.04403	0.00870	0.71996	25.63	<.0001
apr	0.03942	0.00853	0.59991	21.36	<.0001
aug	0.07738	0.00878	2.18357	77.75	<.0001
sep	0.14489	0.00980	6.14469	218.79	<.0001
oct	0.15935	0.00892	8.95860	318.98	<.0001
nov	0.13273	0.00999	4.95478	176.42	<.0001
dec	0.08138	0.01980	0.47443	16.89	<.0001
pctlcknite	-0.00037550	0.00005440	1.33826	47.65	<.0001
pturnback	-0.12206	0.00516	15.71150	559.43	<.0001

Bounds on condition number: 1.1456, 88.77

Stepwise Selection: Step 10

Variable pexchange Entered: R-Square = 0.2174 and C(p) = 13.8233

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	10	34.04876	3.40488	121.47	<.0001
Error	4372	122.54785	0.02803		
Corrected Total	4382	156.59661			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.57154	0.00706	183.48799	6546.09	<.0001
mar	0.04057	0.00876	0.60133	21.45	<.0001
apr	0.03931	0.00852	0.59630	21.27	<.0001
aug	0.07751	0.00877	2.19080	78.16	<.0001
sep	0.14351	0.00980	6.01605	214.63	<.0001
oct	0.15914	0.00891	8.93377	318.72	<.0001
nov	0.13286	0.00998	4.96460	177.12	<.0001
dec	0.08150	0.01978	0.47580	16.97	<.0001
pctlcknite	-0.00036885	0.00005439	1.28923	45.99	<.0001
pturnback	-0.13699	0.00706	10.54383	376.16	<.0001
pexchange	-0.02208	0.00714	0.26817	9.57	0.0020

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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 10

Bounds on condition number: 1.9063, 126.77

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.1157	0.1157	564.496	573.23	<.0001
2	oct		2	0.0311	0.1468	392.690	159.61	<.0001
3	sep		3	0.0233	0.1701	264.205	123.17	<.0001
4	nov		4	0.0201	0.1902	154.080	108.43	<.0001
5	aug		5	0.0091	0.1993	105.301	49.65	<.0001
6	pctlcknite		6	0.0075	0.2068	65.3276	41.42	<.0001
7	mar		7	0.0027	0.2095	52.3177	14.86	0.0001
8	apr		8	0.0032	0.2127	36.3334	17.87	<.0001
9	dec		9	0.0030	0.2157	21.3968	16.89	<.0001
10	pexchange		10	0.0017	0.2174	13.8233	9.57	0.0020

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0236 and C(p) = 87.4661

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.97458	0.97458	29.04	<.0001
Error	1202	40.33306	0.03355		
Corrected Total	1203	41.30764			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.50584	0.00629	216.72147	6458.70	<.0001
pturnback	-0.06229	0.01156	0.97458	29.04	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.0611 and C(p) = 39.9589

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	2.52552	1.26276	39.10	<.0001
Error	1201	38.78212	0.03229		
Corrected Total	1203	41.30764			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.55835	0.00977	105.37199	3263.15	<.0001
pturnback	-0.11481	0.01364	2.28838	70.87	<.0001
pexchange	-0.08738	0.01261	1.55093	48.03	<.0001

Bounds on condition number: 1.4465, 5.7861

Stepwise Selection: Step 3

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.0698 and C(p) = 30.5769

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	2.88209	0.96070	30.00	<.0001
Error	1200	38.42555	0.03202		
Corrected Total	1203	41.30764			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.56280	0.00982	105.08665	3281.77	<.0001
jul	-0.06264	0.01877	0.35657	11.14	0.0009
pturnback	-0.11153	0.01362	2.14856	67.10	<.0001
pexchange	-0.08789	0.01256	1.56885	48.99	<.0001

Bounds on condition number: 1.4541, 11.73

Stepwise Selection: Step 4

Variable jun Entered: R-Square = 0.0780 and C(p) = 21.7534

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	3.22116	0.80529	25.35	<.0001
Error	1199	38.08648	0.03177		
Corrected Total	1203	41.30764			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.56713	0.00987	104.78655	3298.78	<.0001
jun	-0.05974	0.01828	0.33907	10.67	0.0011
jul	-0.06889	0.01880	0.42676	13.43	0.0003
pturnback	-0.10773	0.01361	1.98997	62.65	<.0001
pexchange	-0.08714	0.01251	1.54147	48.53	<.0001

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.4648, 19.797

Stepwise Selection: Step 5

Variable may Entered: R-Square = 0.0862 and C(p) = 12.8813

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	3.56176	0.71235	22.61	<.0001
Error	1198	37.74588	0.03151		
Corrected Total	1203	41.30764			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.57226	0.00996	104.07185	3303.09	<.0001
may	-0.07921	0.02409	0.34060	10.81	0.0010
jun	-0.06463	0.01827	0.39428	12.51	0.0004
jul	-0.07393	0.01878	0.48816	15.49	<.0001
pturnback	-0.10653	0.01356	1.94455	61.72	<.0001
pexchange	-0.08907	0.01247	1.60719	51.01	<.0001

Bounds on condition number: 1.4658, 29.92

Stepwise Selection: Step 6

Variable apr Entered: R-Square = 0.0919 and C(p) = 7.4066

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	3.79592	0.63265	20.19	<.0001
Error	1197	37.51172	0.03134		
Corrected Total	1203	41.30764			

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.57742	0.01011	102.25656	3263.01	<.0001
apr	-0.05638	0.02063	0.23416	7.47	0.0064
may	-0.08442	0.02410	0.38451	12.27	0.0005
jun	-0.06974	0.01832	0.45425	14.50	0.0001
jul	-0.07913	0.01883	0.55359	17.67	<.0001
pturnback	-0.10551	0.01353	1.90598	60.82	<.0001
pexchange	-0.09036	0.01245	1.65144	52.70	<.0001

Bounds on condition number: 1.4669, 42.243

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0236	0.0236	87.4661	29.04	<.0001
2	pexchange		2	0.0375	0.0611	39.9589	48.03	<.0001
3	jul		3	0.0086	0.0698	30.5769	11.14	0.0009
4	jun		4	0.0082	0.0780	21.7534	10.67	0.0011
5	may		5	0.0082	0.0862	12.8813	10.81	0.0010
6	apr		6	0.0057	0.0919	7.4066	7.47	0.0064

Logarithms of single lockage times using key variables from stepwise proc 282
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0275 and C(p) = 120.7212

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	4.06188	4.06188	34.37	<.0001
Error	1215	143.60350	0.11819		
Corrected Total	1216	147.66537			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.75028	0.01176	480.72927	4067.35	<.0001
pturnback	-0.12628	0.02154	4.06188	34.37	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.0705 and C(p) = 63.7911

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	10.40695	5.20347	46.02	<.0001
Error	1214	137.25843	0.11306		
Corrected Total	1216	147.66537			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.64377	0.01829	140.08282	1238.98	<.0001
pturnback	-0.23278	0.02542	9.48404	83.88	<.0001
pexchange	-0.17626	0.02353	6.34507	56.12	<.0001

Bounds on condition number: 1.4554, 5.8214

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 283
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.0798 and C(p) = 52.9836

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	11.78596	3.92865	35.07	<.0001
Error	1213	135.87941	0.11202		
Corrected Total	1216	147.66537			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.63511	0.01837	133.87383	1195.10	<.0001
jul	-0.12203	0.03478	1.37901	12.31	0.0005
pturnback	-0.22632	0.02537	8.91746	79.61	<.0001
pexchange	-0.17712	0.02342	6.40648	57.19	<.0001

Bounds on condition number: 1.4631, 11.783

Stepwise Selection: Step 4

Variable jun Entered: R-Square = 0.0903 and C(p) = 40.6069

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	13.33392	3.33348	30.08	<.0001
Error	1212	134.33146	0.11083		
Corrected Total	1216	147.66537			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.62594	0.01844	127.73141	1152.45	<.0001
jun	-0.12646	0.03384	1.54796	13.97	0.0002
jul	-0.13528	0.03478	1.67711	15.13	0.0001
pturnback	-0.21852	0.02532	8.25697	74.50	<.0001
pexchange	-0.17516	0.02330	6.26166	56.50	<.0001

Logarithms of single lockage times using key variables from stepwise proc 284
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.4731, 19.863

Stepwise Selection: Step 5

Variable may Entered: R-Square = 0.1026 and C(p) = 25.6857

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	15.15584	3.03117	27.70	<.0001
Error	1211	132.50954	0.10942		
Corrected Total	1216	147.66537			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.61424	0.01854	120.05765	1097.20	<.0001
may	-0.18024	0.04417	1.82192	16.65	<.0001
jun	-0.13781	0.03374	1.82583	16.69	<.0001
jul	-0.14700	0.03467	1.96674	17.97	<.0001
pturnback	-0.21547	0.02517	8.02158	73.31	<.0001
pexchange	-0.17925	0.02318	6.54532	59.82	<.0001

Bounds on condition number: 1.4744, 30.004

Stepwise Selection: Step 6

Variable apr Entered: R-Square = 0.1141 and C(p) = 11.9187

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	16.85349	2.80891	25.98	<.0001
Error	1210	130.81188	0.10811		
Corrected Total	1216	147.66537			

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.60055	0.01875	110.87844	1025.62	<.0001
apr	-0.14841	0.03745	1.69765	15.70	<.0001
may	-0.19438	0.04405	2.10514	19.47	<.0001
jun	-0.15170	0.03372	2.18865	20.24	<.0001
jul	-0.16116	0.03465	2.33878	21.63	<.0001
pturnback	-0.21252	0.02503	7.79591	72.11	<.0001
pexchange	-0.18180	0.02305	6.72768	62.23	<.0001

Bounds on condition number: 1.4757, 42.348

Stepwise Selection: Step 7

Variable mar Entered: R-Square = 0.1197 and C(p) = 6.3162

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	17.67206	2.52458	23.48	<.0001
Error	1209	129.99331	0.10752		
Corrected Total	1216	147.66537			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.58979	0.01910	102.48032	953.12	<.0001
mar	-0.10841	0.03929	0.81857	7.61	0.0059
apr	-0.15859	0.03753	1.91998	17.86	<.0001
may	-0.20487	0.04409	2.32120	21.59	<.0001
jun	-0.16186	0.03383	2.46211	22.90	<.0001
jul	-0.17159	0.03476	2.61998	24.37	<.0001
pturnback	-0.21086	0.02497	7.67023	71.34	<.0001
pexchange	-0.18509	0.02301	6.95462	64.68	<.0001

Bounds on condition number: 1.4765, 56.986

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Logarithms of single lockage times using key variables from stepwise proc 286
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0275	0.0275	120.721	34.37	<.0001
2	pexchange		2	0.0430	0.0705	63.7911	56.12	<.0001
3	jul		3	0.0093	0.0798	52.9836	12.31	0.0005
4	jun		4	0.0105	0.0903	40.6069	13.97	0.0002
5	may		5	0.0123	0.1026	25.6857	16.65	<.0001
6	apr		6	0.0115	0.1141	11.9187	15.70	<.0001
7	mar		7	0.0055	0.1197	6.3162	7.61	0.0059

Logarithms of single lockage times using key variables from stepwise proc 287
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable waitmin Entered: R-Square = 0.0244 and C(p) = 114.5861

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	150.58718	150.58718	82.29	<.0001
Error	3285	6011.08211	1.82986		
Corrected Total	3286	6161.66929			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	5.25735	0.03032	55027	30071.7	<.0001
waitmin	-0.00072223	0.00007961	150.58718	82.29	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pcttrandn Entered: R-Square = 0.0330 and C(p) = 86.7947

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	203.29477	101.64738	56.02	<.0001
Error	3284	5958.37452	1.81436		
Corrected Total	3286	6161.66929			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	5.24983	0.03022	54752	30177.0	<.0001
pcttrandn	0.01520	0.00282	52.70759	29.05	<.0001
waitmin	-0.00077967	0.00007999	172.37618	95.01	<.0001

Bounds on condition number: 1.0181, 4.0723

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 288
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 3

Variable mar Entered: R-Square = 0.0367 and C(p) = 75.8147

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	226.25933	75.41978	41.72	<.0001
Error	3283	5935.40995	1.80792		
Corrected Total	3286	6161.66929			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	5.29014	0.03222	48743	26960.9	<.0001
mar	-0.26612	0.07467	22.96457	12.70	0.0004
pcttrandn	0.01519	0.00281	52.63932	29.12	<.0001
waitmin	-0.00082158	0.00008071	187.34197	103.62	<.0001

Bounds on condition number: 1.0401, 9.241

Stepwise Selection: Step 4

Variable nov Entered: R-Square = 0.0413 and C(p) = 62.0331

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	254.18044	63.54511	35.30	<.0001
Error	3282	5907.48885	1.79997		
Corrected Total	3286	6161.66929			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	5.32616	0.03342	45709	25394.5	<.0001
mar	-0.29909	0.07497	28.64648	15.92	<.0001
nov	-0.35595	0.09038	27.92111	15.51	<.0001
pcttrandn	0.01488	0.00281	50.51492	28.06	<.0001
waitmin	-0.00084516	0.00008075	197.16229	109.54	<.0001

Logarithms of single lockage times using key variables from stepwise proc 289
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0459, 16.468

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Label	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	waitmin		Wait/before/lockge	1	0.0244	0.0244	114.586	82.29	<.0001
2	pcttrandn			2	0.0086	0.0330	86.7947	29.05	<.0001
3	mar			3	0.0037	0.0367	75.8147	12.70	0.0004
4	nov			4	0.0045	0.0413	62.0331	15.51	<.0001

Logarithms of single lockage times using key variables from stepwise proc 290
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable nov Entered: R-Square = 0.0045 and C(p) = 53.9420

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.83307	0.83307	14.77	0.0001
Error	3287	185.33627	0.05638		
Corrected Total	3288	186.16934			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.60044	0.00430	7804.56261	138416	<.0001
nov	-0.06096	0.01586	0.83307	14.77	0.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable feb Entered: R-Square = 0.0074 and C(p) = 45.9847

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	1.38577	0.69289	12.32	<.0001
Error	3286	184.78356	0.05623		
Corrected Total	3288	186.16934			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.59909	0.00432	7714.75668	137191	<.0001
feb	0.13641	0.04351	0.55270	9.83	0.0017
nov	-0.05961	0.01584	0.79618	14.16	0.0002

Bounds on condition number: 1.0007, 4.0029

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 291
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable sep Entered: R-Square = 0.0099 and C(p) = 39.6239

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	1.84986	0.61662	10.99	<.0001
Error	3285	184.31948	0.05611		
Corrected Total	3288	186.16934			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.59537	0.00450	7045.14785	125561	<.0001
feb	0.14013	0.04348	0.58274	10.39	0.0013
sep	0.04507	0.01567	0.46408	8.27	0.0041
nov	-0.05589	0.01588	0.69528	12.39	0.0004

Bounds on condition number: 1.0074, 9.0494

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	nov		1	0.0045	0.0045	53.9420	14.77	0.0001
2	feb		2	0.0030	0.0074	45.9847	9.83	0.0017
3	sep		3	0.0025	0.0099	39.6239	8.27	0.0041

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Logarithms of single lockage times using key variables from stepwise proc                    292
                                                                                20:21 Tuesday, June 28, 2005

                              The REG Procedure
                                Model: MODEL1
                       Dependent Variable: transithrs

 No variable met the 0.0100 significance level for entry into the model.
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Logarithms of single lockage times using key variables from stepwise proc                    293
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                              The REG Procedure
                                Model: MODEL1
                        Dependent Variable: logtrnhrs

 No variable met the 0.0100 significance level for entry into the model.
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Logarithms of single lockage times using key variables from stepwise proc 294
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable retsingle Entered: R-Square = 0.0708 and C(p) = 27.9669

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	121877	121877	136.95	<.0001
Error	1798	1600119	889.94362		
Corrected Total	1799	1721995			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	9.84717	0.75122	152917	171.83	<.0001
retsingle	24.97630	2.13427	121877	136.95	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable retother Entered: R-Square = 0.0770 and C(p) = 17.7542

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	132590	66295	74.95	<.0001
Error	1797	1589405	884.47676		
Corrected Total	1799	1721995			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	9.55176	0.75370	142055	160.61	<.0001
retsingle	25.27171	2.12940	124578	140.85	<.0001
retother	23.29324	6.69268	10714	12.11	0.0005

Bounds on condition number: 1.0016, 4.0064

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 295
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 3

Variable pcttrannite Entered: R-Square = 0.0811 and C(p) = 11.7828

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	139584	46528	52.81	<.0001
Error	1796	1582412	881.07549		
Corrected Total	1799	1721995			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	7.14078	1.13940	34606	39.28	<.0001
retsingle	25.98241	2.14022	129854	147.38	<.0001
retother	23.79445	6.68216	11172	12.68	0.0004
pcttrannite	0.05308	0.01884	6993.16927	7.94	0.0049

Bounds on condition number: 1.0157, 9.0977

Stepwise Selection: Step 4

Variable retdouble Entered: R-Square = 0.0848 and C(p) = 6.3504

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	146104	36526	41.60	<.0001
Error	1795	1575891	877.93390		
Corrected Total	1799	1721995			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	6.43566	1.16643	26726	30.44	<.0001
retdouble	6.66620	2.44612	6520.21642	7.43	0.0065
retsingle	26.68543	2.15192	135008	153.78	<.0001
retother	24.49722	6.67522	11824	13.47	0.0002
pcttrannite	0.05315	0.01881	7010.35647	7.99	0.0048

Logarithms of single lockage times using key variables from stepwise proc 296
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0305, 16.259

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	retsingle		1	0.0708	0.0708	27.9669	136.95	<.0001
2	retother		2	0.0062	0.0770	17.7542	12.11	0.0005
3	pcttrannite		3	0.0041	0.0811	11.7828	7.94	0.0049
4	retdouble		4	0.0038	0.0848	6.3504	7.43	0.0065

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable contsingle Entered: R-Square = 0.0918 and C(p) = 88.4739

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	111.60959	111.60959	179.79	<.0001
Error	1779	1104.37187	0.62078		
Corrected Total	1780	1215.98145			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.14592	0.02160	6129.21783	9873.38	<.0001
contsingle	-0.57609	0.04296	111.60959	179.79	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable retother Entered: R-Square = 0.1079 and C(p) = 57.3907

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	131.19503	65.59751	107.52	<.0001
Error	1778	1084.78642	0.61012		
Corrected Total	1780	1215.98145			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.13094	0.02157	5953.11075	9757.34	<.0001
contsingle	-0.56110	0.04268	105.47308	172.87	<.0001
retother	0.99710	0.17599	19.58544	32.10	<.0001

Bounds on condition number: 1.0039, 4.0154

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 298
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable pcttrannite Entered: R-Square = 0.1174 and C(p) = 39.8159

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	142.78343	47.59448	78.81	<.0001
Error	1777	1073.19803	0.60394		
Corrected Total	1780	1215.98145			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.03615	0.03048	2695.38493	4463.02	<.0001
contsingle	-0.56382	0.04246	106.47323	176.30	<.0001
retother	1.01410	0.17514	20.24881	33.53	<.0001
pcttrannite	0.00216	0.00049366	11.58840	19.19	<.0001

Bounds on condition number: 1.0043, 9.0275

Stepwise Selection: Step 4

Variable retsingle Entered: R-Square = 0.1273 and C(p) = 21.5035

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	154.80850	38.70212	64.77	<.0001
Error	1776	1061.17295	0.59751		
Corrected Total	1780	1215.98145			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.98548	0.03235	2250.61712	3766.68	<.0001
contsingle	-0.52242	0.04323	87.24965	146.02	<.0001
retsingle	0.26379	0.05880	12.02507	20.13	<.0001
retother	1.05736	0.17447	21.94624	36.73	<.0001
pcttrannite	0.00237	0.00049316	13.77637	23.06	<.0001

Logarithms of single lockage times using key variables from stepwise proc 299
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0586, 16.51

Stepwise Selection: Step 5

Variable retdouble Entered: R-Square = 0.1317 and C(p) = 14.4999

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	160.13866	32.02773	53.84	<.0001
Error	1775	1055.84279	0.59484		
Corrected Total	1780	1215.98145			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.95672	0.03368	2007.92718	3375.57	<.0001
contsingle	-0.49371	0.04419	74.25206	124.83	<.0001
retdouble	0.19687	0.06577	5.33016	8.96	0.0028
retsingle	0.29251	0.05945	14.40122	24.21	<.0001
retother	1.08608	0.17434	23.08459	38.81	<.0001
pcttrannite	0.00237	0.00049206	13.79019	23.18	<.0001

Bounds on condition number: 1.104, 26.379

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	contsingle		1	0.0918	0.0918	88.4739	179.79	<.0001
2	retother		2	0.0161	0.1079	57.3907	32.10	<.0001
3	pcttrannite		3	0.0095	0.1174	39.8159	19.19	<.0001
4	retsingle		4	0.0099	0.1273	21.5035	20.13	<.0001
5	retdouble		5	0.0044	0.1317	14.4999	8.96	0.0028

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	6037	0	25620357611	4243888.95	3754803.00	4314561.00
strtlcktime	Start/lockge/time	6037	0	8.0079871E12	1326484525	1262962200	1387100460
arrtime	Arriv/time	6037	0	8.0079251E12	1326474257	1262962200	1387100460
deptime	Leave/lockge/time	6037	0	8.0080242E12	1326490677	1262964060	1387107360
BOW_OVER_SILL	BOW_OVER_SILL	6036	1	8.0066691E12	1326485935	1262963220	1387104240
END_OF_ENTRY	END_OF_ENTRY	6036	1	8.0066717E12	1326486369	1262963340	1387105140
START_OF_EXIT	START_OF_EXIT	6036	1	8.0066753E12	1326486963	1262963940	1387106040
SIGNAL_DATE	SIGNAL_DATE	0	6037	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	6037	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	5747	290	66906.00	11.6419001	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	5747	290	3726.00	0.6483383	0	25.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	6037	.	.	.	.
vess_no		6037	0	4043002414	669703.89	2611.00	8888846.00
vss_hp		6010	27	27930949.00	4647.41	75.0000000	8800.00
frsttime		6037	0	8.0079251E12	1326474257	1262962200	1387100460
lasttime		6037	0	8.0080242E12	1326490677	1262964060	1387107360
newpoolno		6037	0	156321.00	25.8938214	8.0000000	28.0000000
oldpoolno		6037	0	150846.00	24.9869140	9.0000000	28.0000000
waitmin	Wait/before/lockge	6037	0	1033079.00	171.1245652	0	2562.00
lockmin	Wait/lockge/time	6037	0	619008.00	102.5356965	4.0000000	1698.00
year		6037	0	12082764.00	2001.45	2000.00	2003.00
fly		6037	0	1042.00	0.1726023	0	1.0000000
turnback		6037	0	2208.00	0.3657446	0	1.0000000
exchange		6037	0	2787.00	0.4616531	0	1.0000000
lock		6037	0	150565.00	24.9403677	8.0000000	27.0000000
totmin		6037	0	1652087.00	273.6602617	4.0000000	2605.00
month		6037	0	45249.00	7.4952791	1.0000000	12.0000000
day		6037	0	94971.00	15.7314892	1.0000000	31.0000000
sunrise		6036	1	138330353	22917.55	20114.00	26937.00
sunset		6036	1	414497756	68670.93	59489.00	74028.00
sequpstr		6037	0	0	0	0	0
seqdstr		6037	0	5399.00	0.8943184	0	1.0000000
plock		6037	0	144888.00	24.0000000	24.0000000	24.0000000
pempty		5741	296	2770.00	0.4824943	0	25.0000000
pfull		5741	296	67804.00	11.8104860	0	28.0000000
parrtime		6037	0	8.0076425E12	1326427441	1262946600	1387014900
pstrtlcktime		6037	0	8.0077136E12	1326439218	1262946600	1387015500
pdeptime		6037	0	8.0077523E12	1326445637	1262947800	1387017900
birth		6037	0	0	0	0	0
transithrs		6037	0	47994.88	7.9501215	-30.4000000	3292.63
reclock		6037	0	0	0	0	0
i		6037	0	2384460.00	394.9743250	58.0000000	401.0000000
pctpsysdn		6037	0	9556.41	1.5829730	0	92.5830000
pctplckdn		6037	0	5598.84	0.9274212	0	95.7530000
cumdown		6034	3	846900.00	140.3546569	0	95160.00
pctdown		6034	3	5055.57	0.8378479	0	93.4040000
pcttrandn		5994	43	15143.98	2.5265232	0	100.0000000
pctsysdn		6034	3	11716.19	1.9416956	0	96.1060000
pctlckdn		6034	3	5055.57	0.8378479	0	93.4040000
stime		6037	0	263918100	43716.76	0	86340.00
etime		6037	0	263647380	43671.92	60.0000002	86340.00
sdate		6037	0	92681981.00	15352.32	14617.00	16054.00

SAS Program Output from “fitmod.sas” for Tows Only (cont.)

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 20:21 Tuesday, June 28, 2005 301

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		6037	0	92682414.00	15352.40	14617.00	16054.00
hrsduration		6037	0	10316.80	1.7089283	0.0666667	28.3000000
ndays		6037	0	1.0000000	0.000165645	0	1.0000000
pctday		6037	0	323423.70	53.5735803	0	100.0000000
pctpsysnite		6037	0	271254.69	44.9320336	0	100.0000000
pctplcknite		6037	0	274366.10	45.4474247	0	100.0000000
pcttrannite		6036	1	280393.13	46.4534680	0	100.0000000
pctsysnite		6037	0	278424.88	46.1197419	0	100.0000000
pctlcknite		6037	0	280276.30	46.4264197	0	100.0000000
stage		6027	10	157495.51	26.1316592	9.8500000	33.0800000
flow		15	6022	1538974.87	102598.32	47443.35	255649.80
jan		6037	0	29.0000000	0.0048037	0	1.0000000
feb		6037	0	45.0000000	0.0074540	0	1.0000000
mar		6037	0	393.0000000	0.0650986	0	1.0000000
apr		6037	0	606.0000000	0.1003810	0	1.0000000
may		6037	0	538.0000000	0.0891171	0	1.0000000
jun		6037	0	719.0000000	0.1190989	0	1.0000000
jul		6037	0	738.0000000	0.1222461	0	1.0000000
aug		6037	0	673.0000000	0.1114792	0	1.0000000
sep		6037	0	542.0000000	0.0897797	0	1.0000000
oct		6037	0	602.0000000	0.0997184	0	1.0000000
nov		6037	0	749.0000000	0.1240682	0	1.0000000
dec		6037	0	403.0000000	0.0667550	0	1.0000000
m31day		6037	0	3376.00	0.5592182	0	1.0000000
m30day		6037	0	2616.00	0.4333278	0	1.0000000
qtr1		6037	0	467.0000000	0.0773563	0	1.0000000
qtr2		6037	0	1863.00	0.3085970	0	1.0000000
qtr3		6037	0	1953.00	0.3235051	0	1.0000000
qtr4		6037	0	1754.00	0.2905417	0	1.0000000
psingle		6037	0	1052.00	0.1742587	0	1.0000000
pdouble		6037	0	4717.00	0.7813484	0	1.0000000
pknockout		6037	0	188.0000000	0.0311413	0	1.0000000
pjacknife		6037	0	77.0000000	0.0127547	0	1.0000000
pothtype		6037	0	3.0000000	0.000496936	0	1.0000000
pexchange		6037	0	2328.00	0.3856220	0	1.0000000
pturnback		6037	0	2444.00	0.4048368	0	1.0000000
single		6037	0	1051.00	0.1740931	0	1.0000000
double		6037	0	4712.00	0.7805201	0	1.0000000
knockout		6037	0	193.0000000	0.0319695	0	1.0000000
jacknife		6037	0	78.0000000	0.0129203	0	1.0000000
othtype		6037	0	3.0000000	0.000496936	0	1.0000000
contthru		6037	0	5399.00	0.8943184	0	1.0000000
return		6037	0	265.0000000	0.0438960	0	1.0000000
contstop		6037	0	323.0000000	0.0535034	0	1.0000000
kill		6037	0	50.0000000	0.0082823	0	1.0000000
contsame		6037	0	5399.00	0.8943184	0	1.0000000
contdouble		6037	0	67.0000000	0.0110982	0	1.0000000
contsingle		6037	0	247.0000000	0.0409144	0	1.0000000
contko		6037	0	7.0000000	0.0011595	0	1.0000000
contjk		6037	0	2.0000000	0.000331290	0	1.0000000
retdouble		6037	0	102.0000000	0.0168958	0	1.0000000
retsingle		6037	0	160.0000000	0.0265032	0	1.0000000

SAS Program Output from “fitmod.sas” for Tows Only (cont.)

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 20:21 Tuesday, June 28, 2005 302

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		6037	0	2.0000000	0.000331290	0	1.0000000
retjk		6037	0	0	0	0	0
xkill		6037	0	51.0000000	0.0084479	0	1.0000000
logtrnhrs		5997	40	8780.31	1.4641178	-3.4011974	8.0994429
plockhrs		6037	0	10587.03	1.7536910	0.1311475	12.9508197
loglckhrs		6037	0	2491.79	0.4127524	-2.0314323	2.5611591
thrusingle		6037	0	617.0000000	0.1022031	0	1.0000000
thruother		6037	0	259.0000000	0.0429021	0	1.0000000
contother		6037	0	9.0000000	0.0014908	0	1.0000000
retother		6037	0	3.0000000	0.000496936	0	1.0000000
thrudoubnite		6036	1	2095.24	0.3471232	0	1.0000000
thrusingnite		6036	1	321.0073500	0.0531821	0	1.0000000
thruothnite		6036	1	120.6238800	0.0199841	0	1.0000000
pdoubnite		6037	0	2214.33	0.3667927	0	1.0000000
psingnite		6037	0	396.5626300	0.0656887	0	1.0000000
pothnite		6037	0	132.7708200	0.0219928	0	1.0000000

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 20:21 Tuesday, June 28, 2005 303

The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI25D

pconfig / doutcome Frequency Percent Row Pct Col Pct	1:contsame	2:contdouble	3:contsingle	4:contko	5:contjk	6:retdouble	7:retsingle	8:retko	x:kill	Total
1:double	4523 74.92 95.89 83.77	64 1.06 1.36 95.52	1 0.02 0.02 0.40	0 0.00 0.00 0.00	0 0.00 0.00 0.00	99 1.64 2.10 97.06	4 0.07 0.08 2.50	2 0.03 0.04 100.00	24 0.40 0.51 47.06	4717 78.13
2:single	617 10.22 58.65 11.43	3 0.05 0.29 4.48	246 4.07 23.38 99.60	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.05 0.29 2.94	156 2.58 14.83 97.50	0 0.00 0.00 0.00	27 0.45 2.57 52.94	1052 17.43
3:knockout	183 3.03 97.34 3.39	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5 0.08 2.66 71.43	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	188 3.11
4:jacknife	73 1.21 94.81 1.35	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.03 2.60 28.57	2 0.03 2.60 100.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	77 1.28
5:Other	3 0.05 100.00 0.06	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.05
Total	5399 89.43	67 1.11	247 4.09	7 0.12	2 0.03	102 1.69	160 2.65	2 0.03	51 0.84	6037 100.00

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 20:21 Tuesday, June 28, 2005 304

The FREQ Procedure

Table 1 of pconfig by nextstep
Controlling for pnewpool=MI25D

pconfig nextstep

Frequency Percent Row Pct Col Pct	1:contth	2:contst	3:return	4:kill	Total
1:double	4523 74.92 95.89 83.77	65 1.08 1.38 20.12	105 1.74 2.23 39.62	24 0.40 0.51 48.00	4717 78.13
2:single	617 10.22 58.65 11.43	249 4.12 23.67 77.09	160 2.65 15.21 60.38	26 0.43 2.47 52.00	1052 17.43
3:knockout	183 3.03 97.34 3.39	5 0.08 2.66 1.55	0 0.00 0.00 0.00	0 0.00 0.00 0.00	188 3.11
4:jacknife	73 1.21 94.81 1.35	4 0.07 5.19 1.24	0 0.00 0.00 0.00	0 0.00 0.00 0.00	77 1.28
5:Other	3 0.05 100.00 0.06	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.05
Total	5399 89.43	323 5.35	265 4.39	50 0.83	6037 100.00

Statistics from water.regfile for regfile 20:21 Tuesday, June 28, 2005 305

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	85485	0	363478864753	4251960.75	3515664.00	4331559.00
strtlcktime	Start/lockge/time	85485	0	1.1343949E14	1327010457	1262306700	1388533680
arrtime	Arriv/time	85485	0	1.1343921E14	1327007179	1262306700	1388530800
deptime	Leave/lockge/time	85485	0	1.1343971E14	1327013017	1262307720	1388536080
BOW_OVER_SILL	BOW_OVER_SILL	85484	1	1.1343822E14	1327011134	1262307000	1388534700
END_OF_ENTRY	END_OF_ENTRY	85484	1	1.1343826E14	1327011609	1262307060	1388535000
START_OF_EXIT	START_OF_EXIT	85484	1	1.1343832E14	1327012336	1262307660	1388535600
SIGNAL_DATE	SIGNAL_DATE	0	85485	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	85485	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	74502	10983	464293.00	6.2319535	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	74502	10983	244287.00	3.2789321	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	85485	.	.	.	.
vess_no		85485	0	68632724504	802862.78	2611.00	8888864.00
vss_hp		84772	713	330423018	3897.78	60.0000000	81800.00
frsttime		85485	0	1.1343921E14	1327007179	1262306700	1388530800
lasttime		85485	0	1.1343971E14	1327013017	1262307720	1388536080
newpoolno		85485	0	2146878.00	25.1140902	1.0000000	28.0000000
oldpoolno		85485	0	2148331.00	25.1310873	1.0000000	28.0000000
waitmin	Wait/before/lockge	85485	0	4669167.00	54.6197228	0	7423.00
lockmin	Wait/lockge/time	85485	0	3647935.00	42.6733930	4.0000000	1823.00
year		85485	0	171098235	2001.50	2000.00	2003.00
fly		85485	0	36299.00	0.4246242	0	1.0000000
turnback		85485	0	26790.00	0.3133883	0	1.0000000
exchange		85485	0	22395.00	0.2619758	0	1.0000000
lock		85485	0	2104862.00	24.6225888	1.0000000	27.0000000
totmin		85485	0	8317102.00	97.2931158	4.0000000	7490.00
month		85485	0	608387.00	7.1168860	1.0000000	12.0000000
day		85485	0	1341476.00	15.6925309	1.0000000	31.0000000
sunrise		84783	702	1963511721	23159.26	19414.00	27155.00
sunset		84783	702	5759416796	67931.27	59694.00	75152.00
sequpstr		85485	0	14034.00	0.1641692	0	1.0000000
seqdstr		85485	0	21059.00	0.2463473	0	1.0000000
plock		85485	0	2011504.00	23.5304907	1.0000000	27.0000000
pempty		74863	10622	192472.00	2.5709897	0	50.0000000
pfull		74863	10622	516849.00	6.9039312	0	28.0000000
parrtime		85485	0	1.1341482E14	1326721897	1262304600	1388521920
pstrtlcktime		85485	0	1.1341528E14	1326727213	1262304600	1388521920
pdeptime		85485	0	1.1341555E14	1326730421	1262305620	1388523540
birth		85485	0	0	0	0	0
transithrs		85485	0	6571868.45	76.8774458	-249.0333333	8099.42
reclock		85485	0	0	0	0	0
i		85485	0	19868482.00	232.4206820	58.0000000	401.0000000
pctpsysdn		79769	5716	79584.70	0.9976895	0	98.9510000
pctplckdn		79769	5716	38503.57	0.4826884	0	98.3000000
cumdown		84724	761	3310800.00	39.0774751	0	107520.00
pctdown		84724	761	32104.23	0.3789272	0	98.3000000
pcttrandn		84466	1019	114565.58	1.3563514	0	100.0000000
pctsysdn		84724	761	74403.14	0.8781826	0	98.6320000
pctlckdn		84724	761	32104.23	0.3789272	0	98.3000000
stime		85485	0	3783305700	44256.95	0	86340.00
etime		85485	0	3793871400	44380.55	0	86340.00
sdate		85485	0	1312913259	15358.41	14610.00	16070.00

Statistics from water.regfile for regfile 20:21 Tuesday, June 28, 2005 306

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		85485	0	1312915670	15358.43	14610.00	16071.00
hrsduration		85485	0	60798.92	0.7112232	0.0666667	30.3833333
ndays		85485	0	1.0000000	0.000011698	0	1.0000000
pctday		85467	18	4673539.70	54.6823885	0	100.0000000
pctpsysnite		85435	50	3839232.20	44.9374635	0	100.0000000
pctplcknite		85464	21	3851468.04	45.0653847	0	100.0000000
pcttrannite		84918	567	4009780.05	47.2194358	0	100.0000000
pctsysnite		85403	82	3852770.71	45.1128264	0	100.0000000
pctlcknite		85467	18	3873160.30	45.3176115	0	100.0000000
stage		40840	44645	888457.37	21.7545879	8.3500000	33.0800000
flow		7705	77780	636594496	82620.96	16077.99	306262.78
jan		85485	0	3081.00	0.0360414	0	1.0000000
feb		85485	0	3432.00	0.0401474	0	1.0000000
mar		85485	0	6963.00	0.0814529	0	1.0000000
apr		85485	0	7604.00	0.0889513	0	1.0000000
may		85485	0	7228.00	0.0845528	0	1.0000000
jun		85485	0	8481.00	0.0992104	0	1.0000000
jul		85485	0	8594.00	0.1005323	0	1.0000000
aug		85485	0	7996.00	0.0935369	0	1.0000000
sep		85485	0	7652.00	0.0895128	0	1.0000000
oct		85485	0	8554.00	0.1000643	0	1.0000000
nov		85485	0	9223.00	0.1078903	0	1.0000000
dec		85485	0	6677.00	0.0781073	0	1.0000000
m31day		85485	0	49093.00	0.5742879	0	1.0000000
m30day		85485	0	32960.00	0.3855647	0	1.0000000
qtr1		85485	0	13476.00	0.1576417	0	1.0000000
qtr2		85485	0	23313.00	0.2727145	0	1.0000000
qtr3		85485	0	24242.00	0.2835819	0	1.0000000
qtr4		85485	0	24454.00	0.2860619	0	1.0000000
psingle		85485	0	65676.00	0.7682751	0	1.0000000
pdouble		85485	0	15912.00	0.1861379	0	1.0000000
pknockout		85485	0	1445.00	0.0169036	0	1.0000000
pjacknife		85485	0	529.0000000	0.0061882	0	1.0000000
pothtype		85485	0	1923.00	0.0224952	0	1.0000000
pexchange		85485	0	23471.00	0.2745628	0	1.0000000
pturnback		85485	0	27737.00	0.3244663	0	1.0000000
single		85485	0	85475.00	0.9998830	0	1.0000000
double		85485	0	6.0000000	0.000070188	0	1.0000000
knockout		85485	0	2.0000000	0.000023396	0	1.0000000
jacknife		85485	0	0	0	0	0
othtype		85485	0	2.0000000	0.000023396	0	1.0000000
contthru		1052	84433	617.0000000	0.5865019	0	1.0000000
return		1052	84433	160.0000000	0.1520913	0	1.0000000
contstop		1052	84433	249.0000000	0.2366920	0	1.0000000
kill		1052	84433	26.0000000	0.0247148	0	1.0000000
contsame		1052	84433	617.0000000	0.5865019	0	1.0000000
contdouble		1052	84433	3.0000000	0.0028517	0	1.0000000
contsingle		1052	84433	246.0000000	0.2338403	0	1.0000000
contko		1052	84433	0	0	0	0
contjk		1052	84433	0	0	0	0
retdouble		1052	84433	3.0000000	0.0028517	0	1.0000000
retsingle		1052	84433	156.0000000	0.1482890	0	1.0000000

Statistics from water.regfile for regfile 20:21 Tuesday, June 28, 2005 307

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1052	84433	0	0	0	0
retjk		1052	84433	0	0	0	0
xkill		1052	84433	27.0000000	0.0256654	0	1.0000000
logtrnhrs		1038	84447	1608.62	1.5497346	-3.4011974	8.0994429
plockhrs		1052	84433	560.3606557	0.5326622	0.1311475	11.9672131
loglckhrs		1052	84433	-813.7155049	-0.7734938	-2.0314323	2.4821707
thrusingle		1052	84433	617.0000000	0.5865019	0	1.0000000
thruother		1052	84433	0	0	0	0
contother		1052	84433	0	0	0	0
retother		1052	84433	1.0000000	0.000950570	0	1.0000000
thrudoubnite		1051	84434	0	0	0	0
thrusingnite		1051	84434	321.0073500	0.3054304	0	1.0000000
thruothnite		1051	84434	0	0	0	0
pdoubnite		1052	84433	0	0	0	0
psingnite		1052	84433	396.5626300	0.3769607	0	1.0000000
pothnite		1052	84433	0	0	0	0

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                    Transition models using key variables from stepwise proc      20:21 Tuesday, June 28, 2005 308
                                    transitions  to contthru

                                       The REG Procedure
                                         Model: MODEL1
                                 Dependent Variable: contsame

                                   Stepwise Selection: Step 1

                      Variable psingle Entered: R-Square = 0.2116 and C(p) = 37.2438


                                      Analysis of Variance

                                             Sum of           Mean
                 Source                 DF        Squares         Square    F Value    Pr > F

                 Model                   1      120.71339      120.71339    1619.40    <.0001
                 Error                6035      449.86173        0.07454
                 Corrected Total      6036      570.57512


                              Parameter     Standard
                     Variable     Estimate        Error   Type II SS  F Value  Pr > F

                     Intercept     0.95928      0.00387   4587.26660  61539.3  <.0001
                     psingle      -0.37278      0.00926    120.71339  1619.40  <.0001

                                  Bounds on condition number: 1, 1
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                                   Stepwise Selection: Step 2


                        Variable mar Entered: R-Square = 0.2138 and C(p) = 22.1756


                                      Analysis of Variance

                                             Sum of           Mean
                 Source                 DF        Squares         Square    F Value    Pr > F

                 Model                   2      121.97830       60.98915     820.35    <.0001
                 Error                6034      448.59682        0.07434
                 Corrected Total      6036      570.57512


                              Parameter     Standard
                     Variable     Estimate        Error   Type II SS  F Value  Pr > F

                     Intercept     0.96236      0.00393   4450.35008  59860.9  <.0001
                     mar          -0.05906      0.01432      1.26491    17.01  <.0001
                     psingle      -0.36839      0.00931    116.35183  1565.03  <.0001

                               Bounds on condition number: 1.0132, 4.0529
-------------------------------------------------------------------------------------------------------------------------------


                    All variables left in the model are significant at the 0.0100 level.
```

SAS Program Output from “fitmod.sas” for Tows Only (cont.)

Transition models using key variables from stepwise proc transitions to contthru 20:21 Tuesday, June 28, 2005 309

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 2

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	psingle		1	0.2116	0.2116	37.2438	1619.40	<.0001
2	mar		2	0.0022	0.2138	22.1756	17.01	<.0001

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 310

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0548 and C(p) = 488.9523

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	27.21303	27.21303	269.92	<.0001
Error	4656	469.41768	0.10082		
Corrected Total	4657	496.63071			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.08344	0.00611	11720	116246	<.0001
pturnback	-0.15485	0.00943	27.21303	269.92	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jun Entered: R-Square = 0.0788 and C(p) = 360.0712

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	39.15906	19.57953	199.23	<.0001
Error	4655	457.47165	0.09828		
Corrected Total	4657	496.63071			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.10334	0.00630	10963	111554	<.0001
jun	-0.15184	0.01377	11.94604	121.56	<.0001
pturnback	-0.15614	0.00931	27.66613	281.52	<.0001

Bounds on condition number: 1.0002, 4.0006

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 311

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.0984 and C(p) = 255.8741

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	48.85210	16.28403	169.25	<.0001
Error	4654	447.77861	0.09621		
Corrected Total	4657	496.63071			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.12173	0.00649	10268	106719	<.0001
jun	-0.17261	0.01378	15.09005	156.84	<.0001
jul	-0.13557	0.01351	9.69303	100.74	<.0001
pturnback	-0.15024	0.00923	25.51176	265.16	<.0001

Bounds on condition number: 1.0274, 9.1645

Stepwise Selection: Step 4

Variable may Entered: R-Square = 0.1199 and C(p) = 140.8513

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	59.53323	14.88331	158.44	<.0001
Error	4653	437.09748	0.09394		
Corrected Total	4657	496.63071			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.14421	0.00675	9465.62829	100764	<.0001
may	-0.16877	0.01583	10.68114	113.70	<.0001
jun	-0.19368	0.01376	18.60794	198.09	<.0001
jul	-0.15630	0.01349	12.61729	134.31	<.0001
pturnback	-0.15371	0.00912	26.66771	283.88	<.0001

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 312

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0492, 16.553

Stepwise Selection: Step 5

Variable pctlcknite Entered: R-Square = 0.1295 and C(p) = 90.7453

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	64.28915	12.85783	138.35	<.0001
Error	4652	432.34156	0.09294		
Corrected Total	4657	496.63071			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.17942	0.00833	6362.88784	68464.7	<.0001
may	-0.17761	0.01579	11.75721	126.51	<.0001
jun	-0.20238	0.01374	20.15732	216.89	<.0001
jul	-0.16447	0.01346	13.86946	149.24	<.0001
pctlcknite	-0.00068649	0.00009596	4.75592	51.17	<.0001
pturnback	-0.15311	0.00907	26.45888	284.70	<.0001

Bounds on condition number: 1.0568, 25.884

Stepwise Selection: Step 6

Variable dec Entered: R-Square = 0.1355 and C(p) = 59.8291

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	67.29354	11.21559	121.50	<.0001
Error	4651	429.33717	0.09231		
Corrected Total	4657	496.63071			

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 313

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.17055	0.00845	6096.99296	66048.6	<.0001
may	-0.16728	0.01584	10.29282	111.50	<.0001
jun	-0.19197	0.01382	17.82197	193.07	<.0001
jul	-0.15391	0.01354	11.91970	129.13	<.0001
dec	0.10395	0.01822	3.00439	32.55	<.0001
pctlcknite	-0.00071199	0.00009575	5.10467	55.30	<.0001
pturnback	-0.15443	0.00905	26.90014	291.41	<.0001

Bounds on condition number: 1.0769, 37.657

Stepwise Selection: Step 7

Variable oct Entered: R-Square = 0.1408 and C(p) = 33.1301

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	69.91302	9.98757	108.84	<.0001
Error	4650	426.71769	0.09177		
Corrected Total	4657	496.63071			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.15733	0.00878	5544.53454	60419.5	<.0001
may	-0.15349	0.01600	8.44004	91.97	<.0001
jun	-0.17817	0.01402	14.82992	161.60	<.0001
jul	-0.14009	0.01375	9.52467	103.79	<.0001
oct	0.08354	0.01564	2.61948	28.54	<.0001
dec	0.11804	0.01836	3.79434	41.35	<.0001
pctlcknite	-0.00072576	0.00009550	5.30017	57.76	<.0001
pturnback	-0.15456	0.00902	26.94244	293.60	<.0001

Bounds on condition number: 1.1164, 52.428

Stepwise Selection: Step 8

Variable apr Entered: R-Square = 0.1432 and C(p) = 22.0898

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 314

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 8

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	71.10326	8.88791	97.10	<.0001
Error	4649	425.52745	0.09153		
Corrected Total	4657	496.63071			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.16988	0.00943	4845.40110	52937.3	<.0001
apr	-0.05757	0.01597	1.19024	13.00	0.0003
may	-0.16522	0.01631	9.39062	102.60	<.0001
jun	-0.18987	0.01437	15.98263	174.61	<.0001
jul	-0.15170	0.01410	10.58695	115.67	<.0001
oct	0.07208	0.01594	1.87235	20.46	<.0001
dec	0.10669	0.01860	3.01084	32.89	<.0001
pctlcknite	-0.00074020	0.00009546	5.50337	60.13	<.0001
pturnback	-0.15528	0.00901	27.18276	296.98	<.0001

Bounds on condition number: 1.1778, 70.932

Stepwise Selection: Step 9

Variable pexchange Entered: R-Square = 0.1447 and C(p) = 15.9483

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	71.84637	7.98293	87.35	<.0001
Error	4648	424.78434	0.09139		
Corrected Total	4657	496.63071			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.14690	0.01240	2740.03334	29981.5	<.0001
apr	-0.05699	0.01596	1.16597	12.76	0.0004
may	-0.16559	0.01630	9.43148	103.20	<.0001
jun	-0.19117	0.01436	16.18713	177.12	<.0001
jul	-0.15351	0.01411	10.82012	118.39	<.0001
oct	0.07266	0.01593	1.90256	20.82	<.0001
dec	0.10990	0.01862	3.18333	34.83	<.0001

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 315

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 9

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
pctlcknite	-0.00075387	0.00009551	5.69425	62.31	<.0001
pturnback	-0.13152	0.01227	10.50064	114.90	<.0001
pexchange	0.03544	0.01243	0.74311	8.13	0.0044

Bounds on condition number: 1.8698, 104.49

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0548	0.0548	488.952	269.92	<.0001
2	jun		2	0.0241	0.0788	360.071	121.56	<.0001
3	jul		3	0.0195	0.0984	255.874	100.74	<.0001
4	may		4	0.0215	0.1199	140.851	113.70	<.0001
5	pctlcknite		5	0.0096	0.1295	90.7453	51.17	<.0001
6	dec		6	0.0060	0.1355	59.8291	32.55	<.0001
7	oct		7	0.0053	0.1408	33.1301	28.54	<.0001
8	apr		8	0.0024	0.1432	22.0898	13.00	0.0003
9	pexchange		9	0.0015	0.1447	15.9483	8.13	0.0044

Logarithms of double lockage times using key variables from stepwise proc 316
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0555 and C(p) = 519.3707

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	6.62279	6.62279	273.83	<.0001
Error	4657	112.63439	0.02419		
Corrected Total	4658	119.25719			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.72171	0.00299	1406.31923	58145.9	<.0001
pturnback	-0.07638	0.00462	6.62279	273.83	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jun Entered: R-Square = 0.0831 and C(p) = 370.5320

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	9.90621	4.95311	210.90	<.0001
Error	4656	109.35097	0.02349		
Corrected Total	4658	119.25719			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.73214	0.00308	1328.31128	56557.5	<.0001
jun	-0.07960	0.00673	3.28342	139.80	<.0001
pturnback	-0.07706	0.00455	6.74095	287.02	<.0001

Bounds on condition number: 1.0002, 4.0006

Stepwise Selection: Step 3

Logarithms of double lockage times using key variables from stepwise proc 317
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.1043 and C(p) = 256.2546

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	12.43731	4.14577	180.66	<.0001
Error	4655	106.81988	0.02295		
Corrected Total	4658	119.25719			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.74154	0.00317	1254.21576	54656.3	<.0001
jun	-0.09021	0.00673	4.12212	179.63	<.0001
jul	-0.06927	0.00660	2.53110	110.30	<.0001
pturnback	-0.07406	0.00451	6.19994	270.18	<.0001

Bounds on condition number: 1.0274, 9.1644

Stepwise Selection: Step 4

Variable may Entered: R-Square = 0.1267 and C(p) = 135.3848

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	15.11191	3.77798	168.83	<.0001
Error	4654	104.14528	0.02238		
Corrected Total	4658	119.25719			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.75278	0.00330	1166.81201	52142.0	<.0001
may	-0.08437	0.00772	2.67460	119.52	<.0001
jun	-0.10077	0.00672	5.03698	225.09	<.0001
jul	-0.07966	0.00658	3.27761	146.47	<.0001
pturnback	-0.07575	0.00445	6.47868	289.52	<.0001

Logarithms of double lockage times using key variables from stepwise proc 318
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0492, 16.553

Stepwise Selection: Step 5

Variable pctlcknite Entered: R-Square = 0.1358 and C(p) = 87.5251

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	16.19724	3.23945	146.26	<.0001
Error	4653	103.05995	0.02215		
Corrected Total	4658	119.25719			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.76960	0.00407	793.42523	35821.9	<.0001
may	-0.08862	0.00770	2.93276	132.41	<.0001
jun	-0.10492	0.00671	5.41806	244.62	<.0001
jul	-0.08356	0.00657	3.58042	161.65	<.0001
pctlcknite	-0.00032792	0.00004685	1.08533	49.00	<.0001
pturnback	-0.07547	0.00443	6.43077	290.34	<.0001

Bounds on condition number: 1.0568, 25.885

Stepwise Selection: Step 6

Variable dec Entered: R-Square = 0.1413 and C(p) = 59.3186

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	16.85477	2.80913	127.61	<.0001
Error	4652	102.40242	0.02201		
Corrected Total	4658	119.25719			

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.76545	0.00412	758.25094	34446.3	<.0001
may	-0.08379	0.00773	2.58725	117.53	<.0001
jun	-0.10006	0.00675	4.84119	219.93	<.0001
jul	-0.07863	0.00661	3.11063	141.31	<.0001
dec	0.04863	0.00890	0.65753	29.87	<.0001
pctlcknite	-0.00033985	0.00004675	1.16320	52.84	<.0001
pturnback	-0.07609	0.00442	6.53232	296.75	<.0001

Bounds on condition number: 1.0769, 37.658

Stepwise Selection: Step 7

Variable oct Entered: R-Square = 0.1466 and C(p) = 32.7090

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	17.47753	2.49679	114.10	<.0001
Error	4651	101.77965	0.02188		
Corrected Total	4658	119.25719			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.75901	0.00429	686.31581	31362.4	<.0001
may	-0.07706	0.00781	2.13157	97.41	<.0001
jun	-0.09333	0.00684	4.06876	185.93	<.0001
jul	-0.07188	0.00671	2.50799	114.61	<.0001
oct	0.04073	0.00764	0.62277	28.46	<.0001
dec	0.05550	0.00896	0.83882	38.33	<.0001
pctlcknite	-0.00034656	0.00004663	1.20873	55.23	<.0001
pturnback	-0.07615	0.00440	6.54251	298.97	<.0001

Bounds on condition number: 1.1165, 52.43

Stepwise Selection: Step 8

Logarithms of double lockage times using key variables from stepwise proc 320
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 8

Variable nov Entered: R-Square = 0.1491 and C(p) = 20.6340

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	17.78391	2.22299	101.87	<.0001
Error	4650	101.47327	0.02182		
Corrected Total	4658	119.25719			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.75294	0.00458	590.69338	27068.5	<.0001
may	-0.07010	0.00802	1.66889	76.48	<.0001
jun	-0.08630	0.00709	3.23639	148.31	<.0001
jul	-0.06475	0.00697	1.88276	86.28	<.0001
oct	0.04797	0.00787	0.81160	37.19	<.0001
nov	0.02637	0.00704	0.30638	14.04	0.0002
dec	0.06286	0.00916	1.02654	47.04	<.0001
pctlcknite	-0.00035971	0.00004670	1.29484	59.34	<.0001
pturnback	-0.07723	0.00441	6.70049	307.05	<.0001

Bounds on condition number: 1.2066, 72.492

Stepwise Selection: Step 9

Variable sep Entered: R-Square = 0.1505 and C(p) = 14.8779

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	17.95275	1.99475	91.54	<.0001
Error	4649	101.30444	0.02179		
Corrected Total	4658	119.25719			

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 9

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.74760	0.00496	495.35030	22732.3	<.0001
may	-0.06455	0.00825	1.33296	61.17	<.0001
jun	-0.08075	0.00736	2.62519	120.47	<.0001
jul	-0.05918	0.00725	1.45298	66.68	<.0001
sep	0.02409	0.00866	0.16883	7.75	0.0054
oct	0.05359	0.00811	0.95017	43.60	<.0001
nov	0.03202	0.00732	0.41687	19.13	<.0001
dec	0.06850	0.00938	1.16221	53.34	<.0001
pctlcknite	-0.00036385	0.00004669	1.32348	60.74	<.0001
pturnback	-0.07736	0.00440	6.72346	308.55	<.0001

Bounds on condition number: 1.3061, 96.803

Stepwise Selection: Step 10

Variable pexchange Entered: R-Square = 0.1519 and C(p) = 9.4915

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	10	18.11353	1.81135	83.24	<.0001
Error	4648	101.14365	0.02176		
Corrected Total	4658	119.25719			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.73685	0.00634	293.96822	13509.1	<.0001
may	-0.06468	0.00825	1.33819	61.50	<.0001
jun	-0.08132	0.00736	2.66007	122.24	<.0001
jul	-0.05998	0.00725	1.49033	68.49	<.0001
sep	0.02513	0.00866	0.18339	8.43	0.0037
oct	0.05390	0.00811	0.96114	44.17	<.0001
nov	0.03173	0.00732	0.40920	18.80	<.0001
dec	0.07004	0.00939	1.21058	55.63	<.0001
pctlcknite	-0.00037020	0.00004671	1.36665	62.80	<.0001
pturnback	-0.06628	0.00600	2.65618	122.06	<.0001
pexchange	0.01651	0.00607	0.16079	7.39	0.0066

Logarithms of double lockage times using key variables from stepwise proc 322
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 10

Bounds on condition number: 1.8778, 135.11

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0555	0.0555	519.371	273.83	<.0001
2	jun		2	0.0275	0.0831	370.532	139.80	<.0001
3	jul		3	0.0212	0.1043	256.255	110.30	<.0001
4	may		4	0.0224	0.1267	135.385	119.52	<.0001
5	pctlcknite		5	0.0091	0.1358	87.5251	49.00	<.0001
6	dec		6	0.0055	0.1413	59.3186	29.87	<.0001
7	oct		7	0.0052	0.1466	32.7090	28.46	<.0001
8	nov		8	0.0026	0.1491	20.6340	14.04	0.0002
9	sep		9	0.0014	0.1505	14.8779	7.75	0.0054
10	pexchange		10	0.0013	0.1519	9.4915	7.39	0.0066

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 323

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable apr Entered: R-Square = 0.0247 and C(p) = 67.1181

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.17807	1.17807	24.55	<.0001
Error	968	46.45163	0.04799		
Corrected Total	969	47.62970			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.53282	0.00747	244.43127	5093.67	<.0001
apr	-0.11035	0.02227	1.17807	24.55	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable dec Entered: R-Square = 0.0439 and C(p) = 48.7624

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	2.09331	1.04666	22.23	<.0001
Error	967	45.53639	0.04709		
Corrected Total	969	47.62970			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.52350	0.00769	218.14446	4632.46	<.0001
apr	-0.10103	0.02216	0.97855	20.78	<.0001
dec	0.12341	0.02799	0.91524	19.44	<.0001

Bounds on condition number: 1.0092, 4.0367

Stepwise Selection: Step 3

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable pturnback Entered: R-Square = 0.0622 and C(p) = 31.4705

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	2.96073	0.98691	21.34	<.0001
Error	966	44.66897	0.04624		
Corrected Total	969	47.62970			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.54346	0.00891	172.16528	3723.20	<.0001
apr	-0.10092	0.02196	0.97653	21.12	<.0001
dec	0.13116	0.02780	1.02949	22.26	<.0001
pturnback	-0.06432	0.01485	0.86741	18.76	<.0001

Bounds on condition number: 1.0134, 9.0802

Stepwise Selection: Step 4

Variable pexchange Entered: R-Square = 0.0792 and C(p) = 15.3927

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	3.77355	0.94339	20.76	<.0001
Error	965	43.85615	0.04545		
Corrected Total	969	47.62970			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.58337	0.01292	92.60212	2037.59	<.0001
apr	-0.09592	0.02180	0.87956	19.35	<.0001
dec	0.11689	0.02776	0.80565	17.73	<.0001
pturnback	-0.10348	0.01739	1.60885	35.40	<.0001
pexchange	-0.07127	0.01685	0.81282	17.89	<.0001

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.4272, 19.478

Stepwise Selection: Step 5

Variable oct Entered: R-Square = 0.0897 and C(p) = 6.3212

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	4.27135	0.85427	18.99	<.0001
Error	964	43.35835	0.04498		
Corrected Total	969	47.62970			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.57479	0.01311	86.42816	1921.59	<.0001
apr	-0.08595	0.02190	0.69292	15.41	<.0001
oct	0.07337	0.02205	0.49780	11.07	0.0009
dec	0.12660	0.02777	0.93461	20.78	<.0001
pturnback	-0.10567	0.01732	1.67522	37.25	<.0001
pexchange	-0.07284	0.01677	0.84827	18.86	<.0001

Bounds on condition number: 1.4284, 29.665

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	apr		1	0.0247	0.0247	67.1181	24.55	<.0001
2	dec		2	0.0192	0.0439	48.7624	19.44	<.0001
3	pturnback		3	0.0182	0.0622	31.4705	18.76	<.0001
4	pexchange		4	0.0171	0.0792	15.3927	17.89	<.0001
5	oct		5	0.0105	0.0897	6.3212	11.07	0.0009

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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable apr Entered: R-Square = 0.0346 and C(p) = 68.5521

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	4.75298	4.75298	35.44	<.0001
Error	989	132.63514	0.13411		
Corrected Total	990	137.38812			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.70919	0.01236	441.59426	3292.77	<.0001
apr	-0.21789	0.03660	4.75298	35.44	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pturnback Entered: R-Square = 0.0466 and C(p) = 57.4770

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	6.39593	3.19796	24.12	<.0001
Error	988	130.99219	0.13258		
Corrected Total	990	137.38812			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.68125	0.01463	287.54337	2168.78	<.0001
apr	-0.21802	0.03639	4.75855	35.89	<.0001
pturnback	-0.08729	0.02480	1.64294	12.39	0.0005

Bounds on condition number: 1, 4

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 327
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable pexchange Entered: R-Square = 0.0651 and C(p) = 39.2280

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	8.94032	2.98011	22.90	<.0001
Error	987	128.44780	0.13014		
Corrected Total	990	137.38812			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.61313	0.02115	109.34745	840.23	<.0001
apr	-0.20930	0.03611	4.37251	33.60	<.0001
pturnback	-0.15641	0.02912	3.75461	28.85	<.0001
pexchange	-0.12390	0.02802	2.54439	19.55	<.0001

Bounds on condition number: 1.4078, 11.447

Stepwise Selection: Step 4

Variable oct Entered: R-Square = 0.0757 and C(p) = 29.5695

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	10.40527	2.60132	20.20	<.0001
Error	986	126.98285	0.12879		
Corrected Total	990	137.38812			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.62623	0.02140	110.31099	856.55	<.0001
apr	-0.19377	0.03621	3.68702	28.63	<.0001
oct	0.12446	0.03690	1.46495	11.38	0.0008
pturnback	-0.15960	0.02898	3.90512	30.32	<.0001
pexchange	-0.12710	0.02789	2.67431	20.77	<.0001

Logarithms of single lockage times using key variables from stepwise proc 328
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.4094, 19.41

Stepwise Selection: Step 5

Variable dec Entered: R-Square = 0.0854 and C(p) = 21.0210

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	11.73073	2.34615	18.39	<.0001
Error	985	125.65739	0.12757		
Corrected Total	990	137.38812			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.64355	0.02196	109.52452	858.54	<.0001
apr	-0.18178	0.03623	3.21062	25.17	<.0001
oct	0.13691	0.03693	1.75337	13.74	0.0002
dec	0.14964	0.04642	1.32546	10.39	0.0013
pturnback	-0.15831	0.02885	3.84160	30.11	<.0001
pexchange	-0.11598	0.02797	2.19303	17.19	<.0001

Bounds on condition number: 1.4312, 29.687

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	apr		1	0.0346	0.0346	68.5521	35.44	<.0001
2	pturnback		2	0.0120	0.0466	57.4770	12.39	0.0005
3	pexchange		3	0.0185	0.0651	39.2280	19.55	<.0001
4	oct		4	0.0107	0.0757	29.5695	11.38	0.0008
5	dec		5	0.0096	0.0854	21.0210	10.39	0.0013

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0448 and C(p) = 837.6564

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	288.60640	288.60640	209.34	<.0001
Error	4460	6148.77554	1.37865		
Corrected Total	4461	6437.38194			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.42316	0.01879	76360	55387.2	<.0001
jun	-0.76827	0.05310	288.60640	209.34	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable waitmin Entered: R-Square = 0.0786 and C(p) = 652.4339

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	505.99000	252.99500	190.19	<.0001
Error	4459	5931.39194	1.33021		
Corrected Total	4461	6437.38194			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.59450	0.02281	53951	40558.3	<.0001
jun	-0.75991	0.05216	282.31498	212.23	<.0001
waitmin	-0.00096635	0.00007559	217.38359	163.42	<.0001

Bounds on condition number: 1.0002, 4.0006

Stepwise Selection: Step 3

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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.1056 and C(p) = 504.7036

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	679.84163	226.61388	175.46	<.0001
Error	4458	5757.54031	1.29151		
Corrected Total	4461	6437.38194			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.66798	0.02335	51596	39949.9	<.0001
jun	-0.85065	0.05199	345.75523	267.71	<.0001
jul	-0.59093	0.05093	173.85163	134.61	<.0001
waitmin	-0.00087351	0.00007491	175.59562	135.96	<.0001

Bounds on condition number: 1.0343, 9.2079

Stepwise Selection: Step 4

Variable may Entered: R-Square = 0.1394 and C(p) = 319.1887

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	897.56477	224.39119	180.53	<.0001
Error	4457	5539.81717	1.24295		
Corrected Total	4461	6437.38194			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.76232	0.02399	48962	39392.2	<.0001
may	-0.78269	0.05914	217.72314	175.17	<.0001
jun	-0.94661	0.05152	419.68822	337.66	<.0001
jul	-0.68736	0.05049	230.32299	185.30	<.0001
waitmin	-0.00086479	0.00007349	172.09143	138.45	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0563, 16.593

Stepwise Selection: Step 5

Variable apr Entered: R-Square = 0.1640 and C(p) = 184.9854

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	1055.71008	211.14202	174.82	<.0001
Error	4456	5381.67186	1.20774		
Corrected Total	4461	6437.38194			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.85902	0.02512	45201	37426.3	<.0001
apr	-0.65895	0.05758	158.14532	130.94	<.0001
may	-0.87959	0.05891	269.28687	222.97	<.0001
jun	-1.04353	0.05148	496.21946	410.87	<.0001
jul	-0.78434	0.05049	291.44774	241.32	<.0001
waitmin	-0.00086364	0.00007245	171.63456	142.11	<.0001

Bounds on condition number: 1.0869, 26.45

Stepwise Selection: Step 6

Variable pcttrandn Entered: R-Square = 0.1743 and C(p) = 129.6259

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	1122.31012	187.05169	156.78	<.0001
Error	4455	5315.07182	1.19306		
Corrected Total	4461	6437.38194			

Logarithms of single lockage times using key variables from stepwise proc 332
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.84989	0.02499	44924	37654.1	<.0001
apr	-0.66606	0.05724	161.53294	135.39	<.0001
may	-0.86198	0.05859	258.19194	216.41	<.0001
jun	-1.04678	0.05117	499.27698	418.49	<.0001
jul	-0.76172	0.05027	273.88749	229.57	<.0001
pcttrandn	0.01136	0.00152	66.60003	55.82	<.0001
waitmin	-0.00098722	0.00007388	213.02629	178.55	<.0001

Bounds on condition number: 1.0909, 38.435

Stepwise Selection: Step 7

Variable mar Entered: R-Square = 0.1810 and C(p) = 94.6994

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	1165.18532	166.45505	140.62	<.0001
Error	4454	5272.19661	1.18370		
Corrected Total	4461	6437.38194			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.89609	0.02605	41809	35320.3	<.0001
mar	-0.45684	0.07591	42.87521	36.22	<.0001
apr	-0.70782	0.05744	179.75982	151.86	<.0001
may	-0.90386	0.05878	279.91115	236.47	<.0001
jun	-1.08807	0.05143	529.84627	447.62	<.0001
jul	-0.80197	0.05052	298.27253	251.98	<.0001
pcttrandn	0.01123	0.00151	65.06914	54.97	<.0001
waitmin	-0.00101	0.00007370	222.92052	188.33	<.0001

Bounds on condition number: 1.1103, 52.693

Stepwise Selection: Step 8

Logarithms of single lockage times using key variables from stepwise proc 333
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 8

Variable nov Entered: R-Square = 0.1868 and C(p) = 64.4124

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	1202.67375	150.33422	127.88	<.0001
Error	4453	5234.70819	1.17555		
Corrected Total	4461	6437.38194			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.97352	0.02936	33733	28695.3	<.0001
mar	-0.53399	0.07687	56.72807	48.26	<.0001
apr	-0.78494	0.05885	209.16040	177.93	<.0001
may	-0.98073	0.06014	312.66077	265.97	<.0001
jun	-1.16511	0.05304	567.33467	482.61	<.0001
jul	-0.87860	0.05214	333.75300	283.91	<.0001
nov	-0.29334	0.05194	37.48842	31.89	<.0001
pcttrandn	0.01134	0.00151	66.34084	56.43	<.0001
waitmin	-0.00102	0.00007345	224.65578	191.11	<.0001

Bounds on condition number: 1.191, 72.131

Stepwise Selection: Step 9

Variable feb Entered: R-Square = 0.1899 and C(p) = 49.5906

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	1222.20553	135.80061	115.93	<.0001
Error	4452	5215.17641	1.17142		
Corrected Total	4461	6437.38194			

Logarithms of single lockage times using key variables from stepwise proc 334
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 9

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.96150	0.02946	33235	28371.4	<.0001
feb	1.11125	0.27214	19.53178	16.67	<.0001
mar	-0.52285	0.07678	54.31804	46.37	<.0001
apr	-0.77404	0.05880	202.97328	173.27	<.0001
may	-0.97031	0.06008	305.49808	260.79	<.0001
jun	-1.15444	0.05301	555.63983	474.33	<.0001
jul	-0.86882	0.05211	325.67327	278.02	<.0001
nov	-0.28249	0.05192	34.67655	29.60	<.0001
pcttrandn	0.01115	0.00151	64.01971	54.65	<.0001
waitmin	-0.00100	0.00007336	219.76356	187.60	<.0001

Bounds on condition number: 1.1935, 90.368

Stepwise Selection: Step 10

Variable aug Entered: R-Square = 0.1920 and C(p) = 39.6954

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	10	1236.01705	123.60171	105.77	<.0001
Error	4451	5201.36489	1.16858		
Corrected Total	4461	6437.38194			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	5.02063	0.03408	25365	21705.5	<.0001
feb	1.05289	0.27234	17.46591	14.95	0.0001
mar	-0.58416	0.07874	64.32478	55.05	<.0001
apr	-0.83613	0.06145	216.38168	185.17	<.0001
may	-1.03323	0.06274	316.92566	271.20	<.0001
jun	-1.21704	0.05599	552.21079	472.55	<.0001
jul	-0.93325	0.05532	332.63279	284.65	<.0001
aug	-0.19852	0.05774	13.81152	11.82	0.0006
nov	-0.34467	0.05492	46.02363	39.38	<.0001
pcttrandn	0.01082	0.00151	60.10498	51.43	<.0001
waitmin	-0.00098073	0.00007361	207.43039	177.51	<.0001

Logarithms of single lockage times using key variables from stepwise proc 335
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 10

Bounds on condition number: 1.3483, 120.72

Stepwise Selection: Step 11

Variable oct Entered: R-Square = 0.1933 and C(p) = 34.2927

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	1244.61221	113.14656	96.96	<.0001
Error	4450	5192.76973	1.16691		
Corrected Total	4461	6437.38194			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	5.09014	0.04261	16651	14269.4	<.0001
feb	0.98348	0.27335	15.10585	12.95	0.0003
mar	-0.65417	0.08280	72.83748	62.42	<.0001
apr	-0.90632	0.06663	215.92482	185.04	<.0001
may	-1.10359	0.06785	308.75934	264.59	<.0001
jun	-1.28735	0.06165	508.76444	435.99	<.0001
jul	-1.00395	0.06111	314.97881	269.92	<.0001
aug	-0.26911	0.06329	21.09468	18.08	<.0001
oct	-0.17906	0.06598	8.59516	7.37	0.0067
nov	-0.41489	0.06068	54.56076	46.76	<.0001
pcttrandn	0.01076	0.00151	59.37755	50.88	<.0001
waitmin	-0.00097538	0.00007358	205.02797	175.70	<.0001

Bounds on condition number: 1.6477, 167.87

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Logarithms of single lockage times using key variables from stepwise proc 336
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Label	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun			1	0.0448	0.0448	837.656	209.34	<.0001
2	waitmin		Wait/before/lockge	2	0.0338	0.0786	652.434	163.42	<.0001
3	jul			3	0.0270	0.1056	504.704	134.61	<.0001
4	may			4	0.0338	0.1394	319.189	175.17	<.0001
5	apr			5	0.0246	0.1640	184.985	130.94	<.0001
6	pcttrandn			6	0.0103	0.1743	129.626	55.82	<.0001
7	mar			7	0.0067	0.1810	94.6994	36.22	<.0001
8	nov			8	0.0058	0.1868	64.4124	31.89	<.0001
9	feb			9	0.0030	0.1899	49.5906	16.67	<.0001
10	aug			10	0.0021	0.1920	39.6954	11.82	0.0006
11	oct			11	0.0013	0.1933	34.2927	7.37	0.0067

Logarithms of single lockage times using key variables from stepwise proc 337
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0608 and C(p) = 774.7969

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	16.06757	16.06757	288.90	<.0001
Error	4462	248.16124	0.05562		
Corrected Total	4463	264.22881			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.45568	0.00377	8272.54568	148742	<.0001
jun	-0.18113	0.01066	16.06757	288.90	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jul Entered: R-Square = 0.1040 and C(p) = 536.2535

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	27.47080	13.73540	258.80	<.0001
Error	4461	236.75802	0.05307		
Corrected Total	4463	264.22881			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.47859	0.00400	7234.26360	136308	<.0001
jun	-0.20405	0.01053	19.94093	375.73	<.0001
jul	-0.15037	0.01026	11.40322	214.86	<.0001

Bounds on condition number: 1.0226, 4.0902

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 338
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable may Entered: R-Square = 0.1522 and C(p) = 269.2888

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	40.22136	13.40712	266.94	<.0001
Error	4460	224.00745	0.05023		
Corrected Total	4463	264.22881			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.50178	0.00416	6549.47445	130400	<.0001
may	-0.18940	0.01189	12.75056	253.86	<.0001
jun	-0.22723	0.01034	24.23997	482.62	<.0001
jul	-0.17355	0.01009	14.87403	296.14	<.0001

Bounds on condition number: 1.0443, 9.3707

Stepwise Selection: Step 4

Variable apr Entered: R-Square = 0.1812 and C(p) = 110.0023

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	47.86732	11.96683	246.62	<.0001
Error	4459	216.36149	0.04852		
Corrected Total	4463	264.22881			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.52308	0.00443	5746.07351	118421	<.0001
apr	-0.14489	0.01154	7.64596	157.58	<.0001
may	-0.21071	0.01181	15.45422	318.50	<.0001
jun	-0.24853	0.01031	28.21219	581.43	<.0001
jul	-0.19486	0.01006	18.21590	375.41	<.0001

Logarithms of single lockage times using key variables from stepwise proc 339
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0749, 17.061

Stepwise Selection: Step 5

Variable mar Entered: R-Square = 0.1866 and C(p) = 81.9310

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	49.29289	9.85858	204.48	<.0001
Error	4458	214.93593	0.04821		
Corrected Total	4463	264.22881			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.53070	0.00463	5271.84209	109344	<.0001
mar	-0.08315	0.01529	1.42556	29.57	<.0001
apr	-0.15251	0.01159	8.34750	173.14	<.0001
may	-0.21833	0.01185	16.36025	339.33	<.0001
jun	-0.25615	0.01037	29.42133	610.23	<.0001
jul	-0.20248	0.01012	19.29147	400.13	<.0001

Bounds on condition number: 1.0959, 26.91

Stepwise Selection: Step 6

Variable nov Entered: R-Square = 0.1909 and C(p) = 59.5373

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	50.44929	8.40822	175.30	<.0001
Error	4457	213.77952	0.04796		
Corrected Total	4463	264.22881			

Logarithms of single lockage times using key variables from stepwise proc 340
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.54423	0.00538	3956.13154	82479.7	<.0001
mar	-0.09668	0.01550	1.86637	38.91	<.0001
apr	-0.16604	0.01188	9.36245	195.19	<.0001
may	-0.23186	0.01214	17.50001	364.85	<.0001
jun	-0.26968	0.01070	30.45000	634.84	<.0001
jul	-0.21601	0.01047	20.43369	426.01	<.0001
nov	-0.05151	0.01049	1.15641	24.11	<.0001

Bounds on condition number: 1.1776, 41.228

Stepwise Selection: Step 7

Variable aug Entered: R-Square = 0.1945 and C(p) = 41.7287

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	51.38834	7.34119	153.69	<.0001
Error	4456	212.84047	0.04776		
Corrected Total	4463	264.22881			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.56024	0.00647	2780.02103	58202.2	<.0001
mar	-0.11269	0.01588	2.40456	50.34	<.0001
apr	-0.18205	0.01240	10.30021	215.64	<.0001
may	-0.24787	0.01264	18.36819	384.55	<.0001
jun	-0.28569	0.01127	30.66832	642.07	<.0001
jul	-0.23202	0.01105	21.05796	440.87	<.0001
aug	-0.05137	0.01159	0.93905	19.66	<.0001
nov	-0.06752	0.01107	1.77562	37.17	<.0001

Bounds on condition number: 1.3183, 61.844

Stepwise Selection: Step 8

Logarithms of single lockage times using key variables from stepwise proc 341
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 8

Variable oct Entered: R-Square = 0.1964 and C(p) = 33.0933

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	51.89253	6.48657	136.09	<.0001
Error	4455	212.33629	0.04766		
Corrected Total	4463	264.22881			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.57690	0.00825	1743.12524	36572.3	<.0001
mar	-0.12935	0.01667	2.86911	60.20	<.0001
apr	-0.19871	0.01340	10.47840	219.85	<.0001
may	-0.26453	0.01363	17.96283	376.88	<.0001
jun	-0.30236	0.01237	28.45982	597.11	<.0001
jul	-0.24868	0.01217	19.90283	417.58	<.0001
aug	-0.06803	0.01266	1.37722	28.90	<.0001
oct	-0.04316	0.01327	0.50418	10.58	0.0012
nov	-0.08419	0.01219	2.27271	47.68	<.0001

Bounds on condition number: 1.6024, 95.403

Stepwise Selection: Step 9

Variable feb Entered: R-Square = 0.1979 and C(p) = 26.7659

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	52.28730	5.80970	122.09	<.0001
Error	4454	211.94152	0.04758		
Corrected Total	4463	264.22881			

Logarithms of single lockage times using key variables from stepwise proc 342
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 9

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.57328	0.00833	1695.51296	35631.6	<.0001
feb	0.15890	0.05517	0.39477	8.30	0.0040
mar	-0.12573	0.01671	2.69507	56.64	<.0001
apr	-0.19509	0.01345	10.01088	210.38	<.0001
may	-0.26091	0.01367	17.32546	364.10	<.0001
jun	-0.29873	0.01243	27.49594	577.83	<.0001
jul	-0.24505	0.01222	19.12147	401.84	<.0001
aug	-0.06441	0.01271	1.22218	25.68	<.0001
oct	-0.03953	0.01332	0.41922	8.81	0.0030
nov	-0.08056	0.01225	2.05911	43.27	<.0001

Bounds on condition number: 1.6195, 117.51

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun		1	0.0608	0.0608	774.797	288.90	<.0001
2	jul		2	0.0432	0.1040	536.253	214.86	<.0001
3	may		3	0.0483	0.1522	269.289	253.86	<.0001
4	apr		4	0.0289	0.1812	110.002	157.58	<.0001
5	mar		5	0.0054	0.1866	81.9310	29.57	<.0001
6	nov		6	0.0044	0.1909	59.5373	24.11	<.0001
7	aug		7	0.0036	0.1945	41.7287	19.66	<.0001
8	oct		8	0.0019	0.1964	33.0933	10.58	0.0012
9	feb		9	0.0015	0.1979	26.7659	8.30	0.0040

Logarithms of single lockage times using key variables from stepwise proc 343
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable feb Entered: R-Square = 0.0156 and C(p) = 76.2537

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	12.64559	12.64559	9.08	0.0027
Error	573	797.95467	1.39259		
Corrected Total	574	810.60026			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.49314	0.04991	6820.94295	4898.02	<.0001
feb	0.90165	0.29921	12.64559	9.08	0.0027

Bounds on condition number: 1, 1

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	feb		1	0.0156	0.0156	76.2537	9.08	0.0027

Logarithms of single lockage times using key variables from stepwise proc 344
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable pcttrannite Entered: R-Square = 0.0496 and C(p) = 79.3780

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.86721	1.86721	29.94	<.0001
Error	574	35.80055	0.06237		
Corrected Total	575	37.66776			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.15282	0.01595	325.64877	5221.22	<.0001
pcttrannite	0.00127	0.00023208	1.86721	29.94	<.0001

Bounds on condition number: 1, 1

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Label	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pcttrannite			1	0.0496	0.0496	79.3780	29.94	<.0001

Logarithms of single lockage times using key variables from stepwise proc 345
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable retsingle Entered: R-Square = 0.1035 and C(p) = 7.0349

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	173773	173773	67.97	<.0001
Error	589	1505900	2556.70688		
Corrected Total	590	1679674			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	11.24385	2.39159	56512	22.10	<.0001
retsingle	39.94388	4.84506	173773	67.97	<.0001

Bounds on condition number: 1, 1

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	retsingle		1	0.1035	0.1035	7.0349	67.97	<.0001

Logarithms of single lockage times using key variables from stepwise proc 346
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable contsingle Entered: R-Square = 0.1543 and C(p) = 55.1039

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	149.24241	149.24241	106.71	<.0001
Error	585	818.16873	1.39858		
Corrected Total	586	967.41114			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.35859	0.06395	1902.52046	1360.32	<.0001
contsingle	-1.02251	0.09898	149.24241	106.71	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable retsingle Entered: R-Square = 0.1896 and C(p) = 30.4637

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	183.40016	91.70008	68.31	<.0001
Error	584	784.01097	1.34248		
Corrected Total	586	967.41114			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.09389	0.08173	881.26114	656.44	<.0001
contsingle	-0.75782	0.11027	63.41026	47.23	<.0001
retsingle	0.64202	0.12728	34.15776	25.44	<.0001

Bounds on condition number: 1.2928, 5.1711

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 347
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable pcttrannite Entered: R-Square = 0.2133 and C(p) = 14.5651

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	206.34947	68.78316	52.69	<.0001
Error	583	761.06167	1.30542		
Corrected Total	586	967.41114			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.84203	0.10051	438.43125	335.85	<.0001
contsingle	-0.73928	0.10882	60.24643	46.15	<.0001
retsingle	0.69638	0.12618	39.76211	30.46	<.0001
pcttrannite	0.00535	0.00128	22.94931	17.58	<.0001

Bounds on condition number: 1.3066, 10.837

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	contsingle		1	0.1543	0.1543	55.1039	106.71	<.0001
2	retsingle		2	0.0353	0.1896	30.4637	25.44	<.0001
3	pcttrannite		3	0.0237	0.2133	14.5651	17.58	<.0001

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	6773	0	28606376022	4223590.14	3746981.00	4318260.00
strtlcktime	Start/lockge/time	6773	0	8.9764997E12	1325335848	1262306700	1387287000
arrtime	Arriv/time	6773	0	8.9764277E12	1325325223	1262306700	1387287000
deptime	Leave/lockge/time	6773	0	8.9765332E12	1325340790	1262307720	1387288080
BOW_OVER_SILL	BOW_OVER_SILL	6773	0	8.9765176E12	1325338497	1262307000	1387287300
END_OF_ENTRY	END_OF_ENTRY	6773	0	8.9765211E12	1325339001	1262307060	1387287360
START_OF_EXIT	START_OF_EXIT	6773	0	8.9765246E12	1325339525	1262307660	1387287960
SIGNAL_DATE	SIGNAL_DATE	0	6773	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	6773	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	5615	1158	26989.00	4.8065895	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	5615	1158	43907.00	7.8195904	0	27.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	6773	.	.	.	.
vess_no		6773	0	4690295925	692499.03	2611.00	8888846.00
vss_hp		6749	24	28465361.00	4217.72	75.0000000	8800.00
frsttime		6773	0	8.9764277E12	1325325223	1262306700	1387287000
lasttime		6773	0	8.9765332E12	1325340790	1262307720	1387288080
newpoolno		6773	0	163971.00	24.2095083	9.0000000	28.0000000
oldpoolno		6773	0	169782.00	25.0674738	8.0000000	28.0000000
waitmin	Wait/before/lockge	6773	0	1199387.00	177.0835671	0	7242.00
lockmin	Wait/lockge/time	6773	0	557816.00	82.3587775	5.0000000	700.0000000
year		6773	0	13555823.00	2001.45	2000.00	2003.00
fly		6773	0	1691.00	0.2496678	0	1.0000000
turnback		6773	0	2518.00	0.3717703	0	1.0000000
exchange		6773	0	2564.00	0.3785619	0	1.0000000
lock		6773	0	163490.00	24.1384911	8.0000000	27.0000000
totmin		6773	0	1757203.00	259.4423446	6.0000000	7305.00
month		6773	0	47925.00	7.0758896	1.0000000	12.0000000
day		6773	0	106828.00	15.7726266	1.0000000	31.0000000
sunrise		6772	1	154399825	22799.74	20114.00	27112.00
sunset		6772	1	467446801	69026.40	59853.00	74161.00
sequpstr		6773	0	5218.00	0.7704119	0	1.0000000
seqdstr		6773	0	0	0	0	0
plock		6773	0	169325.00	25.0000000	25.0000000	25.0000000
pempty		5625	1148	44829.00	7.9696000	0	27.0000000
pfull		5625	1148	26218.00	4.6609778	0	28.0000000
parrtime		6773	0	8.975985E12	1325259851	1262304600	1387285200
pstrtlcktime		6773	0	8.9760656E12	1325271763	1262304600	1387285200
pdeptime		6773	0	8.9760991E12	1325276700	1262305620	1387286520
birth		6773	0	0	0	0	0
transithrs		6773	0	91291.47	13.4787342	-203.5166667	4959.87
reclock		6773	0	0	0	0	0
i		6773	0	2103863.00	310.6249815	58.0000000	401.0000000
pctpsysdn		6773	0	13700.42	2.0227995	0	98.9510000
pctplckdn		6773	0	5089.42	0.7514270	0	86.9570000
cumdown		6770	3	424020.00	62.6322009	0	33720.00
pctdown		6770	3	3032.11	0.4478747	0	80.2860000
pcttrandn		6746	27	13307.63	1.9726691	0	100.0000000
pctsysdn		6770	3	8792.06	1.2986792	0	94.9670000
pctlckdn		6770	3	3032.11	0.4478747	0	80.2860000
stime		6773	0	296046240	43709.77	0	86340.00
etime		6773	0	294177600	43433.87	60.0000002	86340.00
sdate		6773	0	103891246	15339.03	14610.00	16056.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		6773	0	103891655	15339.09	14610.00	16056.00
hrsduration		6773	0	9296.93	1.3726463	0.0833333	11.6666667
ndays		6773	0	0	0	0	0
pctday		6773	0	381748.23	56.3632411	0	100.0000000
pctpsysnite		6773	0	297854.71	43.9767772	0	100.0000000
pctplcknite		6773	0	298459.97	44.0661410	0	100.0000000
pcttrannite		6772	1	305174.92	45.0642237	0	100.0000000
pctsysnite		6773	0	293572.61	43.3445455	0	100.0000000
pctlcknite		6773	0	295551.77	43.6367589	0	100.0000000
stage		6761	12	178477.04	26.3980240	9.9200000	33.2700000
flow		39	6734	3319834.69	85123.97	27348.58	253106.08
jan		6773	0	28.0000000	0.0041341	0	1.0000000
feb		6773	0	83.0000000	0.0122545	0	1.0000000
mar		6773	0	680.0000000	0.1003986	0	1.0000000
apr		6773	0	689.0000000	0.1017274	0	1.0000000
may		6773	0	696.0000000	0.1027610	0	1.0000000
jun		6773	0	822.0000000	0.1213642	0	1.0000000
jul		6773	0	831.0000000	0.1226930	0	1.0000000
aug		6773	0	711.0000000	0.1049756	0	1.0000000
sep		6773	0	575.0000000	0.0848959	0	1.0000000
oct		6773	0	678.0000000	0.1001034	0	1.0000000
nov		6773	0	697.0000000	0.1029086	0	1.0000000
dec		6773	0	283.0000000	0.0417836	0	1.0000000
m31day		6773	0	3907.00	0.5768493	0	1.0000000
m30day		6773	0	2783.00	0.4108962	0	1.0000000
qtr1		6773	0	791.0000000	0.1167872	0	1.0000000
qtr2		6773	0	2207.00	0.3258527	0	1.0000000
qtr3		6773	0	2117.00	0.3125646	0	1.0000000
qtr4		6773	0	1658.00	0.2447955	0	1.0000000
psingle		6773	0	2030.00	0.2997195	0	1.0000000
pdouble		6773	0	4473.00	0.6604164	0	1.0000000
pknockout		6773	0	131.0000000	0.0193415	0	1.0000000
pjacknife		6773	0	139.0000000	0.0205227	0	1.0000000
pothtype		6773	0	0	0	0	0
pexchange		6773	0	2599.00	0.3837295	0	1.0000000
pturnback		6773	0	2519.00	0.3719179	0	1.0000000
single		6773	0	2041.00	0.3013436	0	1.0000000
double		6773	0	4470.00	0.6599734	0	1.0000000
knockout		6773	0	124.0000000	0.0183080	0	1.0000000
jacknife		6773	0	136.0000000	0.0200797	0	1.0000000
othtype		6773	0	2.0000000	0.000295290	0	1.0000000
contthru		6773	0	5218.00	0.7704119	0	1.0000000
return		6773	0	454.0000000	0.0670309	0	1.0000000
contstop		6773	0	429.0000000	0.0633397	0	1.0000000
kill		6773	0	672.0000000	0.0992175	0	1.0000000
contsame		6773	0	5218.00	0.7704119	0	1.0000000
contdouble		6773	0	63.0000000	0.0093016	0	1.0000000
contsingle		6773	0	364.0000000	0.0537428	0	1.0000000
contko		6773	0	1.0000000	0.000147645	0	1.0000000
contjk		6773	0	1.0000000	0.000147645	0	1.0000000
retdouble		6773	0	114.0000000	0.0168315	0	1.0000000
retsingle		6773	0	338.0000000	0.0499040	0	1.0000000

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		6773	0	2.0000000	0.000295290	0	1.0000000
retjk		6773	0	0	0	0	0
xkill		6773	0	672.0000000	0.0992175	0	1.0000000
logtrnhrs		6748	25	13544.88	2.0072443	-4.0943446	8.5091341
plockhrs		6773	0	9136.62	1.3489773	0.0983607	11.8360656
loglckhrs		6773	0	236.5201703	0.0349210	-2.3191144	2.4711513
thrusingle		6773	0	693.0000000	0.1023180	0	1.0000000
thruother		6773	0	263.0000000	0.0388307	0	1.0000000
contother		6773	0	2.0000000	0.000295290	0	1.0000000
retother		6773	0	2.0000000	0.000295290	0	1.0000000
thrudoubnite		6772	1	1882.54	0.2779891	0	1.0000000
thrusingnite		6772	1	346.0596400	0.0511015	0	1.0000000
thruothnite		6772	1	118.5717200	0.0175091	0	1.0000000
pdoubnite		6773	0	1997.01	0.2948491	0	1.0000000
psingnite		6773	0	856.8996300	0.1265170	0	1.0000000
pothnite		6773	0	130.6868500	0.0192953	0	1.0000000

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 20:21 Tuesday, June 28, 2005 351

The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI25U

pconfig / doutcome Frequency Percent Row Pct Col Pct	1:contsame	2:contdouble	3:contsingle	4:contko	5:contjk	6:retdouble	7:retsingle	8:retko	x:kill	Total
1:double	4262 62.93 95.28 81.68	61 0.90 1.36 96.83	3 0.04 0.07 0.82	0 0.00 0.00 0.00	0 0.00 0.00 0.00	103 1.52 2.30 90.35	11 0.16 0.25 3.25	0 0.00 0.00 0.00	33 0.49 0.74 4.91	4473 66.04
2:single	693 10.23 34.14 13.28	2 0.03 0.10 3.17	361 5.33 17.78 99.18	0 0.00 0.00 0.00	0 0.00 0.00 0.00	7 0.10 0.34 6.14	327 4.83 16.11 96.75	2 0.03 0.10 100.00	638 9.42 31.43 94.94	2030 29.97
3:knockout	125 1.85 95.42 2.40	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.01 0.76 100.00	0 0.00 0.00 0.00	4 0.06 3.05 3.51	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.01 0.76 0.15	131 1.93
4:jacknife	138 2.04 99.28 2.64	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.01 0.72 100.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	139 2.05
Total	5218 77.04	63 0.93	364 5.37	1 0.01	1 0.01	114 1.68	338 4.99	2 0.03	672 9.92	6773 100.00

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The FREQ Procedure

Table 1 of pconfig by nextstep
Controlling for pnewpool=MI25U

pconfig nextstep

Frequency Percent Row Pct Col Pct	1:contth	2:contst	3:return	4:kill	Total
1:double	4262 62.93 95.28 81.68	64 0.94 1.43 14.92	114 1.68 2.55 25.11	33 0.49 0.74 4.91	4473 66.04
2:single	693 10.23 34.14 13.28	363 5.36 17.88 84.62	336 4.96 16.55 74.01	638 9.42 31.43 94.94	2030 29.97
3:knockout	125 1.85 95.42 2.40	1 0.01 0.76 0.23	4 0.06 3.05 0.88	1 0.01 0.76 0.15	131 1.93
4:jacknife	138 2.04 99.28 2.64	1 0.01 0.72 0.23	0 0.00 0.00 0.00	0 0.00 0.00 0.00	139 2.05
Total	5218 77.04	429 6.33	454 6.70	672 9.92	6773 100.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	86463	0	367606433951	4251603.97	3515664.00	4331559.00
strtlcktime	Start/lockge/time	86463	0	1.1473819E14	1327020689	1262306700	1388533680
arrtime	Arriv/time	86463	0	1.1473791E14	1327017437	1262306700	1388530800
deptime	Leave/lockge/time	86463	0	1.1473841E14	1327023235	1262307720	1388536080
BOW_OVER_SILL	BOW_OVER_SILL	86463	0	1.1473826E14	1327021511	1262307000	1388534700
END_OF_ENTRY	END_OF_ENTRY	86463	0	1.147383E14	1327021985	1262307060	1388535000
START_OF_EXIT	START_OF_EXIT	86463	0	1.1473836E14	1327022709	1262307660	1388535600
SIGNAL_DATE	SIGNAL_DATE	0	86463	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	86463	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	74627	11836	464208.00	6.2203760	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	74627	11836	245037.00	3.2834899	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	86463	.	.	.	.
vess_no		86463	0	69384030961	802470.78	2611.00	8888864.00
vss_hp		85752	711	332021275	3871.88	60.0000000	81800.00
frsttime		86463	0	1.1473791E14	1327017437	1262306700	1388530800
lasttime		86463	0	1.1473841E14	1327023235	1262307720	1388536080
newpoolno		86463	0	2169779.00	25.0948845	1.0000000	28.0000000
oldpoolno		86463	0	2173286.00	25.1354452	1.0000000	28.0000000
waitmin	Wait/before/lockge	86463	0	4686712.00	54.2048275	0	7423.00
lockmin	Wait/lockge/time	86463	0	3669093.00	42.4354117	4.0000000	1823.00
year		86463	0	173055623	2001.50	2000.00	2003.00
fly		86463	0	36768.00	0.4252455	0	1.0000000
turnback		86463	0	26968.00	0.3119022	0	1.0000000
exchange		86463	0	22726.00	0.2628408	0	1.0000000
lock		86463	0	2128301.00	24.6151649	1.0000000	27.0000000
totmin		86463	0	8355805.00	96.6402392	4.0000000	7490.00
month		86463	0	616660.00	7.1320681	1.0000000	12.0000000
day		86463	0	1356035.00	15.6834137	1.0000000	31.0000000
sunrise		85762	701	1986178547	23159.19	19414.00	27155.00
sunset		85762	701	5825605613	67927.59	59694.00	75152.00
sequpstr		86463	0	14727.00	0.1703272	0	1.0000000
seqdstr		86463	0	20442.00	0.2364248	0	1.0000000
plock		86463	0	2037006.00	23.5592797	1.0000000	27.0000000
pempty		74989	11474	193261.00	2.5771913	0	50.0000000
pfull		74989	11474	516635.00	6.8894771	0	28.0000000
parrtime		86463	0	1.1471341E14	1326734038	1262304600	1388521920
pstrtlcktime		86463	0	1.1471386E14	1326739310	1262304600	1388521920
pdeptime		86463	0	1.1471414E14	1326742489	1262305620	1388523540
birth		86463	0	0	0	0	0
transithrs		86463	0	6603557.97	76.3743794	-249.0333333	8099.42
reclock		86463	0	0	0	0	0
i		86463	0	20159974.00	233.1630177	58.0000000	401.0000000
pctpsysdn		80747	5716	81159.78	1.0051120	0	98.9510000
pctplckdn		80747	5716	38307.91	0.4744190	0	98.3000000
cumdown		85702	761	3310500.00	38.6280367	0	107520.00
pctdown		85702	761	32034.68	0.3737915	0	98.3000000
pcttrandn		85448	1015	115189.13	1.3480612	0	100.0000000
pctsysdn		85702	761	74429.16	0.8684647	0	98.6320000
pctlckdn		85702	761	32034.68	0.3737915	0	98.3000000
stime		86463	0	3823249620	44218.33	0	86340.00
etime		86463	0	3834220800	44345.22	0	86340.00
sdate		86463	0	1327944058	15358.52	14610.00	16070.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		86463	0	1327946479	15358.55	14610.00	16071.00
hrsduration		86463	0	61151.55	0.7072569	0.0666667	30.3833333
ndays		86463	0	1.0000000	0.000011566	0	1.0000000
pctday		86445	18	4737310.78	54.8014435	0	100.0000000
pctpsysnite		86413	50	3888228.23	44.9958713	0	100.0000000
pctplcknite		86442	21	3897501.74	45.0880560	0	100.0000000
pcttrannite		85897	566	4054837.35	47.2058087	0	100.0000000
pctsysnite		86381	82	3887960.88	45.0094451	0	100.0000000
pctlcknite		86445	18	3907189.22	45.1985565	0	100.0000000
stage		41817	44646	913851.62	21.8535911	8.3500000	33.0800000
flow		7734	78729	638793570	82595.50	16077.99	306262.78
jan		86463	0	3075.00	0.0355643	0	1.0000000
feb		86463	0	3442.00	0.0398089	0	1.0000000
mar		86463	0	6990.00	0.0808438	0	1.0000000
apr		86463	0	7633.00	0.0882805	0	1.0000000
may		86463	0	7312.00	0.0845680	0	1.0000000
jun		86463	0	8606.00	0.0995339	0	1.0000000
jul		86463	0	8720.00	0.1008524	0	1.0000000
aug		86463	0	8111.00	0.0938089	0	1.0000000
sep		86463	0	7711.00	0.0891827	0	1.0000000
oct		86463	0	8624.00	0.0997421	0	1.0000000
nov		86463	0	9432.00	0.1090871	0	1.0000000
dec		86463	0	6807.00	0.0787273	0	1.0000000
m31day		86463	0	49639.00	0.5741068	0	1.0000000
m30day		86463	0	33382.00	0.3860842	0	1.0000000
qtr1		86463	0	13507.00	0.1562171	0	1.0000000
qtr2		86463	0	23551.00	0.2723824	0	1.0000000
qtr3		86463	0	24542.00	0.2838440	0	1.0000000
qtr4		86463	0	24863.00	0.2875565	0	1.0000000
psingle		86463	0	66654.00	0.7708962	0	1.0000000
pdouble		86463	0	15912.00	0.1840325	0	1.0000000
pknockout		86463	0	1445.00	0.0167124	0	1.0000000
pjacknife		86463	0	529.0000000	0.0061182	0	1.0000000
pothtype		86463	0	1923.00	0.0222407	0	1.0000000
pexchange		86463	0	23758.00	0.2747765	0	1.0000000
pturnback		86463	0	27939.00	0.3231324	0	1.0000000
single		86463	0	86442.00	0.9997571	0	1.0000000
double		86463	0	16.0000000	0.000185050	0	1.0000000
knockout		86463	0	4.0000000	0.000046263	0	1.0000000
jacknife		86463	0	0	0	0	0
othtype		86463	0	1.0000000	0.000011566	0	1.0000000
contthru		2030	84433	693.0000000	0.3413793	0	1.0000000
return		2030	84433	336.0000000	0.1655172	0	1.0000000
contstop		2030	84433	363.0000000	0.1788177	0	1.0000000
kill		2030	84433	638.0000000	0.3142857	0	1.0000000
contsame		2030	84433	693.0000000	0.3413793	0	1.0000000
contdouble		2030	84433	2.0000000	0.000985222	0	1.0000000
contsingle		2030	84433	361.0000000	0.1778325	0	1.0000000
contko		2030	84433	0	0	0	0
contjk		2030	84433	0	0	0	0
retdouble		2030	84433	7.0000000	0.0034483	0	1.0000000
retsingle		2030	84433	327.0000000	0.1610837	0	1.0000000

SAS Program Output from “fitmod.sas” for Tows Only (cont.)

Statistics from water.regfile for regfile 20:21 Tuesday, June 28, 2005 355

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		2030	84433	2.0000000	0.000985222	0	1.0000000
retjk		2030	84433	0	0	0	0
xkill		2030	84433	638.0000000	0.3142857	0	1.0000000
logtrnhrs		2020	84443	4435.05	2.1955692	-4.0943446	8.5091341
plockhrs		2030	84433	751.5901639	0.3702415	0.0983607	5.0327869
loglckhrs		2030	84433	-2269.27	-1.1178655	-2.3191144	1.6159739
thrusingle		2030	84433	693.0000000	0.3413793	0	1.0000000
thruother		2030	84433	0	0	0	0
contother		2030	84433	0	0	0	0
retother		2030	84433	2.0000000	0.000985222	0	1.0000000
thrudoubnite		2030	84433	0	0	0	0
thrusingnite		2030	84433	346.0596400	0.1704727	0	1.0000000
thruothnite		2030	84433	0	0	0	0
pdoubnite		2030	84433	0	0	0	0
psingnite		2030	84433	856.8996300	0.4221180	0	1.0000000
pothnite		2030	84433	0	0	0	0

Transition models using key variables from stepwise proc transitions to contthru 20:21 Tuesday, June 28, 2005 356

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 1

Variable psingle Entered: R-Square = 0.4454 and C(p) = 9.6203

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	533.58623	533.58623	5437.82	<.0001
Error	6771	664.40432	0.09812		
Corrected Total	6772	1197.99055			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.95404	0.00455	4317.01982	43995.1	<.0001
psingle	-0.61266	0.00831	533.58623	5437.82	<.0001

Bounds on condition number: 1, 1

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	psingle		1	0.4454	0.4454	9.6203	5437.82	<.0001

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 357

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.1755 and C(p) = 377.6632

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	110.34176	110.34176	938.44	<.0001
Error	4408	518.29320	0.11758		
Corrected Total	4409	628.63496			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.88839	0.00677	9146.83670	77792.4	<.0001
pturnback	-0.32066	0.01047	110.34176	938.44	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable sep Entered: R-Square = 0.1936 and C(p) = 275.0852

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	121.67242	60.83621	528.85	<.0001
Error	4407	506.96254	0.11504		
Corrected Total	4409	628.63496			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.87137	0.00691	8429.80197	73279.8	<.0001
sep	0.18579	0.01872	11.33066	98.50	<.0001
pturnback	-0.31603	0.01036	106.95687	929.77	<.0001

Bounds on condition number: 1.002, 4.0081

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 358

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable oct Entered: R-Square = 0.2118 and C(p) = 171.0441

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	133.16160	44.38720	394.71	<.0001
Error	4406	495.47336	0.11245		
Corrected Total	4409	628.63496			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.85075	0.00713	7570.48457	67320.6	<.0001
sep	0.20487	0.01860	13.63622	121.26	<.0001
oct	0.17046	0.01686	11.48918	102.17	<.0001
pturnback	-0.31155	0.01026	103.75559	922.65	<.0001

Bounds on condition number: 1.0125, 9.0848

Stepwise Selection: Step 4

Variable jun Entered: R-Square = 0.2185 and C(p) = 134.2914

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	137.36032	34.34008	307.91	<.0001
Error	4405	491.27464	0.11153		
Corrected Total	4409	628.63496			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.86535	0.00749	6914.03097	61994.5	<.0001
jun	-0.09340	0.01522	4.19872	37.65	<.0001
sep	0.19010	0.01868	11.54607	103.53	<.0001
oct	0.15569	0.01697	9.39031	84.20	<.0001
pturnback	-0.31107	0.01021	103.43232	927.42	<.0001

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 359

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0344, 16.402

Stepwise Selection: Step 5

Variable pctlcknite Entered: R-Square = 0.2256 and C(p) = 94.9576

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	141.83869	28.36774	256.64	<.0001
Error	4404	486.79627	0.11054		
Corrected Total	4409	628.63496			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.89543	0.00883	5094.06974	46085.6	<.0001
jun	-0.09774	0.01517	4.58834	41.51	<.0001
sep	0.18970	0.01860	11.49738	104.02	<.0001
oct	0.16179	0.01692	10.10861	91.45	<.0001
pctlcknite	-0.00067700	0.00010636	4.47837	40.52	<.0001
pturnback	-0.30965	0.01017	102.43422	926.71	<.0001

Bounds on condition number: 1.0365, 25.565

Stepwise Selection: Step 6

Variable jul Entered: R-Square = 0.2326 and C(p) = 56.5051

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	146.22159	24.37026	222.43	<.0001
Error	4403	482.41338	0.10956		
Corrected Total	4409	628.63496			

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 360

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.91613	0.00938	4572.12477	41729.9	<.0001
jun	-0.11694	0.01541	6.31311	57.62	<.0001
jul	-0.09564	0.01512	4.38289	40.00	<.0001
sep	0.17081	0.01876	9.08514	82.92	<.0001
oct	0.14332	0.01710	7.70128	70.29	<.0001
pctlcknite	-0.00072207	0.00010613	5.07155	46.29	<.0001
pturnback	-0.30907	0.01013	102.04261	931.35	<.0001

Bounds on condition number: 1.0818, 37.795

Stepwise Selection: Step 7

Variable may Entered: R-Square = 0.2359 and C(p) = 39.1283

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	148.32099	21.18871	194.19	<.0001
Error	4402	480.31397	0.10911		
Corrected Total	4409	628.63496			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.93185	0.01002	4053.13444	37146.3	<.0001
may	-0.07229	0.01648	2.09941	19.24	<.0001
jun	-0.13242	0.01577	7.68991	70.48	<.0001
jul	-0.11115	0.01550	5.61187	51.43	<.0001
sep	0.15571	0.01903	7.30292	66.93	<.0001
oct	0.12848	0.01739	5.95421	54.57	<.0001
pctlcknite	-0.00075246	0.00010614	5.48396	50.26	<.0001
pturnback	-0.30694	0.01012	100.41159	920.26	<.0001

Bounds on condition number: 1.1412, 53.384

Stepwise Selection: Step 8

Variable pexchange Entered: R-Square = 0.2384 and C(p) = 26.8478

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 8

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	149.86823	18.73353	172.21	<.0001
Error	4401	478.76673	0.10879		
Corrected Total	4409	628.63496			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.96713	0.01370	2243.20266	20620.3	<.0001
may	-0.07081	0.01646	2.01338	18.51	<.0001
jun	-0.12808	0.01579	7.15534	65.77	<.0001
jul	-0.10628	0.01553	5.09578	46.84	<.0001
sep	0.15481	0.01901	7.21712	66.34	<.0001
oct	0.13080	0.01738	6.16321	56.65	<.0001
pctlcknite	-0.00074837	0.00010599	5.42387	49.86	<.0001
pturnback	-0.34404	0.01410	64.75588	595.26	<.0001
pexchange	-0.05347	0.01418	1.54724	14.22	0.0002

Bounds on condition number: 1.9615, 84.45

Stepwise Selection: Step 9

Variable dec Entered: R-Square = 0.2399 and C(p) = 20.1843

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	150.80690	16.75632	154.30	<.0001
Error	4400	477.82806	0.10860		
Corrected Total	4409	628.63496			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.97064	0.01374	2234.19162	20573.2	<.0001
may	-0.07514	0.01651	2.24890	20.71	<.0001
jun	-0.13245	0.01585	7.58472	69.84	<.0001
jul	-0.11064	0.01559	5.47235	50.39	<.0001
sep	0.15037	0.01905	6.76694	62.31	<.0001
oct	0.12619	0.01743	5.69029	52.40	<.0001
dec	-0.11355	0.03862	0.93867	8.64	0.0033

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 9

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
pctlcknite	-0.00073349	0.00010601	5.19851	47.87	<.0001
pturnback	-0.34401	0.01409	64.74589	596.20	<.0001
pexchange	-0.05286	0.01417	1.51184	13.92	0.0002

Bounds on condition number: 1.9615, 104.67

Stepwise Selection: Step 10

Variable feb Entered: R-Square = 0.2413 and C(p) = 13.8575

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	10	151.70908	15.17091	139.93	<.0001
Error	4399	476.92588	0.10842		
Corrected Total	4409	628.63496			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.97675	0.01389	2195.82699	20253.6	<.0001
feb	-0.14908	0.05168	0.90218	8.32	0.0039
may	-0.07834	0.01653	2.43342	22.45	<.0001
jun	-0.13543	0.01587	7.89669	72.84	<.0001
jul	-0.11358	0.01561	5.74228	52.96	<.0001
sep	0.14691	0.01907	6.43340	59.34	<.0001
oct	0.12294	0.01745	5.37913	49.62	<.0001
dec	-0.11686	0.03861	0.99342	9.16	0.0025
pctlcknite	-0.00072860	0.00010594	5.12810	47.30	<.0001
pturnback	-0.34731	0.01412	65.56053	604.71	<.0001
pexchange	-0.05711	0.01423	1.74563	16.10	<.0001

Bounds on condition number: 1.9807, 127.15

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.1755	0.1755	377.663	938.44	<.0001
2	sep		2	0.0180	0.1936	275.085	98.50	<.0001
3	oct		3	0.0183	0.2118	171.044	102.17	<.0001
4	jun		4	0.0067	0.2185	134.291	37.65	<.0001
5	pctlcknite		5	0.0071	0.2256	94.9576	40.52	<.0001
6	jul		6	0.0070	0.2326	56.5051	40.00	<.0001
7	may		7	0.0033	0.2359	39.1283	19.24	<.0001
8	pexchange		8	0.0025	0.2384	26.8478	14.22	0.0002
9	dec		9	0.0015	0.2399	20.1843	8.64	0.0033
10	feb		10	0.0014	0.2413	13.8575	8.32	0.0039

Logarithms of double lockage times using key variables from stepwise proc 364
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.1771 and C(p) = 385.2809

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	37.95371	37.95371	948.21	<.0001
Error	4406	176.35767	0.04003		
Corrected Total	4407	214.31138			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.61682	0.00395	975.12183	24361.8	<.0001
pturnback	-0.18809	0.00611	37.95371	948.21	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable sep Entered: R-Square = 0.1942 and C(p) = 287.7609

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	41.61838	20.80919	530.79	<.0001
Error	4405	172.69300	0.03920		
Corrected Total	4407	214.31138			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.60713	0.00404	886.53742	22613.5	<.0001
sep	0.10566	0.01093	3.66466	93.48	<.0001
pturnback	-0.18545	0.00605	36.81889	939.16	<.0001

Bounds on condition number: 1.002, 4.0082

Stepwise Selection: Step 3

Logarithms of double lockage times using key variables from stepwise proc 365
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable oct Entered: R-Square = 0.2123 and C(p) = 184.5007

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	45.49442	15.16481	395.61	<.0001
Error	4404	168.81696	0.03833		
Corrected Total	4407	214.31138			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.59514	0.00417	782.11945	20403.5	<.0001
sep	0.11675	0.01086	4.42834	115.52	<.0001
oct	0.09901	0.00985	3.87604	101.12	<.0001
pturnback	-0.18284	0.00599	35.72312	931.92	<.0001

Bounds on condition number: 1.0125, 9.085

Stepwise Selection: Step 4

Variable jun Entered: R-Square = 0.2201 and C(p) = 140.9437

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	47.17198	11.79300	310.67	<.0001
Error	4403	167.13940	0.03796		
Corrected Total	4407	214.31138			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.60438	0.00437	725.09035	19101.3	<.0001
jun	-0.05904	0.00888	1.67756	44.19	<.0001
sep	0.10741	0.01090	3.68573	97.09	<.0001
oct	0.08967	0.00990	3.11462	82.05	<.0001
pturnback	-0.18255	0.00596	35.60642	937.99	<.0001

Logarithms of double lockage times using key variables from stepwise proc 366
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0344, 16.403

Stepwise Selection: Step 5

Variable pctlcknite Entered: R-Square = 0.2265 and C(p) = 105.7446

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	48.54178	9.70836	257.80	<.0001
Error	4402	165.76960	0.03766		
Corrected Total	4407	214.31138			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.62101	0.00515	546.58156	14514.4	<.0001
jun	-0.06143	0.00886	1.81256	48.13	<.0001
sep	0.10720	0.01086	3.67107	97.48	<.0001
oct	0.09305	0.00988	3.34337	88.78	<.0001
pctlcknite	-0.00037448	0.00006209	1.36980	36.37	<.0001
pturnback	-0.18175	0.00594	35.27768	936.80	<.0001

Bounds on condition number: 1.0365, 25.566

Stepwise Selection: Step 6

Variable jul Entered: R-Square = 0.2337 and C(p) = 66.0640

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	50.07660	8.34610	223.65	<.0001
Error	4401	164.23478	0.03732		
Corrected Total	4407	214.31138			

Logarithms of double lockage times using key variables from stepwise proc 367
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.63326	0.00548	499.11459	13374.8	<.0001
jun	-0.07280	0.00899	2.44658	65.56	<.0001
jul	-0.05660	0.00883	1.53482	41.13	<.0001
sep	0.09601	0.01095	2.87004	76.91	<.0001
oct	0.08211	0.00998	2.52758	67.73	<.0001
pctlcknite	-0.00040109	0.00006195	1.56437	41.92	<.0001
pturnback	-0.18141	0.00591	35.14512	941.78	<.0001

Bounds on condition number: 1.0818, 37.797

Stepwise Selection: Step 7

Variable may Entered: R-Square = 0.2375 and C(p) = 45.6409

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	50.90230	7.27176	195.80	<.0001
Error	4400	163.40908	0.03714		
Corrected Total	4407	214.31138			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.64313	0.00585	448.89036	12087.0	<.0001
may	-0.04534	0.00962	0.82570	22.23	<.0001
jun	-0.08252	0.00920	2.98559	80.39	<.0001
jul	-0.06634	0.00904	1.99838	53.81	<.0001
sep	0.08653	0.01110	2.25499	60.72	<.0001
oct	0.07280	0.01015	1.91113	51.46	<.0001
pctlcknite	-0.00042011	0.00006193	1.70894	46.02	<.0001
pturnback	-0.18009	0.00590	34.55402	930.41	<.0001

Bounds on condition number: 1.1413, 53.389

Stepwise Selection: Step 8

Logarithms of double lockage times using key variables from stepwise proc 368
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 8

Variable pexchange Entered: R-Square = 0.2397 and C(p) = 35.0382

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	51.36637	6.42080	173.34	<.0001
Error	4399	162.94501	0.03704		
Corrected Total	4407	214.31138			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.66245	0.00799	254.38090	6867.48	<.0001
may	-0.04452	0.00961	0.79571	21.48	<.0001
jun	-0.08013	0.00922	2.80010	75.59	<.0001
jul	-0.06366	0.00906	1.82764	49.34	<.0001
sep	0.08605	0.01109	2.22943	60.19	<.0001
oct	0.07408	0.01014	1.97642	53.36	<.0001
pctlcknite	-0.00041792	0.00006185	1.69099	45.65	<.0001
pturnback	-0.20040	0.00823	21.97174	593.17	<.0001
pexchange	-0.02929	0.00828	0.46407	12.53	0.0004

Bounds on condition number: 1.9608, 84.448

Stepwise Selection: Step 9

Variable feb Entered: R-Square = 0.2420 and C(p) = 23.7185

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	51.85685	5.76187	155.99	<.0001
Error	4398	162.45453	0.03694		
Corrected Total	4407	214.31138			

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 9

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.66687	0.00807	251.95775	6821.05	<.0001
feb	-0.10988	0.03015	0.49048	13.28	0.0003
may	-0.04679	0.00961	0.87508	23.69	<.0001
jun	-0.08224	0.00922	2.93771	79.53	<.0001
jul	-0.06573	0.00907	1.94095	52.55	<.0001
sep	0.08359	0.01110	2.09614	56.75	<.0001
oct	0.07178	0.01015	1.84882	50.05	<.0001
pctlcknite	-0.00041462	0.00006177	1.66409	45.05	<.0001
pturnback	-0.20283	0.00824	22.36046	605.35	<.0001
pexchange	-0.03243	0.00831	0.56282	15.24	<.0001

Bounds on condition number: 1.9799, 104.73

Stepwise Selection: Step 10

Variable dec Entered: R-Square = 0.2438 and C(p) = 15.3119

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	10	52.24006	5.22401	141.73	<.0001
Error	4397	162.07132	0.03686		
Corrected Total	4407	214.31138			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.66924	0.00810	251.66848	6827.77	<.0001
feb	-0.11277	0.03013	0.51621	14.00	0.0002
may	-0.04961	0.00964	0.97593	26.48	<.0001
jun	-0.08509	0.00925	3.11633	84.55	<.0001
jul	-0.06858	0.00910	2.09272	56.78	<.0001
sep	0.08069	0.01112	1.94029	52.64	<.0001
oct	0.06877	0.01018	1.68277	45.65	<.0001
dec	-0.07259	0.02251	0.38321	10.40	0.0013
pctlcknite	-0.00040501	0.00006178	1.58411	42.98	<.0001
pturnback	-0.20288	0.00824	22.37073	606.92	<.0001
pexchange	-0.03212	0.00830	0.55200	14.98	0.0001

Logarithms of double lockage times using key variables from stepwise proc 370
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 10

Bounds on condition number: 1.9801, 127.15

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.1771	0.1771	385.281	948.21	<.0001
2	sep		2	0.0171	0.1942	287.761	93.48	<.0001
3	oct		3	0.0181	0.2123	184.501	101.12	<.0001
4	jun		4	0.0078	0.2201	140.944	44.19	<.0001
5	pctlcknite		5	0.0064	0.2265	105.745	36.37	<.0001
6	jul		6	0.0072	0.2337	66.0640	41.13	<.0001
7	may		7	0.0039	0.2375	45.6409	22.23	<.0001
8	pexchange		8	0.0022	0.2397	35.0382	12.53	0.0004
9	feb		9	0.0023	0.2420	23.7185	13.28	0.0003
10	dec		10	0.0018	0.2438	15.3119	10.40	0.0013

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pctlckdn Entered: R-Square = 0.0184 and C(p) = 104.4208

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.46092	1.46092	35.65	<.0001
Error	1905	78.06614	0.04098		
Corrected Total	1906	79.52706			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.37737	0.00465	270.21241	6593.83	<.0001
pctlckdn	0.00589	0.00098694	1.46092	35.65	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pturnback Entered: R-Square = 0.0294 and C(p) = 83.8391

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	2.33909	1.16954	28.85	<.0001
Error	1904	77.18797	0.04054		
Corrected Total	1906	79.52706			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.38984	0.00534	215.79051	5322.92	<.0001
pturnback	-0.04935	0.01060	0.87817	21.66	<.0001
pctlckdn	0.00596	0.00098174	1.49375	36.85	<.0001

Bounds on condition number: 1.0002, 4.0008

Stepwise Selection: Step 3

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable feb Entered: R-Square = 0.0394 and C(p) = 65.3435

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	3.13614	1.04538	26.04	<.0001
Error	1903	76.39092	0.04014		
Corrected Total	1906	79.52706			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.38659	0.00537	208.27846	5188.50	<.0001
feb	0.15269	0.03427	0.79705	19.86	<.0001
pturnback	-0.04725	0.01056	0.80350	20.02	<.0001
pctlckdn	0.00572	0.00097844	1.37003	34.13	<.0001

Bounds on condition number: 1.005, 9.0317

Stepwise Selection: Step 4

Variable pexchange Entered: R-Square = 0.0460 and C(p) = 54.0142

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	3.65450	0.91363	22.90	<.0001
Error	1902	75.87255	0.03989		
Corrected Total	1906	79.52706			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.40481	0.00736	120.70496	3025.87	<.0001
feb	0.13862	0.03438	0.64841	16.25	<.0001
pturnback	-0.06538	0.01167	1.25248	31.40	<.0001
pexchange	-0.03850	0.01068	0.51836	12.99	0.0003
pctlckdn	0.00578	0.00097551	1.39822	35.05	<.0001

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.2367, 17.957

Stepwise Selection: Step 5

Variable apr Entered: R-Square = 0.0514 and C(p) = 44.9667

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	4.08412	0.81682	20.58	<.0001
Error	1901	75.44293	0.03969		
Corrected Total	1906	79.52706			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.41001	0.00751	118.32933	2981.65	<.0001
feb	0.13351	0.03433	0.60029	15.13	0.0001
apr	-0.05620	0.01708	0.42962	10.83	0.0010
pturnback	-0.06625	0.01164	1.28565	32.40	<.0001
pexchange	-0.04006	0.01066	0.56013	14.11	0.0002
pctlckdn	0.00582	0.00097307	1.41729	35.71	<.0001

Bounds on condition number: 1.2392, 27.492

Stepwise Selection: Step 6

Variable jun Entered: R-Square = 0.0573 and C(p) = 34.7143

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	4.56060	0.76010	19.26	<.0001
Error	1900	74.96645	0.03946		
Corrected Total	1906	79.52706			

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.41559	0.00766	116.22343	2945.64	<.0001
feb	0.12784	0.03427	0.54908	13.92	0.0002
apr	-0.06190	0.01711	0.51631	13.09	0.0003
jun	-0.05438	0.01565	0.47648	12.08	0.0005
pturnback	-0.06550	0.01161	1.25622	31.84	<.0001
pexchange	-0.04034	0.01063	0.56789	14.39	0.0002
pctlckdn	0.00583	0.00097025	1.42275	36.06	<.0001

Bounds on condition number: 1.2393, 39.134

Stepwise Selection: Step 7

Variable jul Entered: R-Square = 0.0624 and C(p) = 26.4551

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	4.95957	0.70851	18.04	<.0001
Error	1899	74.56749	0.03927		
Corrected Total	1906	79.52706			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.42083	0.00781	113.90844	2900.89	<.0001
feb	0.12223	0.03423	0.50069	12.75	0.0004
apr	-0.06768	0.01717	0.61032	15.54	<.0001
jun	-0.06023	0.01572	0.57650	14.68	0.0001
jul	-0.05068	0.01590	0.39897	10.16	0.0015
pturnback	-0.06356	0.01160	1.17955	30.04	<.0001
pexchange	-0.04024	0.01061	0.56511	14.39	0.0002
pctlckdn	0.00589	0.00096813	1.45345	37.01	<.0001

Bounds on condition number: 1.2393, 53.078

Stepwise Selection: Step 8

Variable may Entered: R-Square = 0.0669 and C(p) = 19.1585

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 8

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	5.32111	0.66514	17.01	<.0001
Error	1898	74.20595	0.03910		
Corrected Total	1906	79.52706			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.42771	0.00812	108.52502	2775.79	<.0001
feb	0.11574	0.03422	0.44712	11.44	0.0007
apr	-0.07338	0.01723	0.70903	18.14	<.0001
may	-0.05406	0.01778	0.36154	9.25	0.0024
jun	-0.06577	0.01579	0.67822	17.35	<.0001
jul	-0.05617	0.01597	0.48389	12.38	0.0004
pturnback	-0.06465	0.01158	1.21907	31.18	<.0001
pexchange	-0.04329	0.01063	0.64817	16.58	<.0001
pctlckdn	0.00585	0.00096611	1.43464	36.69	<.0001

Bounds on condition number: 1.2504, 69.441

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pctlckdn		1	0.0184	0.0184	104.421	35.65	<.0001
2	pturnback		2	0.0110	0.0294	83.8391	21.66	<.0001
3	feb		3	0.0100	0.0394	65.3435	19.86	<.0001
4	pexchange		4	0.0065	0.0460	54.0142	12.99	0.0003
5	apr		5	0.0054	0.0514	44.9667	10.83	0.0010
6	jun		6	0.0060	0.0573	34.7143	12.08	0.0005
7	jul		7	0.0050	0.0624	26.4551	10.16	0.0015
8	may		8	0.0045	0.0669	19.1585	9.25	0.0024

Logarithms of single lockage times using key variables from stepwise proc 376
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0169 and C(p) = 116.5267

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	6.02492	6.02492	32.66	<.0001
Error	1905	351.42170	0.18447		
Corrected Total	1906	357.44662			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.04017	0.01138	1540.71297	8351.95	<.0001
pturnback	-0.12925	0.02262	6.02492	32.66	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable feb Entered: R-Square = 0.0256 and C(p) = 100.5634

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	9.15075	4.57538	25.01	<.0001
Error	1904	348.29587	0.18293		
Corrected Total	1906	357.44662			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.04675	0.01145	1530.13260	8364.65	<.0001
feb	0.30192	0.07304	3.12583	17.09	<.0001
pturnback	-0.12518	0.02254	5.64045	30.83	<.0001

Bounds on condition number: 1.0019, 4.0077

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 377
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable pexchange Entered: R-Square = 0.0325 and C(p) = 88.4179

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	11.61224	3.87075	21.30	<.0001
Error	1903	345.83438	0.18173		
Corrected Total	1906	357.44662			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.00703	0.01570	747.33959	4112.34	<.0001
feb	0.27150	0.07327	2.49561	13.73	0.0002
pturnback	-0.16464	0.02490	7.94753	43.73	<.0001
pexchange	-0.08389	0.02279	2.46149	13.54	0.0002

Bounds on condition number: 1.2364, 10.444

Stepwise Selection: Step 4

Variable pctlckdn Entered: R-Square = 0.0392 and C(p) = 76.5776

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	14.02062	3.50515	19.41	<.0001
Error	1902	343.42601	0.18056		
Corrected Total	1906	357.44662			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-1.00826	0.01566	748.82373	4147.22	<.0001
feb	0.25618	0.07315	2.21466	12.27	0.0005
pturnback	-0.16669	0.02482	8.14249	45.10	<.0001
pexchange	-0.08529	0.02272	2.54363	14.09	0.0002
pctlckdn	0.00758	0.00208	2.40837	13.34	0.0003

Logarithms of single lockage times using key variables from stepwise proc 378
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.2367, 17.957

Stepwise Selection: Step 5

Variable apr Entered: R-Square = 0.0459 and C(p) = 64.8357

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	16.41187	3.28237	18.30	<.0001
Error	1901	341.03475	0.17940		
Corrected Total	1906	357.44662			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.99598	0.01596	698.22788	3892.07	<.0001
feb	0.24414	0.07299	2.00717	11.19	0.0008
apr	-0.13260	0.03632	2.39126	13.33	0.0003
pturnback	-0.16876	0.02475	8.34157	46.50	<.0001
pexchange	-0.08897	0.02267	2.76251	15.40	<.0001
pctlckdn	0.00767	0.00207	2.46789	13.76	0.0002

Bounds on condition number: 1.2392, 27.492

Stepwise Selection: Step 6

Variable jun Entered: R-Square = 0.0537 and C(p) = 50.7902

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	19.20398	3.20066	17.98	<.0001
Error	1900	338.24264	0.17802		
Corrected Total	1906	357.44662			

Logarithms of single lockage times using key variables from stepwise proc 379
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.98247	0.01627	649.51326	3648.49	<.0001
feb	0.23040	0.07279	1.78351	10.02	0.0016
apr	-0.14638	0.03635	2.88757	16.22	<.0001
jun	-0.13165	0.03324	2.79211	15.68	<.0001
pturnback	-0.16694	0.02466	8.15995	45.84	<.0001
pexchange	-0.08964	0.02259	2.80429	15.75	<.0001
pctlckdn	0.00770	0.00206	2.48535	13.96	0.0002

Bounds on condition number: 1.2393, 39.134

Stepwise Selection: Step 7

Variable jul Entered: R-Square = 0.0615 and C(p) = 36.8528

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	21.97727	3.13961	17.77	<.0001
Error	1899	335.46936	0.17666		
Corrected Total	1906	357.44662			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.96867	0.01657	603.53138	3416.43	<.0001
feb	0.21563	0.07261	1.55805	8.82	0.0030
apr	-0.16161	0.03641	3.48059	19.70	<.0001
jun	-0.14707	0.03334	3.43694	19.46	<.0001
jul	-0.13361	0.03372	2.77328	15.70	<.0001
pturnback	-0.16182	0.02460	7.64575	43.28	<.0001
pexchange	-0.08938	0.02250	2.78796	15.78	<.0001
pctlckdn	0.00787	0.00205	2.59397	14.68	0.0001

Bounds on condition number: 1.2393, 53.078

Stepwise Selection: Step 8

Logarithms of single lockage times using key variables from stepwise proc 380
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 8

Variable may Entered: R-Square = 0.0699 and C(p) = 21.4668

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	25.00264	3.12533	17.84	<.0001
Error	1898	332.44398	0.17515		
Corrected Total	1906	357.44662			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.94877	0.01718	534.02058	3048.85	<.0001
feb	0.19683	0.07244	1.29321	7.38	0.0066
apr	-0.17811	0.03647	4.17746	23.85	<.0001
may	-0.15637	0.03763	3.02538	17.27	<.0001
jun	-0.16308	0.03342	4.17012	23.81	<.0001
jul	-0.14950	0.03379	3.42788	19.57	<.0001
pturnback	-0.16497	0.02450	7.93821	45.32	<.0001
pexchange	-0.09820	0.02250	3.33544	19.04	<.0001
pctlckdn	0.00776	0.00204	2.52207	14.40	0.0002

Bounds on condition number: 1.2504, 69.441

Stepwise Selection: Step 9

Variable aug Entered: R-Square = 0.0734 and C(p) = 16.3569

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	26.23985	2.91554	16.70	<.0001
Error	1897	331.20677	0.17460		
Corrected Total	1906	357.44662			

Logarithms of single lockage times using key variables from stepwise proc 381
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 9

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.93531	0.01788	477.51879	2735.01	<.0001
feb	0.18336	0.07250	1.11674	6.40	0.0115
apr	-0.19245	0.03681	4.77269	27.34	<.0001
may	-0.17063	0.03794	3.53033	20.22	<.0001
jun	-0.17758	0.03381	4.81618	27.58	<.0001
jul	-0.16402	0.03418	4.02083	23.03	<.0001
aug	-0.08389	0.03151	1.23720	7.09	0.0078
pturnback	-0.16359	0.02447	7.80275	44.69	<.0001
pexchange	-0.09616	0.02248	3.19437	18.30	<.0001
pctlckdn	0.00764	0.00204	2.44679	14.01	0.0002

Bounds on condition number: 1.2519, 88.763

Stepwise Selection: Step 10

Variable feb Removed: R-Square = 0.0703 and C(p) = 20.7745

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	25.12310	3.14039	17.94	<.0001
Error	1898	332.32352	0.17509		
Corrected Total	1906	357.44662			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.92563	0.01749	490.14492	2799.37	<.0001
apr	-0.19900	0.03677	5.12854	29.29	<.0001
may	-0.17749	0.03790	3.83964	21.93	<.0001
jun	-0.18359	0.03378	5.17352	29.55	<.0001
jul	-0.16991	0.03415	4.33539	24.76	<.0001
aug	-0.08946	0.03148	1.41368	8.07	0.0045
pturnback	-0.16890	0.02441	8.37988	47.86	<.0001
pexchange	-0.10285	0.02236	3.70562	21.16	<.0001
pctlckdn	0.00794	0.00204	2.64501	15.11	0.0001

Bounds on condition number: 1.2345, 70.18

All variables left in the model are significant at the 0.0100 level.

Logarithms of single lockage times using key variables from stepwise proc 382
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 10

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0169	0.0169	116.527	32.66	<.0001
2	feb		2	0.0087	0.0256	100.563	17.09	<.0001
3	pexchange		3	0.0069	0.0325	88.4179	13.54	0.0002
4	pctlckdn		4	0.0067	0.0392	76.5776	13.34	0.0003
5	apr		5	0.0067	0.0459	64.8357	13.33	0.0003
6	jun		6	0.0078	0.0537	50.7902	15.68	<.0001
7	jul		7	0.0078	0.0615	36.8528	15.70	<.0001
8	may		8	0.0085	0.0699	21.4668	17.27	<.0001
9	aug		9	0.0035	0.0734	16.3569	7.09	0.0078
10		feb	8	0.0031	0.0703	20.7745	6.40	0.0115

Logarithms of single lockage times using key variables from stepwise proc 383
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable waitmin Entered: R-Square = 0.0154 and C(p) = 208.1395

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	192.89991	192.89991	65.86	<.0001
Error	4218	12354	2.92883		
Corrected Total	4219	12547			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	7.10548	0.03289	136728	46683.5	<.0001
waitmin	-0.00071995	0.00008871	192.89991	65.86	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pcttrandn Entered: R-Square = 0.0306 and C(p) = 141.7516

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	383.86359	191.93180	66.55	<.0001
Error	4217	12163	2.88424		
Corrected Total	4219	12547			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	7.09190	0.03268	135850	47100.9	<.0001
pcttrandn	0.02477	0.00304	190.96368	66.21	<.0001
waitmin	-0.00085581	0.00008960	263.10675	91.22	<.0001

Bounds on condition number: 1.036, 4.1439

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 384
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 3

Variable pcttrannite Entered: R-Square = 0.0371 and C(p) = 114.5938

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	465.28262	155.09421	54.12	<.0001
Error	4216	12081	2.86561		
Corrected Total	4219	12547			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	6.92956	0.04459	69201	24148.6	<.0001
pcttrandn	0.02555	0.00304	202.73496	70.75	<.0001
pcttrannite	0.00358	0.00067254	81.41903	28.41	<.0001
waitmin	-0.00084419	0.00008934	255.85890	89.29	<.0001

Bounds on condition number: 1.0384, 9.2354

Stepwise Selection: Step 4

Variable mar Entered: R-Square = 0.0435 and C(p) = 87.6528

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	546.09628	136.52407	47.95	<.0001
Error	4215	12001	2.84712		
Corrected Total	4219	12547			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	6.97405	0.04523	67702	23779.2	<.0001
mar	-0.44939	0.08435	80.81366	28.38	<.0001
pcttrandn	0.02688	0.00304	222.91112	78.29	<.0001
pcttrannite	0.00375	0.00067109	88.93605	31.24	<.0001
waitmin	-0.00087093	0.00008919	271.46128	95.35	<.0001

Logarithms of single lockage times using key variables from stepwise proc 385
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0455, 16.406

Stepwise Selection: Step 5

Variable apr Entered: R-Square = 0.0469 and C(p) = 74.6664

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	587.94374	117.58875	41.44	<.0001
Error	4214	11959	2.83786		
Corrected Total	4219	12547			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	7.02024	0.04673	64057	22572.2	<.0001
mar	-0.49194	0.08494	95.19565	33.54	<.0001
apr	-0.31390	0.08174	41.84745	14.75	0.0001
pcttrandn	0.02686	0.00303	222.59440	78.44	<.0001
pcttrannite	0.00379	0.00067009	90.99365	32.06	<.0001
waitmin	-0.00090177	0.00008941	288.67761	101.72	<.0001

Bounds on condition number: 1.0483, 25.765

Stepwise Selection: Step 6

Variable nov Entered: R-Square = 0.0500 and C(p) = 62.5193

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	627.44758	104.57460	36.96	<.0001
Error	4213	11919	2.82916		
Corrected Total	4219	12547			

Logarithms of single lockage times using key variables from stepwise proc 386
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	7.03923	0.04693	63648	22497.2	<.0001
mar	-0.52877	0.08538	108.51582	38.36	<.0001
apr	-0.34979	0.08218	51.25308	18.12	<.0001
nov	-0.36847	0.09861	39.50385	13.96	0.0002
pcttrandn	0.02650	0.00303	216.40125	76.49	<.0001
pcttrannite	0.00409	0.00067369	104.21904	36.84	<.0001
waitmin	-0.00087655	0.00008953	271.21138	95.86	<.0001

Bounds on condition number: 1.0543, 37.485

Stepwise Selection: Step 7

Variable may Entered: R-Square = 0.0528 and C(p) = 52.0743

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	662.19838	94.59977	33.53	<.0001
Error	4212	11884	2.82158		
Corrected Total	4219	12547			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	7.08335	0.04852	60123	21308.4	<.0001
mar	-0.57427	0.08624	125.10348	44.34	<.0001
apr	-0.39524	0.08309	63.84867	22.63	<.0001
may	-0.29569	0.08426	34.75080	12.32	0.0005
nov	-0.41859	0.09951	49.93078	17.70	<.0001
pcttrandn	0.02613	0.00303	210.18652	74.49	<.0001
pcttrannite	0.00400	0.00067323	99.74701	35.35	<.0001
waitmin	-0.00083918	0.00009004	245.10073	86.87	<.0001

Bounds on condition number: 1.0762, 51.893

Stepwise Selection: Step 8

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 8

Variable dec Entered: R-Square = 0.0547 and C(p) = 45.2191

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	686.92535	85.86567	30.49	<.0001
Error	4211	11860	2.81638		
Corrected Total	4219	12547			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	7.09594	0.04867	59877	21260.4	<.0001
mar	-0.59251	0.08638	132.50049	47.05	<.0001
apr	-0.41277	0.08322	69.28640	24.60	<.0001
may	-0.31177	0.08435	38.47113	13.66	0.0002
nov	-0.43705	0.09961	54.21884	19.25	<.0001
dec	-0.60835	0.20531	24.72696	8.78	0.0031
pcttrandn	0.02631	0.00303	212.94700	75.61	<.0001
pcttrannite	0.00412	0.00067374	105.22423	37.36	<.0001
waitmin	-0.00084261	0.00008996	247.06771	87.73	<.0001

Bounds on condition number: 1.0806, 67.621

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Label	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	waitmin		Wait/before/lockge	1	0.0154	0.0154	208.140	65.86	<.0001
2	pcttrandn			2	0.0152	0.0306	141.752	66.21	<.0001
3	pcttrannite			3	0.0065	0.0371	114.594	28.41	<.0001
4	mar			4	0.0064	0.0435	87.6528	28.38	<.0001
5	apr			5	0.0033	0.0469	74.6664	14.75	0.0001
6	nov			6	0.0031	0.0500	62.5193	13.96	0.0002
7	may			7	0.0028	0.0528	52.0743	12.32	0.0005
8	dec			8	0.0020	0.0547	45.2191	8.78	0.0031

Logarithms of single lockage times using key variables from stepwise proc 388
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable sep Entered: R-Square = 0.0062 and C(p) = 90.5103

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.34689	1.34689	26.15	<.0001
Error	4215	217.09764	0.05151		
Corrected Total	4216	218.44454			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.90619	0.00365	14066	273085	<.0001
sep	0.06512	0.01273	1.34689	26.15	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable mar Entered: R-Square = 0.0107 and C(p) = 72.7087

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	2.34582	1.17291	22.87	<.0001
Error	4214	216.09872	0.05128		
Corrected Total	4216	218.44454			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.91203	0.00387	12499	243743	<.0001
mar	-0.05002	0.01133	0.99893	19.48	<.0001
sep	0.05928	0.01278	1.10414	21.53	<.0001

Bounds on condition number: 1.0108, 4.0434

Stepwise Selection: Step 3

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable nov Entered: R-Square = 0.0149 and C(p) = 56.6053

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	3.25907	1.08636	21.27	<.0001
Error	4213	215.18547	0.05108		
Corrected Total	4216	218.44454			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.91736	0.00407	11360	222406	<.0001
mar	-0.05535	0.01138	1.20825	23.66	<.0001
sep	0.05395	0.01281	0.90555	17.73	<.0001
nov	-0.05542	0.01311	0.91325	17.88	<.0001

Bounds on condition number: 1.0234, 9.1929

Stepwise Selection: Step 4

Variable may Entered: R-Square = 0.0183 and C(p) = 43.8475

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	4.00356	1.00089	19.66	<.0001
Error	4212	214.44098	0.05091		
Corrected Total	4216	218.44454			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.92404	0.00442	9654.61224	189634	<.0001
mar	-0.06203	0.01150	1.48216	29.11	<.0001
may	-0.04278	0.01119	0.74448	14.62	0.0001
sep	0.04727	0.01291	0.68268	13.41	0.0003
nov	-0.06209	0.01320	1.12638	22.12	<.0001

Logarithms of single lockage times using key variables from stepwise proc 390
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0494, 16.7

Stepwise Selection: Step 5

Variable apr Entered: R-Square = 0.0215 and C(p) = 32.1139

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	4.69637	0.93927	18.50	<.0001
Error	4211	213.74817	0.05076		
Corrected Total	4216	218.44454			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.93191	0.00490	7893.73952	155513	<.0001
mar	-0.06990	0.01167	1.81944	35.84	<.0001
apr	-0.04163	0.01127	0.69281	13.65	0.0002
may	-0.05065	0.01137	1.00695	19.84	<.0001
sep	0.03940	0.01307	0.46172	9.10	0.0026
nov	-0.06996	0.01335	1.39358	27.45	<.0001

Bounds on condition number: 1.0889, 26.968

Stepwise Selection: Step 6

Variable dec Entered: R-Square = 0.0238 and C(p) = 24.2967

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	5.19162	0.86527	17.08	<.0001
Error	4210	213.25292	0.05065		
Corrected Total	4216	218.44454			

Logarithms of single lockage times using key variables from stepwise proc 391
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.93472	0.00498	7658.44454	151192	<.0001
mar	-0.07271	0.01170	1.95705	38.64	<.0001
apr	-0.04444	0.01129	0.78451	15.49	<.0001
may	-0.05346	0.01140	1.11481	22.01	<.0001
sep	0.03659	0.01308	0.39633	7.82	0.0052
nov	-0.07277	0.01337	1.50096	29.63	<.0001
dec	-0.08614	0.02755	0.49525	9.78	0.0018

Bounds on condition number: 1.0959, 38.643

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	sep		1	0.0062	0.0062	90.5103	26.15	<.0001
2	mar		2	0.0046	0.0107	72.7087	19.48	<.0001
3	nov		3	0.0042	0.0149	56.6053	17.88	<.0001
4	may		4	0.0034	0.0183	43.8475	14.62	0.0001
5	apr		5	0.0032	0.0215	32.1139	13.65	0.0002
6	dec		6	0.0023	0.0238	24.2967	9.78	0.0018

```
Logarithms of single lockage times using key variables from stepwise proc                    392
                                                                                20:21 Tuesday, June 28, 2005

                              The REG Procedure
                                Model: MODEL1
                       Dependent Variable: transithrs

 No variable met the 0.0100 significance level for entry into the model.
```

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Logarithms of single lockage times using key variables from stepwise proc                    393
                                                                                 20:21 Tuesday, June 28, 2005

                              The REG Procedure
                                Model: MODEL1
                        Dependent Variable: logtrnhrs

 No variable met the 0.0100 significance level for entry into the model.
```

Logarithms of single lockage times using key variables from stepwise proc 394
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable contsingle Entered: R-Square = 0.0412 and C(p) = 70.2267

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	116769	116769	64.96	<.0001
Error	1511	2715959	1797.45826		
Corrected Total	1512	2832729			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	29.12968	1.24966	976668	543.36	<.0001
contsingle	-20.59170	2.55480	116769	64.96	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable retdouble Entered: R-Square = 0.0517 and C(p) = 54.9018

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	146565	73282	41.20	<.0001
Error	1510	2686164	1778.91654		
Corrected Total	1512	2832729			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	30.77526	1.30660	986895	554.77	<.0001
contsingle	-22.23727	2.57320	132853	74.68	<.0001
retdouble	-17.37663	4.24589	29795	16.75	<.0001

Bounds on condition number: 1.025, 4.1001

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 395
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 3

Variable sep Entered: R-Square = 0.0620 and C(p) = 39.9518

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	175716	58572	33.26	<.0001
Error	1509	2657013	1760.77756		
Corrected Total	1512	2832729			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	29.52803	1.33558	860668	488.80	<.0001
sep	16.24505	3.99254	29151	16.56	<.0001
contsingle	-22.38120	2.56029	134553	76.42	<.0001
retdouble	-17.47075	4.22425	30118	17.11	<.0001

Bounds on condition number: 1.0252, 9.1515

Stepwise Selection: Step 4

Variable oct Entered: R-Square = 0.0714 and C(p) = 26.4899

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	202307	50577	29.00	<.0001
Error	1508	2630422	1744.31151		
Corrected Total	1512	2832729			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	28.31681	1.36503	750629	430.33	<.0001
sep	17.59912	3.98893	33954	19.47	<.0001
oct	15.59157	3.99328	26592	15.24	<.0001
contsingle	-22.87954	2.55148	140260	80.41	<.0001
retdouble	-17.65870	4.20472	30766	17.64	<.0001

Logarithms of single lockage times using key variables from stepwise proc 396
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0278, 16.283

Stepwise Selection: Step 5

Variable retsingle Entered: R-Square = 0.0759 and C(p) = 21.0759

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	215058	43012	24.76	<.0001
Error	1507	2617671	1737.00808		
Corrected Total	1512	2832729			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	25.98180	1.61192	451289	259.81	<.0001
sep	17.50920	3.98071	33606	19.35	<.0001
oct	15.32023	3.98617	25658	14.77	0.0001
contsingle	-20.50910	2.69226	100800	58.03	<.0001
retdouble	-15.29386	4.28574	22120	12.73	0.0004
retsingle	7.54708	2.78557	12751	7.34	0.0068

Bounds on condition number: 1.1492, 26.899

Stepwise Selection: Step 6

Variable pcttrannite Entered: R-Square = 0.0814 and C(p) = 13.9791

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	230702	38450	22.25	<.0001
Error	1506	2602026	1727.77322		
Corrected Total	1512	2832729			

Logarithms of single lockage times using key variables from stepwise proc 397
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	21.19403	2.26186	151699	87.80	<.0001
sep	17.65536	3.97041	34164	19.77	<.0001
oct	15.44738	3.97578	26083	15.10	0.0001
contsingle	-20.64393	2.68547	102101	59.09	<.0001
retdouble	-15.15288	4.27459	21711	12.57	0.0004
retsingle	8.53890	2.79764	16096	9.32	0.0023
pcttrannite	0.10051	0.03340	15645	9.05	0.0027

Bounds on condition number: 1.1586, 38.486

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	contsingle		1	0.0412	0.0412	70.2267	64.96	<.0001
2	retdouble		2	0.0105	0.0517	54.9018	16.75	<.0001
3	sep		3	0.0103	0.0620	39.9518	16.56	<.0001
4	oct		4	0.0094	0.0714	26.4899	15.24	<.0001
5	retsingle		5	0.0045	0.0759	21.0759	7.34	0.0068
6	pcttrannite		6	0.0055	0.0814	13.9791	9.05	0.0027

Logarithms of single lockage times using key variables from stepwise proc 398
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable contsingle Entered: R-Square = 0.1088 and C(p) = 85.2990

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	218.92773	218.92773	182.81	<.0001
Error	1497	1792.78247	1.19758		
Corrected Total	1498	2011.71020			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.67325	0.03247	8118.16925	6778.79	<.0001
contsingle	-0.89209	0.06598	218.92773	182.81	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pcttrannite Entered: R-Square = 0.1272 and C(p) = 54.6421

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	255.97565	127.98782	109.05	<.0001
Error	1496	1755.73456	1.17362		
Corrected Total	1498	2011.71020			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.45289	0.05071	2746.09098	2339.85	<.0001
contsingle	-0.91073	0.06540	227.58436	193.92	<.0001
pcttrannite	0.00491	0.00087325	37.04791	31.57	<.0001

Bounds on condition number: 1.0026, 4.0103

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 399
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable retdouble Entered: R-Square = 0.1411 and C(p) = 32.1342

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	283.77887	94.59296	81.84	<.0001
Error	1495	1727.93133	1.15581		
Corrected Total	1498	2011.71020			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.50201	0.05131	2748.31439	2377.83	<.0001
contsingle	-0.96185	0.06573	247.46965	214.11	<.0001
retdouble	-0.53120	0.10831	27.80322	24.06	<.0001
pcttrannite	0.00495	0.00086664	37.66777	32.59	<.0001

Bounds on condition number: 1.0284, 9.1707

Stepwise Selection: Step 4

Variable sep Entered: R-Square = 0.1490 and C(p) = 20.0405

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	299.76758	74.94190	65.40	<.0001
Error	1494	1711.94262	1.14588		
Corrected Total	1498	2011.71020			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.47021	0.05179	2606.51711	2274.69	<.0001
sep	0.38064	0.10190	15.98871	13.95	0.0002
contsingle	-0.96490	0.06546	248.99973	217.30	<.0001
retdouble	-0.53304	0.10784	27.99521	24.43	<.0001
pcttrannite	0.00500	0.00086300	38.39367	33.51	<.0001

Logarithms of single lockage times using key variables from stepwise proc 400
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0286, 16.231

Stepwise Selection: Step 5

Variable retsingle Entered: R-Square = 0.1535 and C(p) = 14.0560

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	308.82561	61.76512	54.15	<.0001
Error	1493	1702.88459	1.14058		
Corrected Total	1498	2011.71020			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.54353	0.05785	2204.68854	1932.96	<.0001
sep	0.38350	0.10167	16.22822	14.23	0.0002
contsingle	-1.02616	0.06883	253.52648	222.28	<.0001
retdouble	-0.59498	0.10981	33.48221	29.36	<.0001
retsingle	-0.20551	0.07292	9.05803	7.94	0.0049
pcttrannite	0.00474	0.00086565	34.24220	30.02	<.0001

Bounds on condition number: 1.1492, 26.873

Stepwise Selection: Step 6

Variable dec Entered: R-Square = 0.1580 and C(p) = 8.1453

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	317.79997	52.96666	46.65	<.0001
Error	1492	1693.91023	1.13533		
Corrected Total	1498	2011.71020			

Logarithms of single lockage times using key variables from stepwise proc 401
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.54695	0.05773	2209.63841	1946.25	<.0001
sep	0.35660	0.10189	13.90749	12.25	0.0005
dec	-0.27704	0.09854	8.97436	7.90	0.0050
contsingle	-1.01120	0.06888	244.71752	215.55	<.0001
retdouble	-0.61338	0.10976	35.45922	31.23	<.0001
retsingle	-0.20762	0.07276	9.24411	8.14	0.0044
pcttrannite	0.00523	0.00088068	40.00282	35.23	<.0001

Bounds on condition number: 1.1495, 38.996

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	contsingle		1	0.1088	0.1088	85.2990	182.81	<.0001
2	pcttrannite		2	0.0184	0.1272	54.6421	31.57	<.0001
3	retdouble		3	0.0138	0.1411	32.1342	24.06	<.0001
4	sep		4	0.0079	0.1490	20.0405	13.95	0.0002
5	retsingle		5	0.0045	0.1535	14.0560	7.94	0.0049
6	dec		6	0.0045	0.1580	8.1453	7.90	0.0050

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 20:21 Tuesday, June 28, 2005 402

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	6258	0	26701333074	4266751.85	3823914.00	4329369.00
strtlcktime	Start/lockge/time	6258	0	8.2978963E12	1325966165	1263005940	1387130700
arrtime	Arriv/time	6258	0	8.2978625E12	1325960774	1263005700	1387130700
deptime	Leave/lockge/time	6258	0	8.2979149E12	1325969139	1263030480	1387131600
BOW_OVER_SILL	BOW_OVER_SILL	6218	40	8.2444008E12	1325892697	1263029520	1387129500
END_OF_ENTRY	END_OF_ENTRY	6218	40	8.244404E12	1325893207	1263029700	1387130220
START_OF_EXIT	START_OF_EXIT	6218	40	8.2444084E12	1325893921	1263030180	1387130880
SIGNAL_DATE	SIGNAL_DATE	0	6258	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	6258	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	5762	496	66747.00	11.5839986	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	5762	496	4131.00	0.7169386	0	27.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	6258	.	.	.	.
vess_no		6258	0	4241127540	677712.93	2611.00	8888846.00
vss_hp		6230	28	28175744.00	4522.59	75.0000000	8800.00
frsttime		6258	0	8.2978625E12	1325960774	1263005700	1387130700
lasttime		6258	0	8.2979149E12	1325969139	1263030480	1387131600
newpoolno		6258	0	165544.00	26.4531799	3.0000000	28.0000000
oldpoolno		6258	0	160510.00	25.6487696	4.0000000	28.0000000
waitmin	Wait/before/lockge	6258	0	562266.00	89.8475551	0	3923.00
lockmin	Wait/lockge/time	6258	0	310189.00	49.5667945	1.0000000	468.0000000
year		6258	0	12524976.00	2001.43	2000.00	2003.00
fly		6258	0	2863.00	0.4574944	0	1.0000000
turnback		6258	0	2132.00	0.3406839	0	1.0000000
exchange		6258	0	1263.00	0.2018217	0	1.0000000
lock		6258	0	159898.00	25.5509748	3.0000000	27.0000000
totmin		6258	0	872455.00	139.4143496	1.0000000	4025.00
month		6258	0	47009.00	7.5118249	1.0000000	12.0000000
day		6258	0	97916.00	15.6465324	1.0000000	31.0000000
sunrise		6131	127	139819103	22805.27	20114.00	26850.00
sunset		6131	127	420296390	68552.67	59976.00	73907.00
sequpstr		6258	0	0	0	0	0
seqdstr		6258	0	4810.00	0.7686162	0	1.0000000
plock		6258	0	156450.00	25.0000000	25.0000000	25.0000000
pempty		5777	481	2941.00	0.5090878	0	27.0000000
pfull		5777	481	67907.00	11.7547170	0	28.0000000
parrtime		6258	0	8.2975181E12	1325905743	1262306700	1387100460
pstrtlcktime		6258	0	8.2975799E12	1325915611	1262306700	1387100460
pdeptime		6258	0	8.2976174E12	1325921600	1262307720	1387107360
birth		6258	0	0	0	0	0
transithrs		6258	0	68097.65	10.8816954	-10.3666667	2260.33
reclock		6258	0	0	0	0	0
i		6258	0	2259067.00	360.9886545	58.0000000	401.0000000
pctpsysdn		6258	0	12046.34	1.9249511	0	96.1060000
pctplckdn		6258	0	5058.58	0.8083386	0	93.4040000
cumdown		6131	127	322740.00	52.6406785	0	24540.00
pctdown		6131	127	4168.97	0.6799822	0	87.3930000
pcttrandn		6107	151	9620.64	1.5753468	0	100.0000000
pctsysdn		6131	127	8172.54	1.3329863	0	98.6320000
pctlckdn		6131	127	4168.97	0.6799822	0	87.3930000
stime		6258	0	267665700	42771.76	0	86340.00
etime		6258	0	268478640	42901.67	0	86340.00
sdate		6258	0	96037368.00	15346.34	14618.00	16054.00

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 20:21 Tuesday, June 28, 2005 403

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		6258	0	96037574.00	15346.37	14618.00	16054.00
hrsduration		6258	0	5169.82	0.8261132	0.0166667	7.8000000
ndays		6258	0	0	0	0	0
pctday		6257	1	339062.84	54.1893617	0	100.0000000
pctpsysnite		6235	23	291004.04	46.6726606	0	100.0000000
pctplcknite		6249	9	293823.83	47.0193354	0	100.0000000
pcttrannite		6143	115	291646.75	47.4762733	0	100.0000000
pctsysnite		6250	8	285566.10	45.6905765	0	100.0000000
pctlcknite		6257	1	286637.16	45.8106383	0	100.0000000
stage		6103	155	142579.72	23.3622350	10.8200000	32.7100000
flow		3	6255	129887.39	43295.80	25393.50	64704.91
jan		6258	0	28.0000000	0.0044743	0	1.0000000
feb		6258	0	57.0000000	0.0091083	0	1.0000000
mar		6258	0	405.0000000	0.0647172	0	1.0000000
apr		6258	0	601.0000000	0.0960371	0	1.0000000
may		6258	0	552.0000000	0.0882071	0	1.0000000
jun		6258	0	744.0000000	0.1188878	0	1.0000000
jul		6258	0	777.0000000	0.1241611	0	1.0000000
aug		6258	0	722.0000000	0.1153723	0	1.0000000
sep		6258	0	543.0000000	0.0867689	0	1.0000000
oct		6258	0	625.0000000	0.0998722	0	1.0000000
nov		6258	0	776.0000000	0.1240013	0	1.0000000
dec		6258	0	428.0000000	0.0683925	0	1.0000000
m31day		6258	0	3537.00	0.5651965	0	1.0000000
m30day		6258	0	2664.00	0.4256951	0	1.0000000
qtr1		6258	0	490.0000000	0.0782998	0	1.0000000
qtr2		6258	0	1897.00	0.3031320	0	1.0000000
qtr3		6258	0	2042.00	0.3263023	0	1.0000000
qtr4		6258	0	1829.00	0.2922659	0	1.0000000
psingle		6258	0	1252.00	0.2000639	0	1.0000000
pdouble		6258	0	4734.00	0.7564717	0	1.0000000
pknockout		6258	0	193.0000000	0.0308405	0	1.0000000
pjacknife		6258	0	78.0000000	0.0124640	0	1.0000000
pothtype		6258	0	1.0000000	0.000159795	0	1.0000000
pexchange		6258	0	2854.00	0.4560562	0	1.0000000
pturnback		6258	0	2278.00	0.3640141	0	1.0000000
single		6258	0	5767.00	0.9215404	0	1.0000000
double		6258	0	376.0000000	0.0600831	0	1.0000000
knockout		6258	0	62.0000000	0.0099073	0	1.0000000
jacknife		6258	0	12.0000000	0.0019175	0	1.0000000
othtype		6258	0	41.0000000	0.0065516	0	1.0000000
contthru		6258	0	4810.00	0.7686162	0	1.0000000
return		6258	0	464.0000000	0.0741451	0	1.0000000
contstop		6258	0	759.0000000	0.1212848	0	1.0000000
kill		6258	0	225.0000000	0.0359540	0	1.0000000
contsame		6258	0	4810.00	0.7686162	0	1.0000000
contdouble		6258	0	21.0000000	0.0033557	0	1.0000000
contsingle		6258	0	732.0000000	0.1169703	0	1.0000000
contko		6258	0	5.0000000	0.000798977	0	1.0000000
contjk		6258	0	1.0000000	0.000159795	0	1.0000000
retdouble		6258	0	137.0000000	0.0218920	0	1.0000000
retsingle		6258	0	326.0000000	0.0520933	0	1.0000000

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 20:21 Tuesday, June 28, 2005 404

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		6258	0	1.0000000	0.000159795	0	1.0000000
retjk		6258	0	0	0	0	0
xkill		6258	0	225.0000000	0.0359540	0	1.0000000
logtrnhrs		6234	24	11448.85	1.8365169	-1.8971200	7.7232676
plockhrs		6258	0	10241.10	1.6364810	0.0819672	27.8360656
loglckhrs		6258	0	1872.23	0.2991739	-2.5014360	3.3263325
thrusingle		6258	0	548.0000000	0.0875679	0	1.0000000
thruother		6258	0	223.0000000	0.0356344	0	1.0000000
contother		6258	0	6.0000000	0.000958773	0	1.0000000
retother		6258	0	1.0000000	0.000159795	0	1.0000000
thrudoubnite		6143	115	1922.84	0.3130133	0	1.0000000
thrusingnite		6143	115	311.8517700	0.0507654	0	1.0000000
thruothnite		6143	115	91.1078500	0.0148312	0	1.0000000
pdoubnite		6249	9	2265.08	0.3624713	0	1.0000000
psingnite		6249	9	552.3802800	0.0883950	0	1.0000000
pothnite		6249	9	120.7750700	0.0193271	0	1.0000000

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 20:21 Tuesday, June 28, 2005 405

The FREQ Procedure

Table 1 of pconfig by doutcome
Controlling for pnewpool=MI26D

pconfig / doutcome Frequency Percent Row Pct Col Pct	1:contsame	2:contdouble	3:contsingle	4:contko	5:contjk	6:retdouble	7:retsingle	8:retko	x:kill	Total
1:double	4039 64.54 85.32 83.97	18 0.29 0.38 85.71	440 7.03 9.29 60.11	2 0.03 0.04 40.00	0 0.00 0.00 0.00	132 2.11 2.79 96.35	12 0.19 0.25 3.68	1 0.02 0.02 100.00	90 1.44 1.90 40.00	4734 75.65
2:single	548 8.76 43.77 11.39	2 0.03 0.16 9.52	268 4.28 21.41 36.61	2 0.03 0.16 40.00	0 0.00 0.00 0.00	4 0.06 0.32 2.92	314 5.02 25.08 96.32	0 0.00 0.00 0.00	114 1.82 9.11 50.67	1252 20.01
3:knockout	156 2.49 80.83 3.24	1 0.02 0.52 4.76	20 0.32 10.36 2.73	1 0.02 0.52 20.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	15 0.24 7.77 6.67	193 3.08
4:jacknife	67 1.07 85.90 1.39	0 0.00 0.00 0.00	4 0.06 5.13 0.55	0 0.00 0.00 0.00	1 0.02 1.28 100.00	1 0.02 1.28 0.73	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5 0.08 6.41 2.22	78 1.25
5:Other	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02 100.00 0.44	1 0.02
Total	4810 76.86	21 0.34	732 11.70	5 0.08	1 0.02	137 2.19	326 5.21	1 0.02	225 3.60	6258 100.00

resulting regfile for mdy(1,1,2000) to mdy(12,31,2003) 20:21 Tuesday, June 28, 2005 406

The FREQ Procedure

Table 1 of pconfig by nextstep
Controlling for pnewpool=MI26D

pconfig nextstep

Frequency Percent Row Pct Col Pct	1:contth	2:contst	3:return	4:kill	Total
1:double	4039 64.54 85.32 83.97	460 7.35 9.72 60.61	145 2.32 3.06 31.25	90 1.44 1.90 40.00	4734 75.65
2:single	548 8.76 43.77 11.39	272 4.35 21.73 35.84	318 5.08 25.40 68.53	114 1.82 9.11 50.67	1252 20.01
3:knockout	156 2.49 80.83 3.24	22 0.35 11.40 2.90	0 0.00 0.00 0.00	15 0.24 7.77 6.67	193 3.08
4:jacknife	67 1.07 85.90 1.39	5 0.08 6.41 0.66	1 0.02 1.28 0.22	5 0.08 6.41 2.22	78 1.25
5:Other	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02 100.00 0.44	1 0.02
Total	4810 76.86	759 12.13	464 7.41	225 3.60	6258 100.00

Statistics from water.regfile for regfile 20:21 Tuesday, June 28, 2005 407

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	85685	0	364345311259	4252148.12	3515664.00	4331559.00
strtlcktime	Start/lockge/time	85685	0	1.1370142E14	1326969995	1262306700	1388533680
arrtime	Arriv/time	85685	0	1.1370115E14	1326966764	1262306700	1388530800
deptime	Leave/lockge/time	85685	0	1.1370164E14	1326972554	1262307720	1388536080
BOW_OVER_SILL	BOW_OVER_SILL	85668	17	1.1367912E14	1326973008	1262307000	1388534700
END_OF_ENTRY	END_OF_ENTRY	85668	17	1.1367916E14	1326973482	1262307060	1388535000
START_OF_EXIT	START_OF_EXIT	85668	17	1.1367923E14	1326974210	1262307660	1388535600
SIGNAL_DATE	SIGNAL_DATE	0	85685	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	85685	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	74515	11170	464381.00	6.2320472	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	74515	11170	244434.00	3.2803328	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	85685	.	.	.	.
vess_no		85685	0	68807586487	803029.54	2611.00	8888864.00
vss_hp		84970	715	330503513	3889.65	60.0000000	81800.00
frsttime		85685	0	1.1370115E14	1326966764	1262306700	1388530800
lasttime		85685	0	1.1370164E14	1326972554	1262307720	1388536080
newpoolno		85685	0	2152204.00	25.1176285	1.0000000	28.0000000
oldpoolno		85685	0	2153865.00	25.1370135	1.0000000	28.0000000
waitmin	Wait/before/lockge	85685	0	4614775.00	53.8574430	0	7423.00
lockmin	Wait/lockge/time	85685	0	3654502.00	42.6504289	4.0000000	1823.00
year		85685	0	171498420	2001.50	2000.00	2003.00
fly		85685	0	36810.00	0.4295968	0	1.0000000
turnback		85685	0	26631.00	0.3108012	0	1.0000000
exchange		85685	0	22243.00	0.2595904	0	1.0000000
lock		85685	0	2110192.00	24.6273210	1.0000000	27.0000000
totmin		85685	0	8269277.00	96.5078719	4.0000000	7490.00
month		85685	0	609881.00	7.1177102	1.0000000	12.0000000
day		85685	0	1344450.00	15.6906110	1.0000000	31.0000000
sunrise		84943	742	1967000929	23156.72	19414.00	27155.00
sunset		84943	742	5770395888	67932.57	59694.00	75152.00
sequpstr		85685	0	14034.00	0.1637860	0	1.0000000
seqdstr		85685	0	20990.00	0.2449670	0	1.0000000
plock		85685	0	2017556.00	23.5461983	1.0000000	27.0000000
pempty		74878	10807	192576.00	2.5718636	0	50.0000000
pfull		74878	10807	516882.00	6.9029889	0	28.0000000
parrtime		85685	0	1.1367672E14	1326681682	1262304600	1388521920
pstrtlcktime		85685	0	1.1367718E14	1326686994	1262304600	1388521920
pdeptime		85685	0	1.1367745E14	1326690193	1262305620	1388523540
birth		85685	0	0	0	0	0
transithrs		85685	0	6582770.12	76.8252333	-249.0333333	8099.42
reclock		85685	0	0	0	0	0
i		85685	0	19844733.00	231.6010153	58.0000000	401.0000000
pctpsysdn		79969	5716	79492.99	0.9940475	0	98.9510000
pctplckdn		79969	5716	38042.97	0.4757215	0	98.3000000
cumdown		84884	801	3289560.00	38.7535931	0	107520.00
pctdown		84884	801	31918.01	0.3760192	0	98.3000000
pcttrandn		84625	1060	113965.95	1.3467172	0	100.0000000
pctsysdn		84884	801	73557.22	0.8665616	0	98.6320000
pctlckdn		84884	801	31918.01	0.3760192	0	98.3000000
stime		85685	0	3788405040	44213.16	0	86340.00
etime		85685	0	3799278360	44340.06	0	86340.00
sdate		85685	0	1315944857	15357.94	14610.00	16070.00

Statistics from water.regfile for regfile 20:21 Tuesday, June 28, 2005 408

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		85685	0	1315947269	15357.97	14610.00	16071.00
hrsduration		85685	0	60908.37	0.7108405	0.0666667	30.3833333
ndays		85685	0	1.0000000	0.000011671	0	1.0000000
pctday		85667	18	4692684.75	54.7782081	0	100.0000000
pctpsysnite		85634	51	3857022.16	45.0407801	0	100.0000000
pctplcknite		85663	22	3867049.80	45.1425914	0	100.0000000
pcttrannite		85084	601	4019527.77	47.2418759	0	100.0000000
pctsysnite		85603	82	3854297.38	45.0252605	0	100.0000000
pctlcknite		85667	18	3874015.25	45.2217919	0	100.0000000
stage		40984	44701	889512.64	21.7039001	8.3500000	33.0800000
flow		7706	77979	636568695	82606.89	16077.99	306262.78
jan		85685	0	3078.00	0.0359223	0	1.0000000
feb		85685	0	3442.00	0.0401704	0	1.0000000
mar		85685	0	6981.00	0.0814728	0	1.0000000
apr		85685	0	7604.00	0.0887437	0	1.0000000
may		85685	0	7238.00	0.0844722	0	1.0000000
jun		85685	0	8512.00	0.0993406	0	1.0000000
jul		85685	0	8633.00	0.1007528	0	1.0000000
aug		85685	0	8038.00	0.0938087	0	1.0000000
sep		85685	0	7646.00	0.0892338	0	1.0000000
oct		85685	0	8580.00	0.1001342	0	1.0000000
nov		85685	0	9247.00	0.1079185	0	1.0000000
dec		85685	0	6686.00	0.0780300	0	1.0000000
m31day		85685	0	49234.00	0.5745930	0	1.0000000
m30day		85685	0	33009.00	0.3852366	0	1.0000000
qtr1		85685	0	13501.00	0.1575655	0	1.0000000
qtr2		85685	0	23354.00	0.2725565	0	1.0000000
qtr3		85685	0	24317.00	0.2837953	0	1.0000000
qtr4		85685	0	24513.00	0.2860827	0	1.0000000
psingle		85685	0	65876.00	0.7688160	0	1.0000000
pdouble		85685	0	15912.00	0.1857034	0	1.0000000
pknockout		85685	0	1445.00	0.0168641	0	1.0000000
pjacknife		85685	0	529.0000000	0.0061738	0	1.0000000
pothtype		85685	0	1923.00	0.0224427	0	1.0000000
pexchange		85685	0	23484.00	0.2740736	0	1.0000000
pturnback		85685	0	27840.00	0.3249110	0	1.0000000
single		85685	0	85656.00	0.9996616	0	1.0000000
double		85685	0	9.0000000	0.000105036	0	1.0000000
knockout		85685	0	3.0000000	0.000035012	0	1.0000000
jacknife		85685	0	0	0	0	0
othtype		85685	0	17.0000000	0.000198401	0	1.0000000
contthru		1252	84433	548.0000000	0.4376997	0	1.0000000
return		1252	84433	318.0000000	0.2539936	0	1.0000000
contstop		1252	84433	272.0000000	0.2172524	0	1.0000000
kill		1252	84433	114.0000000	0.0910543	0	1.0000000
contsame		1252	84433	548.0000000	0.4376997	0	1.0000000
contdouble		1252	84433	2.0000000	0.0015974	0	1.0000000
contsingle		1252	84433	268.0000000	0.2140575	0	1.0000000
contko		1252	84433	2.0000000	0.0015974	0	1.0000000
contjk		1252	84433	0	0	0	0
retdouble		1252	84433	4.0000000	0.0031949	0	1.0000000
retsingle		1252	84433	314.0000000	0.2507987	0	1.0000000

SAS Program Output from “fitmod.sas” for Tows Only (cont.)

Statistics from water.regfile for regfile 20:21 Tuesday, June 28, 2005 409

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
retko		1252	84433	0	0	0	0
retjk		1252	84433	0	0	0	0
xkill		1252	84433	114.0000000	0.0910543	0	1.0000000
logtrnhrs		1237	84448	2541.81	2.0548221	-1.8971200	7.7232676
plockhrs		1252	84433	522.2295082	0.4171162	0.0819672	4.1803279
loglckhrs		1252	84433	-1256.80	-1.0038312	-2.5014360	1.4303897
thrusingle		1252	84433	548.0000000	0.4376997	0	1.0000000
thruother		1252	84433	0	0	0	0
contother		1252	84433	2.0000000	0.0015974	0	1.0000000
retother		1252	84433	0	0	0	0
thrudoubnite		1217	84468	0	0	0	0
thrusingnite		1217	84468	311.8517700	0.2562463	0	1.0000000
thruothnite		1217	84468	0	0	0	0
pdoubnite		1251	84434	0	0	0	0
psingnite		1251	84434	552.3802800	0.4415510	0	1.0000000
pothnite		1251	84434	0	0	0	0

```
Transition models using key variables from stepwise proc      20:21 Tuesday, June 28, 2005 410
                        transitions  to contthru

                              The REG Procedure
                                Model: MODEL1
                          Dependent Variable: contsame

                            Stepwise Selection: Step 1

                  Variable psingle Entered: R-Square = 0.1540 and C(p) = 19.4702

                                  Analysis of Variance

                                           Sum of           Mean
Source                       DF         Squares         Square    F Value    Pr > F

Model                         1      171.39015      171.39015    1138.76    <.0001
Error                      6256      941.56606        0.15051
Corrected Total            6257     1112.95622


                       Parameter     Standard
          Variable      Estimate        Error   Type II SS  F Value  Pr > F

          Intercept      0.85138      0.00548   3628.57451  24109.2  <.0001
          psingle       -0.41368      0.01226    171.39015  1138.76  <.0001

                             Bounds on condition number: 1, 1
------------------------------------------------------------------------------------------------------------------------

                            Stepwise Selection: Step 2

                     Variable oct Entered: R-Square = 0.1553 and C(p) = 12.0069

                                  Analysis of Variance

                                           Sum of           Mean
Source                       DF         Squares         Square    F Value    Pr > F

Model                         2      172.81047       86.40523     574.87    <.0001
Error                      6255      940.14575        0.15030
Corrected Total            6257     1112.95622


                       Parameter     Standard
          Variable      Estimate        Error   Type II SS  F Value  Pr > F

          Intercept      0.85630      0.00571   3382.22175  22502.7  <.0001
          oct           -0.05025      0.01635     1.42032     9.45  0.0021
          psingle       -0.41318      0.01225   170.94621  1137.34  <.0001

                          Bounds on condition number: 1.0002, 4.0007
------------------------------------------------------------------------------------------------------------------------

                       All variables left in the model are significant at the 0.0100 level.
```

Transition models using key variables from stepwise proc transitions to contthru 20:21 Tuesday, June 28, 2005 411

The REG Procedure
Model: MODEL1
Dependent Variable: contsame

Stepwise Selection: Step 2

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	psingle		1	0.1540	0.1540	19.4702	1138.76	<.0001
2	oct		2	0.0013	0.1553	12.0069	9.45	0.0021

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 412

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0739 and C(p) = 732.6566

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	43.65908	43.65908	367.55	<.0001
Error	4609	547.47667	0.11878		
Corrected Total	4610	591.13575			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.02515	0.00636	12041	101370	<.0001
pturnback	-0.20232	0.01055	43.65908	367.55	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.1312 and C(p) = 403.8141

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	77.58046	38.79023	348.05	<.0001
Error	4608	513.55529	0.11145		
Corrected Total	4610	591.13575			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.22534	0.01302	3253.55830	29193.3	<.0001
pturnback	-0.40252	0.01537	76.45774	686.04	<.0001
pexchange	-0.25791	0.01478	33.92138	304.37	<.0001

Bounds on condition number: 2.2601, 9.0403

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 413

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.1469 and C(p) = 315.5230

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	86.83804	28.94601	264.44	<.0001
Error	4607	504.29771	0.10946		
Corrected Total	4610	591.13575			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.23399	0.01294	3261.58769	29796.2	<.0001
jul	-0.13208	0.01436	9.25758	84.57	<.0001
pturnback	-0.39098	0.01528	71.64935	654.55	<.0001
pexchange	-0.24812	0.01469	31.23148	285.31	<.0001

Bounds on condition number: 2.2754, 16.663

Stepwise Selection: Step 4

Variable jun Entered: R-Square = 0.1650 and C(p) = 213.4082

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	97.51297	24.37824	227.47	<.0001
Error	4606	493.62278	0.10717		
Corrected Total	4610	591.13575			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.24888	0.01289	3260.94481	30427.9	<.0001
jun	-0.14741	0.01477	10.67493	99.61	<.0001
jul	-0.15392	0.01438	12.28109	114.60	<.0001
pturnback	-0.38466	0.01513	69.23365	646.02	<.0001
pexchange	-0.23972	0.01456	29.05487	271.11	<.0001

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 2.2796, 26.464

Stepwise Selection: Step 5

Variable may Entered: R-Square = 0.1846 and C(p) = 102.0629

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	109.13429	21.82686	208.53	<.0001
Error	4605	482.00146	0.10467		
Corrected Total	4610	591.13575			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.26821	0.01287	3249.86131	31048.9	<.0001
may	-0.17619	0.01672	11.62132	111.03	<.0001
jun	-0.16984	0.01475	13.87556	132.57	<.0001
jul	-0.17625	0.01437	15.75312	150.50	<.0001
pturnback	-0.38387	0.01496	68.94807	658.72	<.0001
pexchange	-0.23453	0.01440	27.77858	265.39	<.0001

Bounds on condition number: 2.2823, 38.514

Stepwise Selection: Step 6

Variable feb Entered: R-Square = 0.1933 and C(p) = 53.8625

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	114.28136	19.04689	183.90	<.0001
Error	4604	476.85439	0.10357		
Corrected Total	4610	591.13575			

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 415

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.27580	0.01285	3248.67201	31365.7	<.0001
feb	-0.49765	0.07059	5.14707	49.69	<.0001
may	-0.17943	0.01664	12.04271	116.27	<.0001
jun	-0.17296	0.01468	14.37763	138.82	<.0001
jul	-0.17930	0.01430	16.28754	157.26	<.0001
pturnback	-0.38769	0.01489	70.23309	678.10	<.0001
pexchange	-0.24028	0.01434	29.06239	280.60	<.0001

Bounds on condition number: 2.2897, 52.33

Stepwise Selection: Step 7

Variable pctlcknite Entered: R-Square = 0.1977 and C(p) = 30.5202

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	116.87971	16.69710	162.06	<.0001
Error	4603	474.25604	0.10303		
Corrected Total	4610	591.13575			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.29936	0.01365	2924.36516	28383.1	<.0001
feb	-0.48936	0.07043	4.97425	48.28	<.0001
may	-0.18561	0.01664	12.81631	124.39	<.0001
jun	-0.17977	0.01470	15.40028	149.47	<.0001
jul	-0.18517	0.01431	17.25643	167.49	<.0001
pctlcknite	-0.00049172	0.00009792	2.59836	25.22	<.0001
pturnback	-0.38485	0.01486	69.10870	670.75	<.0001
pexchange	-0.23849	0.01431	28.61484	277.73	<.0001

Bounds on condition number: 2.2911, 68.367

Stepwise Selection: Step 8

Variable apr Entered: R-Square = 0.1995 and C(p) = 22.2324

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 8

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	117.93452	14.74182	143.37	<.0001
Error	4602	473.20123	0.10283		
Corrected Total	4610	591.13575			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.30713	0.01385	2853.91478	27755.0	<.0001
feb	-0.49653	0.07039	5.11604	49.75	<.0001
apr	-0.05306	0.01657	1.05481	10.26	0.0014
may	-0.19379	0.01682	13.64882	132.74	<.0001
jun	-0.18796	0.01491	16.33992	158.91	<.0001
jul	-0.19329	0.01452	18.22939	177.29	<.0001
pctlcknite	-0.00050428	0.00009790	2.72848	26.54	<.0001
pturnback	-0.38477	0.01485	69.07863	671.81	<.0001
pexchange	-0.23690	0.01431	28.19878	274.24	<.0001

Bounds on condition number: 2.2939, 87.432

Stepwise Selection: Step 9

Variable aug Entered: R-Square = 0.2020 and C(p) = 10.0724

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	119.38635	13.26515	129.38	<.0001
Error	4601	471.74940	0.10253		
Corrected Total	4610	591.13575			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.31848	0.01415	2751.10541	26831.7	<.0001
feb	-0.50747	0.07035	5.33476	52.03	<.0001
apr	-0.06610	0.01690	1.56794	15.29	<.0001
may	-0.20708	0.01716	14.92507	145.57	<.0001
jun	-0.20137	0.01531	17.73870	173.01	<.0001
jul	-0.20671	0.01493	19.65864	191.73	<.0001
aug	-0.05883	0.01563	1.45183	14.16	0.0002

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The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 9

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
pctlcknite	-0.00053883	0.00009819	3.08787	30.12	<.0001
pturnback	-0.38169	0.01485	67.77004	660.97	<.0001
pexchange	-0.23268	0.01433	27.03646	263.69	<.0001

Bounds on condition number: 2.308, 110.91

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0739	0.0739	732.657	367.55	<.0001
2	pexchange		2	0.0574	0.1312	403.814	304.37	<.0001
3	jul		3	0.0157	0.1469	315.523	84.57	<.0001
4	jun		4	0.0181	0.1650	213.408	99.61	<.0001
5	may		5	0.0197	0.1846	102.063	111.03	<.0001
6	feb		6	0.0087	0.1933	53.8625	49.69	<.0001
7	pctlcknite		7	0.0044	0.1977	30.5202	25.22	<.0001
8	apr		8	0.0018	0.1995	22.2324	10.26	0.0014
9	aug		9	0.0025	0.2020	10.0724	14.16	0.0002

Logarithms of double lockage times using key variables from stepwise proc 418
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0766 and C(p) = 694.4125

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	12.35201	12.35201	381.92	<.0001
Error	4607	148.99888	0.03234		
Corrected Total	4608	161.35089			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.69052	0.00332	1398.98468	43256.2	<.0001
pturnback	-0.10763	0.00551	12.35201	381.92	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pexchange Entered: R-Square = 0.1214 and C(p) = 439.0043

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	19.58933	9.79466	318.24	<.0001
Error	4606	141.76156	0.03078		
Corrected Total	4608	161.35089			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.78316	0.00685	401.74026	13053.0	<.0001
pturnback	-0.20027	0.00808	18.88619	613.63	<.0001
pexchange	-0.11927	0.00778	7.23732	235.15	<.0001

Bounds on condition number: 2.2645, 9.0579

Stepwise Selection: Step 3

Logarithms of double lockage times using key variables from stepwise proc 419
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.1369 and C(p) = 352.3391

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	22.08225	7.36075	243.39	<.0001
Error	4605	139.26864	0.03024		
Corrected Total	4608	161.35089			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.78766	0.00681	404.21955	13365.8	<.0001
jul	-0.06854	0.00755	2.49292	82.43	<.0001
pturnback	-0.19430	0.00804	17.65686	583.83	<.0001
pexchange	-0.11420	0.00773	6.60123	218.27	<.0001

Bounds on condition number: 2.2798, 16.689

Stepwise Selection: Step 4

Variable jun Entered: R-Square = 0.1547 and C(p) = 251.9461

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	24.96114	6.24029	210.65	<.0001
Error	4604	136.38975	0.02962		
Corrected Total	4608	161.35089			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.79542	0.00679	406.68231	13728.1	<.0001
jun	-0.07655	0.00777	2.87890	97.18	<.0001
jul	-0.07988	0.00756	3.30795	111.66	<.0001
pturnback	-0.19104	0.00797	17.04103	575.24	<.0001
pexchange	-0.10987	0.00766	6.08894	205.54	<.0001

Logarithms of double lockage times using key variables from stepwise proc 420
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 2.2839, 26.498

Stepwise Selection: Step 5

Variable may Entered: R-Square = 0.1732 and C(p) = 147.6202

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	27.95061	5.59012	192.89	<.0001
Error	4603	133.40028	0.02898		
Corrected Total	4608	161.35089			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.80526	0.00678	408.30875	14088.8	<.0001
may	-0.08937	0.00880	2.98947	103.15	<.0001
jun	-0.08793	0.00776	3.71932	128.34	<.0001
jul	-0.09121	0.00756	4.21898	145.58	<.0001
pturnback	-0.19067	0.00788	16.97457	585.71	<.0001
pexchange	-0.10726	0.00758	5.79739	200.04	<.0001

Bounds on condition number: 2.2865, 38.556

Stepwise Selection: Step 6

Variable feb Entered: R-Square = 0.1907 and C(p) = 49.2721

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	30.77201	5.12867	180.75	<.0001
Error	4602	130.57888	0.02837		
Corrected Total	4608	161.35089			

Logarithms of double lockage times using key variables from stepwise proc 421
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.81089	0.00674	411.12964	14489.5	<.0001
feb	-0.36845	0.03695	2.82140	99.43	<.0001
may	-0.09176	0.00871	3.14964	111.00	<.0001
jun	-0.09025	0.00768	3.91423	137.95	<.0001
jul	-0.09347	0.00748	4.42637	156.00	<.0001
pturnback	-0.19352	0.00780	17.46121	615.39	<.0001
pexchange	-0.11154	0.00752	6.24797	220.20	<.0001

Bounds on condition number: 2.2939, 52.382

Stepwise Selection: Step 7

Variable pctlcknite Entered: R-Square = 0.1950 and C(p) = 26.4021

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	31.47126	4.49589	159.27	<.0001
Error	4601	129.87963	0.02823		
Corrected Total	4608	161.35089			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.82312	0.00715	373.68726	13237.9	<.0001
feb	-0.36415	0.03686	2.75437	97.57	<.0001
may	-0.09497	0.00871	3.35520	118.86	<.0001
jun	-0.09378	0.00770	4.19084	148.46	<.0001
jul	-0.09652	0.00749	4.68826	166.08	<.0001
pctlcknite	-0.00025514	0.00005126	0.69925	24.77	<.0001
pturnback	-0.19204	0.00779	17.17135	608.30	<.0001
pexchange	-0.11061	0.00750	6.14073	217.54	<.0001

Bounds on condition number: 2.2953, 68.426

Stepwise Selection: Step 8

Logarithms of double lockage times using key variables from stepwise proc 422
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 8

Variable oct Entered: R-Square = 0.1965 and C(p) = 20.3457

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	31.69777	3.96222	140.58	<.0001
Error	4600	129.65312	0.02819		
Corrected Total	4608	161.35089			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.81883	0.00731	353.92720	12557.1	<.0001
feb	-0.36015	0.03686	2.69027	95.45	<.0001
may	-0.09138	0.00880	3.04208	107.93	<.0001
jun	-0.09022	0.00779	3.77703	134.01	<.0001
jul	-0.09296	0.00759	4.22997	150.08	<.0001
oct	0.02457	0.00867	0.22651	8.04	0.0046
pctlcknite	-0.00025733	0.00005123	0.71112	25.23	<.0001
pturnback	-0.19136	0.00778	17.03341	604.33	<.0001
pexchange	-0.10956	0.00750	6.01070	213.26	<.0001

Bounds on condition number: 2.3009, 87.442

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0766	0.0766	694.413	381.92	<.0001
2	pexchange		2	0.0449	0.1214	439.004	235.15	<.0001
3	jul		3	0.0155	0.1369	352.339	82.43	<.0001
4	jun		4	0.0178	0.1547	251.946	97.18	<.0001
5	may		5	0.0185	0.1732	147.620	103.15	<.0001
6	feb		6	0.0175	0.1907	49.2721	99.43	<.0001
7	pctlcknite		7	0.0043	0.1950	26.4021	24.77	<.0001
8	oct		8	0.0014	0.1965	20.3457	8.04	0.0046

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 423

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0272 and C(p) = 76.7352

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.53392	1.53392	32.11	<.0001
Error	1147	54.78658	0.04777		
Corrected Total	1148	56.32051			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.45381	0.00802	153.01558	3203.50	<.0001
pturnback	-0.07644	0.01349	1.53392	32.11	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable dec Entered: R-Square = 0.0495 and C(p) = 50.7342

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	2.78958	1.39479	29.86	<.0001
Error	1146	53.53093	0.04671		
Corrected Total	1148	56.32051			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.44463	0.00812	139.90778	2995.17	<.0001
dec	0.13922	0.02685	1.25566	26.88	<.0001
pturnback	-0.07411	0.01335	1.44047	30.84	<.0001

Bounds on condition number: 1.0011, 4.0045

Stepwise Selection: Step 3

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 424

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 3

Variable pexchange Entered: R-Square = 0.0606 and C(p) = 38.8462

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	3.41237	1.13746	24.62	<.0001
Error	1145	52.90814	0.04621		
Corrected Total	1148	56.32051			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.47514	0.01159	77.62840	1679.98	<.0001
dec	0.12922	0.02685	1.07062	23.17	<.0001
pturnback	-0.10414	0.01559	2.06146	44.61	<.0001
pexchange	-0.05822	0.01586	0.62279	13.48	0.0003

Bounds on condition number: 1.3862, 11.336

Stepwise Selection: Step 4

Variable pctlcknite Entered: R-Square = 0.0678 and C(p) = 31.7558

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	3.82001	0.95500	20.81	<.0001
Error	1144	52.50050	0.04589		
Corrected Total	1148	56.32051			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.46068	0.01253	62.02631	1351.57	<.0001
dec	0.12381	0.02682	0.97830	21.32	<.0001
pctlcknite	0.00039737	0.00013333	0.40764	8.88	0.0029
pturnback	-0.10335	0.01554	2.03001	44.23	<.0001
pexchange	-0.05860	0.01581	0.63078	13.74	0.0002

Activity times using key variables from stepwise proc 20:21 Tuesday, June 28, 2005 425

The REG Procedure
Model: MODEL1
Dependent Variable: plockhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.3863, 19.157

Stepwise Selection: Step 5

Variable jun Entered: R-Square = 0.0743 and C(p) = 25.6320

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	4.18430	0.83686	18.35	<.0001
Error	1143	52.13620	0.04561		
Corrected Total	1148	56.32051			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	0.46528	0.01260	62.21439	1363.95	<.0001
jun	-0.06347	0.02246	0.36430	7.99	0.0048
dec	0.11847	0.02680	0.89123	19.54	<.0001
pctlcknite	0.00039129	0.00013294	0.39515	8.66	0.0033
pturnback	-0.10138	0.01551	1.94941	42.74	<.0001
pexchange	-0.05628	0.01578	0.58025	12.72	0.0004

Bounds on condition number: 1.39, 29.054

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0272	0.0272	76.7352	32.11	<.0001
2	dec		2	0.0223	0.0495	50.7342	26.88	<.0001
3	pexchange		3	0.0111	0.0606	38.8462	13.48	0.0003
4	pctlcknite		4	0.0072	0.0678	31.7558	8.88	0.0029
5	jun		5	0.0065	0.0743	25.6320	7.99	0.0048

Logarithms of single lockage times using key variables from stepwise proc 426
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 1

Variable pturnback Entered: R-Square = 0.0297 and C(p) = 72.9520

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	6.84241	6.84241	35.07	<.0001
Error	1147	223.77048	0.19509		
Corrected Total	1148	230.61289			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.90068	0.01620	602.73609	3089.50	<.0001
pturnback	-0.16144	0.02726	6.84241	35.07	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jun Entered: R-Square = 0.0437 and C(p) = 57.3729

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	10.07217	5.03609	26.17	<.0001
Error	1146	220.54072	0.19244		
Corrected Total	1148	230.61289			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.88523	0.01653	551.94620	2868.09	<.0001
jun	-0.18814	0.04592	3.22976	16.78	<.0001
pturnback	-0.15881	0.02708	6.61788	34.39	<.0001

Bounds on condition number: 1.0006, 4.0022

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 427
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 3

Variable dec Entered: R-Square = 0.0545 and C(p) = 45.7308

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	12.57858	4.19286	22.02	<.0001
Error	1145	218.03431	0.19042		
Corrected Total	1148	230.61289			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.89930	0.01689	539.62331	2833.81	<.0001
jun	-0.17529	0.04582	2.78682	14.63	0.0001
dec	0.19729	0.05438	2.50641	13.16	0.0003
pturnback	-0.15570	0.02695	6.35454	33.37	<.0001

Bounds on condition number: 1.0071, 9.0459

Stepwise Selection: Step 4

Variable pctlcknite Entered: R-Square = 0.0631 and C(p) = 36.9332

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	14.56239	3.64060	19.28	<.0001
Error	1144	216.05050	0.18886		
Corrected Total	1148	230.61289			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.93185	0.01959	427.15765	2261.82	<.0001
jun	-0.17296	0.04564	2.71252	14.36	0.0002
dec	0.18570	0.05427	2.21105	11.71	0.0006
pctlcknite	0.00087670	0.00027050	1.98381	10.50	0.0012
pturnback	-0.15358	0.02685	6.17872	32.72	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0115, 16.104

Stepwise Selection: Step 5

Variable sep Entered: R-Square = 0.0717 and C(p) = 28.1616

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	16.54142	3.30828	17.66	<.0001
Error	1143	214.07147	0.18729		
Corrected Total	1148	230.61289			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.94860	0.02018	413.78062	2209.31	<.0001
jun	-0.15656	0.04573	2.19559	11.72	0.0006
sep	0.14021	0.04313	1.97903	10.57	0.0012
dec	0.20169	0.05427	2.58666	13.81	0.0002
pctlcknite	0.00089705	0.00026945	2.07588	11.08	0.0009
pturnback	-0.15440	0.02674	6.24472	33.34	<.0001

Bounds on condition number: 1.02, 25.337

Stepwise Selection: Step 6

Variable pexchange Entered: R-Square = 0.0798 and C(p) = 19.9711

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	18.41370	3.06895	16.52	<.0001
Error	1142	212.19919	0.18581		
Corrected Total	1148	230.61289			

Logarithms of single lockage times using key variables from stepwise proc 429
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The REG Procedure
Model: MODEL1
Dependent Variable: loglckhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	-0.89640	0.02597	221.34364	1191.21	<.0001
jun	-0.14922	0.04560	1.98952	10.71	0.0011
sep	0.13892	0.04296	1.94266	10.45	0.0013
dec	0.18476	0.05432	2.14986	11.57	0.0007
pctlcknite	0.00090434	0.00026839	2.10961	11.35	0.0008
pturnback	-0.20660	0.03130	8.09494	43.56	<.0001
pexchange	-0.10110	0.03185	1.87228	10.08	0.0015

Bounds on condition number: 1.3901, 41.114

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	pturnback		1	0.0297	0.0297	72.9520	35.07	<.0001
2	jun		2	0.0140	0.0437	57.3729	16.78	<.0001
3	dec		3	0.0109	0.0545	45.7308	13.16	0.0003
4	pctlcknite		4	0.0086	0.0631	36.9332	10.50	0.0012
5	sep		5	0.0086	0.0717	28.1616	10.57	0.0012
6	pexchange		6	0.0081	0.0798	19.9711	10.08	0.0015

Logarithms of single lockage times using key variables from stepwise proc 430
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0361 and C(p) = 291.0885

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	272.99377	272.99377	149.82	<.0001
Error	3997	7283.34960	1.82220		
Corrected Total	3998	7556.34337			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	5.79523	0.02287	117043	64231.4	<.0001
jun	-0.78067	0.06378	272.99377	149.82	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable jul Entered: R-Square = 0.0501 and C(p) = 230.8986

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	378.67311	189.33655	105.41	<.0001
Error	3996	7177.67026	1.79621		
Corrected Total	3998	7556.34337			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	5.87045	0.02473	101215	56349.4	<.0001
jun	-0.85589	0.06408	320.45035	178.40	<.0001
jul	-0.47836	0.06236	105.67934	58.83	<.0001

Bounds on condition number: 1.024, 4.0959

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 431
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 3

Variable may Entered: R-Square = 0.0672 and C(p) = 156.8953

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	507.82547	169.27516	95.94	<.0001
Error	3995	7048.51790	1.76433		
Corrected Total	3998	7556.34337			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	5.94957	0.02620	91007	51581.3	<.0001
may	-0.63491	0.07421	129.15236	73.20	<.0001
jun	-0.93501	0.06418	374.49451	212.26	<.0001
jul	-0.55748	0.06250	140.38651	79.57	<.0001

Bounds on condition number: 1.0469, 9.3912

Stepwise Selection: Step 4

Variable apr Entered: R-Square = 0.0792 and C(p) = 105.5261

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	598.51580	149.62895	85.89	<.0001
Error	3994	6957.82757	1.74207		
Corrected Total	3998	7556.34337			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	6.02863	0.02824	79376	45564.3	<.0001
apr	-0.52523	0.07280	90.69033	52.06	<.0001
may	-0.71397	0.07455	159.79118	91.72	<.0001
jun	-1.01407	0.06471	427.87080	245.61	<.0001
jul	-0.63654	0.06306	177.50228	101.89	<.0001

Logarithms of single lockage times using key variables from stepwise proc 432
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0795, 17.12

Stepwise Selection: Step 5

Variable waitmin Entered: R-Square = 0.0856 and C(p) = 79.1502

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	646.73499	129.34700	74.75	<.0001
Error	3993	6909.60838	1.73043		
Corrected Total	3998	7556.34337			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	6.07284	0.02937	73994	42760.4	<.0001
apr	-0.52715	0.07255	91.35166	52.79	<.0001
may	-0.74725	0.07457	173.78398	100.43	<.0001
jun	-1.03598	0.06462	444.71538	257.00	<.0001
jul	-0.66655	0.06311	193.05523	111.56	<.0001
waitmin	-0.00034402	0.00006517	48.21919	27.87	<.0001

Bounds on condition number: 1.0883, 26.581

Stepwise Selection: Step 6

Variable sep Entered: R-Square = 0.0899 and C(p) = 62.1513

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	679.01982	113.16997	65.69	<.0001
Error	3992	6877.32355	1.72278		
Corrected Total	3998	7556.34337			

Logarithms of single lockage times using key variables from stepwise proc 433
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	6.02296	0.03149	63037	36590.3	<.0001
apr	-0.47661	0.07333	72.78193	42.25	<.0001
may	-0.69720	0.07529	147.71689	85.74	<.0001
jun	-0.98575	0.06552	390.01031	226.38	<.0001
jul	-0.61645	0.06402	159.72809	92.72	<.0001
sep	0.34299	0.07923	32.28483	18.74	<.0001
waitmin	-0.00034940	0.00006504	49.71933	28.86	<.0001

Bounds on condition number: 1.1251, 39.124

Stepwise Selection: Step 7

Variable pcttrannite Entered: R-Square = 0.0930 and C(p) = 50.3557

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	702.46267	100.35181	58.43	<.0001
Error	3991	6853.88070	1.71733		
Corrected Total	3998	7556.34337			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	5.92324	0.04143	35095	20435.6	<.0001
apr	-0.45710	0.07340	66.59846	38.78	<.0001
may	-0.67785	0.07536	138.95595	80.91	<.0001
jun	-0.95621	0.06590	361.57756	210.55	<.0001
jul	-0.59549	0.06417	147.88598	86.11	<.0001
sep	0.35388	0.07916	34.31957	19.98	<.0001
pcttrannite	0.00187	0.00050479	23.44285	13.65	0.0002
waitmin	-0.00035374	0.00006495	50.94576	29.67	<.0001

Bounds on condition number: 1.134, 53.072

Stepwise Selection: Step 8

Logarithms of single lockage times using key variables from stepwise proc 434
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 8

Variable mar Entered: R-Square = 0.0955 and C(p) = 40.8783

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	721.96623	90.24578	52.69	<.0001
Error	3990	6834.37715	1.71288		
Corrected Total	3998	7556.34337			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	5.95842	0.04267	33393	19495.3	<.0001
mar	-0.33854	0.10033	19.50356	11.39	0.0007
apr	-0.49257	0.07406	75.77681	44.24	<.0001
may	-0.71124	0.07591	150.38459	87.80	<.0001
jun	-0.99067	0.06660	378.98421	221.26	<.0001
jul	-0.62915	0.06486	161.17272	94.09	<.0001
sep	0.31811	0.07977	27.24147	15.90	<.0001
pcttrannite	0.00181	0.00050443	21.97796	12.83	0.0003
waitmin	-0.00033093	0.00006521	44.10827	25.75	<.0001

Bounds on condition number: 1.1614, 70.27

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Label	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun			1	0.0361	0.0361	291.089	149.82	<.0001
2	jul			2	0.0140	0.0501	230.899	58.83	<.0001
3	may			3	0.0171	0.0672	156.895	73.20	<.0001
4	apr			4	0.0120	0.0792	105.526	52.06	<.0001
5	waitmin		Wait/before/lockge	5	0.0064	0.0856	79.1502	27.87	<.0001
6	sep			6	0.0043	0.0899	62.1513	18.74	<.0001
7	pcttrannite			7	0.0031	0.0930	50.3557	13.65	0.0002
8	mar			8	0.0026	0.0955	40.8783	11.39	0.0007

Logarithms of single lockage times using key variables from stepwise proc 435
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable jun Entered: R-Square = 0.0463 and C(p) = 297.7774

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	8.88822	8.88822	193.92	<.0001
Error	3995	183.11223	0.04584		
Corrected Total	3996	192.00044			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.73219	0.00363	10451	228004	<.0001
jun	-0.14087	0.01012	8.88822	193.92	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable may Entered: R-Square = 0.0655 and C(p) = 213.2992

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	12.57874	6.28937	140.00	<.0001
Error	3994	179.42171	0.04492		
Corrected Total	3996	192.00044			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.74334	0.00380	9473.32121	210880	<.0001
may	-0.10615	0.01171	3.69052	82.15	<.0001
jun	-0.15202	0.01009	10.19752	227.00	<.0001

Bounds on condition number: 1.0151, 4.0604

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 436
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable jul Entered: R-Square = 0.0873 and C(p) = 117.2590

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	16.76268	5.58756	127.32	<.0001
Error	3993	175.23777	0.04389		
Corrected Total	3996	192.00044			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.76025	0.00413	7963.04914	181448	<.0001
may	-0.12305	0.01170	4.85093	110.53	<.0001
jun	-0.16893	0.01012	12.22291	278.51	<.0001
jul	-0.09632	0.00986	4.18394	95.34	<.0001

Bounds on condition number: 1.0469, 9.391

Stepwise Selection: Step 4

Variable apr Entered: R-Square = 0.1024 and C(p) = 51.4860

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	19.65495	4.91374	113.82	<.0001
Error	3992	172.34550	0.04317		
Corrected Total	3996	192.00044			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.77437	0.00445	6872.93171	159196	<.0001
apr	-0.09380	0.01146	2.89227	66.99	<.0001
may	-0.13718	0.01174	5.89816	136.62	<.0001
jun	-0.18305	0.01019	13.94051	322.90	<.0001
jul	-0.11044	0.00993	5.33509	123.58	<.0001

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.0794, 17.12

Stepwise Selection: Step 5

Variable mar Entered: R-Square = 0.1087 and C(p) = 25.1686

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	20.86341	4.17268	97.31	<.0001
Error	3991	171.13703	0.04288		
Corrected Total	3996	192.00044			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.78168	0.00464	6320.17126	147390	<.0001
mar	-0.08307	0.01565	1.20846	28.18	<.0001
apr	-0.10111	0.01150	3.31230	77.24	<.0001
may	-0.14448	0.01178	6.45384	150.51	<.0001
jun	-0.19036	0.01025	14.80352	345.23	<.0001
jul	-0.11775	0.01000	5.94938	138.74	<.0001

Bounds on condition number: 1.1003, 26.973

Stepwise Selection: Step 6

Variable sep Entered: R-Square = 0.1111 and C(p) = 16.0098

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	21.33962	3.55660	83.15	<.0001
Error	3990	170.66082	0.04277		
Corrected Total	3996	192.00044			

Logarithms of single lockage times using key variables from stepwise proc 438
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.77488	0.00506	5257.70121	122924	<.0001
mar	-0.07628	0.01576	1.00190	23.42	<.0001
apr	-0.09431	0.01167	2.79442	65.33	<.0001
may	-0.13769	0.01194	5.69075	133.05	<.0001
jun	-0.18356	0.01043	13.24162	309.59	<.0001
jul	-0.11095	0.01019	5.07184	118.58	<.0001
sep	0.04200	0.01259	0.47621	11.13	0.0009

Bounds on condition number: 1.146, 39.986

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	jun		1	0.0463	0.0463	297.777	193.92	<.0001
2	may		2	0.0192	0.0655	213.299	82.15	<.0001
3	jul		3	0.0218	0.0873	117.259	95.34	<.0001
4	apr		4	0.0151	0.1024	51.4860	66.99	<.0001
5	mar		5	0.0063	0.1087	25.1686	28.18	<.0001
6	sep		6	0.0025	0.1111	16.0098	11.13	0.0009

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Logarithms of single lockage times using key variables from stepwise proc                    439
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                              The REG Procedure
                                Model: MODEL1
                       Dependent Variable: transithrs

 No variable met the 0.0100 significance level for entry into the model.
```

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Logarithms of single lockage times using key variables from stepwise proc                    440
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                          The REG Procedure
                            Model: MODEL1
                   Dependent Variable: logtrnhrs

 No variable met the 0.0100 significance level for entry into the model.
```

Logarithms of single lockage times using key variables from stepwise proc 441
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 1

Variable contsingle Entered: R-Square = 0.0489 and C(p) = 77.9041

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	78115	78115	65.87	<.0001
Error	1282	1520434	1185.98562		
Corrected Total	1283	1598549			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	26.92485	1.46050	403071	339.86	<.0001
contsingle	-15.74154	1.93963	78115	65.87	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable retdouble Entered: R-Square = 0.0684 and C(p) = 52.0336

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	109322	54661	47.02	<.0001
Error	1281	1489227	1162.55054		
Corrected Total	1283	1598549			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	31.08420	1.65391	410647	353.23	<.0001
contsingle	-19.90089	2.08142	106276	91.42	<.0001
retdouble	-17.65341	3.40732	31206	26.84	<.0001

Bounds on condition number: 1.1748, 4.6991

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 442
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 3

Variable pcttrannite Entered: R-Square = 0.0801 and C(p) = 37.3117

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	128045	42682	37.15	<.0001
Error	1280	1470504	1148.83112		
Corrected Total	1283	1598549			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	26.87742	1.94653	219032	190.66	<.0001
contsingle	-20.89164	2.08361	115497	100.53	<.0001
retdouble	-18.60511	3.39535	34495	30.03	<.0001
pcttrannite	0.11038	0.02734	18723	16.30	<.0001

Bounds on condition number: 1.1913, 10.159

Stepwise Selection: Step 4

Variable oct Entered: R-Square = 0.0856 and C(p) = 31.4205

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	136881	34220	29.94	<.0001
Error	1279	1461668	1142.82105		
Corrected Total	1283	1598549			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	26.51960	1.94569	212307	185.77	<.0001
oct	8.12577	2.92236	8835.70948	7.73	0.0055
contsingle	-21.42547	2.08700	120446	105.39	<.0001
retdouble	-18.86625	3.38776	35442	31.01	<.0001
pcttrannite	0.10371	0.02737	16404	14.35	0.0002

Logarithms of single lockage times using key variables from stepwise proc 443
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The REG Procedure
Model: MODEL1
Dependent Variable: transithrs

Stepwise Selection: Step 4

Bounds on condition number: 1.2015, 17.695

Stepwise Selection: Step 5

Variable dec Entered: R-Square = 0.0911 and C(p) = 25.6709

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	145558	29112	25.61	<.0001
Error	1278	1452991	1136.92565		
Corrected Total	1283	1598549			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	25.97984	1.95048	201708	177.42	<.0001
oct	8.95004	2.93004	10608	9.33	0.0023
dec	11.05476	4.00154	8677.13540	7.63	0.0058
contsingle	-21.45937	2.08165	120824	106.27	<.0001
retdouble	-18.31423	3.38491	33282	29.27	<.0001
pcttrannite	0.09782	0.02739	14504	12.76	0.0004

Bounds on condition number: 1.2015, 27.322

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	contsingle		1	0.0489	0.0489	77.9041	65.87	<.0001
2	retdouble		2	0.0195	0.0684	52.0336	26.84	<.0001
3	pcttrannite		3	0.0117	0.0801	37.3117	16.30	<.0001
4	oct		4	0.0055	0.0856	31.4205	7.73	0.0055
5	dec		5	0.0054	0.0911	25.6709	7.63	0.0058

Logarithms of single lockage times using key variables from stepwise proc 444
20:21 Tuesday, June 28, 2005

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 1

Variable contsingle Entered: R-Square = 0.0817 and C(p) = 120.2625

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	104.46975	104.46975	112.80	<.0001
Error	1268	1174.39170	0.92618		
Corrected Total	1269	1278.86146			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.53710	0.04134	3488.77925	3766.86	<.0001
contsingle	-0.57987	0.05460	104.46975	112.80	<.0001

Bounds on condition number: 1, 1

Stepwise Selection: Step 2

Variable pcttrannite Entered: R-Square = 0.1145 and C(p) = 72.7923

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	146.37913	73.18957	81.88	<.0001
Error	1267	1132.48232	0.89383		
Corrected Total	1269	1278.86146			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.32262	0.05129	1833.25858	2051.02	<.0001
contsingle	-0.61286	0.05385	115.75916	129.51	<.0001
pcttrannite	0.00526	0.00076745	41.90938	46.89	<.0001

Bounds on condition number: 1.0081, 4.0323

Stepwise Selection: Step 3

Logarithms of single lockage times using key variables from stepwise proc 445
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 3

Variable retdouble Entered: R-Square = 0.1344 and C(p) = 44.6788

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	171.89016	57.29672	65.53	<.0001
Error	1266	1106.97130	0.87438		
Corrected Total	1269	1278.86146			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.43476	0.05481	1725.52475	1973.42	<.0001
contsingle	-0.73721	0.05803	141.13521	161.41	<.0001
retdouble	-0.50778	0.09401	25.51102	29.18	<.0001
pcttrannite	0.00551	0.00076058	45.96824	52.57	<.0001

Bounds on condition number: 1.1964, 10.188

Stepwise Selection: Step 4

Variable mar Entered: R-Square = 0.1404 and C(p) = 37.6656

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	179.52579	44.88145	51.64	<.0001
Error	1265	1099.33566	0.86904		
Corrected Total	1269	1278.86146			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.45367	0.05501	1728.86290	1989.39	<.0001
mar	-0.27010	0.09112	7.63564	8.79	0.0031
contsingle	-0.73288	0.05787	139.38980	160.40	<.0001
retdouble	-0.52129	0.09383	26.82336	30.87	<.0001
pcttrannite	0.00562	0.00075908	47.63220	54.81	<.0001

Logarithms of single lockage times using key variables from stepwise proc 446
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 4

Bounds on condition number: 1.1972, 17.635

Stepwise Selection: Step 5

Variable dec Entered: R-Square = 0.1451 and C(p) = 32.5366

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	185.56525	37.11305	42.91	<.0001
Error	1264	1093.29621	0.86495		
Corrected Total	1269	1278.86146			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.43831	0.05519	1688.36031	1951.98	<.0001
mar	-0.24877	0.09126	6.42693	7.43	0.0065
dec	0.29136	0.11026	6.03945	6.98	0.0083
contsingle	-0.73218	0.05773	139.12292	160.85	<.0001
retdouble	-0.50447	0.09383	25.00493	28.91	<.0001
pcttrannite	0.00548	0.00075924	44.99190	52.02	<.0001

Bounds on condition number: 1.1972, 27.221

Stepwise Selection: Step 6

Variable oct Entered: R-Square = 0.1501 and C(p) = 27.0033

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	191.94724	31.99121	37.17	<.0001
Error	1263	1086.91422	0.86058		
Corrected Total	1269	1278.86146			

The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 6

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.42570	0.05524	1659.21205	1928.01	<.0001
mar	-0.21460	0.09189	4.69353	5.45	0.0197
oct	0.22381	0.08219	6.38199	7.42	0.0066
dec	0.32572	0.11071	7.44968	8.66	0.0033
contsingle	-0.74851	0.05790	143.83708	167.14	<.0001
retdouble	-0.50930	0.09361	25.47604	29.60	<.0001
pcttrannite	0.00526	0.00076141	41.09050	47.75	<.0001

Bounds on condition number: 1.2102, 39.309

Stepwise Selection: Step 7

Variable mar Removed: R-Square = 0.1464 and C(p) = 30.5435

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	187.25371	37.45074	43.37	<.0001
Error	1264	1091.60774	0.86361		
Corrected Total	1269	1278.86146			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.40841	0.05484	1665.56346	1928.60	<.0001
oct	0.25002	0.08156	8.11540	9.40	0.0022
dec	0.35224	0.11032	8.80492	10.20	0.0014
contsingle	-0.75372	0.05796	146.06523	169.13	<.0001
retdouble	-0.49811	0.09365	24.43305	28.29	<.0001
pcttrannite	0.00514	0.00076109	39.44784	45.68	<.0001

Bounds on condition number: 1.2084, 27.387

Stepwise Selection: Step 8

Variable nov Entered: R-Square = 0.1531 and C(p) = 22.4250

Logarithms of single lockage times using key variables from stepwise proc 448
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The REG Procedure
Model: MODEL1
Dependent Variable: logtrnhrs

Stepwise Selection: Step 8

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	195.82579	32.63763	38.06	<.0001
Error	1263	1083.03566	0.85751		
Corrected Total	1269	1278.86146			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.39180	0.05490	1627.62742	1898.08	<.0001
oct	0.28852	0.08218	10.57036	12.33	0.0005
nov	0.28275	0.08943	8.57208	10.00	0.0016
dec	0.38992	0.11057	10.66412	12.44	0.0004
contsingle	-0.76434	0.05785	149.70260	174.58	<.0001
retdouble	-0.49534	0.09332	24.16043	28.18	<.0001
pcttrannite	0.00487	0.00076326	34.93232	40.74	<.0001

Bounds on condition number: 1.2125, 39.441

All variables left in the model are significant at the 0.0100 level.

No other variable met the 0.0100 significance level for entry into the model.

Summary of Stepwise Selection

Step	Variable Entered	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	contsingle		1	0.0817	0.0817	120.262	112.80	<.0001
2	pcttrannite		2	0.0328	0.1145	72.7923	46.89	<.0001
3	retdouble		3	0.0199	0.1344	44.6788	29.18	<.0001
4	mar		4	0.0060	0.1404	37.6656	8.79	0.0031
5	dec		5	0.0047	0.1451	32.5366	6.98	0.0083
6	oct		6	0.0050	0.1501	27.0033	7.42	0.0066
7		mar	5	0.0037	0.1464	30.5435	5.45	0.0197
8	nov		6	0.0067	0.1531	22.4250	10.00	0.0016

```
***** probabilities of outcomes after entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   26MAY05 00:25   ;
pcontsame=0.8374939143 +(-0.416473123 )*feb +(-0.127275034 )*mar +(-0.049780559 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(-0.103304285 )*sep
+(-0.06727403 )*oct +(0 )*nov +(0 )*dec +(-0.406660935 )*psingle +(0.1526545144 )*pjacknife +(0 )*pknockout
+(0 )*pothtype    ;

 * stderr = 0.4103125805  ;

 mcontsame = 0.7189097104 ;
 *  based on           5,870 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   08JUN05 15:31   ;
pcontsame=0.8374718428 +(-0.41574121 )*feb +(-0.127617918 )*mar +(-0.050448089 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(-0.102363405 )*sep +(-
0.067019514 )*oct +(0 )*nov +(0 )*dec +(-0.409689192 )*psingle +(0.1525939822 )*pjacknife +(0 )*pknockout
+(0 )*pothtype    ;

 * stderr = 0.4102093687  ;

 mcontsame = 0.7174430466 ;
 *  based on           5,882 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   08JUN05 15:39   ;
pcontsame=0.8374718428 +(-0.41574121 )*feb +(-0.127617918 )*mar +(-0.050448089 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(-0.102363405 )*sep +(-
0.067019514 )*oct +(0 )*nov +(0 )*dec +(-0.409689192 )*psingle +(0.1525939822 )*pjacknife +(0 )*pknockout
+(0 )*pothtype    ;
```

```
 * stderr = 0.4102093687  ;

 mcontsame = 0.7174430466 ;
 *  based on           5,882 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   08JUN05 16:30   ;
pcontsame=0.8374718428 +(-0.41574121 )*feb +(-0.127617918 )*mar +(-0.050448089 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(-0.102363405 )*sep +(-
0.067019514 )*oct +(0 )*nov +(0 )*dec +(-0.409689192 )*psingle +(0.1525939822 )*pjacknife +(0 )*pknockout
+(0 )*pothtype    ;

 * stderr = 0.4102093687  ;

 mcontsame = 0.7174430466 ;
 *  based on           5,882 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   28JUN05 19:56   ;
pcontsame=0.8374939143 +(-0.416473123 )*feb +(-0.127275034 )*mar +(-0.049780559 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(-0.103304285 )*sep
+(-0.06727403 )*oct +(0 )*nov +(0 )*dec +(-0.406660935 )*psingle +(0.1526545144 )*pjacknife +(0 )*pknockout
+(0 )*pothtype    ;

 * stderr = 0.4103125805  ;

 mcontsame = 0.7189097104 ;
 *  based on           5,870 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
```

```
 * model  fitted   28JUN05 20:21   ;
pcontsame=0.8374939143 +(-0.416473123 )*feb +(-0.127275034 )*mar +(-0.049780559 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(-0.103304285 )*sep
+(-0.06727403 )*oct +(0 )*nov +(0 )*dec +(-0.406660935 )*psingle +(0.1526545144 )*pjacknife +(0 )*pknockout
+(0 )*pothtype    ;

 * stderr = 0.4103125805  ;

 mcontsame = 0.7189097104 ;
 *  based on           5,870 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** probabilities of outcomes after entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   26MAY05 00:25   ;
pcontsame=0.7494463179 +(-0.223419007 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0.0668068171 )*jun +(0.0845970204 )*jul +(0 )*aug +(0 )*sep +(-
0.056750863 )*oct +(-0.06719612 )*nov +(-0.223922867 )*dec +(-0.332115313 )*psingle +(0.165032684 )*pjacknife +(0 )*
pknockout +(0 )*pothtype    ;

 * stderr = 0.4386323767  ;

 mcontsame = 0.667670179 ;
 *  based on           5,979 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   08JUN05 15:31   ;
pcontsame=0.7484656706 +(-0.23082091 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0.0686235071 )*jun +(0.0864513651 )*jul +(0 )*aug +(0 )*sep +(-0.054488017
)*oct +(-0.064268028 )*nov +(-0.219776064 )*dec +(-0.336890038 )*psingle +(0.164582748 )*pjacknife +(0 )*
pknockout +(0 )*pothtype    ;

 * stderr = 0.4385174213  ;

 mcontsame = 0.6658882402 ;
 *  based on           5,995 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   08JUN05 15:39   ;
pcontsame=0.7484656706 +(-0.23082091 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0.0686235071 )*jun +(0.0864513651 )*jul +(0 )*aug +(0 )*sep +(-0.054488017
)*oct +(-0.064268028 )*nov +(-0.219776064 )*dec +(-0.336890038 )*psingle +(0.164582748 )*pjacknife +(0 )*
pknockout +(0 )*pothtype    ;
```

```
 * stderr = 0.4385174213  ;

 mcontsame = 0.6658882402 ;
 *  based on           5,995 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   08JUN05 16:30   ;
pcontsame=0.7484656706 +(-0.23082091 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0.0686235071 )*jun +(0.0864513651 )*jul +(0 )*aug +(0 )*sep +(-0.054488017
)*oct +(-0.064268028 )*nov +(-0.219776064 )*dec +(-0.336890038 )*psingle +(0.164582748 )*pjacknife +(0 )*
pknockout +(0 )*pothtype    ;

 * stderr = 0.4385174213  ;

 mcontsame = 0.6658882402 ;
 *  based on           5,995 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   28JUN05 19:56   ;
pcontsame=0.7494463179 +(-0.223419007 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0.0668068171 )*jun +(0.0845970204 )*jul +(0 )*aug +(0 )*sep +(-
0.056750863 )*oct +(-0.06719612 )*nov +(-0.223922867 )*dec +(-0.332115313 )*psingle +(0.165032684 )*pjacknife +(0 )*
pknockout +(0 )*pothtype    ;

 * stderr = 0.4386323767  ;

 mcontsame = 0.667670179 ;
 *  based on           5,979 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
```

```
 * model  fitted   28JUN05 20:21   ;
pcontsame=0.7494463179 +(-0.223419007 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0.0668068171 )*jun +(0.0845970204 )*jul +(0 )*aug +(0 )*sep +(-
0.056750863 )*oct +(-0.06719612 )*nov +(-0.223922867 )*dec +(-0.332115313 )*psingle +(0.165032684 )*pjacknife +(0 )*
pknockout +(0 )*pothtype    ;

 * stderr = 0.4386323767  ;

 mcontsame = 0.667670179 ;
 *  based on           5,979 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** probabilities of outcomes after entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   26MAY05 00:25   ;
pcontsame=0.9144242097 +(0 )*feb +(0 )*mar +(-0.056700292 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-
0.694298222 )*psingle +(0 )*pjacknife +(0 )*pknockout +(-0.41442421 )*pothtype    ;

 * stderr = 0.3175302203  ;

 mcontsame = 0.7610501828 ;
 *  based on           6,018 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   08JUN05 15:31   ;
pcontsame=0.9142668154 +(0 )*feb +(0 )*mar +(-0.056883306 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-
0.695231632 )*psingle +(0 )*pjacknife +(0 )*pknockout +(-0.414266815 )*pothtype    ;

 * stderr = 0.3175903489  ;

 mcontsame = 0.7600796416 ;
 *  based on           6,027 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   08JUN05 15:39   ;
pcontsame=0.9142668154 +(0 )*feb +(0 )*mar +(-0.056883306 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-
0.695231632 )*psingle +(0 )*pjacknife +(0 )*pknockout +(-0.414266815 )*pothtype    ;

 * stderr = 0.3175903489  ;

 mcontsame = 0.7600796416 ;
```

```
 *  based on           6,027 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   08JUN05 16:30   ;
pcontsame=0.9142668154 +(0 )*feb +(0 )*mar +(-0.056883306 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-
0.695231632 )*psingle +(0 )*pjacknife +(0 )*pknockout +(-0.414266815 )*pothtype    ;

 * stderr = 0.3175903489  ;

 mcontsame = 0.7600796416 ;
 *  based on           6,027 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   28JUN05 19:56   ;
pcontsame=0.9144242097 +(0 )*feb +(0 )*mar +(-0.056700292 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-
0.694298222 )*psingle +(0 )*pjacknife +(0 )*pknockout +(-0.41442421 )*pothtype    ;

 * stderr = 0.3175302203  ;

 mcontsame = 0.7610501828 ;
 *  based on           6,018 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   28JUN05 20:21   ;
pcontsame=0.9144242097 +(0 )*feb +(0 )*mar +(-0.056700292 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-
0.694298222 )*psingle +(0 )*pjacknife +(0 )*pknockout +(-0.41442421 )*pothtype    ;
```

```
 * stderr = 0.3175302203  ;

 mcontsame = 0.7610501828 ;
 *  based on           6,018 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** probabilities of outcomes after entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   26MAY05 00:25   ;
pcontsame=0.8943231441 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.591602056
)*psingle +(0 )*pjacknife +(0 )*pknockout +(0 )*poththype    ;

 * stderr = 0.3440450492  ;

 mcontsame = 0.7734537874 ;
 *  based on           5,756 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   08JUN05 15:31   ;
pcontsame=0.8943231441 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.592372338
)*psingle +(0 )*pjacknife +(0 )*pknockout +(0 )*poththype    ;

 * stderr = 0.3440246311  ;

 mcontsame = 0.7730508769 ;
 *  based on           5,759 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   08JUN05 15:39   ;
pcontsame=0.8943231441 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.592372338
)*psingle +(0 )*pjacknife +(0 )*pknockout +(0 )*poththype    ;

 * stderr = 0.3440246311  ;

 mcontsame = 0.7730508769 ;
```

```
 *  based on          5,759 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   08JUN05 16:30   ;
pcontsame=0.8943231441 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.592372338
)*psingle +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype    ;

 * stderr = 0.3440246311  ;

 mcontsame = 0.7730508769 ;
 *  based on          5,759 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   28JUN05 19:56   ;
pcontsame=0.8943231441 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.591602056
)*psingle +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype    ;

 * stderr = 0.3440450492  ;

 mcontsame = 0.7734537874 ;
 *  based on          5,756 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   28JUN05 20:21   ;
pcontsame=0.8943231441 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.591602056
)*psingle +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype    ;
```

```
 * stderr = 0.3440450492  ;

 mcontsame = 0.7734537874 ;
 *  based on           5,756 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** probabilities of outcomes after entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   26MAY05 00:25   ;
pcontsame=0.8534987541 +(0 )*feb +(-0.071816332 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0.0517398326 )*nov +(0
)*dec +(-0.343700716 )*psingle +(0.1118309747 )*pjacknife +(0 )*pknockout +(0 )*pothtype    ;

 * stderr = 0.3787640874  ;

 mcontsame = 0.7962068966 ;
 *  based on           5,800 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   08JUN05 15:31   ;
pcontsame=0.8536851336 +(0 )*feb +(-0.07510473 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0.0516862971 )*nov +(0
)*dec +(-0.344764764 )*psingle +(0.1116970494 )*pjacknife +(0 )*pknockout +(0 )*pothtype    ;

 * stderr = 0.3787958753  ;

 mcontsame = 0.7957952783 ;
 *  based on           5,803 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   08JUN05 15:39   ;
pcontsame=0.8536851336 +(0 )*feb +(-0.07510473 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0.0516862971 )*nov +(0
)*dec +(-0.344764764 )*psingle +(0.1116970494 )*pjacknife +(0 )*pknockout +(0 )*pothtype    ;

 * stderr = 0.3787958753  ;

 mcontsame = 0.7957952783 ;
```

```
 *  based on           5,803 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   08JUN05 16:30   ;
pcontsame=0.8536851336 +(0 )*feb +(-0.07510473 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0.0516862971 )*nov +(0
)*dec +(-0.344764764 )*psingle +(0.1116970494 )*pjacknife +(0 )*pknockout +(0 )*pothtype    ;

 * stderr = 0.3787958753  ;

 mcontsame = 0.7957952783 ;
 *  based on           5,803 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   28JUN05 19:56   ;
pcontsame=0.8534987541 +(0 )*feb +(-0.071816332 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0.0517398326 )*nov +(0
)*dec +(-0.343700716 )*psingle +(0.1118309747 )*pjacknife +(0 )*pknockout +(0 )*pothtype    ;

 * stderr = 0.3787640874  ;

 mcontsame = 0.7962068966 ;
 *  based on           5,800 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   28JUN05 20:21   ;
pcontsame=0.8534987541 +(0 )*feb +(-0.071816332 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0.0517398326 )*nov +(0
)*dec +(-0.343700716 )*psingle +(0.1118309747 )*pjacknife +(0 )*pknockout +(0 )*pothtype    ;
```

```
 * stderr = 0.3787640874  ;

 mcontsame = 0.7962068966 ;
 *  based on           5,800 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** probabilities of outcomes after entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   26MAY05 00:25   ;
pcontsame=0.7447429182 +(0 )*feb +(0.0583689683 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(-0.08952626
)*dec +(-0.311825749 )*psingle +(0.2335143917 )*pjacknife +(0.1052009871 )*pknockout +(0 )*pothtype    ;

 * stderr = 0.4407611941  ;

 mcontsame = 0.6886587606 ;
 *  based on           5,987 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   08JUN05 15:31   ;
pcontsame=0.7447325412 +(0 )*feb +(0.0584283408 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(-0.089295403
)*dec +(-0.312185296 )*psingle +(0.2335085207 )*pjacknife +(0.1051985967 )*pknockout +(0 )*pothtype    ;

 * stderr = 0.4407598641  ;

 mcontsame = 0.6885437542 ;
 *  based on           5,988 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   08JUN05 15:39   ;
pcontsame=0.7447325412 +(0 )*feb +(0.0584283408 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(-0.089295403
)*dec +(-0.312185296 )*psingle +(0.2335085207 )*pjacknife +(0.1051985967 )*pknockout +(0 )*pothtype    ;

 * stderr = 0.4407598641  ;

 mcontsame = 0.6885437542 ;
```

```
 *  based on           5,988 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   08JUN05 16:30   ;
pcontsame=0.7447325412 +(0 )*feb +(0.0584283408 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(-0.089295403
)*dec +(-0.312185296 )*psingle +(0.2335085207 )*pjacknife +(0.1051985967 )*pknockout +(0 )*pothtype    ;

 * stderr = 0.4407598641  ;

 mcontsame = 0.6885437542 ;
 *  based on           5,988 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   28JUN05 19:56   ;
pcontsame=0.7447429182 +(0 )*feb +(0.0583689683 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(-0.08952626
)*dec +(-0.311825749 )*psingle +(0.2335143917 )*pjacknife +(0.1052009871 )*pknockout +(0 )*pothtype    ;

 * stderr = 0.4407611941  ;

 mcontsame = 0.6886587606 ;
 *  based on           5,987 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   28JUN05 20:21   ;
pcontsame=0.7447429182 +(0 )*feb +(0.0583689683 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(-0.08952626
)*dec +(-0.311825749 )*psingle +(0.2335143917 )*pjacknife +(0.1052009871 )*pknockout +(0 )*pothtype    ;
```

```
 * stderr = 0.4407611941  ;

 mcontsame = 0.6886587606 ;
 *  based on           5,987 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** probabilities of outcomes after entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   26MAY05 00:25   ;
pcontsame=0.9623582487 +(0 )*feb +(-0.059061037 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-
0.368389505 )*psingle +(0 )*pjacknife +(0 )*pknockout +(0 )*poththtype    ;

 * stderr = 0.2726625181  ;

 mcontsame = 0.8943183701 ;
 *  based on           6,037 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   08JUN05 15:31   ;
pcontsame=0.9624592963 +(0 )*feb +(-0.060998432 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-
0.370941048 )*psingle +(0 )*pjacknife +(0 )*pknockout +(0 )*poththtype    ;

 * stderr = 0.273041781  ;

 mcontsame = 0.8935782853 ;
 *  based on           6,042 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   08JUN05 15:39   ;
pcontsame=0.9624592963 +(0 )*feb +(-0.060998432 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-
0.370941048 )*psingle +(0 )*pjacknife +(0 )*pknockout +(0 )*poththtype    ;

 * stderr = 0.273041781  ;

 mcontsame = 0.8935782853 ;
```

```
 *  based on           6,042 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   08JUN05 16:30   ;
pcontsame=0.9624592963 +(0 )*feb +(-0.060998432 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-
0.370941048 )*psingle +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype    ;

 * stderr = 0.273041781  ;

 mcontsame = 0.8935782853 ;
 *  based on           6,042 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   28JUN05 19:56   ;
pcontsame=0.9623582487 +(0 )*feb +(-0.059061037 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-
0.368389505 )*psingle +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype    ;

 * stderr = 0.2726625181  ;

 mcontsame = 0.8943183701 ;
 *  based on           6,037 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   28JUN05 20:21   ;
pcontsame=0.9623582487 +(0 )*feb +(-0.059061037 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-
0.368389505 )*psingle +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype    ;
```

```
 * stderr = 0.2726625181  ;

 mcontsame = 0.8943183701 ;
 *  based on           6,037 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** probabilities of outcomes after entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   26MAY05 00:25   ;
pcontsame=0.954037529 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.612658219
)*psingle +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype    ;

 * stderr = 0.313249089  ;

 mcontsame = 0.7704119297 ;
 *  based on           6,773 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   08JUN05 15:31   ;
pcontsame=0.953836425 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.613295884
)*psingle +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype    ;

 * stderr = 0.3134615842  ;

 mcontsame = 0.7697300487 ;
 *  based on           6,779 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   08JUN05 15:39   ;
pcontsame=0.953836425 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.613295884
)*psingle +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype    ;

 * stderr = 0.3134615842  ;

 mcontsame = 0.7697300487 ;
```

```
 *  based on           6,779 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   08JUN05 16:30   ;
pcontsame=0.953836425 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.613295884
)*psingle +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype    ;

 * stderr = 0.3134615842  ;

 mcontsame = 0.7697300487 ;
 *  based on           6,779 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   28JUN05 19:56   ;
pcontsame=0.954037529 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.612658219
)*psingle +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype    ;

 * stderr = 0.313249089  ;

 mcontsame = 0.7704119297 ;
 *  based on           6,773 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** probabilities of outcomes after entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;


 * model  fitted   28JUN05 20:21   ;
pcontsame=0.954037529 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.612658219
)*psingle +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype    ;
```

```
* stderr = 0.313249089  ;

mcontsame = 0.7704119297 ;
*  based on           6,773 observations;
* with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** transit times for doubles continuing nonstop on entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between p1 =    1.083 and p99 =   10.150 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
nstransithrs=2.6651499815 +(0 )*feb +(-0.235934187 )*mar +(-0.336662416 )*apr +(-0.509249875 )*may +(-0.56276539 )*jun +(-0.385940825 )*jul +(0 )*aug
+(0 )*sep +(0 )*oct +(-0.122535076 )*nov +(0 )*dec +(0 )*thrusingle +(0 )*thruother +(0 )*thrudoubnite +(0
)*thrusingnite +(0 )*thruothnite +(0 )*pcttrandn +(0 )*pcttrannite +(-0.00033584 )*waitmin    ;

 * stderr = 0.6591460176  ;

 mnstransithrs = 2.381449234 ;
 *  based on           3,503 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for doubles continuing straight through on entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =    0.080 and p99 =    2.317   ;


 * model  fitted   28JUN05 20:21   ;
lognstrnhrs=0.9354469331 +(0 )*feb +(-0.081178171 )*mar +(-0.133371111 )*apr +(-0.206409505 )*may +(-0.238145198 )*jun +(-0.167640425 )*jul +(0 )*aug
+(0 )*sep +(0 )*oct +(-0.040285949 )*nov +(0 )*dec    ;

 * stderr = 0.2230099642  ;

 mlognstrnhrs = 0.8358837562 ;
 *  based on           3,503 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for singles continuing nonstop on entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =    1.083 and p99 =   10.150   ;


 * model  fitted   28JUN05 20:21   ;
nstransithrs=1.9663369963 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*thruother    ;
```

```
 * stderr = 1.120163182  ;

 mnstransithrs = 1.9663369963 ;
 *  based on             455 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for singles continuing straight through on entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between p1 =    0.080 and p99 =    2.317 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lognstrnhrs=0.5984620295 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.167777294 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*thrusingle +(0 )*thruother +(0 )*thrudoubnite +(0 )*thrusingnite +(0 )*thruothnite +(0 )*pcttrandn +(0
)*pcttrannite +(0 )*waitmin    ;

 * stderr = 0.3650618278  ;

 mlognstrnhrs = 0.5825712285 ;
 *  based on             454 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** transit times for doubles continuing nonstop on entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between p1 =    1.667 and p99 =   15.417 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
nstransithrs=3.6007454542 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.2533538537 )*aug +(0.3563638214 )*sep +(0.4449643085 )*oct
+(0 )*nov +(0 )*dec +(0 )*thrusingle +(0 )*thruother +(0.2010309847 )*thrudoubnite +(0 )*thrusingnite +(0
)*thruothnite +(0.0211359679 )*pcttrandn +(0 )*pcttrannite +(-0.001536772 )*waitmin    ;

 * stderr = 1.2321226128  ;

 mnstransithrs = 3.6109993715 ;
 *  based on           3,182 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for doubles continuing straight through on entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =    0.511 and p99 =    2.735   ;


 * model  fitted   28JUN05 20:21   ;
lognstrnhrs=1.2282443363 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.052191568 )*jun +(0 )*jul +(0 )*aug +(0.0960081401 )*sep +(0.0903561759 )*oct
+(0 )*nov +(0 )*dec    ;

 * stderr = 0.2891247186  ;

 mlognstrnhrs = 1.2366360356 ;
 *  based on           3,181 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for singles continuing nonstop on entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =    1.667 and p99 =   15.417   ;


 * model  fitted   28JUN05 20:21   ;
nstransithrs=3.701015873 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*thruother    ;
```

```
 * stderr = 1.5705730036  ;

 mnstransithrs = 3.701015873 ;
 *  based on             525 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for singles continuing straight through on entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between p1 =    0.511 and p99 =    2.735 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lognstrnhrs=1.2096403019 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(-0.145280382 )*nov +(0 )*dec +(0
)*thrusingle +(0 )*thruother +(0 )*thrudoubnite +(0.109022283 )*thrusingnite +(0 )*thruothnite +(0 )*
pcttrandn +(0 )*pcttrannite +(0 )*waitmin    ;

 * stderr = 0.3612127246  ;

 mlognstrnhrs = 1.2366992329 ;
 *  based on             525 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** transit times for doubles continuing nonstop on entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between p1 =    1.533 and p99 =   10.967 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
nstransithrs=3.2362124073 +(0 )*feb +(-0.220126167 )*mar +(-0.343887026 )*apr +(-0.483961907 )*may +(-0.658926578 )*jun +(-0.384338439 )*jul +(0
)*aug +(0.1808090366 )*sep +(0 )*oct +(0 )*nov +(0.1431554917 )*dec +(0 )*thrusingle +(0 )*thruother +(
0.0919600488 )*thrudoubnite +(0 )*thrusingnite +(0 )*thruothnite +(0.019323948 )*pcttrandn +(0 )*pcttrannite +(-0.000615044 )*waitmin    ;

 * stderr = 0.8018109504  ;

 mnstransithrs = 2.975332185 ;
 *  based on           4,064 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for doubles continuing straight through on entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =    0.438 and p99 =    2.395   ;


 * model  fitted   28JUN05 20:21   ;
lognstrnhrs=1.137063794 +(0 )*feb +(-0.061207182 )*mar +(-0.12880504 )*apr +(-0.196214901 )*may +(-0.266705381 )*jun +(-0.167672794 )*jul +(0 )*aug
+(0.0626063966 )*sep +(0 )*oct +(0 )*nov +(0.0629910466 )*dec    ;

 * stderr = 0.2272548324  ;

 mlognstrnhrs = 1.0561254733 ;
 *  based on           4,062 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for singles continuing nonstop on entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =    1.533 and p99 =   10.967   ;


 * model  fitted   28JUN05 20:21   ;
nstransithrs=2.398324515 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.6392945326 )*aug +(0 )*sep +(0 )*oct +(0 )*nov
+(1.7350088183 )*dec +(0 )*thruother    ;
```

```
 * stderr = 1.2429231235  ;

 mnstransithrs = 2.5943977591 ;
 *  based on             238 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for singles continuing straight through on entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between p1 =    0.438 and p99 =    2.395 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lognstrnhrs=0.8528182007 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.202584478 )*jun +(0 )*jul +(0.177922729 )*aug +(0 )*sep +(0 )*oct +(0 )*nov
+(0.3394950976 )*dec +(0 )*thrusingle +(0 )*thruother +(0 )*thrudoubnite +(0 )*thrusingnite +(0 )*thruothnite
+(0 )*pcttrandn +(0 )*pcttrannite +(0 )*waitmin    ;

 * stderr = 0.3010823987  ;

 mlognstrnhrs = 0.8763461324 ;
 *  based on             237 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** transit times for doubles continuing nonstop on entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between p1 =    2.500 and p99 =   15.867 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
nstransithrs=4.6507168153 +(0.9303952318 )*feb +(-0.347956915 )*mar +(-0.269507011 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct
+(-0.406894992 )*nov +(0 )*dec +(0 )*thrusingle +(0 )*thruother +(0.1997876607 )*thrudoubnite +(0 )*
thrusingnite +(0 )*thruothnite +(0.0446120782 )*pcttrandn +(0 )*pcttrannite +(-0.000479187 )*waitmin    ;

 * stderr = 1.2300686531  ;

 mnstransithrs = 4.6113188633 ;
 *  based on           3,824 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for doubles continuing straight through on entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =    0.916 and p99 =    2.764   ;


 * model  fitted   28JUN05 20:21   ;
lognstrnhrs=1.5160503056 +(0.1609966246 )*feb +(-0.064769274 )*mar +(-0.046536289 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct
+(-0.073761725 )*nov +(0 )*dec    ;

 * stderr = 0.2293750808  ;

 mlognstrnhrs = 1.499039755 ;
 *  based on           3,826 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for singles continuing nonstop on entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =    2.500 and p99 =   15.867   ;


 * model  fitted   28JUN05 20:21   ;
nstransithrs=4.3454206603 +(3.750412673 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*thruother    ;
```

```
 * stderr = 2.1336278568  ;

 mnstransithrs = 4.3927444795 ;
 *  based on             317 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for singles continuing straight through on entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between p1 =    0.916 and p99 =    2.764 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lognstrnhrs=1.361901245 +(0.5688079755 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(-0.119925 )*nov +(0
)*dec +(0 )*thrusingle +(0 )*thruother +(0 )*thrudoubnite +(0 )*thrusingnite +(0 )*thruothnite +(0 )*
pcttrandn +(0.0013482419 )*pcttrannite +(0 )*waitmin    ;

 * stderr = 0.3281435439  ;

 mlognstrnhrs = 1.4067222361 ;
 *  based on             318 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** transit times for doubles continuing nonstop on entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between p1 =    2.100 and p99 =   11.083 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
nstransithrs=4.1488795397 +(0 )*feb +(-0.289401189 )*mar +(-0.343449866 )*apr +(-0.56920488 )*may +(-0.713015267 )*jun +(-0.445090105 )*jul +(0 )*aug
+(0.3061582197 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*thrusingle +(0 )*thruother +(0.2288118704 )*
thrudoubnite +(0 )*thrusingnite +(0 )*thruothnite +(0.0176787194 )*pcttrandn +(0 )*pcttrannite +(-0.000757687 )*waitmin    ;

 * stderr = 0.982110837  ;

 mnstransithrs = 3.8866433022 ;
 *  based on           3,852 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for doubles continuing straight through on entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =    0.742 and p99 =    2.405   ;


 * model  fitted   28JUN05 20:21   ;
lognstrnhrs=1.376260621 +(0 )*feb +(0 )*mar +(-0.070155538 )*apr +(-0.134904656 )*may +(-0.179545647 )*jun +(-0.127477701 )*jul +(0 )*aug
+(0.0900086649 )*sep +(0 )*oct +(0 )*nov +(0.0567458256 )*dec    ;

 * stderr = 0.2247301042  ;

 mlognstrnhrs = 1.3267631748 ;
 *  based on           3,852 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for singles continuing nonstop on entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =    2.100 and p99 =   11.083   ;


 * model  fitted   28JUN05 20:21   ;
nstransithrs=3.1269406393 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.447178735 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec
+(0 )*thruother    ;
```

```
 * stderr = 0.8764974014  ;

 mnstransithrs = 3.0878125 ;
 *  based on             480 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for singles continuing straight through on entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between p1 =    0.742 and p99 =    2.405 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lognstrnhrs=1.146953952 +(0 )*feb +(-0.136335662 )*mar +(-0.096803786 )*apr +(0 )*may +(-0.174469854 )*jun +(-0.128597727 )*jul +(0 )*aug +(0 )*sep
+(0 )*oct +(0 )*nov +(0 )*dec +(0 )*thrusingle +(0 )*thruother +(0 )*thrudoubnite +(0 )*thrusingnite +(0 )*
thruothnite +(0 )*pcttrandn +(0 )*pcttrannite +(0 )*waitmin    ;

 * stderr = 0.2130871892  ;

 mlognstrnhrs = 1.1004573205 ;
 *  based on             478 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** transit times for doubles continuing nonstop on entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between p1 =    2.717 and p99 =   16.017 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
nstransithrs=5.3261642149 +(0 )*feb +(-0.299092078 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(-0.355954468 )*nov
+(0 )*dec +(0 )*thrusingle +(0 )*thruother +(0 )*thrudoubnite +(0 )*thrusingnite +(0 )*thruothnite +(
0.0148828624 )*pcttrandn +(0 )*pcttrannite +(-0.000845161 )*waitmin    ;

 * stderr = 1.341628165  ;

 mnstransithrs = 5.084651658 ;
 *  based on           3,287 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for doubles continuing straight through on entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =    0.999 and p99 =    2.774   ;


 * model  fitted   28JUN05 20:21   ;
lognstrnhrs=1.5953721742 +(0.1401261768 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.0450716313 )*sep +(0 )*oct +(-
0.055894819 )*nov +(0 )*dec    ;

 * stderr = 0.2368742919  ;

 mlognstrnhrs = 1.5959498803 ;
 *  based on           3,289 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for singles continuing nonstop on entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =    2.717 and p99 =   16.017   ;


 * model  fitted   28JUN05 20:21   ;
nstransithrs=4.1171814672 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*thruother    ;
```

```
 * stderr = 1.4047327027  ;

 mnstransithrs = 4.1171814672 ;
 *  based on             518 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for singles continuing straight through on entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between p1 =    0.999 and p99 =    2.774 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lognstrnhrs=1.3766009495 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*thrusingle +(0 )*thruother +(0 )*thrudoubnite +(0 )*thrusingnite +(0 )*thruothnite +(0 )*pcttrandn +(0 )*
pcttrannite +(0 )*waitmin    ;

 * stderr = 0.2542912814  ;

 mlognstrnhrs = 1.3766009495 ;
 *  based on             519 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** transit times for doubles continuing nonstop on entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between p1 =    2.267 and p99 =   12.333 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
nstransithrs=5.0901422451 +(0.9834841826 )*feb +(-0.654169795 )*mar +(-0.906323559 )*apr +(-1.103592902 )*may +(-1.287349608 )*jun +(-1.003951837
)*jul +(-0.269111666 )*aug +(0 )*sep +(-0.179064065 )*oct +(-0.414889688 )*nov +(0 )*dec +(0 )*thrusingle +(0
)*thruother +(0 )*thrudoubnite +(0 )*thrusingnite +(0 )*thruothnite +(0.0107577232 )*pcttrandn +(0 )*pcttrannite +(-0.000975382 )*waitmin    ;

 * stderr = 1.0802381891  ;

 mnstransithrs = 4.3269087106 ;
 *  based on           4,462 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for doubles continuing straight through on entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =    0.818 and p99 =    2.512   ;


 * model  fitted   28JUN05 20:21   ;
lognstrnhrs=1.5732772817 +(0.1589006415 )*feb +(-0.125725824 )*mar +(-0.195087427 )*apr +(-0.26090528 )*may +(-0.298730555 )*jun +(-0.245054038 )*jul
+(-0.064406308 )*aug +(0 )*sep +(-0.039529947 )*oct +(-0.080561209 )*nov +(0 )*dec    ;

 * stderr = 0.2181387971  ;

 mlognstrnhrs = 1.4329535748 ;
 *  based on           4,464 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for singles continuing nonstop on entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =    2.267 and p99 =   12.333   ;


 * model  fitted   28JUN05 20:21   ;
nstransithrs=3.4931425164 +(0.9016491503 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec
+(0 )*thruother    ;
```

```
 * stderr = 1.1800809478  ;

 mnstransithrs = 3.5182318841 ;
 *  based on             575 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for singles continuing straight through on entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between p1 =    0.818 and p99 =    2.512 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lognstrnhrs=1.1528197915 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*thrusingle +(0 )*thruother +(0 )*thrudoubnite +(0 )*thrusingnite +(0 )*thruothnite +(0 )*pcttrandn +(0.001269823 )*
pcttrannite +(0 )*waitmin    ;

 * stderr = 0.2497404484  ;

 mlognstrnhrs = 1.2189901856 ;
 *  based on             576 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** transit times for doubles continuing nonstop on entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between p1 =    3.533 and p99 =   17.750 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
nstransithrs=7.095940216 +(0 )*feb +(-0.592512895 )*mar +(-0.412771828 )*apr +(-0.31176526 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct
+(-0.437046115 )*nov +(-0.608345577 )*dec +(0 )*thrusingle +(0 )*thruother +(0 )*thrudoubnite +(0 )*
thrusingnite +(0 )*thruothnite +(0.0263088404 )*pcttrandn +(0.0041181509 )*pcttrannite +(-0.000842611 )*waitmin    ;

 * stderr = 1.6782064749  ;

 mnstransithrs = 6.9457345972 ;
 *  based on           4,220 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for doubles continuing straight through on entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =    1.267 and p99 =    2.876   ;


 * model  fitted   28JUN05 20:21   ;
lognstrnhrs=1.9347171038 +(0 )*feb +(-0.072706892 )*mar +(-0.044437956 )*apr +(-0.053458087 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.0365947594 )*sep
+(0 )*oct +(-0.072772284 )*nov +(-0.086136661 )*dec    ;

 * stderr = 0.2250642148  ;

 mlognstrnhrs = 1.9115342843 ;
 *  based on           4,217 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** transit times for singles continuing nonstop on entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =    3.533 and p99 =   17.750   ;


 * model  fitted   28JUN05 20:21   ;
nstransithrs=5.2229786124 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*thruother    ;
```

```
 * stderr = 1.6430264845  ;

 mnstransithrs = 5.2229786124 ;
 *  based on             639 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(transit times) for singles continuing straight through on entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between p1 =    1.267 and p99 =    2.876 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lognstrnhrs=1.6212935102 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*thrusingle +(0 )*thruother +(0 )*thrudoubnite +(0 )*thrusingnite +(0 )*thruothnite +(0 )*pcttrandn +(0 )*
pcttrannite +(0 )*waitmin    ;

 * stderr = 0.2386788256  ;

 mlognstrnhrs = 1.6212935102 ;
 *  based on             636 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** activity times for vessels that stop before next lockage after entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between    0.067 and  427.367 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
transithrs=11.012232655 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*contsingle +(0 )*contother +(0 )*retdouble +(8.7579349977 )*retsingle +(0 )*retother +(0 )*pcttrandn +(0 )*
pcttrannite    ;

 * stderr = 38.765770073  ;

 mtransithrs = 12.844028465 ;
 *  based on           1,616 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(activity times) for vessels that stop before next lockage after entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between   -1.696 and    6.058 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
logtrnhrs=1.76553481 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.2381204238 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-
0.650400653 )*contsingle +(0 )*contother +(0 )*retdouble +(-0.754183855 )*retsingle +(0 )*retother +(0 )*
pcttrandn +(0 )*pcttrannite    ;

 * stderr = 1.1119125213  ;

 mlogtrnthrs = 1.526916864 ;
 *  based on           1,601 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** activity times for vessels that stop before next lockage after entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between    0.750 and  595.233 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
transithrs=14.148119658 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*contsingle +(0 )*contother +(0 )*retdouble +(95.789238172 )*retsingle +(0 )*retother +(0 )*pcttrandn +(0 )*
pcttrannite    ;

 * stderr = 73.339069528  ;

 mtransithrs = 32.950643998 ;
 *  based on           1,941 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(activity times) for vessels that stop before next lockage after entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between    0.017 and    6.389 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
logtrnhrs=1.9125482852 +(-0.713888413 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-
0.484076027 )*contsingle +(0 )*contother +(0 )*retdouble +(1.8962221412 )*retsingle +(0.9938455896 )*retother
+(0 )*pcttrandn +(0 )*pcttrannite    ;

 * stderr = 1.0488073229  ;

 mlogtrnthrs = 2.1707390524 ;
 *  based on           1,934 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** activity times for vessels that stop before next lockage after entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between    0.000 and  914.083 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
transithrs=19.677171068 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*contsingle +(0 )*contother +(0 )*retdouble +(0 )*retsingle +(0 )*retother +(0 )*pcttrandn +(0 )*pcttrannite    ;

 * stderr = 63.32565039  ;

 mtransithrs = 19.677171068 ;
 *  based on           1,401 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(activity times) for vessels that stop before next lockage after entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between   -0.483 and    6.818 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
logtrnhrs=2.1036008249 +(0 )*feb +(-0.361809199 )*mar +(-0.505536857 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0
)*dec +(-0.383876906 )*contsingle +(0 )*contother +(0 )*retdouble +(-0.26131264 )*retsingle +(0 )*retother
+(0 )*pcttrandn +(0 )*pcttrannite    ;

 * stderr = 1.2388935103  ;

 mlogtrnthrs = 1.804909627 ;
 *  based on           1,387 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** activity times for vessels that stop before next lockage after entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between   -2.567 and 1131.017 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
transithrs=15.553657407 +(0 )*feb +(23.282106481 )*mar +(0 )*apr +(20.831064815 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0
)*dec +(0 )*contsingle +(0 )*contother +(0 )*retdouble +(0 )*retsingle +(0 )*retother +(0 )*pcttrandn +(0
)*pcttrannite    ;

 * stderr = 73.187052905  ;

 mtransithrs = 18.882953354 ;
 *  based on           1,272 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(activity times) for vessels that stop before next lockage after entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between    0.262 and    7.042 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
logtrnhrs=1.7274082393 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(-0.337067663 )*nov +(-0.357420678
)*dec +(0 )*contsingle +(0 )*contother +(0 )*retdouble +(0.6143291996 )*retsingle +(1.7639712726 )*retother
+(0 )*pcttrandn +(0.0040051727 )*pcttrannite    ;

 * stderr = 0.93110543  ;

 mlogtrnthrs = 1.9994980509 ;
 *  based on           1,261 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** activity times for vessels that stop before next lockage after entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between   -1.633 and  618.833 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
transithrs=12.105637015 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*contsingle +(0 )*contother +(0 )*retdouble +(29.755911541 )*retsingle +(0 )*retother +(0 )*pcttrandn +(0 )*
pcttrannite    ;

 * stderr = 44.986047004  ;

 mtransithrs = 15.391724638 ;
 *  based on           1,150 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(activity times) for vessels that stop before next lockage after entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between   -0.875 and    6.428 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
logtrnhrs=1.9896922701 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.797604346
)*contsingle +(0 )*contother +(0 )*retdouble +(0.4805024978 )*retsingle +(0 )*retother +(0.0059973573 )*
pcttrandn +(0.0030479625 )*pcttrannite    ;

 * stderr = 0.8229869416  ;

 mlogtrnthrs = 2.0254845691 ;
 *  based on           1,139 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** activity times for vessels that stop before next lockage after entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between   -1.017 and  403.033 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
transithrs=6.4356631764 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*contsingle +(0 )*contother +(6.6661975777 )*retdouble +(26.685434657 )*retsingle +(24.497224422 )*retother +(0 )*
pcttrandn +(0.0531495188 )*pcttrannite    ;

 * stderr = 29.62994945  ;

 mtransithrs = 12.941453704 ;
 *  based on           1,800 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(activity times) for vessels that stop before next lockage after entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between   -0.693 and    5.999 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
logtrnhrs=1.9567195969 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.493713167
)*contsingle +(0 )*contother +(0.1968730269 )*retdouble +(0.2925138301 )*retsingle +(1.0860846086 )*retother
+(0 )*pcttrandn +(0.0023691965 )*pcttrannite    ;

 * stderr = 0.7712593642  ;

 mlogtrnthrs = 2.0003618867 ;
 *  based on           1,781 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** activity times for vessels that stop before next lockage after entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between  -15.617 and  570.083 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
transithrs=11.243847875 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*contsingle +(0 )*contother +(0 )*retdouble +(39.943883607 )*retsingle +(0 )*retother +(0 )*pcttrandn +(0 )*
pcttrannite    ;

 * stderr = 50.563889127  ;

 mtransithrs = 20.976367738 ;
 *  based on             591 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(activity times) for vessels that stop before next lockage after entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between   -1.792 and    6.475 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
logtrnhrs=1.8420336852 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.739283007
)*contsingle +(0 )*contother +(0 )*retdouble +(0.6963771614 )*retsingle +(0 )*retother +(0 )*pcttrandn +(
0.0053525309 )*pcttrannite    ;

 * stderr = 1.1425511352  ;

 mlogtrnthrs = 1.9318123295 ;
 *  based on             587 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** activity times for vessels that stop before next lockage after entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between   -0.283 and  522.083 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
transithrs=21.194025624 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(17.655360784 )*sep +(15.447377951 )*oct +(0 )*nov +(0
)*dec +(-20.64393341 )*contsingle +(0 )*contother +(-15.15288309 )*retdouble +(8.5388973145 )*retsingle +(
0 )*retother +(0 )*pcttrandn +(0.1005127761 )*pcttrannite    ;

 * stderr = 41.566491517  ;

 mtransithrs = 24.202919145 ;
 *  based on           1,513 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(activity times) for vessels that stop before next lockage after entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen for values between   -0.959 and    6.258 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
logtrnhrs=2.5469462267 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.356596602 )*sep +(0 )*oct +(0 )*nov +(-0.277041606
)*dec +(-1.011201867 )*contsingle +(0 )*contother +(-0.613384134 )*retdouble +(-0.20761996 )*retsingle +(0
)*retother +(0 )*pcttrandn +(0.0052276129 )*pcttrannite    ;

 * stderr = 1.0655179832  ;

 mlogtrnthrs = 2.4572220771 ;
 *  based on           1,499 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** lockage  times (hours) for double lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.852 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
dlockhrs=1.7787833369 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.065152944 )*aug +(0.1926635012 )*sep +(0.2176392881 )*oct
+(0.0769413729 )*nov +(0 )*dec +(-0.274622432 )*pturnback +(0.0420173144 )*pexchange    ;

 * stderr = 0.3149745429  ;

 mdlckhrs = 1.7492266867 ;
 *  based on           4,102 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.626 and p99 =    1.048 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
lgdlckhrs=0.5610279473 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0358000723 )*aug +(0.1101271424 )*sep +(0.1195213347 )*oct
+(0.0429549632 )*nov +(0 )*dec +(-0.166641178 )*pturnback +(0.0197080101 )*pexchange    ;

 * stderr = 0.1795355798  ;

 mlgdlckhrs = 0.5383346863 ;
 *  based on           4,102 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.852 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
slockhrs=0.460469045 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.0687229582 )*sep +(0.0604109087 )*oct +(0.0436980903
)*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.099893096 )*pturnback +(0 )*pexchange
   ;
```

```
 * stderr = 0.1961760241  ;

 mslckhrs = 0.4598863418 ;
 *  based on           1,451 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.626 and p99 =    1.048 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
lgslckhrs=-0.846526448 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.1375325319 )*sep +(0.1128156024 )*oct +(0.1109511135
)*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.229601186 )*pturnback +(-0.06468094 )*
pexchange    ;

 * stderr = 0.3914591049  ;

 mlgslckhrs = -0.875952805 ;
 *  based on           1,485 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.852 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
dlockhrs=1.7975725541 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.039136001 )*jun +(0 )*jul +(0.0567907585 )*aug +(0.1875760641 )*sep +(0.2125952292
)*oct +(0.072793785 )*nov +(0 )*dec +(-0.000286415 )*pctlcknite +(-0.273487309 )*pturnback +(0.0448572083
)*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3144379064  ;

 mdlckhrs = 1.7493014499 ;
 *  based on           4,101 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** log(lockage times) for double lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.626 and p99 =    1.048 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
lgdlckhrs=0.5609251521 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0357795514 )*aug +(0.1111338086 )*sep +(0.1195135294 )*oct
+(0.0429349652 )*nov +(0 )*dec +(0 )*pctlcknite +(-0.166599543 )*pturnback +(0.0199503985 )*pexchange +(0 )*
pctlckdn    ;

 * stderr = 0.1794856597  ;

 mlgdlckhrs = 0.5383765961 ;
 *  based on          4,101 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.852 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
slockhrs=0.4614513842 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.0680845826 )*sep +(0.0571748989 )*oct +(0.0437807752
)*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(
-0.10146093 )*pturnback +(0 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1959608242  ;

 mslckhrs = 0.4601703832 ;
 *  based on          1,449 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.626 and p99 =    1.048 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
```

```
lgslckhrs=-0.845026051 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.136101685 )*sep +(0.1065747698 )*oct +(0.1104587366
)*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(
-0.231844801 )*pturnback +(-0.063327409 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3911329598  ;

 mlgslckhrs = -0.87519245 ;
 *  based on           1,483 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.852 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
dlockhrs=1.7975725541 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.039136001 )*jun +(0 )*jul +(0.0567907585 )*aug +(0.1875760641 )*sep +(0.2125952292
)*oct +(0.072793785 )*nov +(0 )*dec +(-0.000286415 )*pctlcknite +(-0.273487309 )*pturnback +(0.0448572083
)*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3144379064  ;

 mdlckhrs = 1.7493014499 ;
 *  based on           4,101 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.626 and p99 =    1.048 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
lgdlckhrs=0.5609251521 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0357795514 )*aug +(0.1111338086 )*sep +(0.1195135294 )*oct
+(0.0429349652 )*nov +(0 )*dec +(0 )*pctlcknite +(-0.166599543 )*pturnback +(0.0199503985 )*pexchange +(0 )*
pctlckdn    ;

 * stderr = 0.1794856597  ;

 mlgdlckhrs = 0.5383765961 ;
```

```
 *  based on           4,101 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.852 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
slockhrs=0.4614513842 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.0680845826 )*sep +(0.0571748989 )*oct +(0.0437807752
)*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(
-0.10146093 )*pturnback +(0 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1959608242  ;

 mslckhrs = 0.4601703832 ;
 *  based on           1,449 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.626 and p99 =    1.048 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
lgslckhrs=-0.845026051 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.136101685 )*sep +(0.1065747698 )*oct +(0.1104587366
)*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(
-0.231844801 )*pturnback +(-0.063327409 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3911329598  ;

 mlgslckhrs = -0.87519245 ;
 *  based on           1,483 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.852 and impair pct le 100  ;
```

```
 * model  fitted   08JUN05 16:30   ;
dlockhrs=1.7975725541 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.039136001 )*jun +(0 )*jul +(0.0567907585 )*aug +(0.1875760641 )*sep +(0.2125952292
)*oct +(0.072793785 )*nov +(0 )*dec +(-0.000286415 )*pctlcknite +(-0.273487309 )*pturnback +(0.0448572083
)*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3144379064  ;

 mdlckhrs = 1.7493014499 ;
 *  based on           4,101 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.626 and p99 =    1.048 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
lgdlckhrs=0.5609251521 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0357795514 )*aug +(0.1111338086 )*sep +(0.1195135294 )*oct
+(0.0429349652 )*nov +(0 )*dec +(0 )*pctlcknite +(-0.166599543 )*pturnback +(0.0199503985 )*pexchange +(0 )*
pctlckdn    ;

 * stderr = 0.1794856597  ;

 mlgdlckhrs = 0.5383765961 ;
 *  based on           4,101 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.852 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
slockhrs=0.4614513842 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.0680845826 )*sep +(0.0571748989 )*oct +(0.0437807752
)*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(
-0.10146093 )*pturnback +(0 )*pexchange +(0 )*pctlckdn    ;
```

```
 * stderr = 0.1959608242  ;

 mslckhrs = 0.4601703832 ;
 *  based on           1,449 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.626 and p99 =    1.048 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
lgslckhrs=-0.845026051 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.136101685 )*sep +(0.1065747698 )*oct +(0.1104587366
)*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(
-0.231844801 )*pturnback +(-0.063327409 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3911329598  ;

 mlgslckhrs = -0.87519245 ;
 *  based on           1,483 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.852 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
dlockhrs=1.7975725541 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.039136001 )*jun +(0 )*jul +(0.0567907585 )*aug +(0.1875760641 )*sep +(0.2125952292
)*oct +(0.072793785 )*nov +(0 )*dec +(-0.000286415 )*pctlcknite +(-0.273487309 )*pturnback +(0.0448572083
)*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3144379064  ;

 mdlckhrs = 1.7493014499 ;
 *  based on           4,101 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** log(lockage times) for double lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.626 and p99 =    1.048 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
lgdlckhrs=0.5609251521 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0357795514 )*aug +(0.1111338086 )*sep +(0.1195135294 )*oct
+(0.0429349652 )*nov +(0 )*dec +(0 )*pctlcknite +(-0.166599543 )*pturnback +(0.0199503985 )*pexchange +(0 )*
pctlckdn    ;

 * stderr = 0.1794856597  ;

 mlgdlckhrs = 0.5383765961 ;
 *  based on           4,101 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.852 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
slockhrs=0.4610512415 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.0684277412 )*sep +(0.0575063743 )*oct +(0.0441189713
)*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(
-0.101201189 )*pturnback +(0 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1961743988  ;

 mslckhrs = 0.4599706895 ;
 *  based on           1,443 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.626 and p99 =    1.048 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
```

```
lgslckhrs=-0.84591164 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.1371426059 )*sep +(0.1076759144 )*oct +(0.1115764874
)*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(
-0.231405568 )*pturnback +(-0.064146318 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3915144349  ;

 mlgslckhrs = -0.875894842 ;
 *  based on           1,477 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.852 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
dlockhrs=1.7975725541 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.039136001 )*jun +(0 )*jul +(0.0567907585 )*aug +(0.1875760641 )*sep +(0.2125952292
)*oct +(0.072793785 )*nov +(0 )*dec +(-0.000286415 )*pctlcknite +(-0.273487309 )*pturnback +(0.0448572083
)*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3144379064  ;

 mdlckhrs = 1.7493014499 ;
 *  based on           4,101 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.626 and p99 =    1.048 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lgdlckhrs=0.5609251521 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0357795514 )*aug +(0.1111338086 )*sep +(0.1195135294 )*oct
+(0.0429349652 )*nov +(0 )*dec +(0 )*pctlcknite +(-0.166599543 )*pturnback +(0.0199503985 )*pexchange +(0 )*
pctlckdn    ;

 * stderr = 0.1794856597  ;

 mlgdlckhrs = 0.5383765961 ;
```

```
 *  based on           4,101 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.852 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
slockhrs=0.4610512415 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.0684277412 )*sep +(0.0575063743 )*oct +(0.0441189713
)*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(
-0.101201189 )*pturnback +(0 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1961743988  ;

 mslckhrs = 0.4599706895 ;
 *  based on           1,443 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI20U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.626 and p99 =    1.048 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lgslckhrs=-0.84591164 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.1371426059 )*sep +(0.1076759144 )*oct +(0.1115764874
)*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(
-0.231405568 )*pturnback +(-0.064146318 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3915144349  ;

 mlgslckhrs = -0.875894842 ;
 *  based on           1,477 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** lockage  times (hours) for double lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.902 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
dlockhrs=1.9203948158 +(0 )*feb +(0 )*mar +(0 )*apr +(-0.046606165 )*may +(-0.066360069 )*jun +(-0.033139313 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0.0682967273 )*dec +(-0.152618783 )*pturnback +(-0.083090786 )*pexchange    ;

 * stderr = 0.269395086  ;

 mdlckhrs = 1.8229706259 ;
 *  based on           4,304 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.626 and p99 =    1.065 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
lgdlckhrs=0.6342471193 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.026872358 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0.0215119049 )*oct +(0 )*nov
+(0.0448709267 )*dec +(-0.085233283 )*pturnback +(-0.046501477 )*pexchange    ;

 * stderr = 0.1486497933  ;

 mlgdlckhrs = 0.5886164497 ;
 *  based on           4,302 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.902 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
slockhrs=0.4726460185 +(0.324485129 )*feb +(0 )*mar +(0 )*apr +(-0.069065899 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.056593742 )*pturnback +(0 )*pexchange    ;
```

```
 * stderr = 0.2023389701  ;

 mslckhrs = 0.4528469631 ;
 *  based on           1,217 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.626 and p99 =    1.065 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
lgslckhrs=-0.847621568 +(0 )*feb +(0 )*mar +(0 )*apr +(-0.164053573 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.110427376 )*pturnback +(0 )*pexchange    ;

 * stderr = 0.4008198001  ;

 mlgslckhrs = -0.892404638 ;
 *  based on           1,246 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.902 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
dlockhrs=1.933894998 +(0 )*feb +(0 )*mar +(0 )*apr +(-0.048608232 )*may +(-0.069924736 )*jun +(-0.036320917 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0.0716007108 )*dec +(-0.000276224 )*pctlcknite +(-0.152312208 )*pturnback +(-0.083295117 )*pexchange
+(0 )*pctlckdn    ;

 * stderr = 0.2689125844  ;

 mdlckhrs = 1.8228113821 ;
 *  based on           4,303 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI21D ;
```

```
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.626 and p99 =    1.065 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
lgdlckhrs=0.6405416041 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.028110572 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0.0228777258 )*oct +(0 )*nov
+(0.0470723475 )*dec +(-0.00013896 )*pctlcknite +(-0.08515092 )*pturnback +(-0.046681618 )*pexchange +(0 )*
pctlckdn    ;

 * stderr = 0.1484346133  ;

 mlgdlckhrs = 0.588539503 ;
 *  based on           4,301 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.902 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
slockhrs=0.4719779813 +(0.2968744777 )*feb +(0 )*mar +(0 )*apr +(-0.070378422 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.056533033 )*
pturnback +(0 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2021452428  ;

 mslckhrs = 0.452248091 ;
 *  based on           1,228 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.626 and p99 =    1.065 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
lgslckhrs=-0.84918328 +(0 )*feb +(0 )*mar +(0 )*apr +(-0.166267566 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.11002419 )*pturnback +(0 )*
```

```
pexchange +(0 )*pctlckdn    ;

 * stderr = 0.4011856776  ;

 mlgslckhrs = -0.894264445 ;
 *  based on           1,258 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.902 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
dlockhrs=1.933894998 +(0 )*feb +(0 )*mar +(0 )*apr +(-0.048608232 )*may +(-0.069924736 )*jun +(-0.036320917 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0.0716007108 )*dec +(-0.000276224 )*pctlcknite +(-0.152312208 )*pturnback +(-0.083295117 )*pexchange
+(0 )*pctlckdn    ;

 * stderr = 0.2689125844  ;

 mdlckhrs = 1.8228113821 ;
 *  based on           4,303 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.626 and p99 =    1.065 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
lgdlckhrs=0.6405416041 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.028110572 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0.0228777258 )*oct +(0 )*nov
+(0.0470723475 )*dec +(-0.00013896 )*pctlcknite +(-0.08515092 )*pturnback +(-0.046681618 )*pexchange +(0 )*
pctlckdn    ;

 * stderr = 0.1484346133  ;

 mlgdlckhrs = 0.588539503 ;
 *  based on           4,301 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** lockage  times (hours) for single lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.902 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
slockhrs=0.4719779813 +(0.2968744777 )*feb +(0 )*mar +(0 )*apr +(-0.070378422 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.056533033 )*
pturnback +(0 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2021452428  ;

 mslckhrs = 0.452248091 ;
 *  based on           1,228 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.626 and p99 =    1.065 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
lgslckhrs=-0.84918328 +(0 )*feb +(0 )*mar +(0 )*apr +(-0.166267566 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.11002419 )*pturnback +(0 )*
pexchange +(0 )*pctlckdn    ;

 * stderr = 0.4011856776  ;

 mlgslckhrs = -0.894264445 ;
 *  based on           1,258 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.902 and impair pct le 100  ;
```

```
 * model  fitted   08JUN05 16:30   ;
dlockhrs=1.933894998 +(0 )*feb +(0 )*mar +(0 )*apr +(-0.048608232 )*may +(-0.069924736 )*jun +(-0.036320917 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0.0716007108 )*dec +(-0.000276224 )*pctlcknite +(-0.152312208 )*pturnback +(-0.083295117 )*pexchange
+(0 )*pctlckdn    ;

 * stderr = 0.2689125844  ;

 mdlckhrs = 1.8228113821 ;
 *  based on           4,303 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.626 and p99 =    1.065 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
lgdlckhrs=0.6405416041 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.028110572 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0.0228777258 )*oct +(0 )*nov
+(0.0470723475 )*dec +(-0.00013896 )*pctlcknite +(-0.08515092 )*pturnback +(-0.046681618 )*pexchange +(0 )*
pctlckdn    ;

 * stderr = 0.1484346133  ;

 mlgdlckhrs = 0.588539503 ;
 *  based on           4,301 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.902 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
slockhrs=0.4719779813 +(0.2968744777 )*feb +(0 )*mar +(0 )*apr +(-0.070378422 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.056533033 )*
pturnback +(0 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2021452428  ;
```

```
 mslckhrs = 0.452248091 ;
 *  based on           1,228 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.626 and p99 =    1.065 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
lgslckhrs=-0.84918328 +(0 )*feb +(0 )*mar +(0 )*apr +(-0.166267566 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*pjacknife +(0 )*pknockout +(0 )*poththype +(0 )*pctlcknite +(0 )*pothnite +(-0.11002419 )*pturnback +(0 )*
pexchange +(0 )*pctlckdn    ;

 * stderr = 0.4011856776  ;

 mlgslckhrs = -0.894264445 ;
 *  based on           1,258 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.902 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
dlockhrs=1.933894998 +(0 )*feb +(0 )*mar +(0 )*apr +(-0.048608232 )*may +(-0.069924736 )*jun +(-0.036320917 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0.0716007108 )*dec +(-0.000276224 )*pctlcknite +(-0.152312208 )*pturnback +(-0.083295117 )*pexchange
+(0 )*pctlckdn    ;

 * stderr = 0.2689125844  ;

 mdlckhrs = 1.8228113821 ;
 *  based on           4,303 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
```

```
 *** with screen between p1 =   -1.626 and p99 =    1.065 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
lgdlckhrs=0.6405416041 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.028110572 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0.0228777258 )*oct +(0 )*nov
+(0.0470723475 )*dec +(-0.00013896 )*pctlcknite +(-0.08515092 )*pturnback +(-0.046681618 )*pexchange +(0 )*
pctlckdn    ;

 * stderr = 0.1484346133  ;

 mlgdlckhrs = 0.588539503 ;
 *  based on           4,301 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.902 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
slockhrs=0.4726460185 +(0.324485129 )*feb +(0 )*mar +(0 )*apr +(-0.069065899 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.056593742 )*
pturnback +(0 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2023389701  ;

 mslckhrs = 0.4528469631 ;
 *  based on           1,217 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.626 and p99 =    1.065 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
lgslckhrs=-0.847621568 +(0 )*feb +(0 )*mar +(0 )*apr +(-0.164053573 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.110427376 )*pturnback +(0 )*
pexchange +(0 )*pctlckdn    ;
```

```
 * stderr = 0.4008198001  ;

 mlgslckhrs = -0.892404638 ;
 *  based on           1,246 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.902 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
dlockhrs=1.933894998 +(0 )*feb +(0 )*mar +(0 )*apr +(-0.048608232 )*may +(-0.069924736 )*jun +(-0.036320917 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0
)*nov +(0.0716007108 )*dec +(-0.000276224 )*pctlcknite +(-0.152312208 )*pturnback +(-0.083295117 )*pexchange
+(0 )*pctlckdn    ;

 * stderr = 0.2689125844  ;

 mdlckhrs = 1.8228113821 ;
 *  based on           4,303 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.626 and p99 =    1.065 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lgdlckhrs=0.6405416041 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.028110572 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0.0228777258 )*oct +(0 )*nov
+(0.0470723475 )*dec +(-0.00013896 )*pctlcknite +(-0.08515092 )*pturnback +(-0.046681618 )*pexchange +(0 )*
pctlckdn    ;

 * stderr = 0.1484346133  ;

 mlgdlckhrs = 0.588539503 ;
 *  based on           4,301 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** lockage  times (hours) for single lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.902 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
slockhrs=0.4726460185 +(0.324485129 )*feb +(0 )*mar +(0 )*apr +(-0.069065899 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.056593742 )*
pturnback +(0 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2023389701  ;

 mslckhrs = 0.4528469631 ;
 *  based on           1,217 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI21D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.626 and p99 =    1.065 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lgslckhrs=-0.847621568 +(0 )*feb +(0 )*mar +(0 )*apr +(-0.164053573 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.110427376 )*pturnback +(0 )*
pexchange +(0 )*pctlckdn    ;

 * stderr = 0.4008198001  ;

 mlgslckhrs = -0.892404638 ;
 *  based on           1,246 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** lockage  times (hours) for double lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.738 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
dlockhrs=1.8535932298 +(0 )*feb +(0 )*mar +(0.0521841778 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0914495891 )*aug +(0.2142424702 )*sep +(0.2061431502
)*oct +(0.0587991705 )*nov +(0 )*dec +(-0.374171967 )*pturnback +(-0.030742344 )*pexchange    ;

 * stderr = 0.30623195  ;

 mdlckhrs = 1.7763137012 ;
 *  based on           4,235 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.626 and p99 =    1.007 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
lgdlckhrs=0.5999406201 +(0 )*feb +(0 )*mar +(0.0318900662 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0524589141 )*aug +(0.1227673719 )*sep
+(0.1151021441 )*oct +(0.0371496409 )*nov +(0 )*dec +(-0.222051895 )*pturnback +(-0.018226419 )*pexchange    ;

 * stderr = 0.174646731  ;

 mlgdlckhrs = 0.5530087573 ;
 *  based on           4,231 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.738 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
slockhrs=0.5394152651 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.0592121288 )*sep +(0.0538976468 )*oct +(0 )*nov +(0
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.175969328 )*pturnback +(-0.104325923 )*pexchange
   ;
```

```
 * stderr = 0.2128510772  ;

 mslckhrs = 0.4648016069 ;
 *  based on           1,363 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.626 and p99 =    1.007 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
lgslckhrs=-0.701805723 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.1474729771 )*sep +(0.0986732177 )*oct +(0 )*nov +(0
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.367638137 )*pturnback +(-0.275856529 )*pexchange
   ;

 * stderr = 0.4104369794  ;

 mlgslckhrs = -0.880351135 ;
 *  based on           1,392 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.738 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
dlockhrs=1.8571624882 +(0 )*feb +(0 )*mar +(0.0535063209 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0893605765 )*aug +(0.2182174672 )*sep +(0.2117397112
)*oct +(0.0652957996 )*nov +(0 )*dec +(-0.000533468 )*pctlcknite +(-0.354117394 )*pturnback +(0 )*
pexchange +(0 )*pctlckdn    ;

 * stderr = 0.305451326  ;

 mdlckhrs = 1.7763137012 ;
 *  based on           4,235 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** log(lockage times) for double lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.626 and p99 =    1.007 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
lgdlckhrs=0.6115650459 +(0 )*feb +(0 )*mar +(0.032404534 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0521591075 )*aug +(0.1237302904 )*sep +(0.1178323645
)*oct +(0.0415473315 )*nov +(0 )*dec +(-0.000290169 )*pctlcknite +(-0.220840576 )*pturnback +(-0.017582665
)*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1741346813  ;

 mlgdlckhrs = 0.5530087573 ;
 *  based on          4,231 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.738 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
slockhrs=0.5339834085 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.0588842711 )*sep +(0.0531751566 )*oct +(0 )*nov +(0
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.173544931 )*
pturnback +(-0.095762422 )*pexchange +(0.0079368523 )*pctlckdn    ;

 * stderr = 0.2113711135  ;

 mslckhrs = 0.4655570303 ;
 *  based on          1,371 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.626 and p99 =    1.007 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
```

```
lgslckhrs=-0.708875565 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.1453018008 )*sep +(0.096757702 )*oct +(0 )*nov +(0
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.364795321 )*
pturnback +(-0.262794266 )*pexchange +(0.01129681 )*pctlckdn    ;

 * stderr = 0.4086559135  ;

 mlgslckhrs = -0.878368591 ;
 *  based on           1,400 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.738 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
dlockhrs=1.8571624882 +(0 )*feb +(0 )*mar +(0.0535063209 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0893605765 )*aug +(0.2182174672 )*sep +(0.2117397112
)*oct +(0.0652957996 )*nov +(0 )*dec +(-0.000533468 )*pctlcknite +(-0.354117394 )*pturnback +(0 )*
pexchange +(0 )*pctlckdn    ;

 * stderr = 0.305451326  ;

 mdlckhrs = 1.7763137012 ;
 *  based on           4,235 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.626 and p99 =    1.007 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
lgdlckhrs=0.6115650459 +(0 )*feb +(0 )*mar +(0.032404534 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0521591075 )*aug +(0.1237302904 )*sep +(0.1178323645
)*oct +(0.0415473315 )*nov +(0 )*dec +(-0.000290169 )*pctlcknite +(-0.220840576 )*pturnback +(-0.017582665
)*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1741346813  ;

 mlgdlckhrs = 0.5530087573 ;
```

```
 *  based on           4,231 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.738 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
slockhrs=0.5339834085 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.0588842711 )*sep +(0.0531751566 )*oct +(0 )*nov +(0
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.173544931 )*
pturnback +(-0.095762422 )*pexchange +(0.0079368523 )*pctlckdn    ;

 * stderr = 0.2113711135  ;

 mslckhrs = 0.4655570303 ;
 *  based on           1,371 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.626 and p99 =    1.007 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
lgslckhrs=-0.708875565 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.1453018008 )*sep +(0.096757702 )*oct +(0 )*nov +(0
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.364795321 )*
pturnback +(-0.262794266 )*pexchange +(0.01129681 )*pctlckdn    ;

 * stderr = 0.4086559135  ;

 mlgslckhrs = -0.878368591 ;
 *  based on           1,400 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.738 and impair pct le 100  ;
```

```
 * model  fitted   08JUN05 16:30   ;
dlockhrs=1.8571624882 +(0 )*feb +(0 )*mar +(0.0535063209 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0893605765 )*aug +(0.2182174672 )*sep +(0.2117397112
)*oct +(0.0652957996 )*nov +(0 )*dec +(-0.000533468 )*pctlcknite +(-0.354117394 )*pturnback +(0 )*
pexchange +(0 )*pctlckdn    ;

 * stderr = 0.305451326  ;

 mdlckhrs = 1.7763137012 ;
 *  based on           4,235 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.626 and p99 =    1.007 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
lgdlckhrs=0.6115650459 +(0 )*feb +(0 )*mar +(0.032404534 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0521591075 )*aug +(0.1237302904 )*sep +(0.1178323645
)*oct +(0.0415473315 )*nov +(0 )*dec +(-0.000290169 )*pctlcknite +(-0.220840576 )*pturnback +(-0.017582665
)*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1741346813  ;

 mlgdlckhrs = 0.5530087573 ;
 *  based on           4,231 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.738 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
slockhrs=0.5339834085 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.0588842711 )*sep +(0.0531751566 )*oct +(0 )*nov +(0
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.173544931 )*
pturnback +(-0.095762422 )*pexchange +(0.0079368523 )*pctlckdn    ;
```

```
 * stderr = 0.2113711135  ;

 mslckhrs = 0.4655570303 ;
 *  based on           1,371 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.626 and p99 =    1.007 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
lgslckhrs=-0.708875565 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.1453018008 )*sep +(0.096757702 )*oct +(0 )*nov +(0
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.364795321 )*
pturnback +(-0.262794266 )*pexchange +(0.01129681 )*pctlckdn    ;

 * stderr = 0.4086559135  ;

 mlgslckhrs = -0.878368591 ;
 *  based on           1,400 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.738 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
dlockhrs=1.8571624882 +(0 )*feb +(0 )*mar +(0.0535063209 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0893605765 )*aug +(0.2182174672 )*sep +(0.2117397112
)*oct +(0.0652957996 )*nov +(0 )*dec +(-0.000533468 )*pctlcknite +(-0.354117394 )*pturnback +(0 )*
pexchange +(0 )*pctlckdn    ;

 * stderr = 0.305451326  ;

 mdlckhrs = 1.7763137012 ;
 *  based on           4,235 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** log(lockage times) for double lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.626 and p99 =    1.007 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
lgdlckhrs=0.6115650459 +(0 )*feb +(0 )*mar +(0.032404534 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0521591075 )*aug +(0.1237302904 )*sep +(0.1178323645
)*oct +(0.0415473315 )*nov +(0 )*dec +(-0.000290169 )*pctlcknite +(-0.220840576 )*pturnback +(-0.017582665
)*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1741346813  ;

 mlgdlckhrs = 0.5530087573 ;
 *  based on           4,231 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.738 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
slockhrs=0.5361526416 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.0585240879 )*sep +(0.0531846773 )*oct +(0 )*nov +(0
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.175529296 )*
pturnback +(-0.099994368 )*pexchange +(0.0079019858 )*pctlckdn    ;

 * stderr = 0.2110792563  ;

 mslckhrs = 0.4652546061 ;
 *  based on           1,356 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.626 and p99 =    1.007 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
```

```
lgslckhrs=-0.705570918 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.1449766923 )*sep +(0.097134628 )*oct +(0 )*nov +(0
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.367963604 )*
pturnback +(-0.269876534 )*pexchange +(0.0112435374 )*pctlckdn    ;

 * stderr = 0.4084677479  ;

 mlgslckhrs = -0.879383029 ;
 *  based on           1,385 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.738 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
dlockhrs=1.8571624882 +(0 )*feb +(0 )*mar +(0.0535063209 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0893605765 )*aug +(0.2182174672 )*sep +(0.2117397112
)*oct +(0.0652957996 )*nov +(0 )*dec +(-0.000533468 )*pctlcknite +(-0.354117394 )*pturnback +(0 )*
pexchange +(0 )*pctlckdn    ;

 * stderr = 0.305451326  ;

 mdlckhrs = 1.7763137012 ;
 *  based on           4,235 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.626 and p99 =    1.007 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lgdlckhrs=0.6115650459 +(0 )*feb +(0 )*mar +(0.032404534 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0521591075 )*aug +(0.1237302904 )*sep +(0.1178323645
)*oct +(0.0415473315 )*nov +(0 )*dec +(-0.000290169 )*pctlcknite +(-0.220840576 )*pturnback +(-0.017582665
)*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1741346813  ;

 mlgdlckhrs = 0.5530087573 ;
```

```
 *  based on           4,231 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.197 and p99 =    2.738 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
slockhrs=0.5361526416 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.0585240879 )*sep +(0.0531846773 )*oct +(0 )*nov +(0
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.175529296 )*
pturnback +(-0.099994368 )*pexchange +(0.0079019858 )*pctlckdn    ;

 * stderr = 0.2110792563  ;

 mslckhrs = 0.4652546061 ;
 *  based on           1,356 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI21U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.626 and p99 =    1.007 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lgslckhrs=-0.705570918 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.1449766923 )*sep +(0.097134628 )*oct +(0 )*nov +(0
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.367963604 )*
pturnback +(-0.269876534 )*pexchange +(0.0112435374 )*pctlckdn    ;

 * stderr = 0.4084677479  ;

 mlgslckhrs = -0.879383029 ;
 *  based on           1,385 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** lockage  times (hours) for double lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.213 and p99 =    3.016 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
dlockhrs=2.2220349442 +(0 )*feb +(0 )*mar +(-0.03932686 )*apr +(-0.092699386 )*may +(-0.117192943 )*jun +(-0.093703706 )*jul +(-0.045872194 )*aug +(0
)*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.401279985 )*pturnback +(-0.308155012 )*pexchange    ;

 * stderr = 0.276729082  ;

 mdlckhrs = 1.9245006985 ;
 *  based on           4,471 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.546 and p99 =    1.104 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
lgdlckhrs=0.7894120817 +(0 )*feb +(0 )*mar +(0 )*apr +(-0.044746243 )*may +(-0.059140111 )*jun +(-0.045967572 )*jul +(-0.020681856 )*aug +(0 )*sep
+(0 )*oct +(0 )*nov +(0 )*dec +(-0.205671794 )*pturnback +(-0.155968844 )*pexchange    ;

 * stderr = 0.1424706599  ;

 mlgdlckhrs = 0.6405989561 ;
 *  based on           4,471 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.213 and p99 =    3.016 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
slockhrs=0.5545242687 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife
+(0 )*pknockout +(0 )*pothtype +(-0.139114433 )*pturnback +(-0.113046884 )*pexchange    ;
```

```
 * stderr = 0.2321703106  ;

 mslckhrs = 0.4706647186 ;
 *  based on           1,223 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.546 and p99 =    1.104 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
lgslckhrs=-0.68396115 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife
+(0 )*pknockout +(0 )*pothtype +(-0.27531566 )*pturnback +(-0.220669186 )*pexchange    ;

 * stderr = 0.399165962  ;

 mlgslckhrs = -0.848886723 ;
 *  based on           1,223 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.213 and p99 =    3.016 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
dlockhrs=2.2609561478 +(0 )*feb +(-0.050468358 )*mar +(-0.052335691 )*apr +(-0.10717364 )*may +(-0.133396415 )*jun +(-0.109960942 )*jul +(-
0.057852112 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.000620446 )*pctlcknite +(-0.400349533 )*pturnback +(
-0.307065551 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2750901834  ;

 mdlckhrs = 1.9245542391 ;
 *  based on           4,472 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI22D ;
```

```
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.546 and p99 =    1.104 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
lgdlckhrs=0.8128615274 +(0 )*feb +(-0.027266409 )*mar +(-0.025755081 )*apr +(-0.055855404 )*may +(-0.071167786 )*jun +(-0.058025026 )*jul +(-
0.030479286 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.00032041 )*pctlcknite +(-0.20508168 )*pturnback +(
-0.15479113 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1415274019  ;

 mlgdlckhrs = 0.6406294267 ;
 *  based on           4,472 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.213 and p99 =    3.016 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
slockhrs=0.5516861146 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife
+(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.13800202 )*pturnback +(-0.112570627 )*
pexchange +(0.0038785009 )*pctlckdn    ;

 * stderr = 0.2305041288  ;

 mslckhrs = 0.4712379322 ;
 *  based on           1,226 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.546 and p99 =    1.104 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
lgslckhrs=-0.686217014 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife
+(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.273983467 )*pturnback +(-0.222093498 )*
```

```
pexchange +(0.0044058585 )*pctlckdn    ;

 * stderr = 0.3979833854  ;

 mlgslckhrs = -0.847739815 ;
 *  based on           1,226 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.213 and p99 =    3.016 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
dlockhrs=2.2609561478 +(0 )*feb +(-0.050468358 )*mar +(-0.052335691 )*apr +(-0.10717364 )*may +(-0.133396415 )*jun +(-0.109960942 )*jul +(-
0.057852112 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.000620446 )*pctlcknite +(-0.400349533 )*pturnback +(
-0.307065551 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2750901834  ;

 mdlckhrs = 1.9245542391 ;
 *  based on           4,472 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.546 and p99 =    1.104 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
lgdlckhrs=0.8128615274 +(0 )*feb +(-0.027266409 )*mar +(-0.025755081 )*apr +(-0.055855404 )*may +(-0.071167786 )*jun +(-0.058025026 )*jul +(-
0.030479286 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.00032041 )*pctlcknite +(-0.20508168 )*pturnback +(
-0.15479113 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1415274019  ;

 mlgdlckhrs = 0.6406294267 ;
 *  based on           4,472 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** lockage  times (hours) for single lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.213 and p99 =    3.016 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
slockhrs=0.5516861146 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife
+(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.13800202 )*pturnback +(-0.112570627 )*
pexchange +(0.0038785009 )*pctlckdn    ;

 * stderr = 0.2305041288  ;

 mslckhrs = 0.4712379322 ;
 *  based on           1,226 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.546 and p99 =    1.104 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
lgslckhrs=-0.686217014 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife
+(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.273983467 )*pturnback +(-0.222093498 )*
pexchange +(0.0044058585 )*pctlckdn    ;

 * stderr = 0.3979833854  ;

 mlgslckhrs = -0.847739815 ;
 *  based on           1,226 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.213 and p99 =    3.016 and impair pct le 100  ;
```

```
 * model  fitted   08JUN05 16:30   ;
dlockhrs=2.2609561478 +(0 )*feb +(-0.050468358 )*mar +(-0.052335691 )*apr +(-0.10717364 )*may +(-0.133396415 )*jun +(-0.109960942 )*jul +(-
0.057852112 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.000620446 )*pctlcknite +(-0.400349533 )*pturnback +(
-0.307065551 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2750901834  ;

 mdlckhrs = 1.9245542391 ;
 *  based on           4,472 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.546 and p99 =    1.104 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
lgdlckhrs=0.8128615274 +(0 )*feb +(-0.027266409 )*mar +(-0.025755081 )*apr +(-0.055855404 )*may +(-0.071167786 )*jun +(-0.058025026 )*jul +(-
0.030479286 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.00032041 )*pctlcknite +(-0.20508168 )*pturnback +(
-0.15479113 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1415274019  ;

 mlgdlckhrs = 0.6406294267 ;
 *  based on           4,472 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.213 and p99 =    3.016 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
slockhrs=0.5516861146 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife
+(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.13800202 )*pturnback +(-0.112570627 )*
pexchange +(0.0038785009 )*pctlckdn    ;

 * stderr = 0.2305041288  ;
```

```
 mslckhrs = 0.4712379322 ;
 *  based on           1,226 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.546 and p99 =    1.104 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
lgslckhrs=-0.686217014 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife
+(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.273983467 )*pturnback +(-0.222093498 )*
pexchange +(0.0044058585 )*pctlckdn    ;

 * stderr = 0.3979833854  ;

 mlgslckhrs = -0.847739815 ;
 *  based on           1,226 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.213 and p99 =    3.016 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
dlockhrs=2.2610393639 +(0 )*feb +(-0.050524443 )*mar +(-0.052399087 )*apr +(-0.106731203 )*may +(-0.13346389 )*jun +(-0.110025592 )*jul +(-0.05790527
)*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.000621136 )*pctlcknite +(-0.400405817 )*pturnback +(
-0.307003667 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2751316447  ;

 mdlckhrs = 1.9245718268 ;
 *  based on           4,470 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
```

```
 *** with screen between p1 =   -1.546 and p99 =    1.104 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
lgdlckhrs=0.8128941897 +(0 )*feb +(-0.027288671 )*mar +(-0.025782232 )*apr +(-0.055619292 )*may +(-0.071197506 )*jun +(-0.05805363 )*jul +(-
0.03050133 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.000320801 )*pctlcknite +(-0.20510227 )*pturnback +(
-0.154750566 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1415491332  ;

 mlgdlckhrs = 0.6406362057 ;
 *  based on           4,470 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.213 and p99 =    3.016 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
slockhrs=0.5504721893 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife
+(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.136864463 )*pturnback +(-0.110893009 )*
pexchange +(0.0038850782 )*pctlckdn    ;

 * stderr = 0.2305895842  ;

 mslckhrs = 0.4708449135 ;
 *  based on           1,221 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.546 and p99 =    1.104 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
lgslckhrs=-0.688569646 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife
+(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.272002069 )*pturnback +(-0.218552199 )*
pexchange +(0.0044185627 )*pctlckdn    ;
```

```
 * stderr = 0.3979949732  ;

 mlgslckhrs = -0.848490557 ;
 *  based on           1,221 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.213 and p99 =    3.016 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
dlockhrs=2.2610393639 +(0 )*feb +(-0.050524443 )*mar +(-0.052399087 )*apr +(-0.106731203 )*may +(-0.13346389 )*jun +(-0.110025592 )*jul +(-0.05790527
)*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.000621136 )*pctlcknite +(-0.400405817 )*pturnback +(
-0.307003667 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2751316447  ;

 mdlckhrs = 1.9245718268 ;
 *  based on           4,470 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.546 and p99 =    1.104 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lgdlckhrs=0.8128941897 +(0 )*feb +(-0.027288671 )*mar +(-0.025782232 )*apr +(-0.055619292 )*may +(-0.071197506 )*jun +(-0.05805363 )*jul +(-
0.03050133 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.000320801 )*pctlcknite +(-0.20510227 )*pturnback +(
-0.154750566 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1415491332  ;

 mlgdlckhrs = 0.6406362057 ;
 *  based on           4,470 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** lockage  times (hours) for single lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.213 and p99 =    3.016 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
slockhrs=0.5504721893 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife
+(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.136864463 )*pturnback +(-0.110893009 )*
pexchange +(0.0038850782 )*pctlckdn    ;

 * stderr = 0.2305895842  ;

 mslckhrs = 0.4708449135 ;
 *  based on           1,221 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI22D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.546 and p99 =    1.104 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lgslckhrs=-0.688569646 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife
+(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.272002069 )*pturnback +(-0.218552199 )*
pexchange +(0.0044185627 )*pctlckdn    ;

 * stderr = 0.3979949732  ;

 mlgslckhrs = -0.848490557 ;
 *  based on           1,221 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** lockage  times (hours) for double lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.230 and p99 =    3.426 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
dlockhrs=2.1182055586 +(0 )*feb +(0 )*mar +(0.0563952408 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.1072482796 )*aug +(0.2475592172 )*sep +(0.2305522036
)*oct +(0.0632168455 )*nov +(0 )*dec +(-0.465373045 )*pturnback +(-0.128073273 )*pexchange    ;

 * stderr = 0.3631367129  ;

 mdlckhrs = 1.9408593906 ;
 *  based on           4,276 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.472 and p99 =    1.231 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
lgdlckhrs=0.7335198644 +(0 )*feb +(0 )*mar +(0.0290911894 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0542472154 )*aug +(0.1236920136 )*sep
+(0.1143679376 )*oct +(0.0350092824 )*nov +(0 )*dec +(-0.246330568 )*pturnback +(-0.064076467 )*pexchange    ;

 * stderr = 0.1853937482  ;

 mlgdlckhrs = 0.6395611924 ;
 *  based on           4,276 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.230 and p99 =    3.426 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
slockhrs=0.6942340305 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife
+(0 )*pknockout +(0 )*pothtype +(-0.245074787 )*pturnback +(-0.18943595 )*pexchange    ;
```

```
 * stderr = 0.247703449  ;

 mslckhrs = 0.5392287733 ;
 *  based on           1,093 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.472 and p99 =    1.231 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
lgslckhrs=-0.458116627 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.1291458331 )*sep +(0.108290393 )*oct +(0 )*nov +(0
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.492249757 )*pturnback +(-0.374035726 )*pexchange
   ;

 * stderr = 0.40808302  ;

 mlgslckhrs = -0.744916668 ;
 *  based on           1,132 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.230 and p99 =    3.426 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
dlockhrs=2.1559841235 +(0 )*feb +(0 )*mar +(0.0585265823 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.1096693059 )*aug +(0.2544965446 )*sep +(0.2423841448
)*oct +(0.0769991695 )*nov +(0 )*dec +(-0.000926232 )*pctlcknite +(-0.464169213 )*pturnback +(-0.126767665
)*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3605923017  ;

 mdlckhrs = 1.940922251 ;
 *  based on           4,275 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** log(lockage times) for double lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.472 and p99 =    1.231 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
lgdlckhrs=0.7527031813 +(0 )*feb +(0 )*mar +(0.0301763678 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0554796911 )*aug +(0.1272177283 )*sep
+(0.1203796226 )*oct +(0.0420115196 )*nov +(0 )*dec +(-0.000470364 )*pctlcknite +(-0.245718951 )*pturnback +(
-0.063416917 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1841102405  ;

 mlgdlckhrs = 0.6395905403 ;
 *  based on           4,275 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.230 and p99 =    3.426 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
slockhrs=0.6814866549 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.0632645751 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*pjacknife +(0 )*pknockout +(0 )*poththype +(0 )*pctlcknite +(0 )*pothnite +(-0.242540886 )*pturnback +(
-0.184643447 )*pexchange +(0.0048546557 )*pctlckdn    ;

 * stderr = 0.2453288726  ;

 mslckhrs = 0.5388876413 ;
 *  based on           1,095 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.472 and p99 =    1.231 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
```

```
lgslckhrs=-0.487341506 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.1377164801 )*sep +(0.1050244499 )*oct +(0 )*nov +(0
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0.0007908051 )*pctlcknite +(0 )*pothnite +(
-0.491022979 )*pturnback +(-0.376999808 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.4062534826  ;

 mlgslckhrs = -0.745465757 ;
 *  based on           1,134 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.230 and p99 =    3.426 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
dlockhrs=2.1559841235 +(0 )*feb +(0 )*mar +(0.0585265823 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.1096693059 )*aug +(0.2544965446 )*sep +(0.2423841448
)*oct +(0.0769991695 )*nov +(0 )*dec +(-0.000926232 )*pctlcknite +(-0.464169213 )*pturnback +(-0.126767665
)*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3605923017  ;

 mdlckhrs = 1.940922251 ;
 *  based on           4,275 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.472 and p99 =    1.231 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
lgdlckhrs=0.7527031813 +(0 )*feb +(0 )*mar +(0.0301763678 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0554796911 )*aug +(0.1272177283 )*sep
+(0.1203796226 )*oct +(0.0420115196 )*nov +(0 )*dec +(-0.000470364 )*pctlcknite +(-0.245718951 )*pturnback +(
-0.063416917 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1841102405  ;

 mlgdlckhrs = 0.6395905403 ;
```

```
 *  based on           4,275 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.230 and p99 =    3.426 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
slockhrs=0.6814866549 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.0632645751 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*pjacknife +(0 )*pknockout +(0 )*poththype +(0 )*pctlcknite +(0 )*pothnite +(-0.242540886 )*pturnback +(
-0.184643447 )*pexchange +(0.0048546557 )*pctlckdn    ;

 * stderr = 0.2453288726  ;

 mslckhrs = 0.5388876413 ;
 *  based on           1,095 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.472 and p99 =    1.231 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
lgslckhrs=-0.487341506 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.1377164801 )*sep +(0.1050244499 )*oct +(0 )*nov +(0
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*poththype +(0.0007908051 )*pctlcknite +(0 )*pothnite +(
-0.491022979 )*pturnback +(-0.376999808 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.4062534826  ;

 mlgslckhrs = -0.745465757 ;
 *  based on           1,134 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.230 and p99 =    3.426 and impair pct le 100  ;
```

```
 * model  fitted   08JUN05 16:30   ;
dlockhrs=2.1559841235 +(0 )*feb +(0 )*mar +(0.0585265823 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.1096693059 )*aug +(0.2544965446 )*sep +(0.2423841448
)*oct +(0.0769991695 )*nov +(0 )*dec +(-0.000926232 )*pctlcknite +(-0.464169213 )*pturnback +(-0.126767665
)*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3605923017  ;

 mdlckhrs = 1.940922251 ;
 *  based on           4,275 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.472 and p99 =    1.231 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
lgdlckhrs=0.7527031813 +(0 )*feb +(0 )*mar +(0.0301763678 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0554796911 )*aug +(0.1272177283 )*sep
+(0.1203796226 )*oct +(0.0420115196 )*nov +(0 )*dec +(-0.000470364 )*pctlcknite +(-0.245718951 )*pturnback +(
-0.063416917 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1841102405  ;

 mlgdlckhrs = 0.6395905403 ;
 *  based on           4,275 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.230 and p99 =    3.426 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
slockhrs=0.6814866549 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.0632645751 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*pjacknife +(0 )*pknockout +(0 )*poththype +(0 )*pctlcknite +(0 )*pothnite +(-0.242540886 )*pturnback +(
-0.184643447 )*pexchange +(0.0048546557 )*pctlckdn    ;
```

```
 * stderr = 0.2453288726  ;

 mslckhrs = 0.5388876413 ;
 *  based on           1,095 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.472 and p99 =    1.231 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
lgslckhrs=-0.487341506 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.1377164801 )*sep +(0.1050244499 )*oct +(0 )*nov +(0
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0.0007908051 )*pctlcknite +(0 )*pothnite +(
-0.491022979 )*pturnback +(-0.376999808 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.4062534826  ;

 mlgslckhrs = -0.745465757 ;
 *  based on           1,134 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.230 and p99 =    3.426 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
dlockhrs=2.1559841235 +(0 )*feb +(0 )*mar +(0.0585265823 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.1096693059 )*aug +(0.2544965446 )*sep +(0.2423841448
)*oct +(0.0769991695 )*nov +(0 )*dec +(-0.000926232 )*pctlcknite +(-0.464169213 )*pturnback +(-0.126767665
)*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3605923017  ;

 mdlckhrs = 1.940922251 ;
 *  based on           4,275 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** log(lockage times) for double lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.472 and p99 =    1.231 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
lgdlckhrs=0.7527031813 +(0 )*feb +(0 )*mar +(0.0301763678 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0554796911 )*aug +(0.1272177283 )*sep
+(0.1203796226 )*oct +(0.0420115196 )*nov +(0 )*dec +(-0.000470364 )*pctlcknite +(-0.245718951 )*pturnback +(
-0.063416917 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1841102405  ;

 mlgdlckhrs = 0.6395905403 ;
 *  based on           4,275 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.230 and p99 =    3.426 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
slockhrs=0.6815238345 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.0630314283 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*pjacknife +(0 )*pknockout +(0 )*poththype +(0 )*pctlcknite +(0 )*pothnite +(-0.242085202 )*pturnback +(
-0.184481716 )*pexchange +(0.0048518717 )*pctlckdn    ;

 * stderr = 0.2455011821  ;

 mslckhrs = 0.5392287733 ;
 *  based on           1,093 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.472 and p99 =    1.231 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
```

```
lgslckhrs=-0.487537663 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.1374122506 )*sep +(0.104665527 )*oct +(0 )*nov +(0
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0.0007987063 )*pctlcknite +(0 )*pothnite +(
-0.49006741 )*pturnback +(-0.376998255 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.4065000464  ;

 mlgslckhrs = -0.744916668 ;
 *  based on           1,132 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.230 and p99 =    3.426 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
dlockhrs=2.1559841235 +(0 )*feb +(0 )*mar +(0.0585265823 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.1096693059 )*aug +(0.2544965446 )*sep +(0.2423841448
)*oct +(0.0769991695 )*nov +(0 )*dec +(-0.000926232 )*pctlcknite +(-0.464169213 )*pturnback +(-0.126767665
)*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3605923017  ;

 mdlckhrs = 1.940922251 ;
 *  based on           4,275 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.472 and p99 =    1.231 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lgdlckhrs=0.7527031813 +(0 )*feb +(0 )*mar +(0.0301763678 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0554796911 )*aug +(0.1272177283 )*sep
+(0.1203796226 )*oct +(0.0420115196 )*nov +(0 )*dec +(-0.000470364 )*pctlcknite +(-0.245718951 )*pturnback +(
-0.063416917 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1841102405  ;

 mlgdlckhrs = 0.6395905403 ;
```

```
 *  based on           4,275 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.230 and p99 =    3.426 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
slockhrs=0.6815238345 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.0630314283 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*pjacknife +(0 )*pknockout +(0 )*poththype +(0 )*pctlcknite +(0 )*pothnite +(-0.242085202 )*pturnback +(
-0.184481716 )*pexchange +(0.0048518717 )*pctlckdn    ;

 * stderr = 0.2455011821  ;

 mslckhrs = 0.5392287733 ;
 *  based on           1,093 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI22U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.472 and p99 =    1.231 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lgslckhrs=-0.487537663 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0.1374122506 )*sep +(0.104665527 )*oct +(0 )*nov +(0
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*poththype +(0.0007987063 )*pctlcknite +(0 )*pothnite +(
-0.49006741 )*pturnback +(-0.376998255 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.4065000464  ;

 mlgslckhrs = -0.744916668 ;
 *  based on           1,132 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** lockage  times (hours) for double lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.246 and p99 =    4.164 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
dlockhrs=2.4005977279 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.085487363 )*jun +(-0.079510954 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov
+(0.0626663818 )*dec +(-0.447997376 )*pturnback +(-0.316249495 )*pexchange    ;

 * stderr = 0.3512824787  ;

 mdlckhrs = 2.0804179107 ;
 *  based on           4,497 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.403 and p99 =    1.426 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
lgdlckhrs=0.8659583447 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.039616752 )*jun +(-0.038536858 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov
+(0.0271750778 )*dec +(-0.212611245 )*pturnback +(-0.145507727 )*pexchange    ;

 * stderr = 0.1624580659  ;

 mlgdlckhrs = 0.715750189 ;
 *  based on           4,497 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.246 and p99 =    4.164 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
slockhrs=0.7702351892 +(0 )*feb +(0 )*mar +(-0.08613356 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.233025389 )*pturnback +(-0.233068217 )*pexchange    ;
```

```
 * stderr = 0.2640292842  ;

 mslckhrs = 0.5851925756 ;
 *  based on             953 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.403 and p99 =    1.426 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
lgslckhrs=-0.340795885 +(0 )*feb +(0 )*mar +(-0.108929118 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.375651079 )*pturnback +(-0.38881435 )*pexchange    ;

 * stderr = 0.3811669729  ;

 mlgslckhrs = -0.641219139 ;
 *  based on             974 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.246 and p99 =    4.148 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
dlockhrs=2.4335269406 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.093273138 )*jun +(-0.087054907 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov
+(0.0680019165 )*dec +(-0.000641492 )*pctlcknite +(-0.446852176 )*pturnback +(-0.319092036 )*pexchange +(0 )*
pctlckdn    ;

 * stderr = 0.3492363988  ;

 mdlckhrs = 2.08066522 ;
 *  based on           4,495 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI24D ;
```

```
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.403 and p99 =    1.423 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
lgdlckhrs=0.8817264633 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.043322889 )*jun +(-0.042124534 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov
+(0.029458075 )*dec +(-0.00029801 )*pctlcknite +(-0.212512567 )*pturnback +(-0.147273635 )*pexchange +(0 )*
pctlckdn    ;

 * stderr = 0.1609664778  ;

 mlgdlckhrs = 0.7159499278 ;
 *  based on           4,495 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.246 and p99 =    4.148 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
slockhrs=0.7700987138 +(0 )*feb +(0 )*mar +(-0.086117959 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.232856923 )*pturnback +(
-0.232933511 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2645652496  ;

 mslckhrs = 0.5858037937 ;
 *  based on            955 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.403 and p99 =    1.423 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
lgslckhrs=-0.341708007 +(0 )*feb +(0 )*mar +(-0.108639337 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.37495692 )*pturnback +(
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```
-0.387934243 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3819806879  ;

 mlgslckhrs = -0.640509749 ;
 *  based on             976 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.246 and p99 =    4.148 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
dlockhrs=2.4335269406 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.093273138 )*jun +(-0.087054907 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov
+(0.0680019165 )*dec +(-0.000641492 )*pctlcknite +(-0.446852176 )*pturnback +(-0.319092036 )*pexchange +(0 )*
pctlckdn    ;

 * stderr = 0.3492363988  ;

 mdlckhrs = 2.08066522 ;
 *  based on           4,495 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.403 and p99 =    1.423 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
lgdlckhrs=0.8817264633 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.043322889 )*jun +(-0.042124534 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov
+(0.029458075 )*dec +(-0.00029801 )*pctlcknite +(-0.212512567 )*pturnback +(-0.147273635 )*pexchange +(0 )*
pctlckdn    ;

 * stderr = 0.1609664778  ;

 mlgdlckhrs = 0.7159499278 ;
 *  based on           4,495 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** lockage  times (hours) for single lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.246 and p99 =    4.148 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
slockhrs=0.7700987138 +(0 )*feb +(0 )*mar +(-0.086117959 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.232856923 )*pturnback +(
-0.232933511 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2645652496  ;

 mslckhrs = 0.5858037937 ;
 *  based on             955 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.403 and p99 =    1.423 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
lgslckhrs=-0.341708007 +(0 )*feb +(0 )*mar +(-0.108639337 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.37495692 )*pturnback +(
-0.387934243 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3819806879  ;

 mlgslckhrs = -0.640509749 ;
 *  based on             976 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.246 and p99 =    4.148 and impair pct le 100  ;
```

```
 * model  fitted   08JUN05 16:30   ;
dlockhrs=2.4335269406 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.093273138 )*jun +(-0.087054907 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov
+(0.0680019165 )*dec +(-0.000641492 )*pctlcknite +(-0.446852176 )*pturnback +(-0.319092036 )*pexchange +(0 )*
pctlckdn    ;

 * stderr = 0.3492363988  ;

 mdlckhrs = 2.08066522 ;
 *  based on           4,495 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.403 and p99 =    1.423 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
lgdlckhrs=0.8817264633 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.043322889 )*jun +(-0.042124534 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov
+(0.029458075 )*dec +(-0.00029801 )*pctlcknite +(-0.212512567 )*pturnback +(-0.147273635 )*pexchange +(0 )*
pctlckdn    ;

 * stderr = 0.1609664778  ;

 mlgdlckhrs = 0.7159499278 ;
 *  based on           4,495 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.246 and p99 =    4.148 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
slockhrs=0.7700987138 +(0 )*feb +(0 )*mar +(-0.086117959 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*pjacknife +(0 )*pknockout +(0 )*poththype +(0 )*pctlcknite +(0 )*pothnite +(-0.232856923 )*pturnback +(
-0.232933511 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2645652496  ;
```

```
 mslckhrs = 0.5858037937 ;
 *  based on             955 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.403 and p99 =    1.423 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
lgslckhrs=-0.341708007 +(0 )*feb +(0 )*mar +(-0.108639337 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.37495692 )*pturnback +(
-0.387934243 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3819806879  ;

 mlgslckhrs = -0.640509749 ;
 *  based on             976 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.246 and p99 =    4.164 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
dlockhrs=2.4335269406 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.093273138 )*jun +(-0.087054907 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov
+(0.0680019165 )*dec +(-0.000641492 )*pctlcknite +(-0.446852176 )*pturnback +(-0.319092036 )*pexchange +(0 )*
pctlckdn    ;

 * stderr = 0.3492363988  ;

 mdlckhrs = 2.08066522 ;
 *  based on           4,495 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
```

```
 *** with screen between p1 =   -1.403 and p99 =    1.426 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
lgdlckhrs=0.8817264633 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.043322889 )*jun +(-0.042124534 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov
+(0.029458075 )*dec +(-0.00029801 )*pctlcknite +(-0.212512567 )*pturnback +(-0.147273635 )*pexchange +(0 )*
pctlckdn    ;

 * stderr = 0.1609664778  ;

 mlgdlckhrs = 0.7159499278 ;
 *  based on           4,495 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.246 and p99 =    4.164 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
slockhrs=0.7702365872 +(0 )*feb +(0 )*mar +(-0.086149138 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.232991295 )*pturnback +(
-0.233067849 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2641681846  ;

 mslckhrs = 0.5852562336 ;
 *  based on             952 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.403 and p99 =    1.426 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
lgslckhrs=-0.34080348 +(0 )*feb +(0 )*mar +(-0.108843398 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.375839069 )*pturnback +(
-0.388816225 )*pexchange +(0 )*pctlckdn    ;
```

```
 * stderr = 0.3813567037  ;

 mlgslckhrs = -0.641215111 ;
 *  based on             973 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.246 and p99 =    4.164 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
dlockhrs=2.4335269406 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.093273138 )*jun +(-0.087054907 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov
+(0.0680019165 )*dec +(-0.000641492 )*pctlcknite +(-0.446852176 )*pturnback +(-0.319092036 )*pexchange +(0 )*
pctlckdn    ;

 * stderr = 0.3492363988  ;

 mdlckhrs = 2.08066522 ;
 *  based on           4,495 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.403 and p99 =    1.426 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lgdlckhrs=0.8817264633 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.043322889 )*jun +(-0.042124534 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov
+(0.029458075 )*dec +(-0.00029801 )*pctlcknite +(-0.212512567 )*pturnback +(-0.147273635 )*pexchange +(0 )*
pctlckdn    ;

 * stderr = 0.1609664778  ;

 mlgdlckhrs = 0.7159499278 ;
 *  based on           4,495 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** lockage  times (hours) for single lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.246 and p99 =    4.164 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
slockhrs=0.7702365872 +(0 )*feb +(0 )*mar +(-0.086149138 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.232991295 )*pturnback +(
-0.233067849 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2641681846  ;

 mslckhrs = 0.5852562336 ;
 *  based on             952 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI24D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.403 and p99 =    1.426 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lgslckhrs=-0.34080348 +(0 )*feb +(0 )*mar +(-0.108843398 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0
)*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.375839069 )*pturnback +(
-0.388816225 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3813567037  ;

 mlgslckhrs = -0.641215111 ;
 *  based on             973 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** lockage  times (hours) for double lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.230 and p99 =    2.705 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
dlockhrs=1.7813530041 +(0 )*feb +(0.058724271 )*mar +(0.0639084555 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.1289751019 )*aug +(0.239699947 )*sep
+(0.2694589577 )*oct +(0.2211626063 )*nov +(0.1232337806 )*dec +(-0.240450042 )*pturnback +(-0.037624156 )*
pexchange    ;

 * stderr = 0.2959758346  ;

 mdlckhrs = 1.7608777439 ;
 *  based on           4,401 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.472 and p99 =    0.995 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
lgdlckhrs=0.5592574938 +(0 )*feb +(0.0363793999 )*mar +(0.0373096249 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0758226316 )*aug +(0.1392321545 )*sep
+(0.1537031918 )*oct +(0.1254971503 )*nov +(0.0785328162 )*dec +(-0.138876548 )*pturnback +(-0.024308373 )*
pexchange    ;

 * stderr = 0.1682582057  ;

 mlgdlckhrs = 0.5464543295 ;
 *  based on           4,387 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.230 and p99 =    2.705 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
```

```
slockhrs=0.5774423902 +(0 )*feb +(0 )*mar +(-0.056460033 )*apr +(-0.084496249 )*may +(-0.06982906 )*jun +(-0.079210314 )*jul +(0 )*aug +(0 )*sep +(0
)*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.105501916 )*pturnback +(
-0.090188792 )*pexchange    ;

 * stderr = 0.1769695348  ;

 mslckhrs = 0.4874362288 ;
 *  based on           1,205 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.472 and p99 =    0.995 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
lgslckhrs=-0.589713345 +(0 )*feb +(-0.108622691 )*mar +(-0.15882694 )*apr +(-0.205079438 )*may +(-0.162113293 )*jun +(-0.171816167 )*jul +(0 )*aug
+(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.210827371 )*
pturnback +(-0.184675295 )*pexchange    ;

 * stderr = 0.3278294786  ;

 mlgslckhrs = -0.787751072 ;
 *  based on           1,218 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.230 and p99 =    2.705 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
dlockhrs=1.8025201359 +(0 )*feb +(0.0659615892 )*mar +(0.0674638558 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.1318659442 )*aug +(0.2471593333 )*sep
+(0.2788784387 )*oct +(0.2342105827 )*nov +(0.128369601 )*dec +(-0.000638526 )*pctlcknite +(-0.237162929 )*
pturnback +(-0.033627765 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2945488572  ;

 mdlckhrs = 1.7608466279 ;
```

```
 *  based on           4,397 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.472 and p99 =    0.995 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
lgdlckhrs=0.5715372329 +(0 )*feb +(0.040573989 )*mar +(0.0393052223 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0775090033 )*aug +(0.1435139281 )*sep
+(0.1591378941 )*oct +(0.132863241 )*nov +(0.0814961377 )*dec +(-0.000368846 )*pctlcknite +(-0.136994621 )*
pturnback +(-0.022083865 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1674220958  ;

 mlgdlckhrs = 0.5464371397 ;
 *  based on           4,383 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.230 and p99 =    2.705 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
slockhrs=0.5764500757 +(0 )*feb +(0 )*mar +(-0.056008848 )*apr +(-0.084035154 )*may +(-0.069457483 )*jun +(-0.07881758 )*jul +(0 )*aug +(0 )*sep +(0
)*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(
-0.104670159 )*pturnback +(-0.08945877 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.17716152  ;

 mslckhrs = 0.4871913475 ;
 *  based on           1,205 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.472 and p99 =    0.995 and impair pct le 100  ;
```

```
 * model  fitted   08JUN05 15:31   ;
lgslckhrs=-0.735821466 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.1196838405 )*aug +(0.1691518675 )*sep +(0.1391608037 )*oct
+(0.1286953611 )*nov +(0.1883245117 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0
)*pothnite +(-0.214167954 )*pturnback +(-0.187327645 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3292180652  ;

 mlgslckhrs = -0.788343958 ;
 *  based on           1,218 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.230 and p99 =    2.705 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
dlockhrs=1.8025201359 +(0 )*feb +(0.0659615892 )*mar +(0.0674638558 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.1318659442 )*aug +(0.2471593333 )*sep
+(0.2788784387 )*oct +(0.2342105827 )*nov +(0.128369601 )*dec +(-0.000638526 )*pctlcknite +(-0.237162929 )*
pturnback +(-0.033627765 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2945488572  ;

 mdlckhrs = 1.7608466279 ;
 *  based on           4,397 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.472 and p99 =    0.995 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
lgdlckhrs=0.5715372329 +(0 )*feb +(0.040573989 )*mar +(0.0393052223 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0775090033 )*aug +(0.1435139281 )*sep
+(0.1591378941 )*oct +(0.132863241 )*nov +(0.0814961377 )*dec +(-0.000368846 )*pctlcknite +(-0.136994621 )*
pturnback +(-0.022083865 )*pexchange +(0 )*pctlckdn    ;
```

```
 * stderr = 0.1674220958  ;

 mlgdlckhrs = 0.5464371397 ;
 *  based on           4,383 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.230 and p99 =    2.705 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
slockhrs=0.5764500757 +(0 )*feb +(0 )*mar +(-0.056008848 )*apr +(-0.084035154 )*may +(-0.069457483 )*jun +(-0.07881758 )*jul +(0 )*aug +(0 )*sep +(0
)*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(
-0.104670159 )*pturnback +(-0.08945877 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.17716152  ;

 mslckhrs = 0.4871913475 ;
 *  based on           1,205 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.472 and p99 =    0.995 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
lgslckhrs=-0.735821466 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.1196838405 )*aug +(0.1691518675 )*sep +(0.1391608037 )*oct
+(0.1286953611 )*nov +(0.1883245117 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0
)*pothnite +(-0.214167954 )*pturnback +(-0.187327645 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3292180652  ;

 mlgslckhrs = -0.788343958 ;
 *  based on           1,218 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** lockage  times (hours) for double lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.230 and p99 =    2.705 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
dlockhrs=1.8025201359 +(0 )*feb +(0.0659615892 )*mar +(0.0674638558 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.1318659442 )*aug +(0.2471593333 )*sep
+(0.2788784387 )*oct +(0.2342105827 )*nov +(0.128369601 )*dec +(-0.000638526 )*pctlcknite +(-0.237162929 )*
pturnback +(-0.033627765 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2945488572  ;

 mdlckhrs = 1.7608466279 ;
 *  based on           4,397 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.472 and p99 =    0.995 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
lgdlckhrs=0.5715372329 +(0 )*feb +(0.040573989 )*mar +(0.0393052223 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0775090033 )*aug +(0.1435139281 )*sep
+(0.1591378941 )*oct +(0.132863241 )*nov +(0.0814961377 )*dec +(-0.000368846 )*pctlcknite +(-0.136994621 )*
pturnback +(-0.022083865 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1674220958  ;

 mlgdlckhrs = 0.5464371397 ;
 *  based on           4,383 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.230 and p99 =    2.705 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
```

```
slockhrs=0.5764500757 +(0 )*feb +(0 )*mar +(-0.056008848 )*apr +(-0.084035154 )*may +(-0.069457483 )*jun +(-0.07881758 )*jul +(0 )*aug +(0 )*sep +(0
)*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(
-0.104670159 )*pturnback +(-0.08945877 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.17716152  ;

 mslckhrs = 0.4871913475 ;
 *  based on           1,205 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.472 and p99 =    0.995 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
lgslckhrs=-0.735821466 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.1196838405 )*aug +(0.1691518675 )*sep +(0.1391608037 )*oct
+(0.1286953611 )*nov +(0.1883245117 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0
)*pothnite +(-0.214167954 )*pturnback +(-0.187327645 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3292180652  ;

 mlgslckhrs = -0.788343958 ;
 *  based on           1,218 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.230 and p99 =    2.705 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
dlockhrs=1.8025201359 +(0 )*feb +(0.0659615892 )*mar +(0.0674638558 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.1318659442 )*aug +(0.2471593333 )*sep
+(0.2788784387 )*oct +(0.2342105827 )*nov +(0.128369601 )*dec +(-0.000638526 )*pctlcknite +(-0.237162929 )*
pturnback +(-0.033627765 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2945488572  ;

 mdlckhrs = 1.7608466279 ;
```

```
 *  based on           4,397 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.472 and p99 =    0.995 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
lgdlckhrs=0.5715372329 +(0 )*feb +(0.040573989 )*mar +(0.0393052223 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0775090033 )*aug +(0.1435139281 )*sep
+(0.1591378941 )*oct +(0.132863241 )*nov +(0.0814961377 )*dec +(-0.000368846 )*pctlcknite +(-0.136994621 )*
pturnback +(-0.022083865 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1674220958  ;

 mlgdlckhrs = 0.5464371397 ;
 *  based on           4,383 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.230 and p99 =    2.705 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
slockhrs=0.5774209489 +(0 )*feb +(0 )*mar +(-0.056379147 )*apr +(-0.08442456 )*may +(-0.06974022 )*jun +(-0.079130795 )*jul +(0 )*aug +(0 )*sep +(0
)*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(
-0.105512414 )*pturnback +(-0.090355849 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1770257418  ;

 mslckhrs = 0.4873645226 ;
 *  based on           1,204 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.472 and p99 =    0.995 and impair pct le 100  ;
```

```
 * model  fitted   28JUN05 19:56   ;
lgslckhrs=-0.589790368 +(0 )*feb +(-0.108406048 )*mar +(-0.158593619 )*apr +(-0.204873369 )*may +(-0.161863486 )*jun +(-0.171592267 )*jul +(0 )*aug
+(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0
)*pothnite +(-0.210858002 )*pturnback +(-0.185087508 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3279044855  ;

 mlgslckhrs = -0.78794189 ;
 *  based on           1,217 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.230 and p99 =    2.705 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
dlockhrs=1.8025201359 +(0 )*feb +(0.0659615892 )*mar +(0.0674638558 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.1318659442 )*aug +(0.2471593333 )*sep
+(0.2788784387 )*oct +(0.2342105827 )*nov +(0.128369601 )*dec +(-0.000638526 )*pctlcknite +(-0.237162929 )*
pturnback +(-0.033627765 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2945488572  ;

 mdlckhrs = 1.7608466279 ;
 *  based on           4,397 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.472 and p99 =    0.995 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lgdlckhrs=0.5715372329 +(0 )*feb +(0.040573989 )*mar +(0.0393052223 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0.0775090033 )*aug +(0.1435139281 )*sep
+(0.1591378941 )*oct +(0.132863241 )*nov +(0.0814961377 )*dec +(-0.000368846 )*pctlcknite +(-0.136994621 )*
pturnback +(-0.022083865 )*pexchange +(0 )*pctlckdn    ;
```

```
 * stderr = 0.1674220958  ;

 mlgdlckhrs = 0.5464371397 ;
 *  based on           4,383 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.230 and p99 =    2.705 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
slockhrs=0.5774209489 +(0 )*feb +(0 )*mar +(-0.056379147 )*apr +(-0.08442456 )*may +(-0.06974022 )*jun +(-0.079130795 )*jul +(0 )*aug +(0 )*sep +(0
)*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(
-0.105512414 )*pturnback +(-0.090355849 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1770257418  ;

 mslckhrs = 0.4873645226 ;
 *  based on           1,204 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI24U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.472 and p99 =    0.995 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lgslckhrs=-0.589790368 +(0 )*feb +(-0.108406048 )*mar +(-0.158593619 )*apr +(-0.204873369 )*may +(-0.161863486 )*jun +(-0.171592267 )*jul +(0 )*aug
+(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0
)*pothnite +(-0.210858002 )*pturnback +(-0.185087508 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3279044855  ;

 mlgslckhrs = -0.78794189 ;
 *  based on           1,217 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** lockage  times (hours) for double lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.246 and p99 =    3.393 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
dlockhrs=2.1319851415 +(0 )*feb +(0 )*mar +(-0.052379826 )*apr +(-0.155858648 )*may +(-0.180673598 )*jun +(-0.143102845 )*jul +(0 )*aug +(0 )*sep
+(0.0698462166 )*oct +(0 )*nov +(0.0997641155 )*dec +(-0.155657271 )*pturnback +(0 )*pexchange    ;

 * stderr = 0.304417553  ;

 mdlckhrs = 2.0183493984 ;
 *  based on           4,660 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.403 and p99 =    1.222 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
lgdlckhrs=0.7470027007 +(0 )*feb +(0 )*mar +(-0.025513611 )*apr +(-0.078261197 )*may +(-0.094620567 )*jun +(-0.073425306 )*jul +(0 )*aug +(0 )*sep
+(0.0340938677 )*oct +(0 )*nov +(0.0467452481 )*dec +(-0.076669859 )*pturnback +(0 )*pexchange    ;

 * stderr = 0.1486150797  ;

 mlgdlckhrs = 0.6895970742 ;
 *  based on           4,661 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.246 and p99 =    3.393 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
slockhrs=0.5747928545 +(0 )*feb +(0 )*mar +(-0.085949615 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0.0733695172 )*oct +(0 )*nov
+(0.1266030977 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*poththype +(-0.105673728 )*pturnback +(-0.072836521 )*
pexchange    ;
```

```
 * stderr = 0.2120790851  ;

 mslckhrs = 0.5204157512 ;
 *  based on             970 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.403 and p99 =    1.222 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
lgslckhrs=-0.643553461 +(0 )*feb +(0 )*mar +(-0.181775209 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0.1369083328 )*oct +(0 )*nov
+(0.1496365667 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.158308672 )*pturnback +(-0.11597825 )*
pexchange    ;

 * stderr = 0.3571707652  ;

 mlgslckhrs = -0.734037978 ;
 *  based on             991 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.246 and p99 =    3.393 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
dlockhrs=2.1469048435 +(0 )*feb +(0 )*mar +(-0.0569895 )*apr +(-0.165586262 )*may +(-0.191173768 )*jun +(-0.153514131 )*jul +(0 )*aug +(0 )*sep
+(0.072662942 )*oct +(0 )*nov +(0.1099032853 )*dec +(-0.000753874 )*pctlcknite +(-0.13151564 )*pturnback +(
0.0354440517 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3023090779  ;

 mdlckhrs = 2.0183467188 ;
 *  based on           4,658 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** log(lockage times) for double lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.403 and p99 =    1.222 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
lgdlckhrs=0.7368511076 +(0 )*feb +(0 )*mar +(0 )*apr +(-0.064681205 )*may +(-0.08132071 )*jun +(-0.059984145 )*jul +(0 )*aug +(0.0251346148 )*sep
+(0.0538998163 )*oct +(0.0317251104 )*nov +(0.0700401437 )*dec +(-0.000370204 )*pctlcknite +(-0.066281913 )*
pturnback +(0.0165082867 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1475150243  ;

 mlgdlckhrs = 0.6895904768 ;
 *  based on           4,659 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.246 and p99 =    3.393 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
slockhrs=0.5729509696 +(0 )*feb +(0 )*mar +(-0.083448686 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0.0740718109 )*oct +(0 )*nov
+(0.1277616031 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*poththype +(0 )*pctlcknite +(0 )*pothnite +(
-0.104644482 )*pturnback +(-0.070886425 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2119989952  ;

 mslckhrs = 0.5200289494 ;
 *  based on             974 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.403 and p99 =    1.222 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
```

```
lgslckhrs=-0.64712216 +(0 )*feb +(0 )*mar +(-0.17550663 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0.1391223794 )*oct +(0 )*nov
+(0.152253567 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(-0.156623099
)*pturnback +(-0.114026245 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3576543898  ;

 mlgslckhrs = -0.735316808 ;
 *  based on             996 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.246 and p99 =    3.393 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
dlockhrs=2.1469048435 +(0 )*feb +(0 )*mar +(-0.0569895 )*apr +(-0.165586262 )*may +(-0.191173768 )*jun +(-0.153514131 )*jul +(0 )*aug +(0 )*sep
+(0.072662942 )*oct +(0 )*nov +(0.1099032853 )*dec +(-0.000753874 )*pctlcknite +(-0.13151564 )*pturnback +(
0.0354440517 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3023090779  ;

 mdlckhrs = 2.0183467188 ;
 *  based on           4,658 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.403 and p99 =    1.222 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
lgdlckhrs=0.7368511076 +(0 )*feb +(0 )*mar +(0 )*apr +(-0.064681205 )*may +(-0.08132071 )*jun +(-0.059984145 )*jul +(0 )*aug +(0.0251346148 )*sep
+(0.0538998163 )*oct +(0.0317251104 )*nov +(0.0700401437 )*dec +(-0.000370204 )*pctlcknite +(-0.066281913 )*
pturnback +(0.0165082867 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1475150243  ;

 mlgdlckhrs = 0.6895904768 ;
```

```
 *  based on           4,659 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.246 and p99 =    3.393 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
slockhrs=0.5729509696 +(0 )*feb +(0 )*mar +(-0.083448686 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0.0740718109 )*oct +(0 )*nov
+(0.1277616031 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*poththype +(0 )*pctlcknite +(0 )*pothnite +(
-0.104644482 )*pturnback +(-0.070886425 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2119989952  ;

 mslckhrs = 0.5200289494 ;
 *  based on             974 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.403 and p99 =    1.222 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
lgslckhrs=-0.64712216 +(0 )*feb +(0 )*mar +(-0.17550663 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0.1391223794 )*oct +(0 )*nov
+(0.152253567 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*poththype +(0 )*pctlcknite +(0 )*pothnite +(-0.156623099
)*pturnback +(-0.114026245 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3576543898  ;

 mlgslckhrs = -0.735316808 ;
 *  based on             996 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.246 and p99 =    3.393 and impair pct le 100  ;
```

```
 * model  fitted   08JUN05 16:30   ;
dlockhrs=2.1469048435 +(0 )*feb +(0 )*mar +(-0.0569895 )*apr +(-0.165586262 )*may +(-0.191173768 )*jun +(-0.153514131 )*jul +(0 )*aug +(0 )*sep
+(0.072662942 )*oct +(0 )*nov +(0.1099032853 )*dec +(-0.000753874 )*pctlcknite +(-0.13151564 )*pturnback +(
0.0354440517 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3023090779  ;

 mdlckhrs = 2.0183467188 ;
 *  based on           4,658 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.403 and p99 =    1.222 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
lgdlckhrs=0.7368511076 +(0 )*feb +(0 )*mar +(0 )*apr +(-0.064681205 )*may +(-0.08132071 )*jun +(-0.059984145 )*jul +(0 )*aug +(0.0251346148 )*sep
+(0.0538998163 )*oct +(0.0317251104 )*nov +(0.0700401437 )*dec +(-0.000370204 )*pctlcknite +(-0.066281913 )*
pturnback +(0.0165082867 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1475150243  ;

 mlgdlckhrs = 0.6895904768 ;
 *  based on           4,659 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.246 and p99 =    3.393 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
slockhrs=0.5729509696 +(0 )*feb +(0 )*mar +(-0.083448686 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0.0740718109 )*oct +(0 )*nov
+(0.1277616031 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(
-0.104644482 )*pturnback +(-0.070886425 )*pexchange +(0 )*pctlckdn    ;
```

```
 * stderr = 0.2119989952  ;

 mslckhrs = 0.5200289494 ;
 *  based on             974 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.403 and p99 =    1.222 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
lgslckhrs=-0.64712216 +(0 )*feb +(0 )*mar +(-0.17550663 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0.1391223794 )*oct +(0 )*nov
+(0.152253567 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*poththype +(0 )*pctlcknite +(0 )*pothnite +(-0.156623099
)*pturnback +(-0.114026245 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3576543898  ;

 mlgslckhrs = -0.735316808 ;
 *  based on             996 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.246 and p99 =    3.393 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
dlockhrs=2.1469048435 +(0 )*feb +(0 )*mar +(-0.0569895 )*apr +(-0.165586262 )*may +(-0.191173768 )*jun +(-0.153514131 )*jul +(0 )*aug +(0 )*sep
+(0.072662942 )*oct +(0 )*nov +(0.1099032853 )*dec +(-0.000753874 )*pctlcknite +(-0.13151564 )*pturnback +(
0.0354440517 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3023090779  ;

 mdlckhrs = 2.0183467188 ;
 *  based on           4,658 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** log(lockage times) for double lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.403 and p99 =    1.222 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
lgdlckhrs=0.7368511076 +(0 )*feb +(0 )*mar +(0 )*apr +(-0.064681205 )*may +(-0.08132071 )*jun +(-0.059984145 )*jul +(0 )*aug +(0.0251346148 )*sep
+(0.0538998163 )*oct +(0.0317251104 )*nov +(0.0700401437 )*dec +(-0.000370204 )*pctlcknite +(-0.066281913 )*
pturnback +(0.0165082867 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1475150243  ;

 mlgdlckhrs = 0.6895904768 ;
 *  based on           4,659 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.246 and p99 =    3.393 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
slockhrs=0.5747928545 +(0 )*feb +(0 )*mar +(-0.085949615 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0.0733695172 )*oct +(0 )*nov
+(0.1266030977 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(
-0.105673728 )*pturnback +(-0.072836521 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2120790851  ;

 mslckhrs = 0.5204157512 ;
 *  based on            970 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.403 and p99 =    1.222 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
```

```
lgslckhrs=-0.643553461 +(0 )*feb +(0 )*mar +(-0.181775209 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0.1369083328 )*oct +(0 )*nov
+(0.1496365667 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*pothnite +(
-0.158308672 )*pturnback +(-0.11597825 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3571707652  ;

 mlgslckhrs = -0.734037978 ;
 *  based on             991 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.246 and p99 =    3.393 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
dlockhrs=2.1469048435 +(0 )*feb +(0 )*mar +(-0.0569895 )*apr +(-0.165586262 )*may +(-0.191173768 )*jun +(-0.153514131 )*jul +(0 )*aug +(0 )*sep
+(0.072662942 )*oct +(0 )*nov +(0.1099032853 )*dec +(-0.000753874 )*pctlcknite +(-0.13151564 )*pturnback +(
0.0354440517 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3023090779  ;

 mdlckhrs = 2.0183467188 ;
 *  based on           4,658 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.403 and p99 =    1.222 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lgdlckhrs=0.7368511076 +(0 )*feb +(0 )*mar +(0 )*apr +(-0.064681205 )*may +(-0.08132071 )*jun +(-0.059984145 )*jul +(0 )*aug +(0.0251346148 )*sep
+(0.0538998163 )*oct +(0.0317251104 )*nov +(0.0700401437 )*dec +(-0.000370204 )*pctlcknite +(-0.066281913 )*
pturnback +(0.0165082867 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1475150243  ;

 mlgdlckhrs = 0.6895904768 ;
```

```
 *  based on           4,659 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.246 and p99 =    3.393 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
slockhrs=0.5747928545 +(0 )*feb +(0 )*mar +(-0.085949615 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0.0733695172 )*oct +(0 )*nov
+(0.1266030977 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*poththype +(0 )*pctlcknite +(0 )*pothnite +(
-0.105673728 )*pturnback +(-0.072836521 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2120790851  ;

 mslckhrs = 0.5204157512 ;
 *  based on             970 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI25D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.403 and p99 =    1.222 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lgslckhrs=-0.643553461 +(0 )*feb +(0 )*mar +(-0.181775209 )*apr +(0 )*may +(0 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0.1369083328 )*oct +(0 )*nov
+(0.1496365667 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*poththype +(0 )*pctlcknite +(0 )*pothnite +(
-0.158308672 )*pturnback +(-0.11597825 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3571707652  ;

 mlgslckhrs = -0.734037978 ;
 *  based on             991 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** lockage  times (hours) for double lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.164 and p99 =    2.984 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
dlockhrs=1.9580952448 +(-0.168806136 )*feb +(-0.045984995 )*mar +(0 )*apr +(-0.083764209 )*may +(-0.140349528 )*jun +(-0.117182619 )*jul +(0 )*aug
+(0.1372317679 )*sep +(0.1066124942 )*oct +(0 )*nov +(-0.141772929 )*dec +(-0.352439345 )*pturnback +(
-0.062923748 )*pexchange    ;

 * stderr = 0.3307188439  ;

 mdlckhrs = 1.7542395553 ;
 *  based on           4,412 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.808 and p99 =    1.093 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
lgdlckhrs=0.6504144192 +(-0.115936074 )*feb +(0 )*mar +(0 )*apr +(-0.045787045 )*may +(-0.081180506 )*jun +(-0.06391191 )*jul +(0 )*aug
+(0.0821736725 )*sep +(0.066406937 )*oct +(0 )*nov +(-0.079705854 )*dec +(-0.204256093 )*pturnback +(-0.032708008 )*
pexchange    ;

 * stderr = 0.1928711284  ;

 mlgdlckhrs = 0.5380996579 ;
 *  based on           4,410 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.164 and p99 =    2.984 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
```

```
slockhrs=0.4284658189 +(0.127763561 )*feb +(0 )*mar +(-0.071993158 )*apr +(-0.055440904 )*may +(-0.065370785 )*jun +(-0.054142496 )*jul +(0 )*aug +(0
)*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*poththype +(-0.06309265 )*
pturnback +(-0.042255078 )*pexchange    ;

 * stderr = 0.1995279838  ;

 mslckhrs = 0.3793088635 ;
 *  based on           1,908 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.808 and p99 =    1.093 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
lgslckhrs=-0.933983303 +(0.1986899472 )*feb +(0 )*mar +(-0.191072313 )*apr +(-0.172864551 )*may +(-0.177505631 )*jun +(-0.160991831 )*jul +(-
0.08638932 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*poththype +(
-0.161246774 )*pturnback +(-0.09475175 )*pexchange    ;

 * stderr = 0.4191881768  ;

 mlgslckhrs = -1.07290577 ;
 *  based on           1,908 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.164 and p99 =    2.984 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
dlockhrs=1.9763860073 +(-0.148768679 )*feb +(0 )*mar +(0 )*apr +(-0.077900333 )*may +(-0.135011118 )*jun +(-0.113156061 )*jul +(0 )*aug
+(0.1472704876 )*sep +(0.1232807186 )*oct +(0 )*nov +(-0.11656772 )*dec +(-0.000725096 )*pctlcknite +(-0.347711671 )*
pturnback +(-0.057142927 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3293885144  ;

 mdlckhrs = 1.7540537628 ;
```

```
 *  based on           4,411 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.808 and p99 =    1.093 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
lgdlckhrs=0.6689581408 +(-0.112531924 )*feb +(0 )*mar +(0 )*apr +(-0.049282534 )*may +(-0.084769624 )*jun +(-0.068253707 )*jul +(0 )*aug
+(0.0809620044 )*sep +(0.0690301052 )*oct +(0 )*nov +(-0.072358742 )*dec +(-0.000402339 )*pctlcknite +(-0.203185042 )*
pturnback +(-0.032146977 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1921244367  ;

 mlgdlckhrs = 0.5379536358 ;
 *  based on           4,409 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.164 and p99 =    2.984 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
slockhrs=0.4272302842 +(0.1161449916 )*feb +(0 )*mar +(-0.07311558 )*apr +(-0.053765431 )*may +(-0.065537343 )*jun +(-0.055952505 )*jul +(0 )*aug +(0
)*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*
pothnite +(-0.064266947 )*pturnback +(-0.042884303 )*pexchange +(0.0058532265 )*pctlckdn    ;

 * stderr = 0.1976856932  ;

 mslckhrs = 0.3792795807 ;
 *  based on           1,911 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.808 and p99 =    1.093 and impair pct le 100  ;
```

```
 * model  fitted   08JUN05 15:31   ;
lgslckhrs=-0.926318426 +(0 )*feb +(0 )*mar +(-0.198857302 )*apr +(-0.177273893 )*may +(-0.183531175 )*jun +(-0.169885716 )*jul +(-0.092293638 )*aug
+(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0
)*pothnite +(-0.167940448 )*pturnback +(-0.101803315 )*pexchange +(0.0079347524 )*pctlckdn    ;

 * stderr = 0.4184612864  ;

 mlgslckhrs = -1.073014085 ;
 *  based on           1,911 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.164 and p99 =    2.984 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
dlockhrs=1.9763860073 +(-0.148768679 )*feb +(0 )*mar +(0 )*apr +(-0.077900333 )*may +(-0.135011118 )*jun +(-0.113156061 )*jul +(0 )*aug
+(0.1472704876 )*sep +(0.1232807186 )*oct +(0 )*nov +(-0.11656772 )*dec +(-0.000725096 )*pctlcknite +(-0.347711671 )*
pturnback +(-0.057142927 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3293885144  ;

 mdlckhrs = 1.7540537628 ;
 *  based on           4,411 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.808 and p99 =    1.093 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
lgdlckhrs=0.6689581408 +(-0.112531924 )*feb +(0 )*mar +(0 )*apr +(-0.049282534 )*may +(-0.084769624 )*jun +(-0.068253707 )*jul +(0 )*aug
+(0.0809620044 )*sep +(0.0690301052 )*oct +(0 )*nov +(-0.072358742 )*dec +(-0.000402339 )*pctlcknite +(-0.203185042 )*
pturnback +(-0.032146977 )*pexchange +(0 )*pctlckdn    ;
```

```
 * stderr = 0.1921244367  ;

 mlgdlckhrs = 0.5379536358 ;
 *  based on           4,409 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.164 and p99 =    2.984 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
slockhrs=0.4272302842 +(0.1161449916 )*feb +(0 )*mar +(-0.07311558 )*apr +(-0.053765431 )*may +(-0.065537343 )*jun +(-0.055952505 )*jul +(0 )*aug +(0
)*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*
pothnite +(-0.064266947 )*pturnback +(-0.042884303 )*pexchange +(0.0058532265 )*pctlckdn    ;

 * stderr = 0.1976856932  ;

 mslckhrs = 0.3792795807 ;
 *  based on           1,911 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.808 and p99 =    1.093 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
lgslckhrs=-0.926318426 +(0 )*feb +(0 )*mar +(-0.198857302 )*apr +(-0.177273893 )*may +(-0.183531175 )*jun +(-0.169885716 )*jul +(-0.092293638 )*aug
+(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0
)*pothnite +(-0.167940448 )*pturnback +(-0.101803315 )*pexchange +(0.0079347524 )*pctlckdn    ;

 * stderr = 0.4184612864  ;

 mlgslckhrs = -1.073014085 ;
 *  based on           1,911 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** lockage  times (hours) for double lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.164 and p99 =    2.984 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
dlockhrs=1.9763860073 +(-0.148768679 )*feb +(0 )*mar +(0 )*apr +(-0.077900333 )*may +(-0.135011118 )*jun +(-0.113156061 )*jul +(0 )*aug
+(0.1472704876 )*sep +(0.1232807186 )*oct +(0 )*nov +(-0.11656772 )*dec +(-0.000725096 )*pctlcknite +(-0.347711671 )*
pturnback +(-0.057142927 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3293885144  ;

 mdlckhrs = 1.7540537628 ;
 *  based on           4,411 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.808 and p99 =    1.093 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
lgdlckhrs=0.6689581408 +(-0.112531924 )*feb +(0 )*mar +(0 )*apr +(-0.049282534 )*may +(-0.084769624 )*jun +(-0.068253707 )*jul +(0 )*aug
+(0.0809620044 )*sep +(0.0690301052 )*oct +(0 )*nov +(-0.072358742 )*dec +(-0.000402339 )*pctlcknite +(-0.203185042 )*
pturnback +(-0.032146977 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1921244367  ;

 mlgdlckhrs = 0.5379536358 ;
 *  based on           4,409 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.164 and p99 =    2.984 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
```

```
slockhrs=0.4272302842 +(0.1161449916 )*feb +(0 )*mar +(-0.07311558 )*apr +(-0.053765431 )*may +(-0.065537343 )*jun +(-0.055952505 )*jul +(0 )*aug +(0
)*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0 )*
pothnite +(-0.064266947 )*pturnback +(-0.042884303 )*pexchange +(0.0058532265 )*pctlckdn    ;

 * stderr = 0.1976856932  ;

 mslckhrs = 0.3792795807 ;
 *  based on           1,911 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.808 and p99 =    1.093 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
lgslckhrs=-0.926318426 +(0 )*feb +(0 )*mar +(-0.198857302 )*apr +(-0.177273893 )*may +(-0.183531175 )*jun +(-0.169885716 )*jul +(-0.092293638 )*aug
+(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0
)*pothnite +(-0.167940448 )*pturnback +(-0.101803315 )*pexchange +(0.0079347524 )*pctlckdn    ;

 * stderr = 0.4184612864  ;

 mlgslckhrs = -1.073014085 ;
 *  based on           1,911 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.164 and p99 =    2.984 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
dlockhrs=1.9767497104 +(-0.14908369 )*feb +(0 )*mar +(0 )*apr +(-0.078335957 )*may +(-0.135432596 )*jun +(-0.113581473 )*jul +(0 )*aug +(0.1469096472
)*sep +(0.1229446303 )*oct +(0 )*nov +(-0.116864982 )*dec +(-0.000728603 )*pctlcknite +(-0.347307072 )*
pturnback +(-0.057107613 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.329267196  ;

 mdlckhrs = 1.754235902 ;
```

```
 *  based on           4,410 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.808 and p99 =    1.093 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
lgdlckhrs=0.6692351661 +(-0.112771889 )*feb +(0 )*mar +(0 )*apr +(-0.049614387 )*may +(-0.085090715 )*jun +(-0.068577795 )*jul +(0 )*aug
+(0.0806870945 )*sep +(0.0687740362 )*oct +(0 )*nov +(-0.072585245 )*dec +(-0.00040501 )*pctlcknite +(-0.202876923 )*
pturnback +(-0.032119953 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1919883417  ;

 mlgdlckhrs = 0.5380871169 ;
 *  based on           4,408 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.164 and p99 =    2.984 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
slockhrs=0.4277067979 +(0.1157369991 )*feb +(0 )*mar +(-0.073379111 )*apr +(-0.054056217 )*may +(-0.065768917 )*jun +(-0.056169942 )*jul +(0 )*aug
+(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0
)*pothnite +(-0.064646778 )*pturnback +(-0.043289043 )*pexchange +(0.0058523349 )*pctlckdn    ;

 * stderr = 0.197729405  ;

 mslckhrs = 0.3793272413 ;
 *  based on           1,907 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.808 and p99 =    1.093 and impair pct le 100  ;
```

```
 * model  fitted   28JUN05 19:56   ;
lgslckhrs=-0.925629302 +(0 )*feb +(0 )*mar +(-0.199002904 )*apr +(-0.177488366 )*may +(-0.183594553 )*jun +(-0.169914078 )*jul +(-0.089455775 )*aug
+(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0
)*pothnite +(-0.168903967 )*pturnback +(-0.102846309 )*pexchange +(0.0079355568 )*pctlckdn    ;

 * stderr = 0.4184392677  ;

 mlgslckhrs = -1.072909207 ;
 *  based on           1,907 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.164 and p99 =    2.984 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
dlockhrs=1.9767497104 +(-0.14908369 )*feb +(0 )*mar +(0 )*apr +(-0.078335957 )*may +(-0.135432596 )*jun +(-0.113581473 )*jul +(0 )*aug +(0.1469096472
)*sep +(0.1229446303 )*oct +(0 )*nov +(-0.116864982 )*dec +(-0.000728603 )*pctlcknite +(-0.347307072 )*
pturnback +(-0.057107613 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.329267196  ;

 mdlckhrs = 1.754235902 ;
 *  based on           4,410 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.808 and p99 =    1.093 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lgdlckhrs=0.6692351661 +(-0.112771889 )*feb +(0 )*mar +(0 )*apr +(-0.049614387 )*may +(-0.085090715 )*jun +(-0.068577795 )*jul +(0 )*aug
+(0.0806870945 )*sep +(0.0687740362 )*oct +(0 )*nov +(-0.072585245 )*dec +(-0.00040501 )*pctlcknite +(-0.202876923 )*
pturnback +(-0.032119953 )*pexchange +(0 )*pctlckdn    ;
```

```
 * stderr = 0.1919883417  ;

 mlgdlckhrs = 0.5380871169 ;
 *  based on           4,408 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.164 and p99 =    2.984 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
slockhrs=0.4277067979 +(0.1157369991 )*feb +(0 )*mar +(-0.073379111 )*apr +(-0.054056217 )*may +(-0.065768917 )*jun +(-0.056169942 )*jul +(0 )*aug
+(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0
)*pothnite +(-0.064646778 )*pturnback +(-0.043289043 )*pexchange +(0.0058523349 )*pctlckdn    ;

 * stderr = 0.197729405  ;

 mslckhrs = 0.3793272413 ;
 *  based on           1,907 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI25U ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.808 and p99 =    1.093 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lgslckhrs=-0.925629302 +(0 )*feb +(0 )*mar +(-0.199002904 )*apr +(-0.177488366 )*may +(-0.183594553 )*jun +(-0.169914078 )*jul +(-0.089455775 )*aug
+(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0 )*pctlcknite +(0
)*pothnite +(-0.168903967 )*pturnback +(-0.102846309 )*pexchange +(0.0079355568 )*pctlckdn    ;

 * stderr = 0.4184392677  ;

 mlgslckhrs = -1.072909207 ;
 *  based on           1,907 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
***** lockage  times (hours) for double lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.164 and p99 =    3.361 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
dlockhrs=2.2864816866 +(-0.51274091 )*feb +(0 )*mar +(-0.060470116 )*apr +(-0.195085512 )*may +(-0.190790029 )*jun +(-0.196232159 )*jul +(-
0.049701232 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.380563164 )*pturnback +(-0.2307801 )*pexchange    ;

 * stderr = 0.3214953121  ;

 mdlckhrs = 1.9524393835 ;
 *  based on           4,676 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.808 and p99 =    1.212 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
lgdlckhrs=0.8091128471 +(-0.367856896 )*feb +(0 )*mar +(0 )*apr +(-0.090242451 )*may +(-0.090052375 )*jun +(-0.092620921 )*jul +(0 )*aug +(0 )*sep
+(0 )*oct +(0 )*nov +(0 )*dec +(-0.19140524 )*pturnback +(-0.109553328 )*pexchange    ;

 * stderr = 0.1684350042  ;

 mlgdlckhrs = 0.6518601365 ;
 *  based on           4,674 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.164 and p99 =    3.361 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
slockhrs=0.4743037388 +(0.1005194762 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.066138489 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov
+(0.117644321 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.099999252 )*pturnback +(-0.054817424 )*
pexchange    ;
```

```
 * stderr = 0.212769176  ;

 mslckhrs = 0.4251936967 ;
 *  based on           1,187 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.808 and p99 =    1.212 and impair pct le 100  ;


 * model  fitted   26MAY05 00:25   ;
lgslckhrs=-0.85770962 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.166892055 )*jun +(0 )*jul +(0 )*aug +(0.132250948 )*sep +(0 )*oct +(0 )*nov
+(0.174873262 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(-0.218329663 )*pturnback +(-0.109124871 )*
pexchange    ;

 * stderr = 0.4330207465  ;

 mlgslckhrs = -0.961784068 ;
 *  based on           1,187 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.164 and p99 =    3.393 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
dlockhrs=2.3185432158 +(-0.508004192 )*feb +(0 )*mar +(-0.066523393 )*apr +(-0.207482657 )*may +(-0.201801686 )*jun +(-0.207178664 )*jul +(-
0.059268392 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.000535893 )*pctlcknite +(-0.38107419 )*pturnback +(
-0.232607288 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3203967366  ;

 mdlckhrs = 1.9518431517 ;
 *  based on           4,613 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** log(lockage times) for double lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.808 and p99 =    1.222 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
lgdlckhrs=0.8332605689 +(-0.373703175 )*feb +(0 )*mar +(-0.030703757 )*apr +(-0.10556668 )*may +(-0.104423901 )*jun +(-0.107137915 )*jul +(-
0.027890053 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.000273058 )*pctlcknite +(-0.191098324 )*pturnback +(
-0.10904531 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.168166298  ;

 mlgdlckhrs = 0.6518629519 ;
 *  based on           4,614 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.164 and p99 =    3.393 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
slockhrs=0.467082098 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.063665498 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0.1151942772
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0.0003894768 )*pctlcknite +(0 )*pothnite +(
-0.102940864 )*pturnback +(-0.058679024 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2141568997  ;

 mslckhrs = 0.4271804698 ;
 *  based on           1,155 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.808 and p99 =    1.222 and impair pct le 100  ;


 * model  fitted   08JUN05 15:31   ;
```

```
lgslckhrs=-0.893448512 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.149216343 )*jun +(0 )*jul +(0 )*aug +(0.1385084061 )*sep +(0 )*oct +(0 )*nov
+(0.1809997316 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0.0009038093 )*pctlcknite +(0 )*pothnite
+(-0.209305265 )*pturnback +(-0.105935013 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.4319818146  ;

 mlgslckhrs = -0.957309089 ;
 *  based on           1,155 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.164 and p99 =    3.393 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
dlockhrs=2.3185432158 +(-0.508004192 )*feb +(0 )*mar +(-0.066523393 )*apr +(-0.207482657 )*may +(-0.201801686 )*jun +(-0.207178664 )*jul +(-
0.059268392 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.000535893 )*pctlcknite +(-0.38107419 )*pturnback +(
-0.232607288 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3203967366  ;

 mdlckhrs = 1.9518431517 ;
 *  based on           4,613 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.808 and p99 =    1.222 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
lgdlckhrs=0.8332605689 +(-0.373703175 )*feb +(0 )*mar +(-0.030703757 )*apr +(-0.10556668 )*may +(-0.104423901 )*jun +(-0.107137915 )*jul +(-
0.027890053 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.000273058 )*pctlcknite +(-0.191098324 )*pturnback +(
-0.10904531 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.168166298  ;

 mlgdlckhrs = 0.6518629519 ;
```

```
 *  based on           4,614 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.164 and p99 =    3.393 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
slockhrs=0.467082098 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.063665498 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0.1151942772
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0.0003894768 )*pctlcknite +(0 )*pothnite +(
-0.102940864 )*pturnback +(-0.058679024 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2141568997  ;

 mslckhrs = 0.4271804698 ;
 *  based on           1,155 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.808 and p99 =    1.222 and impair pct le 100  ;


 * model  fitted   08JUN05 15:39   ;
lgslckhrs=-0.893448512 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.149216343 )*jun +(0 )*jul +(0 )*aug +(0.1385084061 )*sep +(0 )*oct +(0 )*nov
+(0.1809997316 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0.0009038093 )*pctlcknite +(0 )*pothnite
+(-0.209305265 )*pturnback +(-0.105935013 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.4319818146  ;

 mlgslckhrs = -0.957309089 ;
 *  based on           1,155 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.164 and p99 =    3.393 and impair pct le 100  ;
```

```
 * model  fitted   08JUN05 16:30   ;
dlockhrs=2.3185432158 +(-0.508004192 )*feb +(0 )*mar +(-0.066523393 )*apr +(-0.207482657 )*may +(-0.201801686 )*jun +(-0.207178664 )*jul +(-
0.059268392 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.000535893 )*pctlcknite +(-0.38107419 )*pturnback +(
-0.232607288 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3203967366  ;

 mdlckhrs = 1.9518431517 ;
 *  based on           4,613 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.808 and p99 =    1.222 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
lgdlckhrs=0.8332605689 +(-0.373703175 )*feb +(0 )*mar +(-0.030703757 )*apr +(-0.10556668 )*may +(-0.104423901 )*jun +(-0.107137915 )*jul +(-
0.027890053 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.000273058 )*pctlcknite +(-0.191098324 )*pturnback +(
-0.10904531 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.168166298  ;

 mlgdlckhrs = 0.6518629519 ;
 *  based on           4,614 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.164 and p99 =    3.393 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
slockhrs=0.467082098 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.063665498 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0.1151942772
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0.0003894768 )*pctlcknite +(0 )*pothnite +(
-0.102940864 )*pturnback +(-0.058679024 )*pexchange +(0 )*pctlckdn    ;
```

```
 * stderr = 0.2141568997  ;

 mslckhrs = 0.4271804698 ;
 *  based on           1,155 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.808 and p99 =    1.222 and impair pct le 100  ;


 * model  fitted   08JUN05 16:30   ;
lgslckhrs=-0.893448512 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.149216343 )*jun +(0 )*jul +(0 )*aug +(0.1385084061 )*sep +(0 )*oct +(0 )*nov
+(0.1809997316 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0.0009038093 )*pctlcknite +(0 )*pothnite
+(-0.209305265 )*pturnback +(-0.105935013 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.4319818146  ;

 mlgslckhrs = -0.957309089 ;
 *  based on           1,155 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.164 and p99 =    3.361 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
dlockhrs=2.3184824253 +(-0.507470122 )*feb +(0 )*mar +(-0.066099056 )*apr +(-0.207076634 )*may +(-0.201373312 )*jun +(-0.206707424 )*jul +(-
0.058825484 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.000538829 )*pctlcknite +(-0.381690465 )*pturnback +(
-0.232678312 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3202060722  ;

 mdlckhrs = 1.95165161 ;
 *  based on           4,611 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
 ***** log(lockage times) for double lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.808 and p99 =    1.212 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
lgdlckhrs=0.8188269666 +(-0.36014962 )*feb +(0 )*mar +(0 )*apr +(-0.091381686 )*may +(-0.090215678 )*jun +(-0.09296188 )*jul +(0 )*aug +(0 )*sep
+(0.0245732653 )*oct +(0 )*nov +(0 )*dec +(-0.000257329 )*pctlcknite +(-0.191359623 )*pturnback +(-0.109563043
)*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1678852579  ;

 mlgdlckhrs = 0.6514053038 ;
 *  based on           4,609 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.164 and p99 =    3.361 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
slockhrs=0.4652814878 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.063469577 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0.1184654409
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0.0003912887 )*pctlcknite +(0 )*pothnite +(
-0.101383818 )*pturnback +(-0.056277239 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2135731163  ;

 mslckhrs = 0.4268002112 ;
 *  based on           1,149 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.808 and p99 =    1.212 and impair pct le 100  ;


 * model  fitted   28JUN05 19:56   ;
```

```
lgslckhrs=-0.896401249 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.149224684 )*jun +(0 )*jul +(0 )*aug +(0.1389179321 )*sep +(0 )*oct +(0 )*nov
+(0.1847615382 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*pothtype +(0.0009043429 )*pctlcknite +(0 )*pothnite
+(-0.206598133 )*pturnback +(-0.101095509 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.4310610746  ;

 mlgslckhrs = -0.957721657 ;
 *  based on           1,149 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for double lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.164 and p99 =    3.361 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
dlockhrs=2.3184824253 +(-0.507470122 )*feb +(0 )*mar +(-0.066099056 )*apr +(-0.207076634 )*may +(-0.201373312 )*jun +(-0.206707424 )*jul +(-
0.058825484 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0 )*dec +(-0.000538829 )*pctlcknite +(-0.381690465 )*pturnback +(
-0.232678312 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.3202060722  ;

 mdlckhrs = 1.95165161 ;
 *  based on           4,611 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for double lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003);
 *** with screen between p1 =   -1.808 and p99 =    1.212 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lgdlckhrs=0.8188269666 +(-0.36014962 )*feb +(0 )*mar +(0 )*apr +(-0.091381686 )*may +(-0.090215678 )*jun +(-0.09296188 )*jul +(0 )*aug +(0 )*sep
+(0.0245732653 )*oct +(0 )*nov +(0 )*dec +(-0.000257329 )*pctlcknite +(-0.191359623 )*pturnback +(-0.109563043
)*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.1678852579  ;

 mlgdlckhrs = 0.6514053038 ;
```

```
 *  based on           4,609 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** lockage  times (hours) for single lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with time screen between p1 =    0.164 and p99 =    3.361 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
slockhrs=0.4652814878 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.063469577 )*jun +(0 )*jul +(0 )*aug +(0 )*sep +(0 )*oct +(0 )*nov +(0.1184654409
)*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*poththype +(0.0003912887 )*pctlcknite +(0 )*pothnite +(
-0.101383818 )*pturnback +(-0.056277239 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.2135731163  ;

 mslckhrs = 0.4268002112 ;
 *  based on           1,149 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;


 ***** log(lockage times) for single lockages entering pool MI26D ;
 ***** based on data from mdy(1,1,2000) to mdy(12,31,2003) ;
 *** with screen between p1 =   -1.808 and p99 =    1.212 and impair pct le 100  ;


 * model  fitted   28JUN05 20:21   ;
lgslckhrs=-0.896401249 +(0 )*feb +(0 )*mar +(0 )*apr +(0 )*may +(-0.149224684 )*jun +(0 )*jul +(0 )*aug +(0.1389179321 )*sep +(0 )*oct +(0 )*nov
+(0.1847615382 )*dec +(0 )*pjacknife +(0 )*pknockout +(0 )*poththype +(0.0009043429 )*pctlcknite +(0 )*pothnite
+(-0.206598133 )*pturnback +(-0.101095509 )*pexchange +(0 )*pctlckdn    ;

 * stderr = 0.4310610746  ;

 mlgslckhrs = -0.957721657 ;
 *  based on           1,149 observations;
 * with alpha = .01 for stepwise addition and elimination of variables;
```

```
/** program lockperf.sas 04.21.2004**/

 /***  dataset descriptions
 *** Lockage dataset is created with  basic lockage data from CORPS omni database
     with one record per lockage and logic to determine type of lockage.
     Logic determines type of lockage (turnback, exchange, etc.) and pool changes
 *** vprocess dataset is created to examine sequential lockages and changes in tow
     configuration
 *** dstr dataset is created to give sequence of events and compute river status statistics
     it contains a record for each event (arrival, start lockage, departure)
 *** pmvt dataset is derived from vprocess dataset and summarizes transitions among
     pools in a form to drive a logistic model for disposition of vessels as they enter a pool

      end of datset descriptions  */


 options mprint macrogen;
libname water v8 '~/waterway';
*libname water '~/waterway';
%include '~/waterway/pctday.sas';
%include '~/waterway/pctdown.sas';

proc format ;
 value $lkgetyp  'S' = '2:SINGLE'
                 'C' = '1:DOUBLE'
                 'K' = '3:KNOCKOUT'
                 'V' = '4:JACKNIFE'
                  other   ='5:OTHER'
                  ;
run;


proc format ;
 value YN  0 = 'N'
           1 = 'Y'
            ;
run;
%macro locklist; ('19','20','21','22','23','24','25','26','27')  %mend;
options ls=136;
%macro opstats (regen=no,   /* regenerate dataset for model building  */
                regfile=regfile,  /* dataset for building models of pool transitions
                                     and activities */
                mximp=750,    /* maximum number of impairments per chamber in water.impair */
                debug=no,  /* browse progress  */
                csvexp=no,   /* export csv files for excel */

                  /* the following two parameters will eliminate all records if both are set to yes */
                norecs=yes,  /* eliminate recreational vehicles from stats */
                onlyrecs=no, /* restrict to only recreational vehicles */

               locklist=locklist, /* name of macro with "in" criterion  for stat analysis*/
               firstdte=mdy(1,1,2000),  /* beginning day for statistical summaries*/
               lastdte=mdy(12,31,2003),  /* ending day for statistical summaries*/
               begdate=mdy(1,1,2000),  /* beginning day for itinerary data stream*/
               enddate=mdy(12,31,2003),  /* ending day for itinerary data stream*/
               frstlck=18,  /* first lock for queueing stats */
               lastlck=27,  /* last lock for queueing stats */
```

SAS Program “lockperf.sas”


```
               randarr=yes,  /* generate statistics for random arrival rates */
               fullmod=no, /* fullmod=yes for modeling stops and returns with tprobs*/
               randtime=month,  /* period for calculating random arrival rate
                                   (week or month)*/
          );


 %if %upcase(&regen)=YES %then %do;
  data lockage; set water.lockage;
    year=year(datepart(arrtime));


   proc sort data=lockage; by river_code lock_no chmbr_no year strtlcktime;
   *** use start-lockage time and chamber  rather than operations ID to determine operation
             type;

   data lockage; set lockage; by river_code lock_no chmbr_no year;
   length lagdir $1 fly turnback exchange 4. opstype $8;;
   if substr(lock_no,2,1) ne 'A' then  lock=input(lock_no,2.);
   lagdir=lag(direction);
   totmin=waitmin+lockmin;
   if first.river_code or first.lock_no or first.chmbr_no or first.year  then
      lagdir=' ';
   fly=0; turnback=0; exchange=0;
   if waitmin eq 0 then opstype='FLY';
   if waitmin eq 0 then fly=1;
   if lagdir ne ' ' then do;
     if waitmin gt 0 and direction eq lagdir then opstype='TURNBACK';
     if waitmin gt 0 and direction eq lagdir then turnback=1;
     if waitmin gt 0 and direction ne lagdir then opstype='EXCHANGE';
     if waitmin gt 0 and direction ne lagdir then exchange=1;
   end;

   %if %upcase(&norecs)=YES %then %do;
   *if  abs( vess_no - 9999999. ) gt .1 ;
    if vess_type ne 'R';
   %end; ** of norecs;

   %if %upcase(&onlyrecs)=YES %then %do;
   *if  abs( vess_no - 9999999. ) gt .1 ;
    if vess_type eq 'R';
   %end; ** of norecs;

   if datepart(arrtime) ge &firstdte and datepart(arrtime) le &lastdte ;
   ** identify month and day of arrival times for appending sunrise and sunset;
   month=month(datepart(arrtime));
   day=day(datepart(arrtime));
   year=year(datepart(arrtime));

   run;

   proc sort data=water.suntimeb; by river_code lock_no month day;
   proc sort data=lockage; by river_code lock_no month day;


   ** add sunrise and sunset ;
   data lockage; merge lockage(in=in1) water.suntimeb(in=in2);
```

SAS Program “lockperf.sas” (cont.)

```
           by    river_code lock_no month day;
         if in1;
   run;

  %if %upcase(&debug) eq YES %then %do;
    proc fsbrowse data = lockage;
    run;
 %end;


 *** study vessel itineraries;
  *** analyze subsequent pools;
 data vprocess; set lockage;
run;


proc sort data=vprocess ; by vess_no arrtime; run;

data vprocess; set vprocess;
  by vess_no year arrtime;

  length poldpool pnewpool $5 pdirection $1 sequpstr 4. seqdstr lock plock 4.;

  label stop_code='Stop';

  ** identify previous lock and type;

  plockno=lag(lock_no);
  pchmbr_no=lag(chmbr_no);
  plock=lag(lock);
  plockagetype=lag(lockage_type);
  popstype=lag(opstype);
  privercode=lag(river_code);
  pdirection=lag(direction);
  ** define sort keys for merging impairment data at this lock and previous lock;
  sortkey=left(river_code)||left(lock_no)||left(chmbr_no);
  psortkey=left(privercode)||left(plockno)||left(pchmbr_no);
  poldpool=lag(oldpool);
  pnewpool=lag(newpool);

  ** identify barge configuraiton approaching previous lock;
  pempty=lag(num_empty_brg);
  pfull=lag(num_loaded_brg);

  ** identify event times at previous lock;
  parrtime=lag(arrtime);
  pstrtlcktime=lag(strtlcktime);
  pdeptime=lag(deptime);
  format   parrtime    pstrtlcktime  pdeptime   datetime18.;
           birth=0;
 if first.vess_no or first.year then do;
  birth=1;
  poldpool=' ';
  pnewpool='BIRTH';
  plockno=' ';
  pchmbr_no=' ';
  psortkey=' ';
```



```
  parrtime=.;
  pstrtlcktime=.;
   pdeptime=.;
  pdirection=' ';
  popstype=' ';
  plockagetype=' ';
  plock=.;
 end;

 ** identify whether barge configuration or vessel stoppage occurred between locks;

  if ( (plock-lock = -1 and river_code eq privercode)
        or (lock eq 24  and plock eq 22 and privercode eq 'MI')
        or (lock eq 55 and plock eq 5 and privercode eq 'MI')
       or (lock eq 6 and river_code eq 'MI' and plock eq 55) or (lock eq 52 and plock eq 51)
            or (lock eq 1 and river_code eq 'MI'and plock eq 52)
       or (plock eq 8 and privercode='IL' and lock eq 26 ) )
              and (direction='D' and pdirection='D' )  and stop_code eq 'N'
                 and pempty eq num_empty_brg and pfull eq num_loaded_brg
                 then seqdstr=1; else seqdstr=0;
  if ( (plock-lock = 1 and river_code eq privercode)
        or (lock eq 22  and plock eq 24 and privercode eq 'MI')
      or (plock eq 55 and lock eq 5 and river_code eq 'MI')
       or (plock eq 6 and privercode eq 'MI' and lock eq 55) or (plock eq 52 and lock eq 51)
            or (plock eq 1 and privercode eq 'MI'and lock eq 52)
       or (lock eq 8 and river_code='IL' and plock eq 26 )  )
              and (direction='U' and pdirection='U' ) and stop_code eq 'N'
                 and pempty eq num_empty_brg and pfull eq num_loaded_brg
                 then sequpstr=1; else sequpstr=0;


  *** calculate hours in transit from previous departure to current arrival;
  transithrs=(arrtime- pdeptime)/3600;

  ** identify recreational lockage;
     length reclock 4.;
     if  abs( vess_no - 9999999. ) le .1 or  vess_type eq 'R' then
        reclock=1; else reclock=0;


  ** eliminate recreational lockages if desired;
  %if %upcase(&norecs)=YES %then %do;
  *if  abs( vess_no - 9999999. ) gt .1 ;
   if vess_type ne 'R';
  %end; ** of norecs;

  %if %upcase(&onlyrecs)=YES %then %do;
  *if  abs( vess_no - 9999999. ) gt .1 ;
   if vess_type eq 'R';
  %end; ** of norecs;

  if datepart(arrtime) ge &firstdte and datepart(arrtime) le &lastdte ;
 run;


data regfile; set vprocess;
      length  nxtstep $15 temppool $4;
```

```
   /* removed line below to add nxtstep to all possible lockage events  */
*where river_code='MI' and (lock=19 or lock=20 or lock=21 or lock=22 or lock=24 or lock=25 or lock=26);

   nxtstep='PROBLEM';
   temppool=substr(pnewpool,1,4);
   temppriv=substr(pnewpool,1,2);

          if pnewpool=oldpool and seqdstr eq 1 and sequpstr eq 0 then
                    nxtstep='CONTNOSTOP';
          else if pnewpool=oldpool and seqdstr eq 0 and sequpstr eq 1 then
                    nxtstep='CONTNOSTOP';
          else if pnewpool=oldpool and seqdstr eq 0 and sequpstr eq 0 then
                    nxtstep='CONTSTOP';
          else if temppool=substr(oldpool,1,4) then
                    nxtstep='Return';
          else if pnewpool='BIRTH' then
                    nxtstep='Birth';
          else if temppriv ne 'MI' then
                    nxtstep='EnterMI';
          else if temppool ne substr(oldpool,1,4) and pnewpool ne 'BIRTH' then
                    nxtstep='Other';


   * keep vess_no river_code lock direction lockage_type
         privercode newpool oldpool pnewpool nxtstep sequpstr seqdstr plockagetype;

  run;


  * assign general sort key to impairment data;
  data impair;  set water.impair;
  length sortkey psortkey $5;
   sortkey=left(river_code)||left(lock_no)||left(chmbr_no);
   psortkey=left(river_code)||left(lock_no)||left(chmbr_no);
 run;

 **  consider impairment data at previous lock;
 proc sort data= regfile; by psortkey parrtime;
 data regfile; merge regfile(in=in1)  impair (in=in2);
   by psortkey;
  if plockno in %locklist  or lock_no in %locklist;
  length  reason1-reason&mximp $2;
  array begstop {*} bgstop1-bgstop&mximp;
  array endstop {*} endstop1-endstop&mximp;
  array reason {*} reason1-reason&mximp;

  ** determine pct times previous lockage events were affected by
        impairments;
  if nstops gt 0 then do;
    %pctdown(start=parrtime,end=pdeptime);
     pctpsysdn=pctdown;
    %pctdown(start=pstrtlcktime,end=pdeptime);
     pctplckdn=pctdown;
  end;
  drop nstops pctdown cumdown bgstop1-bgstop&mximp endstop1-endstop&mximp reason1-reason&mximp;
```

SAS Program “lockperf.sas” (cont.)

A.4 Statistical Models
A.4.4 Simulation Enhancement Level 2

```
   ** compute percent of activities impaired by darkness;

  run;

  %if %upcase(&debug)=YES %then %do;
   title data in regfile after picking up impairment data at previous lock;
    proc means data=regfile n nmiss sum mean min max;
   run;
  %end; * of debug;


    proc freq data=regfile;
   title changes in configuration after upstream lockages;
    title2 "using data from &firstdte to &lastdte";
    where river_code='MI' and (lock ge 19 and lock le 26) and direction='U';
    format plockagetype $lkgetyp. lockage_type $lkgetyp.;
    tables lock * nxtstep;
   run;

    proc freq data=regfile;
   title changes in configuration after downstream lockages;
    title2 "using data from &firstdte to &lastdte";
  where river_code='MI' and (lock ge 19 and lock le 26) and direction='D';
    format plockagetype $lkgetyp. lockage_type $lkgetyp.;
    tables lock * nxtstep;
   run;

  **  consider impairment data at current lock;
  proc sort data= regfile; by sortkey arrtime;
  data regfile; merge regfile(in=in1)  impair (in=in2);
    by sortkey;
   length  reason1-reason&mximp $2;
   array begstop {*} bgstop1-bgstop&mximp;
   array endstop {*} endstop1-endstop&mximp;
   array reason {*} reason1-reason&mximp;
   ** determine pct times pool transit current lockage events were affected by
         impairments;
   if nstops gt 0 then do;
    if pdeptime lt arrtime then do;
     %pctdown(start=pdeptime,end=arrtime);
      pcttrandn=pctdown;
    end;
     %pctdown(start=arrtime,end=deptime);
      pctsysdn=pctdown;
     %pctdown(start=strtlcktime,end=deptime);
      pctlckdn=pctdown;
   end;
          drop nstops bgstop1-bgstop&mximp endstop1-endstop&mximp reason1-reason&mximp ;

     **** determine pct of time activities are impaired by darkness;
     %pctday(start=parrtime,end=pdeptime);
      pctpsysnite=100-pctday;
     %pctday(start=pstrtlcktime,end=pdeptime);
      pctplcknite=100-pctday;
     %pctday(start=pdeptime,end=arrtime);
      pcttrannite=100-pctday;
     %pctday(start=arrtime,end=deptime);
```

SAS Program “lockperf.sas” (cont.)

```
     pctsysnite=100-pctday;
    %pctday(start=strtlcktime,end=deptime);
     pctlcknite=100-pctday;

    if (datepart(parrtime) ge &firstdte and datepart(parrtime) le &lastdte)
     or (datepart(arrtime) ge &firstdte and datepart(arrtime) le &lastdte);
run;


**** merge flow and gage readings for locks 20 through 26;

data gage; set water.gage;
  length poolsortkey $4;
  poolsortkey = abbrpool;
  if stage = 901 then do;
     stage = .;
  end;
  if flow = 901 then do;
     flow = .;
  end;
run;
data regfile; set regfile;
  length poolsortkey $4;
  poolsortkey = left(river_code)||left(lock_no);
run;
proc sort data = gage; by poolsortkey year month day;
run;
proc sort data = regfile; by poolsortkey year month day;
data regfile; merge regfile(in=in1) gage(in=in2);
   by poolsortkey year month day;
   if in1;
drop poolsortkey abbrpool date;
run;


 title data in regfile after picking up impairment data ;
  title2 "using data from &firstdte to &lastdte";
  proc means data=regfile n nmiss sum mean min max;
run;

  proc freq data=regfile;
 title changes in configuration after upstream lockages;
  title2 "using data from &firstdte to &lastdte";
  where river_code='MI' and (plock ge 19 and plock le 26) and pdirection='U';
  format plockagetype $lkgetyp. lockage_type $lkgetyp.;
  tables plock * plockagetype*lockage_type
        pnewpool*nxtstep;
run;

  proc freq data=regfile;
 title changes in configuration after downstream lockages;
  title2 "using data from &firstdte to &lastdte";
where river_code='MI' and (plock ge 19 and plock le 26) and pdirection='D';
  format plockagetype $lkgetyp. lockage_type $lkgetyp.;
  tables plock * plockagetype*lockage_type
       pnewpool*nxtstep;
run;
```

SAS Program “lockperf.sas” (cont.)


```
  ** save model-building file in permanent library;
  data water.regfile; set regfile; run;


   %if %upcase(&csvexp)=YES %then %do;
      PROC EXPORT DATA = water.regfile
        OUTFILE= "/accounts/research/cbis1/waterway/regfile.csv"
      DMBMS=CSV REPLACE;
      run;
   %end;

 %end;  ** of regen;

 *** identify lockage instances to be treated as random arrivals;
%if %upcase(&randarr)=YES %then %do;

  data randarr; set water.regfile;

       ** all arrivals into pool 21 downstream and pool 26 upstream are random arrivals;
       ** arrivals into newpool that are "other" for nxtstep are also to be simulated
          as random arrivals;

        * identify week of arrival time (redefined by LDS 6/7/05);

     week=intck('week',mdy(1,1,year),datepart(arrtime)+1);

  * if (newpool eq 'MI21D' or newpool eq 'MI25U' or nxtstep eq 'Other'
          or nxtstep eq 'Birth' or nxtstep eq 'EnterMI')
          and lock_no in (20,21,22,24,25);

   %if %upcase(&fullmod)=YES %then
   if (newpool eq 'MI21D' or newpool eq 'MI25U' or
          (nxtstep ne 'CONTNOSTOP' and nxtstep ne 'CONTSTOP' and nxtstep ne
                                                              'Return') or vess_type eq 'R')
          and lock_no in (20,21,22,24,25); ;

   %if %upcase(&fullmod) ne YES %then
   if (newpool eq 'MI21D' or newpool eq 'MI25U' or
          (nxtstep ne 'CONTNOSTOP') or vess_type eq 'R')
          and lock_no in (20,21,22,24,25); ;
  run;

      proc sort data=randarr; by lock_no direction lockage_type year &randtime arrtime;

      ** compute inter-arrival time;
     data randarr; set randarr;
        by  lock_no direction lockage_type year &randtime ;
        lagarrtm=lag(arrtime);
       ** determine time of first random arrival;
       * retain firstrand;
        if first.lock_no or first.direction or first.lockage_type or
                                                first.year or vess_type eq 'R' then do;
          lagarrtm=.;
          firstrand=arrtime;
        end;
          intarrivhr=(arrtime-lagarrtm)/3600;
```

SAS Program “lockperf.sas” (cont.)

```
       run;

       Proc univariate noprint data=randarr;
        title average interarrival times and first lockage times for random arrivals;
        title2 "with fullmod = &fullmod" ;
         by lock_no direction lockage_type year &randtime;
        var intarrivhr  firstrand;
         output out=arrrates
                mean=intarrivhr  firstrand
                min=minarrhr minfirst
                max=maxarrhr maxfirst
                std=stdarrhr stdfirst
                n=numarriv nfirst;
      run;

 ** now provide totals for all types of lockages;
       data randarr; set randarr; drop lagarrtm firstrand intarrivhr; run;
       proc sort data=randarr; by lock_no direction  year &randtime arrtime;   run;

       ** compute inter-arrival time;

      data randarr; set randarr;
         by  lock_no direction year &randtime ;
         lagarrtm=lag(arrtime);
     if first.lock_no or first.direction or first.year then do;
          lagarrtm=.;
          firstrand=arrtime;
        end;
          intarrivhr=(arrtime-lagarrtm)/3600;
       run;

      data typedist; set randarr;
          by lock_no direction year &randtime;
   if first.lock_no or first.direction or first.year or first.&randtime then do;

        numdoub=0; numsing=0; numjack=0; numko=0; numoth=0; numrec=0;
         end;
        if vess_type eq 'R' then numrec+1;
         else if lockage_type eq 'C' then numdoub+1;
          else if lockage_type eq 'S' then numsing+1 ;
           else if lockage_type eq 'V' then numjack+1 ;
            else if lockage_type eq 'K' then numko+1 ;
             else numoth+1;
      if last.lock_no or last.direction or last.year or last.&randtime then do;
       totrand=sum(numdoub,numsing,numjack,numko,numoth,numrec);
        propdoub=numdoub/totrand;
        propsing=numsing/totrand;
        propjack=numjack/totrand;
        propko=numko/totrand;
        propoth=numoth/totrand;
        proprec=numrec/totrand;
        output;
       end;
       run;

       ** print distribution of random arrivals;
        proc print data=typedist;
```

SAS Program “lockperf.sas” (cont.)


```
        id lock_no direction year &randtime  ;
          title distribution of random arrivals;
          var totrand propdoub propsing propjack propko propoth proprec;
         format propdoub propsing propjack propko propoth proprec 7.3;
          run;

    %if %upcase(&csvexp)=YES %then %do;
       PROC EXPORT DATA = typedist
         OUTFILE= "/accounts/research/cbis1/waterway/yrmtdist.csv"
       DMBMS=CSV REPLACE;
       run;
    %end;

  proc sort data=randarr; by lock_no direction &randtime; run;

  data avgtypedist; set randarr;
           by lock_no direction &randtime;
     if first.lock_no or first.direction or first.&randtime then do;

         numdoub=0; numsing=0; numjack=0; numko=0; numoth=0; numrec=0;
          end;
         if vess_type eq 'R' then numrec+1;
          else if lockage_type eq 'C' then numdoub+1;
           else if lockage_type eq 'S' then numsing+1 ;
            else if lockage_type eq 'V' then numjack+1 ;
             else if lockage_type eq 'K' then numko+1 ;
              else numoth+1;
        if last.lock_no or last.direction or last.&randtime then do;
         totrand=sum(numdoub,numsing,numjack,numko,numoth,numrec);
          propdoub=numdoub/totrand;
          propsing=numsing/totrand;
          propjack=numjack/totrand;
          propko=numko/totrand;
          propoth=numoth/totrand;
          proprec=numrec/totrand;
          output;
         end;
         run;

        ** print distribution of random arrivals;
         proc print data=avgtypedist;
        id lock_no direction &randtime  ;
          title distribution of random arrivals;
          var totrand propdoub propsing propjack propko propoth proprec;
         format propdoub propsing propjack propko propoth proprec 7.3;
          run;

    %if %upcase(&csvexp)=YES %then %do;
       PROC EXPORT DATA = avgtypedist
         OUTFILE= "/accounts/research/cbis1/waterway/mtdist.csv"
       DMBMS=CSV REPLACE;
       run;
    %end;

    proc sort data=randarr; by lock_no direction year &randtime; run;

       Proc univariate noprint data=randarr;
```

SAS Program “lockperf.sas” (cont.)

```
          by lock_no direction year &randtime;
         var intarrivhr  firstrand;
          output out=arrrates
                 mean=intarrivhr  firstrand
                 min=minarrhr minfirst
                 max=maxarrhr maxfirst
                 std=stdarrhr stdfirst
                 n=numarriv nfirst;
        run;

        proc print data=arrrates;
         title average interarrival times and first lockage times for random arrivals;
         title2 "with fullmod = &fullmod" ;
            format firstrand  minfirst maxfirst datetime7.;
             id lock_no direction year &randtime ;
             var numarriv intarrivhr stdarrhr nfirst minfirst maxfirst ;
          **   by lock_no direction year &randtime ;
          **   sum numarriv;
          **   sumby  ;
        run;

      %if %upcase(&csvexp)=YES %then %do;
         PROC EXPORT DATA = arrrates
           OUTFILE= "/accounts/research/cbis1/waterway/yrrates.csv"
         DMBMS=CSV REPLACE;
         run;
      %end;


       Proc sort data = randarr;
           by lock_no direction &randtime;
       run;

         Proc univariate noprint data=randarr;
           by lock_no direction &randtime;
          var intarrivhr  firstrand;
           output out=arrrates
                 mean=intarrivhr  firstrand
                 min=minarrhr minfirst
                 max=maxarrhr maxfirst
                 std=stdarrhr stdfirst
                 n=numarriv nfirst;
        run;

        proc print data=arrrates;
         title average interarrival times and first lockage times for random arrivals;
         title2 "with fullmod = &fullmod" ;
            format firstrand  minfirst maxfirst datetime7.;
             id lock_no direction &randtime ;
             var numarriv intarrivhr stdarrhr nfirst minfirst maxfirst ;
          **   by lock_no direction &randtime ;
          **   sum numarriv;
          **   sumby  ;
        run;

       %if %upcase(&csvexp) = YES %then %do;
          PROC EXPORT DATA = arrrates
```

SAS Program “lockperf.sas” (cont.)


```
             OUTFILE= "/accounts/research/cbis1/waterway/mtrates.csv"
           DMBMS=CSV REPLACE;
           run;
        %end;

    %end;

%mend;

%opstats;
```

SAS Program “lockperf.sas” (cont.)

```
  libname water '~/waterway';
 data interrupt; set water.stallstop;

  if river_code eq 'MI' and (lock_no  eq '20' or lock_no eq '21' or lock_no eq '22'
        or lock_no eq '24' or lock_no eq '25');
 run;
 * proc fsbrowse data=interrupt;run;

  proc sort data=interrupt; by lock_no beg_stop_date end_stop_date  ;
  run;

data interrupt; set interrupt;
  where end_stop_date ne .;
run;

data int2; set interrupt;
  year=year(datepart(beg_stop_date));
  month=month(datepart(beg_stop_date));
  lock_no=lock_no;
  durmins=(end_stop_date-beg_stop_date)/60;
  lbeg=lag(beg_stop_date);
  lend=lag(end_stop_date);

   ***** impair definition used in impair.sas;
   ** eliminate duplicates or overlaps for same reason;
     overlap=0;
     if beg_stop_date gt end_stop_date or end_stop_date eq . then overlap=1;
     if lbeg gt 0 and lreason eq reason_code and min(beg_stop_date,end_stop_date)
             lt max(lbeg,lend) then overlap=1;
     timegap=(beg_stop_date-lend)/3660/24;
run;

data int2; set int2; by lock_no year;
  if first.lock_no or first.year then timegap=.;
  where (month ne 3 and month ne 2 and month ne 1 and month ne 12) and overlap ne 1;
run;
/*
  PROC EXPORT DATA= int2
      OUTFILE= "/accounts/research/cbis1/waterway/interdata1.csv"
      DBMS=CSV REPLACE;
  run;
*/
  proc univariate noprint; var durmins timegap;
  by lock_no year month;
     output out=summary
            n=ndur ngap
            sum= sumdur sumgap
            min=mindur mingap
            max=maxdur maxgap
            median=meddur medgap
            mean=meandur meangap
            std=stddur stdgap
            p5=p5dur p5gap
            p95=p95dur p95gap
            q1=p25dur p25gap
            q3=p75dur p75gap;
```

SAS Program “interrupt.sas”


```
   run;
   proc print data=summary;
    title Summary of Times between impairments (days);
    id lock_no year month ;
    var  ngap  mingap p5gap p25gap medgap meangap p75gap p95gap maxgap  stdgap ;
    run;

   proc print data=summary;
    title Summary of duration of interruptions (minutes);
    id lock_no year month ;
    var ndur mindur p5dur p25dur meddur meandur p75dur p95dur maxdur stddur ;
    run;

  proc sort data=interrupt; by beg_stop_date end_stop_date  ;
  run;

   proc sort data=int2;  by lock_no month;

  proc univariate noprint; var durmins timegap;
  by lock_no  month;
     output out=summary
            n=ndur ngap
            sum= sumdur sumgap
            min=mindur mingap
            max=maxdur maxgap
            median=meddur medgap
            mean=meandur meangap
            std=stddur stdgap
            p5=p5dur p5gap
            p95=p95dur p95gap
            q1=p25dur p25gap
            q3=p75dur p75gap;

   run;
   proc print data=summary;
    title Summary of Times between impairments at lock(days)for all years ;
    id lock_no month ;
    var  ngap  mingap p5gap p25gap medgap meangap p75gap p95gap maxgap  stdgap ;
    run;

   proc print data=summary;
    title Summary of duration of interruptions for all years (minutes);
    id lock_no month ;
    var ndur mindur p5dur p25dur meddur meandur p75dur p95dur maxdur stddur ;
    run;


  proc sort data=interrupt; by beg_stop_date end_stop_date  ;
run;

   proc sort data=int2;  by month;

  proc univariate noprint; var durmins timegap; ** timegap2;
  by month  ;
     output out=summary
            n=ndur ngap
            sum= sumdur sumgap
```

SAS Program “interrupt.sas” (cont.)

```
           min=mindur mingap
           max=maxdur maxgap
           median=meddur medgap
           mean=meandur meangap
           std=stddur stdgap
           p5=p5dur p5gap
           p95=p95dur p95gap
           q1=p25dur p25gap
           q3=p75dur p75gap;

  run;
  proc print data=summary;
   title Summary of Times between impairments at any lock(days);
   id month;
   var  ngap  mingap p5gap p25gap medgap meangap p75gap p95gap maxgap  stdgap ;
   run;

  proc print data=summary;
   id month;
   title Summary of duration of interruptions for all locks (minutes);
   var ndur mindur p5dur p25dur meddur meandur p75dur p95dur maxdur stddur ;
   run;

  proc sort data=int2;  by lock_no;

 proc univariate noprint; var durmins timegap; **  timegap2;
 by lock_no  ;
    output out=summary
           n=ndur ngap
           sum= sumdur sumgap
           min=mindur mingap
           max=maxdur maxgap
           median=meddur medgap
           mean=meandur meangap
           std=stddur stdgap
           p5=p5dur p5gap
           p95=p95dur p95gap
           q1=p25dur p25gap
           q3=p75dur p75gap;

  run;
  proc print data=summary;
   title Summary of Lock Stoppages by Lock across all years apr - nov;
   id lock_no;
   var  ngap ndur meangap stdgap meandur stddur;
   run;
```

SAS Program “interrupt.sas” (cont.)

```
 ** datetime format is in seconds from Jan 1 base year (1960);
 ** time format is seconds from prior midnight;
  ** this routine determines the percentage of time than impairment
      of locks is involved between start time  and end time in datetime format;
   options mprint macrogen;
  %macro reasons; reason {i} ne ' ' %mend;
%macro pctdown(start=start,  /** variable for start time in datetime format*/
               end=end,  /* variable for end time in datetime format */
               reasons=reasons,  /*macro with statements defining qualifying
                                   impairments */
               );
    cumdown=0;
    if &end gt &start then do;
    do i=1 to nstops;
      if %reasons and begstop{i} ne . and endstop{i} ne . and &end ne . and &start ne . then do;
       if &start le begstop{i} and &end gt begstop{i} and &end le endstop{i} then
          cumdown=cumdown+ &end - begstop(i) ;
       if &start le begstop{i}  and &end ge endstop{i} then
          cumdown=cumdown+ endstop{i} - begstop(i) ;
       if &start gt begstop{i}  and &end le endstop{i} then
          cumdown=cumdown+ &end - &start ;
       if &start gt begstop{i}  and &start lt endstop{i} and &end gt endstop{i} then
          cumdown=cumdown+ endstop{i} - &start ;
      end; * of reasons;
    end; * of looping through stopages;
     pctdown=round(100*cumdown/(&end-&start),.001);
     if pctdown gt 100 or pctdown lt 0 then pctdown=.;
    end;   ** of case where end gt start;
    %mend; ** of  pctdown macro;
```

SAS Program “pctdown.sas”

```
 ** datetime format is in seconds from Jan 1 base year (1960);
 ** time format is seconds from prior midnight;
   options mprint macrogen;

%macro pctday(start=start,  /** variable for start time in datetime format*/
              end=end,  /* variable for end time in datetime format */
              sunrise=sunrise,  /* variable for sunrise time in time format */
              sunset=sunset,  /* variable for sunset time in time format */
              );
    stime=timepart(&start);
    etime=timepart(&end);
    sdate=datepart(&start);
    edate=datepart(&end);
    hrsduration= (&end-&start )/(3600);

 ** determine number of full days for which pct day must be added;
    ndays= int((&end-&start)/(24*60*60));

     ** handle events with no time duration;

     if abs (&end-&start) le 1 then do;
        if &sunrise - etime  ge 1  then pctday=0;
        if etime - &sunrise ge -1 and etime le &sunset +1 then pctday=100;
        if etime ge &sunset +1 then pctday=0;
     end;


   ** handle case where duration is nonzero and start is on same day as end;
      if &end gt &start and sdate eq edate then do;

       ** case where sequence is start end sunrise sunset;
       if stime le &sunrise and etime le &sunrise then
         pctday = 0;

       ** case where sequence is start sunrise end sunset;
       if stime le &sunrise and etime ge &sunrise and etime le &sunset then
         pctday = 100*(etime-&sunrise)/(&end-&start);

       ** case where time sequence is start sunrise sunset end;
       if stime lt &sunrise and etime gt &sunset then
         pctday = 100 * (&sunset-&sunrise)/(&end-&start);

       ** case where time sequence is sunrise start end sunset;
       if stime ge &sunrise and etime le &sunset then
         pctday = 100;

       ** case where time sequence is sunrise start sunset end;
       if stime ge &sunrise and stime le &sunset and etime gt &sunset then
         pctday = 100*(&sunset-stime)/(&end-&start);

       ** case where time sequence is sunrise sunset start end;
       if stime ge &sunset and etime gt &sunset then
         pctday = 0;

    end;  ** of start and end same day;
```

SAS Program “pctday.sas”


```
   ** handle case where duration is nonzero and start is not on same day as end;

     if &end gt &start and sdate lt edate then do;

      ** case where sequence is start sunrise, end sunrise ;
      if stime le &sunrise and etime le &sunrise and stime gt etime then
        pctday = 100*((1+ndays)*(&sunset-&sunrise))/(&end-&start) ;
      if stime le &sunrise and etime le &sunrise and stime le etime then
        pctday = 100*((ndays)*(&sunset-&sunrise))/(&end-&start) ;

      ** case where sequence is start sunrise,  sunrise end sunset;
      if stime le &sunrise and etime ge &sunrise and etime le &sunset then
        pctday = 100*(ndays*(&sunset-&sunrise)+(etime-&sunrise))/(&end-&start);

      ** case where sequence is start sunrise,  sunset end;
      if stime le &sunrise and etime ge &sunset then
        pctday = 100*(1+ndays)*(&sunset-&sunrise)/(&end-&start) ;

      ** case where time sequence is sunrise start sunset, end sunrise;
      if stime ge &sunrise and stime le &sunset and etime le &sunrise then
        pctday = 100 *(ndays*(&sunset-&sunrise)+(&sunset-stime))/(&end-&start);

      ** case where time sequence is sunrise start sunset, sunrise end sunset;
      if stime ge &sunrise and stime le &sunset and etime ge &sunrise
           and etime le &sunset and stime gt etime then
        pctday = 100 *(ndays*(&sunset-&sunrise)+(&sunset-stime)
             +(etime-&sunrise))/(&end-&start);
      if stime ge &sunrise and stime le &sunset and etime ge &sunrise
           and etime le &sunset and stime le etime then
        pctday = 100 *((ndays-1)*(&sunset-&sunrise)+(&sunset-stime)
             +(etime-&sunrise))/(&end-&start);

      ** case where time sequence is sunrise start sunset, sunset end ;
      if stime ge &sunrise and stime le &sunset and etime ge &sunset then
        pctday = 100 *(ndays*(&sunset-&sunrise)+(&sunset-stime))/(&end-&start);

      ** case where sequence is sunset start, end sunrise ;
      if stime ge &sunset and etime le  &sunrise  then
        pctday = 100*(ndays)*(&sunset-&sunrise)/(&end-&start) ;

      ** case where sequence is sunset start, sunrise end sunset;
      if stime ge &sunset and etime ge &sunrise and etime le &sunset then
        pctday = 100*(ndays*(&sunset-&sunrise)+(etime-&sunrise))/(&end-&start) ;

      ** case where sequence is sunset start, sunset end;
      if stime ge &sunset and etime ge &sunset and etime gt stime then
        pctday = 100*((ndays)*(&sunset-&sunrise))/(&end-&start) ;
      if stime ge &sunset and etime ge &sunset and etime le stime then
        pctday = 100*(ndays+1)*(&sunset-&sunrise)/(&end-&start) ;

   end;  ** of start and end on different days;

   pctday=round(pctday,.001);

   if pctday gt 100 or pctday lt 0 then pctday=.;

   %mend; ** of  pctday macro;
```

SAS Program “pctday.sas” (cont.)

A.5 Impairment Statistics

Summary of Times between impairments (days) 15:44 Monday, June 27, 2005 1

LOCK_NO	year	month	ngap	mingap	p5gap	p25gap	medgap	meangap	p75gap	p95gap	maxgap	stdgap
20	2000	4	7	0.0287	0.0287	1.4529	2.0574	3.2681	5.6243	8.1038	8.1038	2.7731
20	2000	5	7	0.7773	0.7773	1.0485	2.0362	4.2863	5.3320	14.3033	14.3033	4.7409
20	2000	6	3	4.7418	4.7418	4.7418	13.2206	10.9403	14.8586	14.8586	14.8586	5.4302
20	2000	7	9	0.0164	0.0164	0.5908	3.4945	2.9558	4.8067	6.9085	6.9085	2.6309
20	2000	8	2	11.4447	11.4447	11.4447	12.8245	12.8245	14.2042	14.2042	14.2042	1.9513
20	2000	9	3	0.4372	0.4372	0.4372	11.1824	10.4904	19.8518	19.8518	19.8518	9.7258
20	2000	10	9	0.0683	0.0683	2.3975	3.8258	4.0040	5.3381	9.9208	9.9208	3.1081
20	2000	11	6	0.0888	0.0888	0.6141	3.6141	3.3144	5.7234	6.2322	6.2322	2.6205
20	2001	4	4	0.0096	0.0096	0.5089	1.3883	1.8173	3.1257	4.4829	4.4829	1.9175
20	2001	6	5	0.6482	0.6482	2.6059	3.3429	14.3992	15.0751	50.3238	50.3238	20.8653
20	2001	7	2	5.1407	5.1407	5.1407	12.0089	12.0089	18.8770	18.8770	18.8770	9.7131
20	2001	8	7	0.6598	0.6598	0.7363	3.8340	5.8988	13.9583	14.5499	14.5499	6.0975
20	2001	9	2	9.1667	9.1667	9.1667	14.9696	14.9696	20.7725	20.7725	20.7725	8.2066
20	2001	11	2	10.1851	10.1851	10.1851	28.6083	28.6083	47.0314	47.0314	47.0314	26.0543
20	2002	4	1	12.3579	12.3579	12.3579	12.3579	12.3579	12.3579	12.3579	12.3579	.
20	2002	5	4	1.0116	1.0116	2.9495	8.9115	9.0244	15.0994	17.2630	17.2630	7.4048
20	2002	6	9	0.0225	0.0225	0.0915	1.0587	3.0459	4.9426	11.0601	11.0601	3.8892
20	2002	7	3	4.3818	4.3818	4.3818	14.7322	11.4388	15.2022	15.2022	15.2022	6.1160
20	2002	8	2	4.4413	4.4413	4.4413	11.6650	11.6650	18.8887	18.8887	18.8887	10.2159
20	2002	9	1	8.3402	8.3402	8.3402	8.3402	8.3402	8.3402	8.3402	8.3402	.
20	2002	10	3	5.6762	5.6762	5.6762	11.0628	15.9948	31.2452	31.2452	31.2452	13.4791
20	2002	11	3	2.7616	2.7616	2.7616	4.1189	10.8552	25.6851	25.6851	25.6851	12.8610
20	2003	4	2	4.6633	4.6633	4.6633	12.3074	12.3074	19.9515	19.9515	19.9515	10.8104
20	2003	5	2	8.2316	8.2316	8.2316	9.7333	9.7333	11.2350	11.2350	11.2350	2.1237
20	2003	6	3	7.3087	7.3087	7.3087	14.3969	12.2090	14.9214	14.9214	14.9214	4.2519
20	2003	7	4	0.2070	0.2070	4.7254	9.9474	8.1884	11.6513	12.6516	12.6516	5.5016
20	2003	8	2	14.8634	14.8634	14.8634	15.6339	15.6339	16.4044	16.4044	16.4044	1.0896
20	2003	9	9	0.1168	0.1168	0.7452	1.9413	2.9340	3.9023	7.2322	7.2322	2.5158
20	2003	10	2	2.4788	2.4788	2.4788	7.0270	7.0270	11.5751	11.5751	11.5751	6.4321
20	2003	11	4	0.3627	0.3627	1.0283	7.2555	9.0232	17.0181	21.2193	21.2193	9.8634
21	2000	4	0	.	.	.	.	.	.	.	.	.
21	2000	5	2	19.8204	19.8204	19.8204	20.0171	20.0171	20.2138	20.2138	20.2138	0.2782
21	2000	6	5	0.2158	0.2158	1.7391	2.9939	6.7381	7.1018	21.6400	21.6400	8.7142
21	2000	7	4	3.7459	3.7459	5.3552	7.7828	8.0739	10.7927	12.9843	12.9843	3.8450
21	2000	8	5	1.9235	1.9235	2.8661	3.0813	5.0449	4.1653	13.1885	13.1885	4.6216
21	2000	9	1	32.7295	32.7295	32.7295	32.7295	32.7295	32.7295	32.7295	32.7295	.
21	2000	10	3	0.5540	0.5540	0.5540	0.8736	6.6660	18.5704	18.5704	18.5704	10.3107
21	2000	11	1	14.5567	14.5567	14.5567	14.5567	14.5567	14.5567	14.5567	14.5567	.
21	2001	6	3	1.1626	1.1626	1.1626	3.2555	4.5622	9.2684	9.2684	9.2684	4.2080
21	2001	7	6	2.3033	2.3033	2.6414	5.6434	5.8331	8.5902	10.1769	10.1769	3.2083
21	2001	8	2	1.0676	1.0676	1.0676	3.1431	3.1431	5.2186	5.2186	5.2186	2.9352
21	2001	9	2	8.7589	8.7589	8.7589	22.8945	22.8945	37.0301	37.0301	37.0301	19.9907
21	2001	10	1	26.3887	26.3887	26.3887	26.3887	26.3887	26.3887	26.3887	26.3887	.
21	2001	11	1	18.1216	18.1216	18.1216	18.1216	18.1216	18.1216	18.1216	18.1216	.
21	2002	4	0	.	.	.	.	.	.	.	.	.
21	2002	5	3	2.4713	2.4713	2.4713	18.8490	16.2111	27.3128	27.3128	27.3128	12.6291
21	2002	6	2	0.1851	0.1851	0.1851	7.8798	7.8798	15.5745	15.5745	15.5745	10.8819
21	2002	7	2	8.5704	8.5704	8.5704	19.2602	19.2602	29.9501	29.9501	29.9501	15.1178
21	2002	10	3	5.3641	5.3641	5.3641	8.6851	28.4221	71.2172	71.2172	71.2172	37.0988
21	2002	11	2	14.5376	14.5376	14.5376	21.3023	21.3023	28.0669	28.0669	28.0669	9.5667
21	2003	4	0	.	.	.	.	.	.	.	.	.
21	2003	5	3	1.2917	1.2917	1.2917	5.2561	4.9210	8.2152	8.2152	8.2152	3.4739
21	2003	6	2	5.8204	5.8204	5.8204	12.9238	12.9238	20.0273	20.0273	20.0273	10.0458
21	2003	7	5	0.9720	0.9720	2.8559	5.2268	9.9515	12.5915	28.1113	28.1113	11.0686
21	2003	10	1	87.4214	87.4214	87.4214	87.4214	87.4214	87.4214	87.4214	87.4214	.
21	2003	11	2	7.7042	7.7042	7.7042	16.1482	16.1482	24.5922	24.5922	24.5922	11.9416

A.5 Impairment Statistics

Summary of Times between impairments (days) 15:44 Monday, June 27, 2005 2

LOCK_NO	year	month	ngap	mingap	p5gap	p25gap	medgap	meangap	p75gap	p95gap	maxgap	stdgap
22	2000	4	2	2.7268	2.7268	2.7268	7.1383	7.1383	11.5499	11.5499	11.5499	6.2389
22	2000	5	6	2.0594	2.0594	2.6571	5.7199	6.3987	9.7145	12.5212	12.5212	4.1108
22	2000	6	5	0.4993	0.4993	2.0061	2.5116	5.0299	3.3518	16.7807	16.7807	6.6504
22	2000	7	6	0.6762	0.6762	1.9925	3.1735	4.2984	5.5656	11.2090	11.2090	3.7722
22	2000	8	11	0.1537	0.1537	0.7691	2.6113	3.0790	4.2869	10.8593	10.8593	3.0162
22	2000	9	10	0.0150	0.0150	0.4385	1.4792	3.2238	4.0232	12.0717	12.0717	4.3379
22	2000	10	14	0.0020	0.0020	0.0936	0.3258	2.0116	4.7158	9.1270	9.1270	3.0039
22	2000	11	3	8.6421	8.6421	8.6421	10.2862	9.8443	10.6045	10.6045	10.6045	1.0532
22	2001	4	1	13.4829	13.4829	13.4829	13.4829	13.4829	13.4829	13.4829	13.4829	.
22	2001	5	1	34.3825	34.3825	34.3825	34.3825	34.3825	34.3825	34.3825	34.3825	.
22	2001	6	5	1.0116	1.0116	1.6400	2.7514	4.6548	2.9747	14.8962	14.8962	5.7813
22	2001	7	2	2.3163	2.3163	2.3163	18.8548	18.8548	35.3934	35.3934	35.3934	23.3891
22	2001	8	8	0.0137	0.0137	0.9795	3.3887	2.8542	4.1844	5.7145	5.7145	1.9944
22	2001	9	3	0.7896	0.7896	0.7896	4.7083	8.3108	19.4344	19.4344	19.4344	9.8306
22	2001	10	2	15.7288	15.7288	15.7288	16.7497	16.7497	17.7705	17.7705	17.7705	1.4437
22	2001	11	2	6.4686	6.4686	6.4686	8.7138	8.7138	10.9590	10.9590	10.9590	3.1752
22	2002	4	4	1.2015	1.2015	1.5881	4.7753	5.2408	8.8934	10.2111	10.2111	4.3642
22	2002	5	8	0.1100	0.1100	1.3733	3.0444	3.6600	4.7859	10.7630	10.7630	3.3484
22	2002	6	4	4.8675	4.8675	5.2244	6.0116	6.0681	6.9119	7.3818	7.3818	1.0869
22	2002	7	5	2.8825	2.8825	3.4925	5.3108	6.7772	8.2923	13.9078	13.9078	4.5069
22	2002	8	2	0.7186	0.7186	0.7186	3.6134	3.6134	6.5082	6.5082	6.5082	4.0939
22	2002	9	4	1.7883	1.7883	3.7783	9.6923	11.7034	19.6284	25.6407	25.6407	10.5110
22	2002	10	6	0.6564	0.6564	0.9781	3.9033	4.9869	9.8825	10.5977	10.5977	4.6046
22	2003	4	0	.	.	.	.	.	.	.	.	.
22	2003	6	2	11.8067	11.8067	11.8067	25.1745	25.1745	38.5423	38.5423	38.5423	18.9050
22	2003	7	5	2.0642	2.0642	3.2124	3.6817	8.5365	10.7964	22.9276	22.9276	8.7467
22	2003	8	5	0.8770	0.8770	3.1148	4.8962	5.9732	6.3313	14.6469	14.6469	5.2598
22	2003	9	5	1.7964	1.7964	3.4337	3.7534	4.1833	4.7486	7.1844	7.1844	1.9856
22	2003	10	7	0.5383	0.5383	0.6496	1.1298	5.2081	9.0307	18.5369	18.5369	6.7249
22	2003	11	3	0.1223	0.1223	0.1223	5.9652	8.3725	19.0301	19.0301	19.0301	9.6810
24	2000	4	2	5.0922	5.0922	5.0922	5.3439	5.3439	5.5956	5.5956	5.5956	0.3560
24	2000	5	3	7.2910	7.2910	7.2910	8.6373	10.7015	16.1762	16.1762	16.1762	4.7888
24	2000	6	8	0.0273	0.0273	0.7783	1.6096	4.6834	7.6052	17.4536	17.4536	6.1912
24	2000	7	9	0.0355	0.0355	1.0690	3.7650	3.3095	4.8231	7.5806	7.5806	2.5923
24	2000	8	7	0.4262	0.4262	3.3538	5.4064	4.5722	6.1066	6.2357	6.2357	2.0863
24	2000	9	3	0.4898	0.4898	0.4898	5.5738	4.0795	6.1749	6.1749	6.1749	3.1233
24	2000	10	10	0.0212	0.0212	0.1523	2.5550	4.7036	6.2671	23.6236	23.6236	7.1806
24	2000	11	2	0.7008	0.7008	0.7008	10.1936	10.1936	19.6865	19.6865	19.6865	13.4249
24	2001	4	3	0.1680	0.1680	0.1680	0.1742	2.3103	6.5888	6.5888	6.5888	3.7053
24	2001	5	6	0.0656	0.0656	0.4440	0.7360	6.8580	6.6872	32.4795	32.4795	12.7964
24	2001	6	6	0.3866	0.3866	0.6195	1.4218	1.8388	2.8279	4.3552	4.3552	1.5082
24	2001	7	6	0.2712	0.2712	2.7049	3.6380	7.7782	16.5171	19.9003	19.9003	8.2428
24	2001	8	10	0.2883	0.2883	0.5799	1.6175	2.9206	5.1557	9.8948	9.8948	3.1079
24	2001	9	7	0.7869	0.7869	0.9262	1.9419	3.8288	4.7439	13.0546	13.0546	4.3160
24	2001	10	6	0.4788	0.4788	1.8593	4.5051	5.7144	7.1947	15.7432	15.7432	5.5220
24	2001	11	6	0.0102	0.0102	0.8613	4.6510	4.7038	7.8231	10.2261	10.2261	4.3235
24	2002	4	8	0.0321	0.0321	0.5376	1.2128	2.7249	4.2319	9.8026	9.8026	3.3233
24	2002	5	10	0.0956	0.0956	1.1783	3.3969	3.1431	4.3893	7.5307	7.5307	2.2527
24	2002	6	10	0.0881	0.0881	0.7753	2.0301	2.6384	3.9911	6.9501	6.9501	2.3225
24	2002	7	8	0.1380	0.1380	0.8671	1.1612	3.6333	5.3012	14.2691	14.2691	4.7623
24	2002	8	5	0.7650	0.7650	1.0116	5.2391	6.7355	12.3620	14.2999	14.2999	6.3152
24	2002	9	11	0.0642	0.0642	0.8538	2.0663	2.6106	3.0212	9.5990	9.5990	2.6947
24	2002	10	12	0.0417	0.0417	1.0536	2.2766	2.2021	3.1527	4.7643	4.7643	1.4521
24	2002	11	5	3.5075	3.5075	3.9310	5.7206	5.4597	5.9734	8.1660	8.1660	1.8577
24	2003	4	3	0.3873	0.3873	0.3873	1.2370	6.7546	18.6393	18.6393	18.6393	10.3013
24	2003	5	8	0.2124	0.2124	0.9040	2.9228	3.5780	5.4416	9.8750	9.8750	3.2873

A.5 Impairment Statistics

Summary of Times between impairments (days) 15:44 Monday, June 27, 2005 3

LOCK_NO	year	month	ngap	mingap	p5gap	p25gap	medgap	meangap	p75gap	p95gap	maxgap	stdgap
24	2003	6	8	0.0485	0.0485	0.3132	3.6520	3.2813	5.6489	6.9740	6.9740	2.78558
24	2003	7	3	1.6462	1.6462	1.6462	11.8852	9.7036	15.5792	15.5792	15.5792	7.21820
24	2003	8	4	0.7220	0.7220	1.2626	4.9966	6.5886	11.9146	15.6393	15.6393	6.87499
24	2003	9	15	0.0075	0.0075	0.7719	1.0485	2.4220	3.6182	10.7561	10.7561	2.94704
24	2003	10	1	28.5724	28.5724	28.5724	28.5724	28.5724	28.5724	28.5724	28.5724	.
24	2003	11	11	0.0478	0.0478	0.2678	1.1373	2.4663	3.6441	7.7329	7.7329	2.67056
25	2000	4	8	0.0225	0.0225	1.0663	2.4375	2.8911	5.1499	5.7992	5.7992	2.23503
25	2000	5	6	0.0184	0.0184	0.0704	4.2063	4.5419	9.1107	9.6393	9.6393	4.52323
25	2000	6	20	0.0137	0.0137	0.0806	0.5779	1.6545	2.1489	7.6366	8.2104	2.45681
25	2000	7	8	0.0321	0.0321	1.3627	3.1909	3.9175	6.8911	8.4187	8.4187	3.21702
25	2000	8	9	0.0089	0.0089	0.1940	2.7582	3.3335	4.4454	9.6646	9.6646	3.64814
25	2000	9	9	0.9051	0.9051	1.6974	1.9638	2.8446	2.8190	9.2992	9.2992	2.57547
25	2000	10	12	0.2459	0.2459	0.5167	1.7831	2.6638	4.4119	9.0068	9.0068	2.74716
25	2000	11	15	0.1257	0.1257	0.7288	1.1107	1.8544	2.4016	6.5847	6.5847	1.71212
25	2001	4	6	0.0034	0.0034	0.0348	0.0994	1.6379	2.1141	7.4761	7.4761	2.97632
25	2001	5	3	5.8654	5.8654	5.8654	9.0642	8.0879	9.3340	9.3340	9.3340	1.92942
25	2001	6	7	0.4051	0.4051	0.4221	3.6311	3.6707	6.9283	8.9454	8.9454	3.32392
25	2001	7	8	0.0977	0.0977	0.6161	2.4088	3.9641	6.5413	12.4822	12.4822	4.47770
25	2001	8	5	2.9706	2.9706	3.5840	3.7254	5.9844	6.2363	13.4057	13.4057	4.33265
25	2001	9	8	0.0779	0.0779	0.5823	2.5765	3.4506	4.9747	11.2602	11.2602	3.78811
25	2001	10	8	0.0553	0.0553	0.8350	3.8825	3.7743	6.1352	8.4337	8.4337	3.07672
25	2001	11	18	0.0178	0.0178	0.7131	1.1281	1.5088	1.7616	6.0184	6.0184	1.49917
25	2002	4	5	0.0478	0.0478	2.7937	3.4720	5.6822	5.8784	16.2193	16.2193	6.24586
25	2002	5	7	0.0567	0.0567	0.2773	2.8156	3.8185	5.6762	12.2268	12.2268	4.39709
25	2002	6	21	0.0178	0.0307	0.0601	0.0840	1.4901	1.1735	6.6311	7.3941	2.37378
25	2002	7	6	0.3846	0.3846	0.5895	3.1732	4.6870	8.5068	12.2951	12.2951	4.75283
25	2002	8	8	0.0840	0.0840	0.0936	0.1253	3.7990	1.2053	27.4597	27.4597	9.57546
25	2002	9	5	0.0068	0.0068	1.4740	1.6127	5.6995	8.1660	17.2377	17.2377	7.17943
25	2002	10	30	0.0198	0.0348	0.0799	0.0932	1.0522	0.7295	5.9597	8.6694	2.00392
25	2002	11	5	0.0888	0.0888	1.0007	1.8251	5.2695	4.1974	19.2357	19.2357	7.95501
25	2003	4	22	0.0697	0.0751	0.0867	0.1107	0.6560	0.7520	3.2855	4.2213	1.09666
25	2003	5	8	0.0410	0.0410	0.5290	1.8084	3.4118	4.1670	14.2445	14.2445	4.66406
25	2003	6	7	0.0656	0.0656	0.1298	4.0410	4.0330	5.2500	13.4570	13.4570	4.72969
25	2003	7	8	0.0765	0.0765	0.7141	3.0509	4.1787	6.6598	12.5034	12.5034	4.41402
25	2003	8	8	0.0082	0.0082	0.5973	1.3067	3.3920	3.9976	15.3245	15.3245	5.12662
25	2003	9	6	0.0116	0.0116	0.6428	1.3354	2.0102	2.7971	5.9392	5.9392	2.15415
25	2003	10	5	0.8067	0.8067	1.6031	3.4187	7.3862	10.7432	20.3593	20.3593	8.24689
25	2003	11	9	0.0219	0.0219	0.0922	0.4064	3.2350	2.6667	14.4686	14.4686	5.23492

Summary of duration of interruptions (minutes) 15:44 Monday, June 27, 2005 4

LOCK_NO	year	month	ndur	mindur	p5dur	p25dur	meddur	meandur	p75dur	p95dur	maxdur	stddur
20	2000	4	8	22.000	22.000	34.500	57.000	81.250	103.000	239.000	239.000	71.223
20	2000	5	7	27.000	27.000	29.000	35.000	55.286	79.000	133.000	133.000	39.041
20	2000	6	3	28.000	28.000	28.000	44.000	62.333	115.000	115.000	115.000	46.307
20	2000	7	9	21.000	21.000	33.000	93.000	191.333	171.000	662.000	662.000	237.243
20	2000	8	2	37.000	37.000	37.000	45.000	45.000	53.000	53.000	53.000	11.314
20	2000	9	3	30.000	30.000	30.000	54.000	51.000	69.000	69.000	69.000	19.672
20	2000	10	9	22.000	22.000	45.000	92.000	124.111	153.000	349.000	349.000	105.939
20	2000	11	6	50.000	50.000	65.000	113.000	220.167	388.000	592.000	592.000	220.327
20	2001	4	5	28.000	28.000	53.000	194.000	201.000	209.000	521.000	521.000	196.434
20	2001	6	5	49.000	49.000	59.000	106.000	92.000	108.000	138.000	138.000	37.101
20	2001	7	2	28.000	28.000	28.000	28.500	28.500	29.000	29.000	29.000	0.707
20	2001	8	7	35.000	35.000	47.000	59.000	83.571	104.000	227.000	227.000	66.828
20	2001	9	2	55.000	55.000	55.000	141.000	141.000	227.000	227.000	227.000	121.622
20	2001	11	2	49.000	49.000	49.000	143.500	143.500	238.000	238.000	238.000	133.643
20	2002	4	2	56.000	56.000	56.000	129.500	129.500	203.000	203.000	203.000	103.945
20	2002	5	4	22.000	22.000	23.000	34.000	131.250	239.500	435.000	435.000	202.743
20	2002	6	9	28.000	28.000	41.000	50.000	76.556	91.000	211.000	211.000	57.670
20	2002	7	3	20.000	20.000	20.000	165.000	140.667	237.000	237.000	237.000	110.528
20	2002	8	2	25.000	25.000	25.000	47.000	47.000	69.000	69.000	69.000	31.113
20	2002	9	1	293.000	293.000	293.000	293.000	293.000	293.000	293.000	293.000	.
20	2002	10	3	25.000	25.000	25.000	40.000	117.000	286.000	286.000	286.000	146.550
20	2002	11	3	30.000	30.000	30.000	62.000	79.667	147.000	147.000	147.000	60.468
20	2003	4	3	41.000	41.000	41.000	45.000	45.333	50.000	50.000	50.000	4.509
20	2003	5	2	140.000	140.000	140.000	190.000	190.000	240.000	240.000	240.000	70.711
20	2003	6	3	30.000	30.000	30.000	39.000	41.000	54.000	54.000	54.000	12.124
20	2003	7	4	32.000	32.000	45.000	69.000	107.000	169.000	258.000	258.000	102.561
20	2003	8	2	39.000	39.000	39.000	90.000	90.000	141.000	141.000	141.000	72.125
20	2003	9	9	29.000	29.000	33.000	50.000	114.000	82.000	426.000	426.000	142.352
20	2003	10	2	41.000	41.000	41.000	175.500	175.500	310.000	310.000	310.000	190.212
20	2003	11	4	62.000	62.000	80.500	149.000	233.000	385.500	572.000	572.000	233.291
21	2000	4	1	25.000	25.000	25.000	25.000	25.000	25.000	25.000	25.000	.
21	2000	5	2	14.000	14.000	14.000	130.500	130.500	247.000	247.000	247.000	164.756
21	2000	6	5	27.000	27.000	45.000	50.000	54.200	70.000	79.000	79.000	20.657
21	2000	7	4	48.000	48.000	59.000	76.500	107.250	155.500	228.000	228.000	81.786
21	2000	8	5	33.000	33.000	42.000	49.000	57.400	55.000	108.000	108.000	29.450
21	2000	9	1	131.000	131.000	131.000	131.000	131.000	131.000	131.000	131.000	.
21	2000	10	3	225.000	225.000	225.000	285.000	333.333	490.000	490.000	490.000	138.954
21	2000	11	1	192.000	192.000	192.000	192.000	192.000	192.000	192.000	192.000	.
21	2001	6	4	24.000	24.000	41.000	82.000	76.750	112.500	119.000	119.000	43.874
21	2001	7	6	4.000	4.000	45.000	62.500	64.500	104.000	109.000	109.000	39.022
21	2001	8	2	49.000	49.000	49.000	50.500	50.500	52.000	52.000	52.000	2.121
21	2001	9	2	26.000	26.000	26.000	75.000	75.000	124.000	124.000	124.000	69.296
21	2001	10	1	327.000	327.000	327.000	327.000	327.000	327.000	327.000	327.000	.
21	2001	11	1	143.000	143.000	143.000	143.000	143.000	143.000	143.000	143.000	.
21	2002	4	1	86.000	86.000	86.000	86.000	86.000	86.000	86.000	86.000	.
21	2002	5	3	23.000	23.000	23.000	186.000	152.000	247.000	247.000	247.000	115.806
21	2002	6	2	57.000	57.000	57.000	63.000	63.000	69.000	69.000	69.000	8.485
21	2002	7	2	43.000	43.000	43.000	94.000	94.000	145.000	145.000	145.000	72.125
21	2002	10	3	65.000	65.000	65.000	93.000	148.333	287.000	287.000	287.000	120.902
21	2002	11	2	78.000	78.000	78.000	126.000	126.000	174.000	174.000	174.000	67.882
21	2003	4	1	732.000	732.000	732.000	732.000	732.000	732.000	732.000	732.000	.
21	2003	5	3	63.000	63.000	63.000	85.000	154.000	314.000	314.000	314.000	139.000
21	2003	6	2	135.000	135.000	135.000	232.500	232.500	330.000	330.000	330.000	137.886
21	2003	7	5	12.000	12.000	24.000	35.000	38.800	57.000	66.000	66.000	22.488
21	2003	10	1	170.000	170.000	170.000	170.000	170.000	170.000	170.000	170.000	.
21	2003	11	2	128.000	128.000	128.000	298.000	298.000	468.000	468.000	468.000	240.416

Summary of duration of interruptions (minutes) 15:44 Monday, June 27, 2005 5

LOCK_NO	year	month	ndur	mindur	p5dur	p25dur	meddur	meandur	p75dur	p95dur	maxdur	stddur
22	2000	4	3	32.000	32.000	32.000	59.000	52.67	67.000	67.00	67.00	18.34
22	2000	5	6	22.000	22.000	26.000	43.500	81.83	100.000	256.00	256.00	89.87
22	2000	6	5	20.000	20.000	46.000	112.000	87.60	113.000	147.00	147.00	52.61
22	2000	7	6	14.000	14.000	35.000	108.500	109.00	123.000	265.00	265.00	88.65
22	2000	8	11	11.000	11.000	50.000	107.000	181.00	161.000	912.00	912.00	255.36
22	2000	9	10	68.000	68.000	91.000	120.000	154.40	145.000	344.00	344.00	98.81
22	2000	10	14	8.000	8.000	43.000	176.000	196.71	298.000	513.00	513.00	167.24
22	2000	11	3	60.000	60.000	60.000	69.000	90.33	142.000	142.00	142.00	44.97
22	2001	4	2	70.000	70.000	70.000	222.500	222.50	375.000	375.00	375.00	215.67
22	2001	5	1	180.000	180.000	180.000	180.000	180.00	180.000	180.00	180.00	.
22	2001	6	5	16.000	16.000	60.000	77.000	72.80	87.000	124.00	124.00	39.47
22	2001	7	2	57.000	57.000	57.000	94.500	94.50	132.000	132.00	132.00	53.03
22	2001	8	8	16.000	16.000	32.500	70.000	88.63	137.500	213.00	213.00	71.09
22	2001	9	3	34.000	34.000	34.000	228.000	190.33	309.000	309.00	309.00	141.32
22	2001	10	2	78.000	78.000	78.000	190.500	190.50	303.000	303.00	303.00	159.10
22	2001	11	2	30.000	30.000	30.000	57.500	57.50	85.000	85.00	85.00	38.89
22	2002	4	5	130.000	130.000	203.000	205.000	228.40	297.000	307.00	307.00	73.75
22	2002	5	8	31.000	31.000	41.000	52.500	110.62	196.000	275.00	275.00	100.43
22	2002	6	4	26.000	26.000	28.000	36.000	45.50	63.000	84.00	84.00	26.55
22	2002	7	5	6.000	6.000	40.000	58.000	77.80	103.000	182.00	182.00	67.95
22	2002	8	2	56.000	56.000	56.000	255.000	255.00	454.000	454.00	454.00	281.43
22	2002	9	4	148.000	148.000	184.000	261.000	257.75	331.500	361.00	361.00	93.25
22	2002	10	6	25.000	25.000	87.000	93.000	170.50	297.000	428.00	428.00	156.55
22	2003	4	1	189.000	189.000	189.000	189.000	189.00	189.000	189.00	189.00	.
22	2003	6	2	43.000	43.000	43.000	51.500	51.50	60.000	60.00	60.00	12.02
22	2003	7	5	29.000	29.000	40.000	61.000	98.80	155.000	209.00	209.00	79.15
22	2003	8	5	98.000	98.000	100.000	132.000	159.20	138.000	328.00	328.00	96.09
22	2003	9	5	43.000	43.000	134.000	184.000	208.00	204.000	475.00	475.00	161.70
22	2003	10	7	51.000	51.000	55.000	130.000	287.14	619.000	627.00	627.00	268.95
22	2003	11	3	15.000	15.000	15.000	215.000	188.00	334.000	334.00	334.00	161.20
24	2000	4	3	19.000	19.000	19.000	20.000	27.33	43.000	43.00	43.00	13.58
24	2000	5	3	51.000	51.000	51.000	59.000	58.33	65.000	65.00	65.00	7.02
24	2000	6	8	8.000	8.000	18.500	32.500	49.63	46.000	195.00	195.00	60.48
24	2000	7	9	31.000	31.000	65.000	75.000	105.56	140.000	299.00	299.00	82.32
24	2000	8	7	25.000	25.000	25.000	45.000	59.14	112.000	120.00	120.00	40.01
24	2000	9	3	25.000	25.000	25.000	65.000	86.00	168.000	168.00	168.00	73.78
24	2000	10	10	30.000	30.000	54.000	107.000	210.90	372.000	654.00	654.00	215.98
24	2000	11	2	285.000	285.000	285.000	342.000	342.00	399.000	399.00	399.00	80.61
24	2001	4	4	40.000	40.000	44.500	67.000	69.25	94.000	103.00	103.00	29.74
24	2001	5	6	43.000	43.000	54.000	86.000	2206.50	130.000	12840.00	12840.00	5209.46
24	2001	6	6	37.000	37.000	73.000	100.500	119.00	123.000	280.00	280.00	85.21
24	2001	7	6	45.000	45.000	45.000	58.500	65.00	90.000	93.00	93.00	21.53
24	2001	8	10	15.000	15.000	40.000	53.500	67.30	77.000	189.00	189.00	50.59
24	2001	9	7	101.000	101.000	105.000	240.000	224.43	299.000	344.00	344.00	95.70
24	2001	10	6	29.000	29.000	30.000	59.500	64.17	100.000	107.00	107.00	35.80
24	2001	11	6	48.000	48.000	65.000	93.500	152.17	128.000	485.00	485.00	165.60
24	2002	4	9	33.000	33.000	45.000	55.000	130.56	180.000	479.00	479.00	144.33
24	2002	5	10	15.000	15.000	25.000	113.000	142.80	260.000	345.00	345.00	122.82
24	2002	6	10	31.000	31.000	37.000	45.000	65.70	56.000	250.00	250.00	65.43
24	2002	7	8	16.000	16.000	24.000	62.500	129.25	149.500	546.00	546.00	177.82
24	2002	8	5	39.000	39.000	70.000	105.000	96.40	128.000	140.00	140.00	41.73
24	2002	9	11	26.000	26.000	80.000	160.000	225.00	270.000	666.00	666.00	220.36
24	2002	10	12	73.000	73.000	100.500	135.000	153.25	153.000	444.00	444.00	96.31
24	2002	11	5	10.000	10.000	70.000	70.000	92.00	125.000	185.00	185.00	66.01
24	2003	4	4	50.000	50.000	50.500	64.500	179.75	309.000	540.00	540.00	240.52
24	2003	5	8	19.000	19.000	24.500	36.000	91.38	81.500	428.00	428.00	138.28

Summary of duration of interruptions (minutes) 15:44 Monday, June 27, 2005 6

LOCK_NO	year	month	ndur	mindur	p5dur	p25dur	meddur	meandur	p75dur	p95dur	maxdur	stddur
24	2003	6	8	4.0000	4.0000	27.500	61.00	75.25	88.50	244.00	244.00	74.71
24	2003	7	3	40.0000	40.0000	40.000	85.00	76.67	105.00	105.00	105.00	33.29
24	2003	8	4	64.0000	64.0000	87.000	121.00	132.75	178.50	225.00	225.00	67.71
24	2003	9	15	64.0000	64.0000	88.000	235.00	196.53	254.00	349.00	349.00	87.96
24	2003	10	1	28.0000	28.0000	28.000	28.00	28.00	28.00	28.00	28.00	.
24	2003	11	11	30.0000	30.0000	80.000	89.00	170.73	205.00	618.00	618.00	169.85
25	2000	4	9	32.0000	32.0000	49.000	81.00	105.33	84.00	309.00	309.00	90.06
25	2000	5	6	24.0000	24.0000	37.000	92.50	131.50	214.00	329.00	329.00	118.17
25	2000	6	20	21.0000	22.5000	30.000	43.00	90.30	155.50	245.00	259.00	80.21
25	2000	7	8	21.0000	21.0000	26.500	29.50	40.63	50.00	92.00	92.00	23.45
25	2000	8	9	22.0000	22.0000	44.000	54.00	64.22	76.00	138.00	138.00	37.37
25	2000	9	9	29.0000	29.0000	75.000	90.00	118.56	125.00	300.00	300.00	87.88
25	2000	10	12	34.0000	34.0000	114.000	201.50	271.50	508.00	580.00	580.00	205.71
25	2000	11	15	32.0000	32.0000	53.000	80.00	114.47	134.00	403.00	403.00	101.80
25	2001	4	7	34.0000	34.0000	36.000	45.00	287.86	210.00	1586.00	1586.00	575.83
25	2001	5	3	21.0000	21.0000	21.000	4810.00	5990.33	13140.00	13140.00	13140.00	6638.67
25	2001	6	7	23.0000	23.0000	28.000	53.00	101.43	205.00	264.00	264.00	96.26
25	2001	7	8	25.0000	25.0000	39.000	50.00	50.63	66.50	69.00	69.00	16.10
25	2001	8	5	25.0000	25.0000	26.000	46.00	123.60	241.00	280.00	280.00	126.01
25	2001	9	8	25.0000	25.0000	41.000	74.50	105.00	174.50	235.00	235.00	81.47
25	2001	10	8	35.0000	35.0000	39.000	62.50	103.50	120.00	350.00	350.00	106.90
25	2001	11	18	6.0000	6.0000	22.000	69.50	87.72	114.00	467.00	467.00	107.27
25	2002	4	6	20.0000	20.0000	44.000	60.00	68.83	109.00	120.00	120.00	39.31
25	2002	5	7	19.0000	19.0000	21.000	69.00	114.43	217.00	340.00	340.00	119.62
25	2002	6	21	15.0000	20.0000	37.000	57.00	88.52	70.00	168.00	706.00	145.73
25	2002	7	6	13.0000	13.0000	19.000	109.50	115.00	161.00	278.00	278.00	98.39
25	2002	8	8	47.0000	47.0000	51.500	59.00	60.37	67.00	81.00	81.00	11.51
25	2002	9	5	34.0000	34.0000	76.000	149.00	185.20	162.00	505.00	505.00	186.35
25	2002	10	30	24.0000	29.0000	37.000	41.00	70.40	74.00	271.00	346.00	71.79
25	2002	11	5	48.0000	48.0000	65.000	75.00	123.60	120.00	310.00	310.00	107.55
25	2003	4	23	30.0000	32.0000	36.000	43.00	72.22	69.00	141.00	523.00	101.20
25	2003	5	8	14.0000	14.0000	41.000	71.00	107.63	172.00	279.00	279.00	91.95
25	2003	6	7	20.0000	20.0000	28.000	30.00	90.43	122.00	364.00	364.00	125.59
25	2003	7	8	22.0000	22.0000	43.000	65.00	115.75	194.50	299.00	299.00	110.60
25	2003	8	8	15.0000	15.0000	16.000	41.50	37.13	55.00	57.00	57.00	19.16
25	2003	9	6	48.0000	48.0000	134.000	238.00	222.83	320.00	359.00	359.00	116.58
25	2003	10	5	20.0000	20.0000	28.000	29.00	121.40	143.00	387.00	387.00	156.97
25	2003	11	9	52.0000	52.0000	98.000	115.00	157.89	198.00	354.00	354.00	109.15

A.5 Impairment Statistics

Summary of Times between impairments at lock(days)for all years 15:44 Monday, June 27, 2005 7

LOCK_NO	month	ngap	mingap	p5gap	p25gap	medgap	meangap	p75gap	p95gap	maxgap	stdgap
20	4	14	0.00956	0.00956	1.4529	2.8668	4.7942	5.6243	19.9515	19.9515	5.5185
20	5	13	0.77732	0.77732	1.9433	4.8873	6.5822	11.2350	17.2630	17.2630	5.6604
20	6	20	0.02254	0.04235	0.9648	4.8422	8.4429	13.8087	32.6995	50.3238	11.3749
20	7	18	0.01639	0.01639	0.9679	4.9737	6.5383	10.6510	18.8770	18.8770	5.8088
20	8	13	0.65984	0.65984	3.8340	11.4447	9.3491	14.5499	18.8887	18.8887	6.6436
20	9	15	0.11680	0.11680	0.7452	3.9023	6.4104	9.1667	20.7725	20.7725	6.6339
20	10	14	0.06831	0.06831	2.4788	5.0239	7.0053	9.9208	31.2452	31.2452	7.8717
20	11	15	0.08880	0.08880	1.6940	4.6489	9.7174	12.8169	47.0314	47.0314	12.8212
21	4	0	.	.	.	.	.	.	.	.	.
21	5	8	1.29167	1.29167	3.8637	13.5321	12.9288	20.0171	27.3128	27.3128	9.7716
21	6	12	0.18511	0.18511	1.4508	4.5379	7.4154	12.4214	21.6400	21.6400	7.6653
21	7	17	0.97199	0.97199	3.7459	6.9645	9.1513	10.1769	29.9501	29.9501	8.2640
21	8	7	1.06762	1.06762	1.9235	3.0813	4.5016	5.2186	13.1885	13.1885	4.0665
21	9	3	8.75888	8.75888	8.7589	32.7295	26.1728	37.0301	37.0301	37.0301	15.2334
21	10	8	0.55396	0.55396	3.1189	13.6277	27.3843	48.8029	87.4214	87.4214	33.5127
21	11	6	7.70423	7.70423	14.5376	16.3391	17.9299	24.5922	28.0669	28.0669	7.4113
22	4	7	1.20150	1.20150	1.9747	7.5758	6.9604	11.5499	13.4829	13.4829	5.0083
22	5	15	0.10997	0.10997	2.0594	4.4365	6.8036	9.7145	34.3825	34.3825	8.4668
22	6	16	0.49932	0.49932	2.2589	4.1096	7.6903	9.5943	38.5423	38.5423	9.5740
22	7	18	0.67623	0.67623	2.5342	3.7473	7.7816	10.7964	35.3934	35.3934	8.8497
22	8	26	0.01366	0.15369	0.9372	3.0495	3.6075	4.8893	10.8593	14.6469	3.3576
22	9	22	0.01503	0.11339	1.3361	3.5936	5.6773	7.1844	19.4344	25.6407	6.7162
22	10	29	0.00205	0.00751	0.3818	1.0765	4.4152	6.4911	17.7705	18.5369	5.6324
22	11	8	0.12227	0.12227	6.2169	9.4641	9.0097	10.7818	19.0301	19.0301	5.3882
24	4	16	0.03210	0.03210	0.4201	1.4481	3.7301	5.3439	18.6393	18.6393	4.9255
24	5	27	0.06557	0.09563	0.8012	4.0232	4.9373	6.6872	16.1762	32.4795	6.6642
24	6	32	0.02732	0.04850	0.5994	1.9597	3.1605	4.5659	10.4686	17.4536	3.6563
24	7	26	0.03552	0.13798	0.9918	3.6370	5.1781	5.6612	16.5171	19.9003	5.6885
24	8	26	0.28825	0.42623	0.7650	4.0079	4.6632	6.1066	14.2999	15.6393	4.3868
24	9	36	0.00751	0.01503	0.8009	1.7189	2.8913	4.1974	10.7561	13.0546	3.1169
24	10	29	0.02117	0.04167	0.7780	2.9542	4.7007	4.9167	23.6236	28.5724	6.7893
24	11	24	0.01025	0.04781	0.7811	3.4993	4.2932	7.0523	10.2261	19.6865	4.5348
25	4	41	0.00342	0.03484	0.0867	0.5157	1.8488	2.7937	5.8784	16.2193	3.0590
25	5	24	0.01844	0.04098	0.3210	3.3835	4.3975	7.9935	12.2268	14.2445	4.3194
25	6	55	0.01366	0.01776	0.0758	0.6346	2.1511	4.0410	8.2104	13.4570	2.9906
25	7	30	0.03210	0.07650	0.6831	2.9153	4.1535	8.1769	12.4822	12.5034	4.0025
25	8	30	0.00820	0.00888	0.1523	1.6653	3.9151	4.4454	15.3245	27.4597	5.9715
25	9	28	0.00683	0.01161	0.9051	1.7862	3.3488	4.1055	11.2602	17.2377	3.9611
25	10	55	0.01981	0.05533	0.0881	0.6578	2.3756	3.4187	9.0068	20.3593	3.6830
25	11	47	0.01776	0.03142	0.6359	1.1175	2.3497	2.4016	9.7452	19.2357	3.6645

Summary of duration of interruptions for all years (minutes) 15:44 Monday, June 27, 2005 8

LOCK_NO	month	ndur	mindur	p5dur	p25dur	meddur	meandur	p75dur	p95dur	maxdur	stddur
20	4	18	22.0000	22.0000	41.000	54.500	113.889	194.000	521.00	521.00	124.09
20	5	13	22.0000	22.0000	29.000	44.000	99.385	133.000	435.00	435.00	119.57
20	6	20	28.0000	28.0000	41.000	52.000	72.950	107.000	174.50	211.00	47.03
20	7	18	20.0000	20.0000	29.000	72.500	146.056	171.000	662.00	662.00	181.26
20	8	13	25.0000	25.0000	39.000	53.000	73.000	69.000	227.00	227.00	55.81
20	9	15	29.0000	29.0000	33.000	55.000	116.933	227.000	426.00	426.00	126.20
20	10	14	22.0000	22.0000	40.000	81.500	129.929	218.000	349.00	349.00	115.65
20	11	15	30.0000	30.0000	62.000	101.000	185.267	238.000	592.00	592.00	186.04
21	4	3	25.0000	25.0000	25.000	86.000	281.000	732.000	732.00	732.00	391.77
21	5	8	14.0000	14.0000	43.000	135.500	147.375	247.000	314.00	314.00	115.50
21	6	13	24.0000	24.0000	50.000	69.000	89.923	106.000	330.00	330.00	79.45
21	7	17	4.0000	4.0000	43.000	59.000	70.471	83.000	228.00	228.00	54.00
21	8	7	33.0000	33.0000	42.000	49.000	55.429	55.000	108.00	108.00	24.30
21	9	3	26.0000	26.0000	26.000	124.000	93.667	131.000	131.00	131.00	58.71
21	10	8	65.0000	65.0000	131.500	255.000	242.750	307.000	490.00	490.00	137.11
21	11	6	78.0000	78.0000	128.000	158.500	197.167	192.000	468.00	468.00	138.44
22	4	11	32.0000	32.0000	67.000	189.000	175.818	297.000	375.00	375.00	115.24
22	5	15	22.0000	22.0000	32.000	51.000	103.733	180.000	275.00	275.00	92.61
22	6	16	16.0000	16.0000	36.000	60.000	67.938	99.500	147.00	147.00	40.14
22	7	18	6.0000	6.0000	40.000	79.000	95.889	132.000	265.00	265.00	72.09
22	8	26	11.0000	16.0000	50.000	105.000	154.077	156.000	454.00	912.00	186.16
22	9	22	34.0000	43.0000	109.000	146.500	190.273	302.000	361.00	475.00	117.74
22	10	29	8.0000	22.0000	55.000	130.000	212.690	303.000	619.00	627.00	188.94
22	11	8	15.0000	15.0000	45.000	77.000	118.750	178.500	334.00	334.00	108.13
24	4	20	19.0000	19.5000	43.000	50.500	112.650	99.500	509.50	540.00	143.91
24	5	27	15.0000	15.0000	33.000	65.000	576.778	135.000	428.00	12840.00	2453.20
24	6	32	4.0000	8.0000	35.500	46.500	74.063	81.000	250.00	280.00	71.19
24	7	26	16.0000	19.0000	45.000	72.000	100.154	105.000	299.00	546.00	108.85
24	8	26	15.0000	24.0000	40.000	67.000	80.769	112.000	189.00	225.00	53.09
24	9	36	25.0000	26.0000	90.000	184.500	201.444	254.500	633.00	666.00	142.41
24	10	29	28.0000	29.0000	69.000	101.000	150.379	151.000	468.00	654.00	149.35
24	11	24	10.0000	30.0000	74.500	93.500	163.958	195.000	485.00	618.00	153.25
25	4	45	20.0000	32.0000	37.000	47.000	111.933	74.000	309.00	1586.00	240.82
25	5	24	14.0000	19.0000	36.000	76.500	850.917	215.500	4810.00	13140.00	2789.12
25	6	55	15.0000	20.0000	30.000	47.000	91.055	117.000	264.00	706.00	113.70
25	7	30	13.0000	19.0000	29.000	51.000	78.200	92.000	280.00	299.00	78.01
25	8	30	15.0000	15.0000	34.000	53.000	65.867	66.000	241.00	280.00	59.23
25	9	28	25.0000	29.0000	61.000	120.000	148.929	215.500	359.00	505.00	118.35
25	10	55	20.0000	28.0000	37.000	51.000	123.727	143.000	519.00	580.00	145.56
25	11	47	6.0000	19.0000	48.000	80.000	113.511	134.000	354.00	467.00	105.55

Summary of Times between impairments at any lock(days) 15:44 Monday, June 27, 2005 9

month	ngap	mingap	p5gap	p25gap	medgap	meangap	p75gap	p95gap	maxgap	stdgap
4	78	0.003415	0.028689	0.11134	1.51469	3.22208	4.89139	13.4829	19.9515	4.4114
5	87	0.018443	0.070355	1.17828	4.38251	6.09081	8.63730	19.8204	34.3825	6.9298
6	135	0.013661	0.043033	0.40505	2.00615	4.44689	5.66052	15.5745	50.3238	6.8640
7	109	0.016393	0.097678	1.61749	3.87910	6.17034	8.57036	18.8770	35.3934	6.5398
8	102	0.008197	0.092213	0.81694	3.23429	4.76019	6.10656	14.8634	27.4597	5.2240
9	104	0.006831	0.064208	0.87944	1.95287	4.78296	5.80055	19.4344	37.0301	6.5415
10	135	0.002049	0.041667	0.26639	1.84153	5.27530	5.95970	20.3593	87.4214	10.9355
11	100	0.010246	0.062158	0.72712	2.31899	5.38893	7.05225	20.4529	47.0314	7.5628

Summary of duration of interruptions for all locks (minutes) 15:44 Monday, June 27, 2005 10

month	ndur	mindur	p5dur	p25dur	meddur	meandur	p75dur	p95dur	maxdur	stddur
4	97	19.0000	25.0000	42.0000	56.000	124.918	116.0	521.000	1586.00	197.94
5	87	14.0000	19.0000	32.0000	65.000	460.023	180.0	428.000	13140.00	2000.56
6	136	4.0000	20.0000	32.5000	53.500	81.566	104.5	250.000	706.00	86.46
7	109	4.0000	16.0000	35.0000	62.000	96.358	109.0	280.000	662.00	106.82
8	102	11.0000	17.0000	40.0000	56.500	92.343	108.0	241.000	912.00	109.79
9	104	25.0000	29.0000	71.5000	133.500	169.644	242.5	361.000	666.00	129.44
10	135	8.0000	25.0000	40.0000	92.000	156.259	222.0	513.000	654.00	156.81
11	100	6.0000	20.0000	58.0000	94.000	141.820	177.0	467.500	618.00	135.41

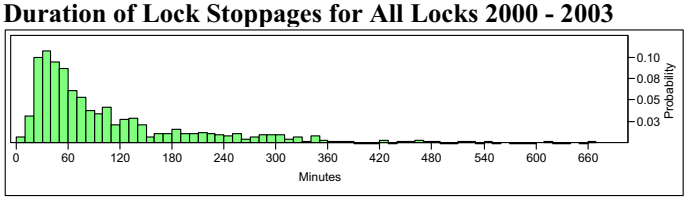
Summary of Lock Stoppages by Lock across all years apr - nov 15:44 Monday, June 27, 2005 11

LOCK_NO	ngap	ndur	meangap	stdgap	meandur	stddur
20	122	126	7.3833	8.3075	116.913	129.869
21	61	65	12.8634	15.5774	125.892	130.090
22	141	145	5.9057	6.8636	149.055	143.417
24	216	220	4.1363	5.0478	183.855	866.504
25	310	314	2.8276	3.9414	162.736	793.239

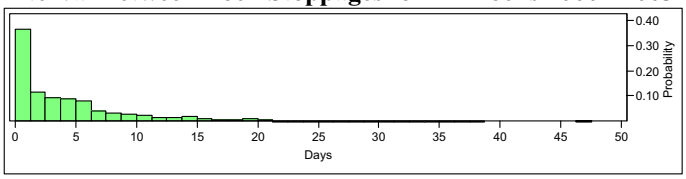
A.5 Impairment Statistics

The following two charts display the distribution of impairments occurring at Locks 20 through 25. The remaining charts show the distributions for each individual lock. The duration (in minutes) is the number of minutes in which lockage operations are unavailable due to some kind of impairment. The interval (in days) is the number of days between each occurrence of lock impairments. These impairments include weather conditions, accidents, breakdowns, and scheduled maintenance.

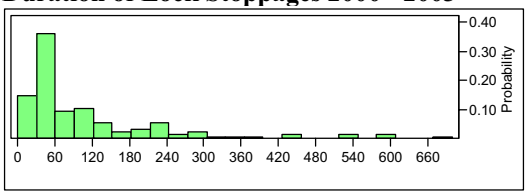
Duration of Lock Stoppages for All Locks 2000 - 2003



Interval Between Lock Stoppages for All Locks 2000 - 2003

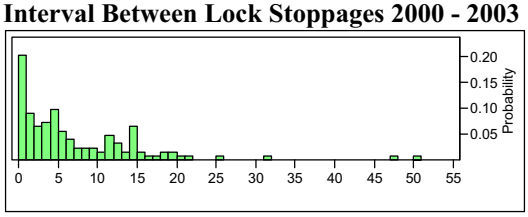


LOCK_NO=20
Duration of Lock Stoppages 2000 - 2003



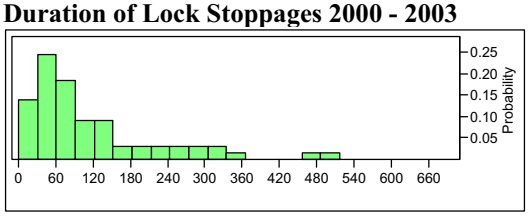
minutes

Interval Between Lock Stoppages 2000 - 2003



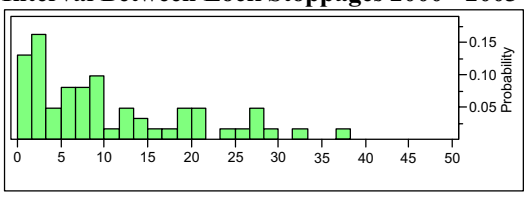
days

LOCK_NO=21
Duration of Lock Stoppages 2000 - 2003



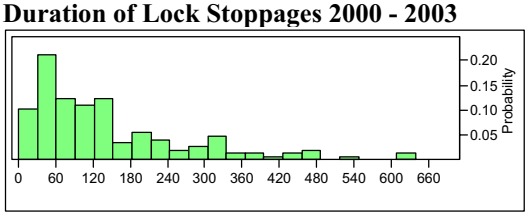
minutes

Interval Between Lock Stoppages 2000 - 2003



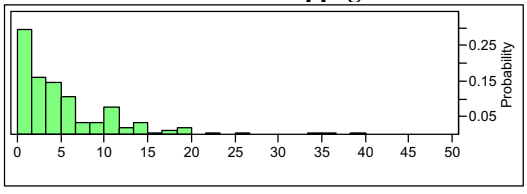
days

LOCK_NO=22
Duration of Lock Stoppages 2000 - 2003



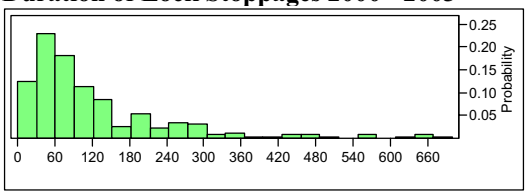
minutes

Interval Between Lock Stoppages 2000 - 2003



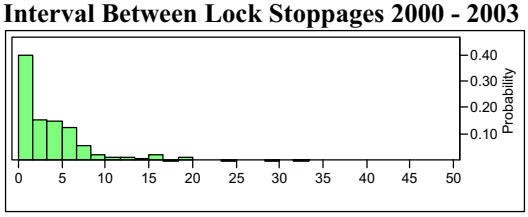
days

LOCK_NO=24
Duration of Lock Stoppages 2000 - 2003



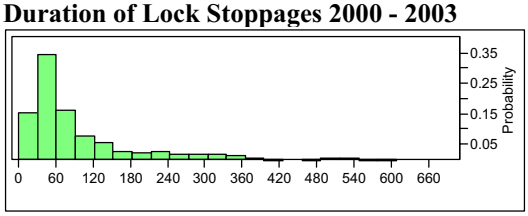
minutes

Interval Between Lock Stoppages 2000 - 2003



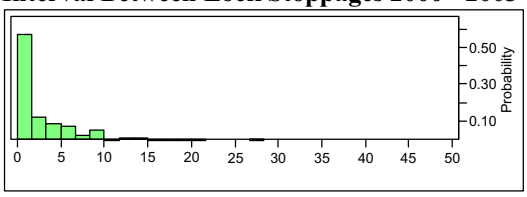
days

LOCK_NO=25
Duration of Lock Stoppages 2000 - 2003



minutes

Interval Between Lock Stoppages 2000 - 2003



days

changes in configuration after upstream lockages 14:40 Friday, June 24, 2005 1
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table of lock by nxtstep

lock / Frequency / Percent / Row Pct / Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
19	18	3810	1477	1	137	127	5570
	0.04	7.57	2.94	0.00	0.27	0.25	11.07
	0.32	68.40	26.52	0.02	2.46	2.28	
	11.54	11.36	13.76	0.71	8.15	3.13	
20	12	3992	1323	1	192	403	5923
	0.02	7.93	2.63	0.00	0.38	0.80	11.77
	0.20	67.40	22.34	0.02	3.24	6.80	
	7.69	11.90	12.33	0.71	11.43	9.92	
21	9	4452	797	2	118	623	6001
	0.02	8.85	1.58	0.00	0.23	1.24	11.93
	0.15	74.19	13.28	0.03	1.97	10.38	
	5.77	13.27	7.43	1.43	7.02	15.33	
22	10	4123	1340	2	60	224	5759
	0.02	8.19	2.66	0.00	0.12	0.45	11.45
	0.17	71.59	23.27	0.03	1.04	3.89	
	6.41	12.29	12.48	1.43	3.57	5.51	
24	4	5218	429	3	71	265	5990
	0.01	10.37	0.85	0.01	0.14	0.53	11.90
	0.07	87.11	7.16	0.05	1.19	4.42	
	2.56	15.56	4.00	2.14	4.23	6.52	
25	12	4938	620	75	672	464	6781
	0.02	9.81	1.23	0.15	1.34	0.92	13.48
	0.18	72.82	9.14	1.11	9.91	6.84	
	7.69	14.72	5.78	53.57	40.00	11.42	
26	91	7012	4748	56	430	1957	14294
	0.18	13.94	9.44	0.11	0.85	3.89	28.41
	0.64	49.06	33.22	0.39	3.01	13.69	
	58.33	20.90	44.23	40.00	25.60	48.17	
Total	156	33545	10734	140	1680	4063	50318
	0.31	66.67	21.33	0.28	3.34	8.07	100.00

changes in configuration after downstream lockages 14:40 Friday, June 24, 2005 2
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table of lock by nxtstep

lock / nxtstep	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
19	13	3778	1333	1	62	333	5520
	0.03	7.57	2.67	0.00	0.12	0.67	11.06
	0.24	68.44	24.15	0.02	1.12	6.03	
	7.69	11.91	21.52	0.02	8.10	6.58	
20	10	4319	1017	1	114	426	5887
	0.02	8.65	2.04	0.00	0.23	0.85	11.79
	0.17	73.37	17.28	0.02	1.94	7.24	
	5.92	13.61	16.42	0.02	14.90	8.42	
21	22	4220	1146	0	95	546	6029
	0.04	8.45	2.30	0.00	0.19	1.09	12.08
	0.36	70.00	19.01	0.00	1.58	9.06	
	13.02	13.30	18.50	0.00	12.42	10.79	
22	7	4580	718	1	58	442	5806
	0.01	9.17	1.44	0.00	0.12	0.89	11.63
	0.12	78.88	12.37	0.02	1.00	7.61	
	4.14	14.44	11.59	0.02	7.58	8.73	
24	10	4618	897	0	69	452	6046
	0.02	9.25	1.80	0.00	0.14	0.91	12.11
	0.17	76.38	14.84	0.00	1.14	7.48	
	5.92	14.56	14.48	0.00	9.02	8.93	
25	5	5399	323	1	96	454	6278
	0.01	10.81	0.65	0.00	0.19	0.91	12.57
	0.08	86.00	5.14	0.02	1.53	7.23	
	2.96	17.02	5.22	0.02	12.55	8.97	
26	102	4810	759	6013	271	2408	14363
	0.20	9.63	1.52	12.04	0.54	4.82	28.77
	0.71	33.49	5.28	41.86	1.89	16.77	
	60.36	15.16	12.26	99.93	35.42	47.58	
Total	169	31724	6193	6017	765	5061	49929
	0.34	63.54	12.40	12.05	1.53	10.14	100.00

data in regfile after picking up impairment data 14:40 Friday, June 24, 2005 3
using data from mdy(1,1,2000) to mdy(12,31,2003)

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	145569	0	614018209679	4218056.11	3515664.00	4331559.00
strtlcktime	Start/lockge/time	145569	0	1.9303608E14	1326079581	1262304600	1388533680
arrtime	Arriv/time	145569	0	1.9303506E14	1326072578	1262304600	1388530800
deptime	Leave/lockge/time	145569	0	1.9303668E14	1326083731	1262305620	1388536080
BOW_OVER_SILL	BOW_OVER_SILL	143341	2228	1.9009093E14	1326144848	1262304900	1388534700
END_OF_ENTRY	END_OF_ENTRY	143341	2228	1.90091E14	1326145368	1262304960	1388535000
START_OF_EXIT	START_OF_EXIT	143341	2228	1.9009109E14	1326146001	1262305560	1388535600
SIGNAL_DATE	SIGNAL_DATE	0	145569	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	145569	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	134357	11212	980334.00	7.2964862	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	134357	11212	531215.00	3.9537575	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	145569	.	.	.	.
vess_no		145569	0	101287364241	695803.12	2611.00	8888864.00
vss_hp		144799	770	629975827	4350.69	60.0000000	81800.00
frsttime		145569	0	1.9303506E14	1326072578	1262304600	1388530800
lasttime		145569	0	1.9303668E14	1326083731	1262305620	1388536080
newpoolno		145569	0	3437500.00	23.6142311	1.0000000	55.0000000
oldpoolno		145569	0	3449095.00	23.6938840	1.0000000	56.0000000
waitmin	Wait/before/lockge	145569	0	16989907.00	116.7137715	0	16396.00
lockmin	Wait/lockge/time	145569	0	10069822.00	69.1755937	1.0000000	7660.00
year		145569	0	291353055	2001.48	2000.00	2003.00
fly		145569	0	51327.00	0.3525957	0	1.0000000
turnback		145569	0	49518.00	0.3401686	0	1.0000000
exchange		145569	0	44717.00	0.3071877	0	1.0000000
lock		145569	0	3370513.00	23.1540575	1.0000000	55.0000000
totmin		145569	0	27059729.00	185.8893652	1.0000000	16498.00
month		145569	0	1024090.00	7.0350830	1.0000000	12.0000000
day		145569	0	2286351.00	15.7063042	1.0000000	31.0000000
sunrise		139280	6289	3208437367	23035.88	19392.00	27155.00
sunset		139280	6289	9525367596	68390.06	59489.00	75152.00
sequpstr		145569	0	40844.00	0.2805817	0	1.0000000
seqdstr		145569	0	41812.00	0.2872315	0	1.0000000
plock		143709	1860	3321185.00	23.1104872	1.0000000	27.0000000
pempty		134447	11122	481458.00	3.5810245	0	50.0000000
pfull		134447	11122	1029522.00	7.6574561	0	28.0000000
parrtime		143709	1860	1.905567E14	1325990044	1262304600	1388521920
pstrtlcktime		143709	1860	1.9055771E14	1325997077	1262304600	1388521920
pdeptime		143709	1860	1.9055832E14	1326001298	1262305620	1388523540
birth		145569	0	1860.00	0.0127774	0	1.0000000
transithrs		143709	1860	7126987.63	49.5931892	-249.0333333	8099.42
reclock		145569	0	0	0	0	0
i		145569	0	33841208.00	232.4753759	58.0000000	401.0000000
pctpsysdn		137338	8231	151443.42	1.1027058	0	98.9510000
pctplckdn		137338	8231	73866.98	0.5378481	0	98.3000000
cumdown		139194	6375	10831740.00	77.8175783	0	107520.00
pctdown		139194	6375	74747.88	0.5370050	0	98.3000000
pcttrandn		136865	8704	201278.99	1.4706389	0	100.0000000
pctsysdn		139194	6375	153424.84	1.1022375	0	98.9510000
pctlckdn		139194	6375	74747.88	0.5370050	0	98.3000000
stime		145569	0	6406918980	44012.94	0	86340.00
etime		145569	0	6412010700	44047.91	0	86340.00
sdate		145569	0	2234139717	15347.63	14610.00	16070.00

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The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		145569	0	2234146651	15347.68	14610.00	16071.00
hrsduration		145569	0	167830.37	1.1529266	0.0166667	127.6666667
ndays		145569	0	8.0000000	0.000054957	0	5.0000000
pctday		145290	279	7642957.80	52.6048441	0	100.0000000
pctpsysnite		142974	2595	6739626.33	47.1388248	0	100.0000000
pctplcknite		143477	2092	6807447.49	47.4462631	0	100.0000000
pcttrannite		138230	7339	6487690.87	46.9340293	0	100.0000000
pctsysnite		144550	1019	6789914.73	46.9727758	0	100.0000000
pctlcknite		145290	279	6886042.20	47.3951559	0	100.0000000
stage		88893	56676	1771891.12	19.9328532	8.3200000	35.3200000
flow		35115	110454	3208150134	91361.25	16077.99	306262.78

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The FREQ Procedure

Table 1 of plockagetype by LOCKAGE_TYPE
Controlling for plock=19

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00
5:OTHER	1 0.02 100.00 0.03	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02
3:KNOCKOUT	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00
2:SINGLE	3727 67.00 67.02 99.97	1 0.02 0.02 100.00	124 2.23 2.23 100.00	1599 28.74 28.75 99.94	110 1.98 1.98 100.00	5561 99.96
4:JACKNIFE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02 100.00 0.06	0 0.00 0.00 0.00	1 0.02
Total	3728 67.01	1 0.02	124 2.23	1600 28.76	110 1.98	5563 100.00

changes in configuration after upstream lockages 14:40 Friday, June 24, 2005 6
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 2 of plockagetype by LOCKAGE_TYPE
Controlling for plock=20

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	40 0.68 0.96 68.97	1 0.02 0.02 100.00	0 0.00 0.00 0.00	4121 69.68 99.01 70.47	0 0.00 0.00 0.00	4162 70.38
5:OTHER	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00
3:KNOCKOUT	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	92 1.56 100.00 1.57	0 0.00 0.00 0.00	92 1.56
2:SINGLE	18 0.30 1.17 31.03	0 0.00 0.00 0.00	5 0.08 0.32 100.00	1519 25.68 98.38 25.97	2 0.03 0.13 100.00	1544 26.11
4:JACKNIFE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	116 1.96 100.00 1.98	0 0.00 0.00 0.00	116 1.96
Total	58 0.98	1 0.02	5 0.08	5848 98.88	2 0.03	5914 100.00

changes in configuration after upstream lockages 14:40 Friday, June 24, 2005 7
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 3 of plockagetype by LOCKAGE_TYPE
Controlling for plock=21

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	4178 69.88 97.32 98.40	0 0.00 0.00 0.00	14 0.23 0.33 13.59	101 1.69 2.35 6.67	0 0.00 0.00 0.00	4293 71.80
5:OTHER	5 0.08 62.50 0.12	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.05 37.50 0.20	0 0.00 0.00 0.00	8 0.13
3:KNOCKOUT	9 0.15 8.26 0.21	0 0.00 0.00 0.00	78 1.30 71.56 75.73	19 0.32 17.43 1.25	3 0.05 2.75 2.61	109 1.82
2:SINGLE	54 0.90 3.74 1.27	1 0.02 0.07 100.00	4 0.07 0.28 3.88	1385 23.16 95.91 91.48	0 0.00 0.00 0.00	1444 24.15
4:JACKNIFE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	7 0.12 5.60 6.80	6 0.10 4.80 0.40	112 1.87 89.60 97.39	125 2.09
Total	4246 71.02	1 0.02	103 1.72	1514 25.32	115 1.92	5979 100.00

changes in configuration after upstream lockages 14:40 Friday, June 24, 2005 8
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 4 of plockagetype by LOCKAGE_TYPE
Controlling for plock=22

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	4266 74.11 98.59 99.51	5 0.09 0.12 62.50	11 0.19 0.25 9.82	45 0.78 1.04 3.67	0 0.00 0.00 0.00	4327 75.17
5:OTHER	1 0.02 33.33 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.03 66.67 0.16	0 0.00 0.00 0.00	3 0.05
3:KNOCKOUT	7 0.12 6.14 0.16	0 0.00 0.00 0.00	95 1.65 83.33 84.82	11 0.19 9.65 0.90	1 0.02 0.88 0.81	114 1.98
2:SINGLE	13 0.23 1.11 0.30	3 0.05 0.26 37.50	1 0.02 0.09 0.89	1159 20.14 98.55 94.61	0 0.00 0.00 0.00	1176 20.43
4:JACKNIFE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5 0.09 3.68 4.46	8 0.14 5.88 0.65	123 2.14 90.44 99.19	136 2.36
Total	4287 74.48	8 0.14	112 1.95	1225 21.28	124 2.15	5756 100.00

changes in configuration after upstream lockages 14:40 Friday, June 24, 2005 9
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 5 of plockagetype by LOCKAGE_TYPE
Controlling for plock=24

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	4363 72.89 97.91 98.91	1 0.02 0.02 50.00	14 0.23 0.31 10.69	77 1.29 1.73 5.89	1 0.02 0.02 0.74	4456 74.44
5:OTHER	1 0.02 33.33 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.03 66.67 0.15	0 0.00 0.00 0.00	3 0.05
3:KNOCKOUT	9 0.15 7.26 0.20	0 0.00 0.00 0.00	99 1.65 79.84 75.57	13 0.22 10.48 0.99	3 0.05 2.42 2.22	124 2.07
2:SINGLE	38 0.63 3.00 0.86	1 0.02 0.08 50.00	16 0.27 1.26 12.21	1212 20.25 95.66 92.73	0 0.00 0.00 0.00	1267 21.17
4:JACKNIFE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.03 1.47 1.53	3 0.05 2.21 0.23	131 2.19 96.32 97.04	136 2.27
Total	4411 73.69	2 0.03	131 2.19	1307 21.83	135 2.26	5986 100.00

changes in configuration after upstream lockages 14:40 Friday, June 24, 2005 10
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 6 of plockagetype by LOCKAGE_TYPE
Controlling for plock=25

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	4443 65.61 99.35 99.40	1 0.01 0.02 50.00	2 0.03 0.04 1.61	26 0.38 0.58 1.27	0 0.00 0.00 0.00	4472 66.04
5:OTHER	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00
3:KNOCKOUT	11 0.16 8.40 0.25	0 0.00 0.00 0.00	112 1.65 85.50 90.32	3 0.04 2.29 0.15	5 0.07 3.82 3.68	131 1.93
2:SINGLE	16 0.24 0.79 0.36	1 0.01 0.05 50.00	4 0.06 0.20 3.23	2009 29.67 98.97 98.48	0 0.00 0.00 0.00	2030 29.98
4:JACKNIFE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	6 0.09 4.32 4.84	2 0.03 1.44 0.10	131 1.93 94.24 96.32	139 2.05
Total	4470 66.01	2 0.03	124 1.83	2040 30.12	136 2.01	6772 100.00

changes in configuration after upstream lockages 14:40 Friday, June 24, 2005 11
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 7 of plockagetype by LOCKAGE_TYPE
Controlling for plock=26

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	312 3.78 85.48 7.11	0 0.00 0.00 0.00	5 0.06 1.37 3.57	48 0.58 13.15 1.34	0 0.00 0.00 0.00	365 4.42
5:OTHER	1 0.01 9.09 0.02	1 0.01 9.09 25.00	0 0.00 0.00 0.00	9 0.11 81.82 0.25	0 0.00 0.00 0.00	11 0.13
3:KNOCKOUT	5 0.06 7.25 0.11	0 0.00 0.00 0.00	21 0.25 30.43 15.00	43 0.52 62.32 1.20	0 0.00 0.00 0.00	69 0.84
2:SINGLE	4073 49.37 52.26 92.76	3 0.04 0.04 75.00	113 1.37 1.45 80.71	3479 42.17 44.64 97.15	126 1.53 1.62 94.03	7794 94.47
4:JACKNIFE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.01 9.09 0.71	2 0.02 18.18 0.06	8 0.10 72.73 5.97	11 0.13
Total	4391 53.22	4 0.05	140 1.70	3581 43.41	134 1.62	8250 100.00

changes in configuration after upstream lockages 14:40 Friday, June 24, 2005 12
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by nxtstep

pnewpool nxtstep

Frequency Percent Row Pct Col Pct	CONTNOSTOP	CONTSTOP	Other	Return	Total
MI19U	3406 7.70 61.23 11.38	1689 3.82 30.36 22.01	135 0.31 2.43 8.74	333 0.75 5.99 6.58	5563 12.58
MI20U	3810 8.62 64.42 12.73	1477 3.34 24.97 19.24	201 0.45 3.40 13.01	426 0.96 7.20 8.42	5914 13.37
MI21U	3992 9.03 66.77 13.33	1323 2.99 22.13 17.24	118 0.27 1.97 7.64	546 1.23 9.13 10.79	5979 13.52
MI22U	4452 10.07 77.35 14.87	797 1.80 13.85 10.38	65 0.15 1.13 4.21	442 1.00 7.68 8.73	5756 13.02
MI24U	4123 9.32 68.88 13.77	1340 3.03 22.39 17.46	71 0.16 1.19 4.60	452 1.02 7.55 8.93	5986 13.54
MI25U	5218 11.80 77.05 17.43	429 0.97 6.33 5.59	671 1.52 9.91 43.43	454 1.03 6.70 8.97	6772 15.31
MI26U	4938 11.17 59.85 16.49	620 1.40 7.52 8.08	284 0.64 3.44 18.38	2408 5.45 29.19 47.58	8250 18.66
Total	29939 67.70	7675 17.36	1545 3.49	5061 11.45	44220 100.00

changes in configuration after downstream lockages 14:40 Friday, June 24, 2005 13
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 1 of plockagetype by LOCKAGE_TYPE
Controlling for plock=19

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00
5:OTHER	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02 100.00 0.10	0 0.00 0.00 0.00	1 0.02
3:KNOCKOUT	1 0.02 100.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02
2:SINGLE	4305 78.23 78.26 99.98	4 0.07 0.07 100.00	120 2.18 2.18 100.00	987 17.94 17.94 99.90	85 1.54 1.55 100.00	5501 99.96
4:JACKNIFE	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00
Total	4306 78.25	4 0.07	120 2.18	988 17.95	85 1.54	5503 100.00

changes in configuration after downstream lockages 14:40 Friday, June 24, 2005 14
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 2 of plockagetype by LOCKAGE_TYPE
Controlling for plock=20

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	4336 73.87 99.50 97.53	2 0.03 0.05 66.67	5 0.09 0.11 4.35	15 0.26 0.34 1.22	0 0.00 0.00 0.00	4358 74.24
5:OTHER	2 0.03 50.00 0.04	1 0.02 25.00 33.33	0 0.00 0.00 0.00	1 0.02 25.00 0.08	0 0.00 0.00 0.00	4 0.07
3:KNOCKOUT	28 0.48 22.22 0.63	0 0.00 0.00 0.00	92 1.57 73.02 80.00	3 0.05 2.38 0.24	3 0.05 2.38 3.80	126 2.15
2:SINGLE	79 1.35 6.10 1.78	0 0.00 0.00 0.00	8 0.14 0.62 6.96	1207 20.56 93.13 98.37	2 0.03 0.15 2.53	1296 22.08
4:JACKNIFE	1 0.02 1.16 0.02	0 0.00 0.00 0.00	10 0.17 11.63 8.70	1 0.02 1.16 0.08	74 1.26 86.05 93.67	86 1.47
Total	4446 75.74	3 0.05	115 1.96	1227 20.90	79 1.35	5870 100.00

changes in configuration after downstream lockages 14:40 Friday, June 24, 2005 15
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 3 of plockagetype by LOCKAGE_TYPE
Controlling for plock=21

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	4493 74.68 99.16 98.92	3 0.05 0.07 60.00	23 0.38 0.51 15.86	12 0.20 0.26 0.96	0 0.00 0.00 0.00	4531 75.32
5:OTHER	2 0.03 50.00 0.04	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.03 50.00 0.16	0 0.00 0.00 0.00	4 0.07
3:KNOCKOUT	9 0.15 7.14 0.20	0 0.00 0.00 0.00	107 1.78 84.92 73.79	4 0.07 3.17 0.32	6 0.10 4.76 7.79	126 2.09
2:SINGLE	38 0.63 2.98 0.84	2 0.03 0.16 40.00	10 0.17 0.78 6.90	1227 20.40 96.08 98.40	0 0.00 0.00 0.00	1277 21.23
4:JACKNIFE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5 0.08 6.41 3.45	2 0.03 2.56 0.16	71 1.18 91.03 92.21	78 1.30
Total	4542 75.50	5 0.08	145 2.41	1247 20.73	77 1.28	6016 100.00

changes in configuration after downstream lockages 14:40 Friday, June 24, 2005 16
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 4 of plockagetype by LOCKAGE_TYPE
Controlling for plock=22

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	4518 77.91 99.38 98.00	3 0.05 0.07 75.00	6 0.10 0.13 3.51	17 0.29 0.37 1.82	2 0.03 0.04 2.53	4546 78.39
5:OTHER	3 0.05 60.00 0.07	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.03 40.00 0.21	0 0.00 0.00 0.00	5 0.09
3:KNOCKOUT	33 0.57 22.45 0.72	0 0.00 0.00 0.00	108 1.86 73.47 63.16	1 0.02 0.68 0.11	5 0.09 3.40 6.33	147 2.53
2:SINGLE	55 0.95 5.38 1.19	1 0.02 0.10 25.00	52 0.90 5.08 30.41	915 15.78 89.44 97.86	0 0.00 0.00 0.00	1023 17.64
4:JACKNIFE	1 0.02 1.28 0.02	0 0.00 0.00 0.00	5 0.09 6.41 2.92	0 0.00 0.00 0.00	72 1.24 92.31 91.14	78 1.35
Total	4610 79.50	4 0.07	171 2.95	935 16.12	79 1.36	5799 100.00

changes in configuration after downstream lockages 14:40 Friday, June 24, 2005 17
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 5 of plockagetype by LOCKAGE_TYPE
Controlling for plock=24

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	4695 77.78 99.53 99.64	0 0.00 0.00 0.00	13 0.22 0.28 6.74	9 0.15 0.19 0.86	0 0.00 0.00 0.00	4717 78.15
5:OTHER	3 0.05 100.00 0.06	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.05
3:KNOCKOUT	8 0.13 4.26 0.17	1 0.02 0.53 50.00	173 2.87 92.02 89.64	0 0.00 0.00 0.00	6 0.10 3.19 7.69	188 3.11
2:SINGLE	6 0.10 0.57 0.13	1 0.02 0.10 50.00	2 0.03 0.19 1.04	1042 17.26 99.14 99.14	0 0.00 0.00 0.00	1051 17.41
4:JACKNIFE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5 0.08 6.49 2.59	0 0.00 0.00 0.00	72 1.19 93.51 92.31	77 1.28
Total	4712 78.06	2 0.03	193 3.20	1051 17.41	78 1.29	6036 100.00

changes in configuration after downstream lockages 14:40 Friday, June 24, 2005 18
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 6 of plockagetype by LOCKAGE_TYPE
Controlling for plock=25

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	322 5.25 6.90 96.41	1 0.02 0.02 100.00	5 0.08 0.11 10.20	4341 70.80 92.97 75.61	0 0.00 0.00 0.00	4669 76.15
5:OTHER	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00
3:KNOCKOUT	2 0.03 1.12 0.60	0 0.00 0.00 0.00	39 0.64 21.91 79.59	137 2.23 76.97 2.39	0 0.00 0.00 0.00	178 2.90
2:SINGLE	9 0.15 0.74 2.69	0 0.00 0.00 0.00	3 0.05 0.25 6.12	1199 19.56 99.01 20.88	0 0.00 0.00 0.00	1211 19.75
4:JACKNIFE	1 0.02 1.37 0.30	0 0.00 0.00 0.00	2 0.03 2.74 4.08	64 1.04 87.67 1.11	6 0.10 8.22 100.00	73 1.19
Total	334 5.45	1 0.02	49 0.80	5741 93.64	6 0.10	6131 100.00

changes in configuration after downstream lockages 14:40 Friday, June 24, 2005 19
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 7 of plockagetype by LOCKAGE_TYPE
Controlling for plock=26

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	70 0.49 9.86 39.11	0 0.00 0.00 0.00	4 0.03 0.56 2.80	635 4.47 89.44 4.58	1 0.01 0.14 5.00	710 5.00
5:OTHER	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	9 0.06 100.00 0.06	0 0.00 0.00 0.00	9 0.06
3:KNOCKOUT	1 0.01 0.47 0.56	0 0.00 0.00 0.00	33 0.23 15.64 23.08	177 1.25 83.89 1.28	0 0.00 0.00 0.00	211 1.48
2:SINGLE	108 0.76 0.81 60.34	11 0.08 0.08 100.00	105 0.74 0.79 73.43	13014 91.56 98.20 93.89	15 0.11 0.11 75.00	13253 93.24
4:JACKNIFE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.01 3.23 0.70	26 0.18 83.87 0.19	4 0.03 12.90 20.00	31 0.22
Total	179 1.26	11 0.08	143 1.01	13861 97.52	20 0.14	14214 100.00

changes in configuration after downstream lockages 14:40 Friday, June 24, 2005 20
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by nxtstep

pnewpool nxtstep

Frequency Percent Row Pct Col Pct	CONTNOSTOP	CONTSTOP	Other	Return	Total
MI20D	4319 8.71 78.48 12.64	1017 2.05 18.48 9.65	40 0.08 0.73 5.01	127 0.26 2.31 3.13	5503 11.10
MI21D	4220 8.51 71.89 12.35	1146 2.31 19.52 10.87	101 0.20 1.72 12.66	403 0.81 6.87 9.92	5870 11.84
MI22D	4580 9.24 76.13 13.40	718 1.45 11.93 6.81	95 0.19 1.58 11.90	623 1.26 10.36 15.33	6016 12.14
MI24D	4618 9.32 79.63 13.52	897 1.81 15.47 8.51	60 0.12 1.03 7.52	224 0.45 3.86 5.51	5799 11.70
MI25D	5399 10.89 89.45 15.80	323 0.65 5.35 3.06	49 0.10 0.81 6.14	265 0.53 4.39 6.52	6036 12.18
MI26D	4810 9.70 78.45 14.08	759 1.53 12.38 7.20	98 0.20 1.60 12.28	464 0.94 7.57 11.42	6131 12.37
MI27D	6221 12.55 43.77 18.21	5681 11.46 39.97 53.89	355 0.72 2.50 44.49	1957 3.95 13.77 48.17	14214 28.68
Total	34167 68.93	10541 21.27	798 1.61	4063 8.20	49569 100.00

distribution of random arrivals 14:40 Friday, June 24, 2005 21

LOCK_NO	DIRECTION	year	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
20	D	2000	2	4	0.000	1.000	0.000	0.000	0.000	0.000
20	D	2000	3	119	0.664	0.286	0.000	0.042	0.008	0.000
20	D	2000	4	171	0.708	0.216	0.023	0.047	0.006	0.000
20	D	2000	5	169	0.757	0.195	0.030	0.018	0.000	0.000
20	D	2000	6	164	0.841	0.110	0.018	0.030	0.000	0.000
20	D	2000	7	183	0.809	0.158	0.005	0.027	0.000	0.000
20	D	2000	8	162	0.759	0.210	0.019	0.012	0.000	0.000
20	D	2000	9	153	0.699	0.242	0.020	0.039	0.000	0.000
20	D	2000	10	146	0.753	0.219	0.014	0.014	0.000	0.000
20	D	2000	11	195	0.769	0.169	0.031	0.031	0.000	0.000
20	D	2000	12	74	0.703	0.203	0.014	0.068	0.014	0.000
20	D	2001	1	1	0.000	0.000	0.000	1.000	0.000	0.000
20	D	2001	2	9	0.111	0.778	0.000	0.111	0.000	0.000
20	D	2001	3	87	0.471	0.494	0.000	0.034	0.000	0.000
20	D	2001	4	93	0.624	0.344	0.000	0.032	0.000	0.000
20	D	2001	5	41	0.732	0.268	0.000	0.000	0.000	0.000
20	D	2001	6	207	0.749	0.213	0.014	0.024	0.000	0.000
20	D	2001	7	196	0.786	0.194	0.015	0.005	0.000	0.000
20	D	2001	8	192	0.740	0.224	0.016	0.021	0.000	0.000
20	D	2001	9	152	0.645	0.329	0.013	0.013	0.000	0.000
20	D	2001	10	141	0.695	0.291	0.014	0.000	0.000	0.000
20	D	2001	11	178	0.781	0.191	0.022	0.006	0.000	0.000
20	D	2001	12	119	0.697	0.294	0.000	0.008	0.000	0.000
20	D	2002	2	3	0.000	1.000	0.000	0.000	0.000	0.000
20	D	2002	3	118	0.593	0.347	0.000	0.059	0.000	0.000
20	D	2002	4	154	0.760	0.201	0.019	0.019	0.000	0.000
20	D	2002	5	164	0.823	0.146	0.006	0.024	0.000	0.000
20	D	2002	6	172	0.843	0.128	0.017	0.006	0.006	0.000
20	D	2002	7	189	0.820	0.164	0.005	0.011	0.000	0.000
20	D	2002	8	168	0.798	0.173	0.012	0.018	0.000	0.000
20	D	2002	9	127	0.677	0.276	0.016	0.031	0.000	0.000
20	D	2002	10	183	0.705	0.262	0.016	0.016	0.000	0.000
20	D	2002	11	220	0.818	0.136	0.023	0.023	0.000	0.000
20	D	2002	12	67	0.701	0.254	0.015	0.030	0.000	0.000
20	D	2003	3	69	0.507	0.464	0.000	0.029	0.000	0.000
20	D	2003	4	141	0.823	0.170	0.000	0.007	0.000	0.000
20	D	2003	5	142	0.824	0.141	0.014	0.021	0.000	0.000
20	D	2003	6	160	0.819	0.156	0.006	0.019	0.000	0.000
20	D	2003	7	175	0.783	0.189	0.023	0.006	0.000	0.000
20	D	2003	8	154	0.727	0.247	0.013	0.013	0.000	0.000
20	D	2003	9	114	0.623	0.351	0.018	0.009	0.000	0.000
20	D	2003	10	157	0.656	0.293	0.038	0.013	0.000	0.000
20	D	2003	11	167	0.743	0.222	0.006	0.030	0.000	0.000
20	D	2003	12	87	0.678	0.264	0.023	0.034	0.000	0.000
20	U	2000	2	6	0.500	0.500	0.000	0.000	0.000	0.000
20	U	2000	3	56	0.679	0.321	0.000	0.000	0.000	0.000
20	U	2000	4	37	0.649	0.324	0.000	0.027	0.000	0.000
20	U	2000	5	50	0.660	0.340	0.000	0.000	0.000	0.000
20	U	2000	6	40	0.575	0.425	0.000	0.000	0.000	0.000
20	U	2000	7	47	0.383	0.617	0.000	0.000	0.000	0.000
20	U	2000	8	53	0.528	0.453	0.000	0.019	0.000	0.000
20	U	2000	9	48	0.313	0.688	0.000	0.000	0.000	0.000
20	U	2000	10	58	0.603	0.379	0.000	0.017	0.000	0.000
20	U	2000	11	70	0.300	0.700	0.000	0.000	0.000	0.000
20	U	2000	12	33	0.152	0.848	0.000	0.000	0.000	0.000
20	U	2001	2	9	0.111	0.889	0.000	0.000	0.000	0.000

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LOCK_NO	DIRECTION	year	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
20	U	2001	3	52	0.423	0.538	0.000	0.038	0.000	0.000
20	U	2001	4	35	0.657	0.314	0.000	0.029	0.000	0.000
20	U	2001	5	19	0.684	0.316	0.000	0.000	0.000	0.000
20	U	2001	6	40	0.500	0.500	0.000	0.000	0.000	0.000
20	U	2001	7	56	0.482	0.500	0.000	0.018	0.000	0.000
20	U	2001	8	59	0.661	0.339	0.000	0.000	0.000	0.000
20	U	2001	9	54	0.352	0.648	0.000	0.000	0.000	0.000
20	U	2001	10	66	0.515	0.439	0.000	0.045	0.000	0.000
20	U	2001	11	65	0.431	0.569	0.000	0.000	0.000	0.000
20	U	2001	12	47	0.149	0.851	0.000	0.000	0.000	0.000
20	U	2002	2	1	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2002	3	41	0.585	0.415	0.000	0.000	0.000	0.000
20	U	2002	4	49	0.551	0.429	0.020	0.000	0.000	0.000
20	U	2002	5	35	0.543	0.457	0.000	0.000	0.000	0.000
20	U	2002	6	42	0.548	0.452	0.000	0.000	0.000	0.000
20	U	2002	7	35	0.543	0.457	0.000	0.000	0.000	0.000
20	U	2002	8	46	0.609	0.391	0.000	0.000	0.000	0.000
20	U	2002	9	47	0.511	0.489	0.000	0.000	0.000	0.000
20	U	2002	10	60	0.550	0.433	0.017	0.000	0.000	0.000
20	U	2002	11	75	0.373	0.627	0.000	0.000	0.000	0.000
20	U	2002	12	31	0.097	0.903	0.000	0.000	0.000	0.000
20	U	2003	3	39	0.462	0.538	0.000	0.000	0.000	0.000
20	U	2003	4	42	0.667	0.333	0.000	0.000	0.000	0.000
20	U	2003	5	37	0.757	0.243	0.000	0.000	0.000	0.000
20	U	2003	6	43	0.558	0.442	0.000	0.000	0.000	0.000
20	U	2003	7	50	0.420	0.560	0.000	0.020	0.000	0.000
20	U	2003	8	44	0.636	0.341	0.000	0.023	0.000	0.000
20	U	2003	9	56	0.429	0.571	0.000	0.000	0.000	0.000
20	U	2003	10	67	0.448	0.552	0.000	0.000	0.000	0.000
20	U	2003	11	55	0.364	0.636	0.000	0.000	0.000	0.000
20	U	2003	12	36	0.028	0.972	0.000	0.000	0.000	0.000
21	D	2000	2	9	0.111	0.889	0.000	0.000	0.000	0.000
21	D	2000	3	60	0.433	0.567	0.000	0.000	0.000	0.000
21	D	2000	4	47	0.404	0.596	0.000	0.000	0.000	0.000
21	D	2000	5	39	0.590	0.410	0.000	0.000	0.000	0.000
21	D	2000	6	38	0.579	0.421	0.000	0.000	0.000	0.000
21	D	2000	7	37	0.649	0.351	0.000	0.000	0.000	0.000
21	D	2000	8	53	0.547	0.453	0.000	0.000	0.000	0.000
21	D	2000	9	57	0.614	0.368	0.000	0.018	0.000	0.000
21	D	2000	10	62	0.597	0.371	0.016	0.016	0.000	0.000
21	D	2000	11	54	0.630	0.370	0.000	0.000	0.000	0.000
21	D	2000	12	39	0.667	0.333	0.000	0.000	0.000	0.000
21	D	2001	1	17	0.353	0.588	0.000	0.059	0.000	0.000
21	D	2001	2	19	0.579	0.421	0.000	0.000	0.000	0.000
21	D	2001	3	48	0.396	0.583	0.000	0.021	0.000	0.000
21	D	2001	4	48	0.375	0.604	0.000	0.021	0.000	0.000
21	D	2001	5	19	0.474	0.526	0.000	0.000	0.000	0.000
21	D	2001	6	67	0.493	0.493	0.000	0.000	0.015	0.000
21	D	2001	7	55	0.545	0.436	0.000	0.018	0.000	0.000
21	D	2001	8	38	0.632	0.342	0.000	0.026	0.000	0.000
21	D	2001	9	49	0.714	0.265	0.000	0.020	0.000	0.000
21	D	2001	10	55	0.600	0.382	0.000	0.018	0.000	0.000
21	D	2001	11	54	0.574	0.389	0.000	0.037	0.000	0.000
21	D	2001	12	36	0.611	0.361	0.000	0.028	0.000	0.000
21	D	2002	1	1	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2002	2	2	0.000	1.000	0.000	0.000	0.000	0.000

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LOCK_NO	DIRECTION	year	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
21	D	2002	3	59	0.356	0.644	0.000	0.000	0.000	0.000
21	D	2002	4	45	0.533	0.467	0.000	0.000	0.000	0.000
21	D	2002	5	37	0.568	0.405	0.000	0.000	0.027	0.000
21	D	2002	6	25	0.520	0.440	0.000	0.000	0.040	0.000
21	D	2002	7	24	0.625	0.375	0.000	0.000	0.000	0.000
21	D	2002	8	42	0.690	0.286	0.000	0.024	0.000	0.000
21	D	2002	9	37	0.486	0.514	0.000	0.000	0.000	0.000
21	D	2002	10	56	0.500	0.464	0.000	0.036	0.000	0.000
21	D	2002	11	45	0.533	0.422	0.000	0.044	0.000	0.000
21	D	2002	12	16	0.563	0.438	0.000	0.000	0.000	0.000
21	D	2003	3	37	0.297	0.676	0.000	0.027	0.000	0.000
21	D	2003	4	62	0.597	0.387	0.000	0.016	0.000	0.000
21	D	2003	5	40	0.575	0.425	0.000	0.000	0.000	0.000
21	D	2003	6	28	0.643	0.357	0.000	0.000	0.000	0.000
21	D	2003	7	40	0.775	0.225	0.000	0.000	0.000	0.000
21	D	2003	8	52	0.615	0.365	0.019	0.000	0.000	0.000
21	D	2003	9	44	0.614	0.364	0.000	0.023	0.000	0.000
21	D	2003	10	47	0.617	0.383	0.000	0.000	0.000	0.000
21	D	2003	11	48	0.583	0.417	0.000	0.000	0.000	0.000
21	D	2003	12	23	0.522	0.478	0.000	0.000	0.000	0.000
21	U	2000	2	1	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2000	3	38	0.316	0.684	0.000	0.000	0.000	0.000
21	U	2000	4	27	0.296	0.704	0.000	0.000	0.000	0.000
21	U	2000	5	45	0.511	0.489	0.000	0.000	0.000	0.000
21	U	2000	6	37	0.297	0.703	0.000	0.000	0.000	0.000
21	U	2000	7	31	0.452	0.516	0.000	0.032	0.000	0.000
21	U	2000	8	41	0.268	0.732	0.000	0.000	0.000	0.000
21	U	2000	9	41	0.171	0.805	0.000	0.024	0.000	0.000
21	U	2000	10	52	0.346	0.654	0.000	0.000	0.000	0.000
21	U	2000	11	58	0.172	0.828	0.000	0.000	0.000	0.000
21	U	2000	12	31	0.097	0.903	0.000	0.000	0.000	0.000
21	U	2001	1	6	0.167	0.833	0.000	0.000	0.000	0.000
21	U	2001	2	8	0.375	0.625	0.000	0.000	0.000	0.000
21	U	2001	3	30	0.233	0.733	0.000	0.033	0.000	0.000
21	U	2001	4	36	0.444	0.556	0.000	0.000	0.000	0.000
21	U	2001	5	15	0.267	0.733	0.000	0.000	0.000	0.000
21	U	2001	6	43	0.395	0.605	0.000	0.000	0.000	0.000
21	U	2001	7	57	0.333	0.667	0.000	0.000	0.000	0.000
21	U	2001	8	32	0.250	0.750	0.000	0.000	0.000	0.000
21	U	2001	9	39	0.231	0.769	0.000	0.000	0.000	0.000
21	U	2001	10	42	0.190	0.786	0.024	0.000	0.000	0.000
21	U	2001	11	60	0.250	0.733	0.000	0.017	0.000	0.000
21	U	2001	12	36	0.056	0.944	0.000	0.000	0.000	0.000
21	U	2002	1	1	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2002	2	2	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2002	3	36	0.361	0.639	0.000	0.000	0.000	0.000
21	U	2002	4	37	0.405	0.568	0.000	0.027	0.000	0.000
21	U	2002	5	40	0.400	0.575	0.000	0.025	0.000	0.000
21	U	2002	6	30	0.333	0.667	0.000	0.000	0.000	0.000
21	U	2002	7	32	0.344	0.656	0.000	0.000	0.000	0.000
21	U	2002	8	33	0.091	0.909	0.000	0.000	0.000	0.000
21	U	2002	9	38	0.316	0.658	0.000	0.026	0.000	0.000
21	U	2002	10	53	0.208	0.792	0.000	0.000	0.000	0.000
21	U	2002	11	65	0.123	0.877	0.000	0.000	0.000	0.000
21	U	2002	12	28	0.036	0.964	0.000	0.000	0.000	0.000
21	U	2003	3	26	0.346	0.654	0.000	0.000	0.000	0.000

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LOCK_NO	DIRECTION	year	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
21	U	2003	4	39	0.462	0.538	0.000	0.000	0.000	0.000
21	U	2003	5	34	0.500	0.471	0.029	0.000	0.000	0.000
21	U	2003	6	28	0.393	0.607	0.000	0.000	0.000	0.000
21	U	2003	7	30	0.267	0.733	0.000	0.000	0.000	0.000
21	U	2003	8	31	0.323	0.677	0.000	0.000	0.000	0.000
21	U	2003	9	28	0.214	0.786	0.000	0.000	0.000	0.000
21	U	2003	10	44	0.205	0.795	0.000	0.000	0.000	0.000
21	U	2003	11	54	0.278	0.722	0.000	0.000	0.000	0.000
21	U	2003	12	34	0.029	0.971	0.000	0.000	0.000	0.000
22	D	2000	2	6	0.000	1.000	0.000	0.000	0.000	0.000
22	D	2000	3	35	0.314	0.686	0.000	0.000	0.000	0.000
22	D	2000	4	35	0.286	0.686	0.000	0.029	0.000	0.000
22	D	2000	5	32	0.469	0.531	0.000	0.000	0.000	0.000
22	D	2000	6	29	0.414	0.552	0.000	0.034	0.000	0.000
22	D	2000	7	26	0.269	0.692	0.000	0.038	0.000	0.000
22	D	2000	8	30	0.433	0.567	0.000	0.000	0.000	0.000
22	D	2000	9	33	0.333	0.667	0.000	0.000	0.000	0.000
22	D	2000	10	31	0.452	0.548	0.000	0.000	0.000	0.000
22	D	2000	11	32	0.500	0.469	0.000	0.031	0.000	0.000
22	D	2000	12	20	0.400	0.550	0.000	0.050	0.000	0.000
22	D	2001	1	13	0.000	1.000	0.000	0.000	0.000	0.000
22	D	2001	2	13	0.077	0.923	0.000	0.000	0.000	0.000
22	D	2001	3	29	0.310	0.655	0.000	0.034	0.000	0.000
22	D	2001	4	45	0.511	0.489	0.000	0.000	0.000	0.000
22	D	2001	5	11	0.182	0.818	0.000	0.000	0.000	0.000
22	D	2001	6	47	0.340	0.638	0.000	0.021	0.000	0.000
22	D	2001	7	35	0.486	0.486	0.000	0.029	0.000	0.000
22	D	2001	8	23	0.348	0.652	0.000	0.000	0.000	0.000
22	D	2001	9	31	0.419	0.516	0.000	0.065	0.000	0.000
22	D	2001	10	36	0.444	0.528	0.000	0.028	0.000	0.000
22	D	2001	11	29	0.414	0.552	0.000	0.034	0.000	0.000
22	D	2001	12	25	0.280	0.680	0.000	0.040	0.000	0.000
22	D	2002	1	3	0.333	0.667	0.000	0.000	0.000	0.000
22	D	2002	3	41	0.268	0.732	0.000	0.000	0.000	0.000
22	D	2002	4	41	0.463	0.488	0.000	0.049	0.000	0.000
22	D	2002	5	34	0.471	0.529	0.000	0.000	0.000	0.000
22	D	2002	6	33	0.364	0.636	0.000	0.000	0.000	0.000
22	D	2002	7	28	0.429	0.571	0.000	0.000	0.000	0.000
22	D	2002	8	20	0.200	0.800	0.000	0.000	0.000	0.000
22	D	2002	9	25	0.360	0.600	0.000	0.040	0.000	0.000
22	D	2002	10	41	0.415	0.585	0.000	0.000	0.000	0.000
22	D	2002	11	20	0.300	0.650	0.000	0.050	0.000	0.000
22	D	2002	12	13	0.308	0.692	0.000	0.000	0.000	0.000
22	D	2003	3	27	0.222	0.778	0.000	0.000	0.000	0.000
22	D	2003	4	38	0.526	0.474	0.000	0.000	0.000	0.000
22	D	2003	5	24	0.625	0.375	0.000	0.000	0.000	0.000
22	D	2003	6	16	0.375	0.625	0.000	0.000	0.000	0.000
22	D	2003	7	15	0.400	0.600	0.000	0.000	0.000	0.000
22	D	2003	8	51	0.157	0.804	0.020	0.020	0.000	0.000
22	D	2003	9	37	0.297	0.703	0.000	0.000	0.000	0.000
22	D	2003	10	28	0.321	0.679	0.000	0.000	0.000	0.000
22	D	2003	11	27	0.444	0.519	0.037	0.000	0.000	0.000
22	D	2003	12	17	0.294	0.706	0.000	0.000	0.000	0.000
22	U	2000	2	3	0.667	0.333	0.000	0.000	0.000	0.000
22	U	2000	3	42	0.762	0.238	0.000	0.000	0.000	0.000
22	U	2000	4	44	0.795	0.182	0.023	0.000	0.000	0.000

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LOCK_NO	DIRECTION	year	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
22	U	2000	5	41	0.756	0.244	0.000	0.000	0.000	0.000
22	U	2000	6	46	0.609	0.348	0.000	0.043	0.000	0.000
22	U	2000	7	40	0.700	0.300	0.000	0.000	0.000	0.000
22	U	2000	8	40	0.700	0.275	0.000	0.025	0.000	0.000
22	U	2000	9	44	0.523	0.477	0.000	0.000	0.000	0.000
22	U	2000	10	44	0.659	0.341	0.000	0.000	0.000	0.000
22	U	2000	11	62	0.323	0.661	0.000	0.016	0.000	0.000
22	U	2000	12	23	0.174	0.783	0.000	0.043	0.000	0.000
22	U	2001	1	10	0.100	0.900	0.000	0.000	0.000	0.000
22	U	2001	2	7	0.429	0.571	0.000	0.000	0.000	0.000
22	U	2001	3	31	0.645	0.355	0.000	0.000	0.000	0.000
22	U	2001	4	27	0.852	0.148	0.000	0.000	0.000	0.000
22	U	2001	5	13	0.692	0.308	0.000	0.000	0.000	0.000
22	U	2001	6	53	0.528	0.434	0.019	0.019	0.000	0.000
22	U	2001	7	58	0.569	0.414	0.000	0.017	0.000	0.000
22	U	2001	8	43	0.628	0.372	0.000	0.000	0.000	0.000
22	U	2001	9	45	0.511	0.467	0.022	0.000	0.000	0.000
22	U	2001	10	36	0.750	0.250	0.000	0.000	0.000	0.000
22	U	2001	11	53	0.528	0.472	0.000	0.000	0.000	0.000
22	U	2001	12	32	0.219	0.781	0.000	0.000	0.000	0.000
22	U	2002	1	2	0.000	1.000	0.000	0.000	0.000	0.000
22	U	2002	3	33	0.727	0.273	0.000	0.000	0.000	0.000
22	U	2002	4	36	0.667	0.306	0.000	0.028	0.000	0.000
22	U	2002	5	37	0.649	0.351	0.000	0.000	0.000	0.000
22	U	2002	6	54	0.537	0.463	0.000	0.000	0.000	0.000
22	U	2002	7	43	0.721	0.256	0.000	0.000	0.023	0.000
22	U	2002	8	34	0.676	0.294	0.000	0.029	0.000	0.000
22	U	2002	9	35	0.629	0.371	0.000	0.000	0.000	0.000
22	U	2002	10	53	0.679	0.302	0.000	0.019	0.000	0.000
22	U	2002	11	64	0.344	0.656	0.000	0.000	0.000	0.000
22	U	2002	12	20	0.150	0.850	0.000	0.000	0.000	0.000
22	U	2003	3	25	0.760	0.240	0.000	0.000	0.000	0.000
22	U	2003	4	37	0.892	0.108	0.000	0.000	0.000	0.000
22	U	2003	5	30	1.000	0.000	0.000	0.000	0.000	0.000
22	U	2003	6	34	0.882	0.118	0.000	0.000	0.000	0.000
22	U	2003	7	39	0.769	0.231	0.000	0.000	0.000	0.000
22	U	2003	8	57	0.526	0.474	0.000	0.000	0.000	0.000
22	U	2003	9	40	0.625	0.375	0.000	0.000	0.000	0.000
22	U	2003	10	47	0.596	0.383	0.000	0.021	0.000	0.000
22	U	2003	11	51	0.549	0.451	0.000	0.000	0.000	0.000
22	U	2003	12	28	0.143	0.857	0.000	0.000	0.000	0.000
24	D	2000	1	5	0.400	0.600	0.000	0.000	0.000	0.000
24	D	2000	2	9	0.111	0.889	0.000	0.000	0.000	0.000
24	D	2000	3	36	0.361	0.611	0.000	0.028	0.000	0.000
24	D	2000	4	45	0.444	0.489	0.000	0.067	0.000	0.000
24	D	2000	5	40	0.700	0.150	0.000	0.150	0.000	0.000
24	D	2000	6	34	0.765	0.206	0.000	0.029	0.000	0.000
24	D	2000	7	37	0.730	0.243	0.000	0.027	0.000	0.000
24	D	2000	8	40	0.550	0.400	0.000	0.050	0.000	0.000
24	D	2000	9	36	0.583	0.361	0.000	0.056	0.000	0.000
24	D	2000	10	41	0.659	0.268	0.000	0.073	0.000	0.000
24	D	2000	11	32	0.813	0.156	0.000	0.031	0.000	0.000
24	D	2000	12	20	0.700	0.250	0.000	0.050	0.000	0.000
24	D	2001	1	15	0.267	0.733	0.000	0.000	0.000	0.000
24	D	2001	2	14	0.500	0.500	0.000	0.000	0.000	0.000
24	D	2001	3	31	0.548	0.387	0.000	0.065	0.000	0.000

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LOCK_NO	DIRECTION	year	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
24	D	2001	4	37	0.541	0.405	0.000	0.027	0.027	0.000
24	D	2001	5	22	0.364	0.545	0.000	0.091	0.000	0.000
24	D	2001	6	42	0.524	0.452	0.000	0.024	0.000	0.000
24	D	2001	7	45	0.689	0.222	0.000	0.089	0.000	0.000
24	D	2001	8	33	0.758	0.182	0.000	0.061	0.000	0.000
24	D	2001	9	48	0.396	0.542	0.000	0.063	0.000	0.000
24	D	2001	10	42	0.714	0.214	0.000	0.071	0.000	0.000
24	D	2001	11	36	0.556	0.389	0.000	0.056	0.000	0.000
24	D	2001	12	32	0.563	0.406	0.000	0.031	0.000	0.000
24	D	2002	3	52	0.365	0.577	0.000	0.058	0.000	0.000
24	D	2002	4	51	0.490	0.471	0.000	0.039	0.000	0.000
24	D	2002	5	39	0.513	0.436	0.000	0.051	0.000	0.000
24	D	2002	6	38	0.500	0.474	0.000	0.026	0.000	0.000
24	D	2002	7	38	0.474	0.421	0.000	0.105	0.000	0.000
24	D	2002	8	25	0.600	0.360	0.000	0.040	0.000	0.000
24	D	2002	9	37	0.541	0.405	0.000	0.054	0.000	0.000
24	D	2002	10	39	0.487	0.436	0.000	0.077	0.000	0.000
24	D	2002	11	34	0.647	0.324	0.000	0.029	0.000	0.000
24	D	2002	12	14	0.643	0.357	0.000	0.000	0.000	0.000
24	D	2003	3	28	0.214	0.786	0.000	0.000	0.000	0.000
24	D	2003	4	41	0.561	0.439	0.000	0.000	0.000	0.000
24	D	2003	5	29	0.655	0.310	0.000	0.034	0.000	0.000
24	D	2003	6	28	0.714	0.250	0.000	0.036	0.000	0.000
24	D	2003	7	25	0.760	0.120	0.000	0.120	0.000	0.000
24	D	2003	8	28	0.536	0.393	0.000	0.071	0.000	0.000
24	D	2003	9	30	0.667	0.267	0.000	0.067	0.000	0.000
24	D	2003	10	34	0.676	0.235	0.000	0.088	0.000	0.000
24	D	2003	11	24	0.625	0.333	0.000	0.042	0.000	0.000
24	D	2003	12	22	0.727	0.273	0.000	0.000	0.000	0.000
24	U	2000	1	2	0.000	1.000	0.000	0.000	0.000	0.000
24	U	2000	2	5	0.600	0.400	0.000	0.000	0.000	0.000
24	U	2000	3	12	0.417	0.583	0.000	0.000	0.000	0.000
24	U	2000	4	9	0.222	0.778	0.000	0.000	0.000	0.000
24	U	2000	5	6	0.833	0.167	0.000	0.000	0.000	0.000
24	U	2000	6	13	0.154	0.846	0.000	0.000	0.000	0.000
24	U	2000	7	13	0.385	0.615	0.000	0.000	0.000	0.000
24	U	2000	8	18	0.167	0.778	0.000	0.056	0.000	0.000
24	U	2000	9	17	0.353	0.647	0.000	0.000	0.000	0.000
24	U	2000	10	17	0.294	0.706	0.000	0.000	0.000	0.000
24	U	2000	11	38	0.079	0.921	0.000	0.000	0.000	0.000
24	U	2000	12	13	0.077	0.923	0.000	0.000	0.000	0.000
24	U	2001	1	10	0.200	0.800	0.000	0.000	0.000	0.000
24	U	2001	2	3	0.000	1.000	0.000	0.000	0.000	0.000
24	U	2001	3	9	0.444	0.556	0.000	0.000	0.000	0.000
24	U	2001	4	8	0.250	0.750	0.000	0.000	0.000	0.000
24	U	2001	5	11	0.364	0.636	0.000	0.000	0.000	0.000
24	U	2001	6	24	0.375	0.625	0.000	0.000	0.000	0.000
24	U	2001	7	24	0.458	0.542	0.000	0.000	0.000	0.000
24	U	2001	8	22	0.455	0.545	0.000	0.000	0.000	0.000
24	U	2001	9	35	0.086	0.914	0.000	0.000	0.000	0.000
24	U	2001	10	9	0.444	0.556	0.000	0.000	0.000	0.000
24	U	2001	11	32	0.188	0.813	0.000	0.000	0.000	0.000
24	U	2001	12	25	0.000	1.000	0.000	0.000	0.000	0.000
24	U	2002	3	18	0.444	0.444	0.000	0.056	0.056	0.000
24	U	2002	4	24	0.208	0.792	0.000	0.000	0.000	0.000
24	U	2002	5	24	0.250	0.708	0.000	0.042	0.000	0.000

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LOCK_NO	DIRECTION	year	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
24	U	2002	6	31	0.194	0.806	0.000	0.000	0.000	0.000
24	U	2002	7	28	0.357	0.643	0.000	0.000	0.000	0.000
24	U	2002	8	19	0.158	0.842	0.000	0.000	0.000	0.000
24	U	2002	9	17	0.118	0.882	0.000	0.000	0.000	0.000
24	U	2002	10	23	0.174	0.826	0.000	0.000	0.000	0.000
24	U	2002	11	47	0.085	0.915	0.000	0.000	0.000	0.000
24	U	2002	12	17	0.000	1.000	0.000	0.000	0.000	0.000
24	U	2003	3	17	0.412	0.588	0.000	0.000	0.000	0.000
24	U	2003	4	15	0.467	0.533	0.000	0.000	0.000	0.000
24	U	2003	5	11	0.545	0.455	0.000	0.000	0.000	0.000
24	U	2003	6	14	0.571	0.429	0.000	0.000	0.000	0.000
24	U	2003	7	14	0.429	0.571	0.000	0.000	0.000	0.000
24	U	2003	8	10	0.400	0.600	0.000	0.000	0.000	0.000
24	U	2003	9	12	0.417	0.500	0.083	0.000	0.000	0.000
24	U	2003	10	16	0.125	0.875	0.000	0.000	0.000	0.000
24	U	2003	11	22	0.136	0.864	0.000	0.000	0.000	0.000
24	U	2003	12	19	0.000	1.000	0.000	0.000	0.000	0.000
25	D	2000	1	2	0.000	1.000	0.000	0.000	0.000	0.000
25	D	2000	2	5	0.000	1.000	0.000	0.000	0.000	0.000
25	D	2000	3	21	0.190	0.810	0.000	0.000	0.000	0.000
25	D	2000	4	23	0.217	0.783	0.000	0.000	0.000	0.000
25	D	2000	5	19	0.263	0.737	0.000	0.000	0.000	0.000
25	D	2000	6	23	0.043	0.957	0.000	0.000	0.000	0.000
25	D	2000	7	22	0.136	0.864	0.000	0.000	0.000	0.000
25	D	2000	8	25	0.120	0.840	0.000	0.040	0.000	0.000
25	D	2000	9	24	0.333	0.667	0.000	0.000	0.000	0.000
25	D	2000	10	28	0.250	0.750	0.000	0.000	0.000	0.000
25	D	2000	11	19	0.316	0.684	0.000	0.000	0.000	0.000
25	D	2000	12	16	0.375	0.563	0.000	0.063	0.000	0.000
25	D	2001	1	9	0.333	0.667	0.000	0.000	0.000	0.000
25	D	2001	2	20	0.300	0.700	0.000	0.000	0.000	0.000
25	D	2001	3	25	0.000	1.000	0.000	0.000	0.000	0.000
25	D	2001	4	22	0.091	0.909	0.000	0.000	0.000	0.000
25	D	2001	5	11	0.364	0.636	0.000	0.000	0.000	0.000
25	D	2001	6	31	0.161	0.839	0.000	0.000	0.000	0.000
25	D	2001	7	40	0.300	0.700	0.000	0.000	0.000	0.000
25	D	2001	8	39	0.256	0.744	0.000	0.000	0.000	0.000
25	D	2001	9	28	0.179	0.786	0.036	0.000	0.000	0.000
25	D	2001	10	23	0.217	0.783	0.000	0.000	0.000	0.000
25	D	2001	11	27	0.370	0.593	0.000	0.037	0.000	0.000
25	D	2001	12	15	0.133	0.800	0.000	0.067	0.000	0.000
25	D	2002	1	1	0.000	1.000	0.000	0.000	0.000	0.000
25	D	2002	2	1	0.000	1.000	0.000	0.000	0.000	0.000
25	D	2002	3	35	0.229	0.771	0.000	0.000	0.000	0.000
25	D	2002	4	16	0.250	0.750	0.000	0.000	0.000	0.000
25	D	2002	5	18	0.278	0.722	0.000	0.000	0.000	0.000
25	D	2002	6	17	0.294	0.706	0.000	0.000	0.000	0.000
25	D	2002	7	19	0.421	0.579	0.000	0.000	0.000	0.000
25	D	2002	8	21	0.286	0.714	0.000	0.000	0.000	0.000
25	D	2002	9	12	0.167	0.833	0.000	0.000	0.000	0.000
25	D	2002	10	16	0.188	0.750	0.000	0.063	0.000	0.000
25	D	2002	11	18	0.444	0.556	0.000	0.000	0.000	0.000
25	D	2002	12	9	0.000	0.778	0.000	0.222	0.000	0.000
25	D	2003	1	1	0.000	1.000	0.000	0.000	0.000	0.000
25	D	2003	3	22	0.000	0.955	0.000	0.045	0.000	0.000
25	D	2003	4	25	0.320	0.680	0.000	0.000	0.000	0.000

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LOCK_NO	DIRECTION	year	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
25	D	2003	5	22	0.364	0.636	0.000	0.000	0.000	0.000
25	D	2003	6	26	0.423	0.577	0.000	0.000	0.000	0.000
25	D	2003	7	19	0.421	0.579	0.000	0.000	0.000	0.000
25	D	2003	8	19	0.368	0.579	0.000	0.053	0.000	0.000
25	D	2003	9	14	0.286	0.643	0.071	0.000	0.000	0.000
25	D	2003	10	12	0.250	0.750	0.000	0.000	0.000	0.000
25	D	2003	11	13	0.308	0.692	0.000	0.000	0.000	0.000
25	D	2003	12	6	0.167	0.833	0.000	0.000	0.000	0.000
25	U	2000	1	5	0.400	0.600	0.000	0.000	0.000	0.000
25	U	2000	2	32	0.750	0.250	0.000	0.000	0.000	0.000
25	U	2000	3	192	0.766	0.182	0.016	0.036	0.000	0.000
25	U	2000	4	191	0.806	0.136	0.031	0.026	0.000	0.000
25	U	2000	5	188	0.787	0.176	0.011	0.027	0.000	0.000
25	U	2000	6	195	0.723	0.231	0.036	0.010	0.000	0.000
25	U	2000	7	197	0.751	0.213	0.025	0.010	0.000	0.000
25	U	2000	8	186	0.688	0.290	0.011	0.011	0.000	0.000
25	U	2000	9	146	0.658	0.315	0.014	0.014	0.000	0.000
25	U	2000	10	179	0.715	0.235	0.039	0.011	0.000	0.000
25	U	2000	11	177	0.424	0.520	0.040	0.017	0.000	0.000
25	U	2000	12	65	0.277	0.723	0.000	0.000	0.000	0.000
25	U	2001	1	22	0.591	0.364	0.000	0.045	0.000	0.000
25	U	2001	2	55	0.473	0.527	0.000	0.000	0.000	0.000
25	U	2001	3	158	0.544	0.424	0.006	0.025	0.000	0.000
25	U	2001	4	143	0.594	0.385	0.007	0.014	0.000	0.000
25	U	2001	5	119	0.824	0.134	0.008	0.034	0.000	0.000
25	U	2001	6	214	0.696	0.276	0.014	0.014	0.000	0.000
25	U	2001	7	238	0.689	0.269	0.017	0.025	0.000	0.000
25	U	2001	8	207	0.618	0.348	0.014	0.019	0.000	0.000
25	U	2001	9	144	0.576	0.382	0.014	0.028	0.000	0.000
25	U	2001	10	164	0.652	0.299	0.024	0.024	0.000	0.000
25	U	2001	11	163	0.552	0.387	0.006	0.055	0.000	0.000
25	U	2001	12	91	0.319	0.615	0.033	0.033	0.000	0.000
25	U	2002	1	2	0.000	1.000	0.000	0.000	0.000	0.000
25	U	2002	2	9	0.889	0.111	0.000	0.000	0.000	0.000
25	U	2002	3	193	0.756	0.197	0.021	0.026	0.000	0.000
25	U	2002	4	177	0.774	0.198	0.011	0.017	0.000	0.000
25	U	2002	5	207	0.681	0.295	0.014	0.010	0.000	0.000
25	U	2002	6	230	0.674	0.313	0.004	0.009	0.000	0.000
25	U	2002	7	198	0.783	0.197	0.015	0.005	0.000	0.000
25	U	2002	8	171	0.596	0.363	0.018	0.023	0.000	0.000
25	U	2002	9	165	0.636	0.297	0.036	0.030	0.000	0.000
25	U	2002	10	191	0.654	0.283	0.037	0.026	0.000	0.000
25	U	2002	11	208	0.490	0.457	0.029	0.024	0.000	0.000
25	U	2002	12	60	0.167	0.800	0.017	0.017	0.000	0.000
25	U	2003	1	1	0.000	1.000	0.000	0.000	0.000	0.000
25	U	2003	3	140	0.821	0.164	0.014	0.000	0.000	0.000
25	U	2003	4	180	0.733	0.244	0.017	0.006	0.000	0.000
25	U	2003	5	177	0.695	0.277	0.028	0.000	0.000	0.000
25	U	2003	6	187	0.711	0.262	0.021	0.005	0.000	0.000
25	U	2003	7	197	0.711	0.269	0.010	0.010	0.000	0.000
25	U	2003	8	145	0.710	0.248	0.021	0.021	0.000	0.000
25	U	2003	9	120	0.692	0.233	0.042	0.033	0.000	0.000
25	U	2003	10	150	0.647	0.267	0.040	0.047	0.000	0.000
25	U	2003	11	141	0.567	0.340	0.050	0.043	0.000	0.000
25	U	2003	12	61	0.246	0.721	0.033	0.000	0.000	0.000

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LOCK_NO	DIRECTION	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
20	D	1	1	0.000	0.000	0.000	1.000	0.000	0.000
20	D	2	16	0.063	0.875	0.000	0.063	0.000	0.000
20	D	3	393	0.573	0.382	0.000	0.043	0.003	0.000
20	D	4	559	0.737	0.222	0.013	0.027	0.002	0.000
20	D	5	516	0.795	0.171	0.016	0.019	0.000	0.000
20	D	6	703	0.809	0.155	0.014	0.020	0.001	0.000
20	D	7	743	0.799	0.176	0.012	0.012	0.000	0.000
20	D	8	676	0.756	0.213	0.015	0.016	0.000	0.000
20	D	9	546	0.663	0.297	0.016	0.024	0.000	0.000
20	D	10	627	0.702	0.266	0.021	0.011	0.000	0.000
20	D	11	760	0.780	0.176	0.021	0.022	0.000	0.000
20	D	12	347	0.695	0.259	0.012	0.032	0.003	0.000
20	U	2	16	0.250	0.750	0.000	0.000	0.000	0.000
20	U	3	188	0.543	0.447	0.000	0.011	0.000	0.000
20	U	4	163	0.626	0.356	0.006	0.012	0.000	0.000
20	U	5	141	0.660	0.340	0.000	0.000	0.000	0.000
20	U	6	165	0.545	0.455	0.000	0.000	0.000	0.000
20	U	7	188	0.452	0.537	0.000	0.011	0.000	0.000
20	U	8	202	0.609	0.381	0.000	0.010	0.000	0.000
20	U	9	205	0.400	0.600	0.000	0.000	0.000	0.000
20	U	10	251	0.526	0.454	0.004	0.016	0.000	0.000
20	U	11	265	0.366	0.634	0.000	0.000	0.000	0.000
20	U	12	147	0.109	0.891	0.000	0.000	0.000	0.000
21	D	1	18	0.333	0.611	0.000	0.056	0.000	0.000
21	D	2	30	0.400	0.600	0.000	0.000	0.000	0.000
21	D	3	204	0.377	0.613	0.000	0.010	0.000	0.000
21	D	4	202	0.485	0.505	0.000	0.010	0.000	0.000
21	D	5	135	0.563	0.430	0.000	0.000	0.007	0.000
21	D	6	158	0.544	0.443	0.000	0.000	0.013	0.000
21	D	7	156	0.641	0.353	0.000	0.006	0.000	0.000
21	D	8	185	0.616	0.368	0.005	0.011	0.000	0.000
21	D	9	187	0.615	0.369	0.000	0.016	0.000	0.000
21	D	10	220	0.577	0.400	0.005	0.018	0.000	0.000
21	D	11	201	0.582	0.398	0.000	0.020	0.000	0.000
21	D	12	114	0.605	0.386	0.000	0.009	0.000	0.000
21	U	1	7	0.143	0.857	0.000	0.000	0.000	0.000
21	U	2	11	0.273	0.727	0.000	0.000	0.000	0.000
21	U	3	130	0.315	0.677	0.000	0.008	0.000	0.000
21	U	4	139	0.410	0.583	0.000	0.007	0.000	0.000
21	U	5	134	0.448	0.537	0.007	0.007	0.000	0.000
21	U	6	138	0.355	0.645	0.000	0.000	0.000	0.000
21	U	7	150	0.347	0.647	0.000	0.007	0.000	0.000
21	U	8	137	0.234	0.766	0.000	0.000	0.000	0.000
21	U	9	146	0.233	0.753	0.000	0.014	0.000	0.000
21	U	10	191	0.241	0.754	0.005	0.000	0.000	0.000
21	U	11	237	0.203	0.793	0.000	0.004	0.000	0.000
21	U	12	129	0.054	0.946	0.000	0.000	0.000	0.000
22	D	1	16	0.063	0.938	0.000	0.000	0.000	0.000
22	D	2	19	0.053	0.947	0.000	0.000	0.000	0.000
22	D	3	132	0.280	0.712	0.000	0.008	0.000	0.000
22	D	4	159	0.453	0.528	0.000	0.019	0.000	0.000
22	D	5	101	0.475	0.525	0.000	0.000	0.000	0.000
22	D	6	125	0.368	0.616	0.000	0.016	0.000	0.000
22	D	7	104	0.404	0.577	0.000	0.019	0.000	0.000
22	D	8	124	0.266	0.718	0.008	0.008	0.000	0.000
22	D	9	126	0.349	0.627	0.000	0.024	0.000	0.000

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LOCK_NO	DIRECTION	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
22	D	10	136	0.412	0.581	0.000	0.007	0.000	0.000
22	D	11	108	0.426	0.537	0.009	0.028	0.000	0.000
22	D	12	75	0.320	0.653	0.000	0.027	0.000	0.000
22	U	1	12	0.083	0.917	0.000	0.000	0.000	0.000
22	U	2	10	0.500	0.500	0.000	0.000	0.000	0.000
22	U	3	131	0.725	0.275	0.000	0.000	0.000	0.000
22	U	4	144	0.799	0.188	0.007	0.007	0.000	0.000
22	U	5	121	0.777	0.223	0.000	0.000	0.000	0.000
22	U	6	187	0.615	0.364	0.005	0.016	0.000	0.000
22	U	7	180	0.678	0.311	0.000	0.006	0.006	0.000
22	U	8	174	0.621	0.368	0.000	0.011	0.000	0.000
22	U	9	164	0.567	0.427	0.006	0.000	0.000	0.000
22	U	10	180	0.667	0.322	0.000	0.011	0.000	0.000
22	U	11	230	0.426	0.570	0.000	0.004	0.000	0.000
22	U	12	103	0.175	0.816	0.000	0.010	0.000	0.000
24	D	1	20	0.300	0.700	0.000	0.000	0.000	0.000
24	D	2	23	0.348	0.652	0.000	0.000	0.000	0.000
24	D	3	147	0.374	0.585	0.000	0.041	0.000	0.000
24	D	4	174	0.506	0.454	0.000	0.034	0.006	0.000
24	D	5	130	0.577	0.338	0.000	0.085	0.000	0.000
24	D	6	142	0.613	0.359	0.000	0.028	0.000	0.000
24	D	7	145	0.655	0.262	0.000	0.083	0.000	0.000
24	D	8	126	0.611	0.333	0.000	0.056	0.000	0.000
24	D	9	151	0.530	0.411	0.000	0.060	0.000	0.000
24	D	10	156	0.635	0.288	0.000	0.077	0.000	0.000
24	D	11	126	0.659	0.302	0.000	0.040	0.000	0.000
24	D	12	88	0.648	0.330	0.000	0.023	0.000	0.000
24	U	1	12	0.167	0.833	0.000	0.000	0.000	0.000
24	U	2	8	0.375	0.625	0.000	0.000	0.000	0.000
24	U	3	56	0.429	0.536	0.000	0.018	0.018	0.000
24	U	4	56	0.286	0.714	0.000	0.000	0.000	0.000
24	U	5	52	0.404	0.577	0.000	0.019	0.000	0.000
24	U	6	82	0.305	0.695	0.000	0.000	0.000	0.000
24	U	7	79	0.405	0.595	0.000	0.000	0.000	0.000
24	U	8	69	0.290	0.696	0.000	0.014	0.000	0.000
24	U	9	81	0.198	0.790	0.012	0.000	0.000	0.000
24	U	10	65	0.231	0.769	0.000	0.000	0.000	0.000
24	U	11	139	0.115	0.885	0.000	0.000	0.000	0.000
24	U	12	74	0.014	0.986	0.000	0.000	0.000	0.000
25	D	1	13	0.231	0.769	0.000	0.000	0.000	0.000
25	D	2	26	0.231	0.769	0.000	0.000	0.000	0.000
25	D	3	103	0.117	0.874	0.000	0.010	0.000	0.000
25	D	4	86	0.221	0.779	0.000	0.000	0.000	0.000
25	D	5	70	0.314	0.686	0.000	0.000	0.000	0.000
25	D	6	97	0.227	0.773	0.000	0.000	0.000	0.000
25	D	7	100	0.310	0.690	0.000	0.000	0.000	0.000
25	D	8	104	0.250	0.731	0.000	0.019	0.000	0.000
25	D	9	78	0.244	0.731	0.026	0.000	0.000	0.000
25	D	10	79	0.228	0.759	0.000	0.013	0.000	0.000
25	D	11	77	0.364	0.623	0.000	0.013	0.000	0.000
25	D	12	46	0.196	0.717	0.000	0.087	0.000	0.000
25	U	1	30	0.500	0.467	0.000	0.033	0.000	0.000
25	U	2	96	0.604	0.396	0.000	0.000	0.000	0.000
25	U	3	683	0.723	0.239	0.015	0.023	0.000	0.000
25	U	4	691	0.735	0.232	0.017	0.016	0.000	0.000
25	U	5	691	0.738	0.230	0.016	0.016	0.000	0.000

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LOCK_NO	DIRECTION	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
25	U	6	826	0.700	0.272	0.018	0.010	0.000	0.000
25	U	7	830	0.731	0.239	0.017	0.013	0.000	0.000
25	U	8	709	0.650	0.316	0.016	0.018	0.000	0.000
25	U	9	575	0.638	0.310	0.026	0.026	0.000	0.000
25	U	10	684	0.668	0.270	0.035	0.026	0.000	0.000
25	U	11	689	0.504	0.433	0.030	0.033	0.000	0.000
25	U	12	277	0.260	0.704	0.022	0.014	0.000	0.000

average interarrival times and first lockage times for random arrivals 32
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LOCK_NO	DIRECTION	year	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
20	D	2000	2	3	14.167	6.623	1	27FEB00	27FEB00
20	D	2000	3	119	6.200	5.526	0	.	.
20	D	2000	4	171	4.182	3.793	0	.	.
20	D	2000	5	169	4.465	4.415	0	.	.
20	D	2000	6	164	4.409	3.524	0	.	.
20	D	2000	7	183	4.087	3.285	0	.	.
20	D	2000	8	162	4.599	4.031	0	.	.
20	D	2000	9	153	4.629	4.416	0	.	.
20	D	2000	10	146	5.166	5.510	0	.	.
20	D	2000	11	195	3.700	3.308	0	.	.
20	D	2000	12	74	10.035	47.672	0	.	.
20	D	2001	1	0	.	.	1	01JAN01	01JAN01
20	D	2001	2	9	154.959	387.049	0	.	.
20	D	2001	3	87	8.580	7.915	0	.	.
20	D	2001	4	93	5.406	5.414	0	.	.
20	D	2001	5	41	23.647	115.463	0	.	.
20	D	2001	6	207	3.477	3.131	0	.	.
20	D	2001	7	196	3.794	3.169	0	.	.
20	D	2001	8	192	3.872	3.433	0	.	.
20	D	2001	9	152	4.741	4.787	0	.	.
20	D	2001	10	141	5.282	5.197	0	.	.
20	D	2001	11	178	3.988	4.028	0	.	.
20	D	2001	12	119	5.651	7.139	0	.	.
20	D	2002	2	2	192.300	97.651	1	11FEB02	11FEB02
20	D	2002	3	118	6.605	12.291	0	.	.
20	D	2002	4	154	4.681	4.205	0	.	.
20	D	2002	5	164	4.511	4.606	0	.	.
20	D	2002	6	172	4.160	3.489	0	.	.
20	D	2002	7	189	3.922	3.119	0	.	.
20	D	2002	8	168	4.486	3.879	0	.	.
20	D	2002	9	127	5.583	5.227	0	.	.
20	D	2002	10	183	4.129	4.146	0	.	.
20	D	2002	11	220	3.270	2.516	0	.	.
20	D	2002	12	67	4.144	3.406	0	.	.
20	D	2003	3	68	7.701	11.493	1	10MAR03	10MAR03
20	D	2003	4	141	5.090	4.492	0	.	.
20	D	2003	5	142	5.276	4.654	0	.	.
20	D	2003	6	160	4.502	4.377	0	.	.
20	D	2003	7	175	4.224	4.116	0	.	.
20	D	2003	8	154	4.774	4.239	0	.	.
20	D	2003	9	114	6.430	5.189	0	.	.
20	D	2003	10	157	4.718	4.575	0	.	.
20	D	2003	11	167	4.268	4.323	0	.	.
20	D	2003	12	87	8.545	32.239	0	.	.
20	U	2000	2	5	28.800	37.385	1	22FEB00	22FEB00
20	U	2000	3	56	13.791	17.660	0	.	.
20	U	2000	4	37	18.467	17.543	0	.	.
20	U	2000	5	50	15.832	17.879	0	.	.
20	U	2000	6	40	17.735	12.965	0	.	.
20	U	2000	7	47	15.275	12.677	0	.	.
20	U	2000	8	53	14.272	17.536	0	.	.
20	U	2000	9	48	15.266	14.547	0	.	.
20	U	2000	10	58	12.989	15.652	0	.	.
20	U	2000	11	70	10.314	9.101	0	.	.
20	U	2000	12	33	22.530	82.423	0	.	.

average interarrival times and first lockage times for random arrivals 33
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LOCK_NO	DIRECTION	year	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
20	U	2001	2	8	29.1563	35.017	1	18FEB01	18FEB01
20	U	2001	3	52	14.5913	15.111	0	.	.
20	U	2001	4	35	13.8143	13.395	0	.	.
20	U	2001	5	19	51.4535	171.265	0	.	.
20	U	2001	6	40	17.6721	15.890	0	.	.
20	U	2001	7	56	13.0449	14.248	0	.	.
20	U	2001	8	59	13.0364	13.085	0	.	.
20	U	2001	9	54	13.1929	13.558	0	.	.
20	U	2001	10	66	11.4611	12.089	0	.	.
20	U	2001	11	65	10.9638	12.690	0	.	.
20	U	2001	12	47	13.2074	18.022	0	.	.
20	U	2002	2	0	.	.	1	27FEB02	27FEB02
20	U	2002	3	41	18.8992	19.441	0	.	.
20	U	2002	4	49	14.8337	13.267	0	.	.
20	U	2002	5	35	21.2243	17.834	0	.	.
20	U	2002	6	42	17.0675	18.642	0	.	.
20	U	2002	7	35	21.1114	24.154	0	.	.
20	U	2002	8	46	16.1641	15.485	0	.	.
20	U	2002	9	47	15.2773	13.971	0	.	.
20	U	2002	10	60	12.6042	12.013	0	.	.
20	U	2002	11	75	9.5467	8.850	0	.	.
20	U	2002	12	31	9.2237	8.954	0	.	.
20	U	2003	3	38	15.4868	32.474	1	07MAR03	07MAR03
20	U	2003	4	42	17.0440	17.825	0	.	.
20	U	2003	5	37	20.0901	17.082	0	.	.
20	U	2003	6	43	16.6702	15.611	0	.	.
20	U	2003	7	50	14.9533	13.111	0	.	.
20	U	2003	8	44	16.7330	16.662	0	.	.
20	U	2003	9	56	12.9643	13.615	0	.	.
20	U	2003	10	67	10.7948	10.518	0	.	.
20	U	2003	11	55	13.3409	11.376	0	.	.
20	U	2003	12	36	20.6319	71.655	0	.	.
21	D	2000	2	8	15.6771	16.128	1	24FEB00	24FEB00
21	D	2000	3	60	12.4081	10.980	0	.	.
21	D	2000	4	47	15.0216	11.383	0	.	.
21	D	2000	5	39	19.5321	20.891	0	.	.
21	D	2000	6	38	18.7873	17.943	0	.	.
21	D	2000	7	37	20.2815	20.803	0	.	.
21	D	2000	8	53	13.8553	13.821	0	.	.
21	D	2000	9	57	12.6798	11.241	0	.	.
21	D	2000	10	62	12.1089	12.691	0	.	.
21	D	2000	11	54	13.3179	13.668	0	.	.
21	D	2000	12	39	17.7158	35.029	0	.	.
21	D	2001	1	16	43.3281	55.689	1	01JAN01	01JAN01
21	D	2001	2	19	33.5746	38.176	0	.	.
21	D	2001	3	48	15.5938	17.894	0	.	.
21	D	2001	4	48	12.9149	13.293	0	.	.
21	D	2001	5	19	47.5044	112.266	0	.	.
21	D	2001	6	67	10.7338	9.037	0	.	.
21	D	2001	7	55	13.0182	12.433	0	.	.
21	D	2001	8	38	19.8860	13.814	0	.	.
21	D	2001	9	49	14.9218	14.695	0	.	.
21	D	2001	10	55	13.6091	11.170	0	.	.
21	D	2001	11	54	13.1296	11.351	0	.	.
21	D	2001	12	36	21.0231	18.775	0	.	.

average interarrival times and first lockage times for random arrivals 34
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LOCK_NO	DIRECTION	year	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
21	D	2002	1	0	.	.	1	09JAN02	09JAN02
21	D	2002	2	2	584.208	289.383	0	.	.
21	D	2002	3	59	13.008	12.409	0	.	.
21	D	2002	4	45	15.779	14.091	0	.	.
21	D	2002	5	37	20.618	16.764	0	.	.
21	D	2002	6	25	28.291	29.007	0	.	.
21	D	2002	7	24	31.319	27.613	0	.	.
21	D	2002	8	42	17.567	16.059	0	.	.
21	D	2002	9	37	19.694	15.221	0	.	.
21	D	2002	10	56	13.411	11.335	0	.	.
21	D	2002	11	45	15.878	12.683	0	.	.
21	D	2002	12	16	44.453	90.728	0	.	.
21	D	2003	3	36	12.127	12.653	1	13MAR03	13MAR03
21	D	2003	4	62	11.480	10.704	0	.	.
21	D	2003	5	40	18.827	18.707	0	.	.
21	D	2003	6	28	25.685	25.814	0	.	.
21	D	2003	7	40	18.375	19.420	0	.	.
21	D	2003	8	52	14.460	12.256	0	.	.
21	D	2003	9	44	16.172	17.460	0	.	.
21	D	2003	10	47	15.751	15.967	0	.	.
21	D	2003	11	48	14.963	11.145	0	.	.
21	D	2003	12	23	15.878	13.844	0	.	.
21	U	2000	2	0	.	.	1	28FEB00	28FEB00
21	U	2000	3	38	20.621	25.925	0	.	.
21	U	2000	4	27	26.470	22.493	0	.	.
21	U	2000	5	45	16.649	16.601	0	.	.
21	U	2000	6	37	18.534	18.465	0	.	.
21	U	2000	7	31	24.653	22.373	0	.	.
21	U	2000	8	41	18.417	15.096	0	.	.
21	U	2000	9	41	17.677	17.650	0	.	.
21	U	2000	10	52	14.321	11.671	0	.	.
21	U	2000	11	58	12.355	10.581	0	.	.
21	U	2000	12	31	22.480	41.879	0	.	.
21	U	2001	1	5	137.333	139.160	1	01JAN01	01JAN01
21	U	2001	2	8	78.767	122.600	0	.	.
21	U	2001	3	30	26.663	26.766	0	.	.
21	U	2001	4	36	14.677	15.999	0	.	.
21	U	2001	5	15	63.544	127.591	0	.	.
21	U	2001	6	43	16.523	13.679	0	.	.
21	U	2001	7	57	13.281	13.506	0	.	.
21	U	2001	8	32	23.212	20.013	0	.	.
21	U	2001	9	39	18.385	19.255	0	.	.
21	U	2001	10	42	17.802	16.863	0	.	.
21	U	2001	11	60	11.793	10.913	0	.	.
21	U	2001	12	36	18.674	18.111	0	.	.
21	U	2002	1	0	.	.	1	09JAN02	09JAN02
21	U	2002	2	2	411.150	302.547	0	.	.
21	U	2002	3	36	30.992	69.303	0	.	.
21	U	2002	4	37	19.326	15.951	0	.	.
21	U	2002	5	40	17.781	18.426	0	.	.
21	U	2002	6	30	25.779	21.490	0	.	.
21	U	2002	7	32	23.232	22.229	0	.	.
21	U	2002	8	33	20.992	18.274	0	.	.
21	U	2002	9	38	20.388	23.303	0	.	.
21	U	2002	10	53	13.346	13.792	0	.	.

average interarrival times and first lockage times for random arrivals 35
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LOCK_NO	DIRECTION	year	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
21	U	2002	11	65	11.473	12.371	0	.	.
21	U	2002	12	28	25.833	60.386	0	.	.
21	U	2003	3	25	20.302	26.028	1	10MAR03	10MAR03
21	U	2003	4	39	18.246	14.892	0	.	.
21	U	2003	5	34	19.166	17.051	0	.	.
21	U	2003	6	28	28.651	29.541	0	.	.
21	U	2003	7	30	24.355	21.114	0	.	.
21	U	2003	8	31	24.800	21.724	0	.	.
21	U	2003	9	28	25.696	29.378	0	.	.
21	U	2003	10	44	17.007	14.420	0	.	.
21	U	2003	11	54	13.021	13.667	0	.	.
21	U	2003	12	34	10.991	13.234	0	.	.
22	D	2000	2	5	24.843	24.406	1	24FEB00	24FEB00
22	D	2000	3	35	21.194	19.232	0	.	.
22	D	2000	4	35	19.806	16.253	0	.	.
22	D	2000	5	32	22.857	17.314	0	.	.
22	D	2000	6	29	25.461	25.429	0	.	.
22	D	2000	7	26	29.393	24.043	0	.	.
22	D	2000	8	30	22.939	23.152	0	.	.
22	D	2000	9	33	23.525	28.844	0	.	.
22	D	2000	10	31	23.408	22.405	0	.	.
22	D	2000	11	32	21.356	25.389	0	.	.
22	D	2000	12	20	26.481	28.839	0	.	.
22	D	2001	1	12	50.472	85.214	1	05JAN01	05JAN01
22	D	2001	2	13	51.599	73.781	0	.	.
22	D	2001	3	29	26.416	24.484	0	.	.
22	D	2001	4	45	12.819	11.547	0	.	.
22	D	2001	5	11	81.836	133.996	0	.	.
22	D	2001	6	47	15.141	12.862	0	.	.
22	D	2001	7	35	21.314	29.792	0	.	.
22	D	2001	8	23	30.782	24.701	0	.	.
22	D	2001	9	31	24.635	20.706	0	.	.
22	D	2001	10	36	20.373	22.027	0	.	.
22	D	2001	11	29	24.893	21.838	0	.	.
22	D	2001	12	25	29.055	23.072	0	.	.
22	D	2002	1	2	111.333	154.031	1	01JAN02	01JAN02
22	D	2002	3	41	47.069	186.638	0	.	.
22	D	2002	4	41	17.098	18.748	0	.	.
22	D	2002	5	34	22.161	17.897	0	.	.
22	D	2002	6	33	21.748	19.979	0	.	.
22	D	2002	7	28	26.137	23.065	0	.	.
22	D	2002	8	20	36.941	22.150	0	.	.
22	D	2002	9	25	29.554	27.481	0	.	.
22	D	2002	10	41	18.339	18.711	0	.	.
22	D	2002	11	20	35.683	27.804	0	.	.
22	D	2002	12	13	26.199	14.277	0	.	.
22	D	2003	3	26	15.826	16.396	1	14MAR03	14MAR03
22	D	2003	4	38	18.354	14.609	0	.	.
22	D	2003	5	24	31.714	26.014	0	.	.
22	D	2003	6	16	41.439	33.671	0	.	.
22	D	2003	7	15	50.850	32.346	0	.	.
22	D	2003	8	51	15.327	17.496	0	.	.
22	D	2003	9	37	18.860	19.516	0	.	.
22	D	2003	10	28	27.485	18.352	0	.	.
22	D	2003	11	27	26.738	30.683	0	.	.

average interarrival times and first lockage times for random arrivals 36
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LOCK_NO	DIRECTION	year	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
22	D	2003	12	17	18.463	15.153	0	.	.
22	U	2000	2	2	24.583	3.182	1	24FEB00	24FEB00
22	U	2000	3	42	19.244	18.447	0	.	.
22	U	2000	4	44	16.397	13.354	0	.	.
22	U	2000	5	41	18.088	20.613	0	.	.
22	U	2000	6	46	15.984	18.473	0	.	.
22	U	2000	7	40	18.577	15.485	0	.	.
22	U	2000	8	40	18.665	12.941	0	.	.
22	U	2000	9	44	16.225	15.567	0	.	.
22	U	2000	10	44	17.052	15.318	0	.	.
22	U	2000	11	62	11.672	11.473	0	.	.
22	U	2000	12	23	20.331	28.429	0	.	.
22	U	2001	1	9	71.559	79.662	1	03JAN01	03JAN01
22	U	2001	2	7	71.726	94.168	0	.	.
22	U	2001	3	31	30.091	43.322	0	.	.
22	U	2001	4	27	19.333	17.505	0	.	.
22	U	2001	5	13	71.596	210.340	0	.	.
22	U	2001	6	53	14.037	16.979	0	.	.
22	U	2001	7	58	12.663	10.708	0	.	.
22	U	2001	8	43	17.666	15.839	0	.	.
22	U	2001	9	45	15.859	16.505	0	.	.
22	U	2001	10	36	20.840	20.993	0	.	.
22	U	2001	11	53	13.500	11.545	0	.	.
22	U	2001	12	32	22.109	21.506	0	.	.
22	U	2002	1	1	142.800	.	1	10JAN02	10JAN02
22	U	2002	3	33	54.044	183.387	0	.	.
22	U	2002	4	36	19.139	17.691	0	.	.
22	U	2002	5	37	20.738	16.433	0	.	.
22	U	2002	6	54	13.332	12.264	0	.	.
22	U	2002	7	43	17.600	21.099	0	.	.
22	U	2002	8	34	21.788	23.183	0	.	.
22	U	2002	9	35	20.475	16.737	0	.	.
22	U	2002	10	53	14.010	10.311	0	.	.
22	U	2002	11	64	11.392	11.340	0	.	.
22	U	2002	12	20	17.883	30.116	0	.	.
22	U	2003	3	24	18.759	14.782	1	12MAR03	12MAR03
22	U	2003	4	37	19.701	22.701	0	.	.
22	U	2003	5	30	22.782	16.779	0	.	.
22	U	2003	6	34	22.735	23.618	0	.	.
22	U	2003	7	39	18.472	16.893	0	.	.
22	U	2003	8	57	13.693	14.850	0	.	.
22	U	2003	9	40	17.317	17.236	0	.	.
22	U	2003	10	47	16.145	15.184	0	.	.
22	U	2003	11	51	14.329	15.708	0	.	.
22	U	2003	12	28	10.528	17.647	0	.	.
24	D	2000	1	4	79.875	56.774	1	08JAN00	08JAN00
24	D	2000	2	9	103.657	120.781	0	.	.
24	D	2000	3	36	20.752	19.873	0	.	.
24	D	2000	4	45	15.488	13.827	0	.	.
24	D	2000	5	40	19.120	15.476	0	.	.
24	D	2000	6	34	21.309	15.844	0	.	.
24	D	2000	7	37	20.189	19.877	0	.	.
24	D	2000	8	40	18.315	22.212	0	.	.
24	D	2000	9	36	20.170	18.121	0	.	.
24	D	2000	10	41	18.089	16.450	0	.	.

average interarrival times and first lockage times for random arrivals 37
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LOCK_NO	DIRECTION	year	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
24	D	2000	11	32	22.557	25.540	0	.	.
24	D	2000	12	20	34.575	55.151	0	.	.
24	D	2001	1	14	52.048	61.285	1	01JAN01	01JAN01
24	D	2001	2	14	47.440	46.319	0	.	.
24	D	2001	3	31	23.941	23.902	0	.	.
24	D	2001	4	37	15.572	17.587	0	.	.
24	D	2001	5	22	40.716	69.319	0	.	.
24	D	2001	6	42	16.982	13.133	0	.	.
24	D	2001	7	45	16.052	11.248	0	.	.
24	D	2001	8	33	23.409	24.126	0	.	.
24	D	2001	9	48	14.622	13.475	0	.	.
24	D	2001	10	42	18.230	18.473	0	.	.
24	D	2001	11	36	19.981	19.316	0	.	.
24	D	2001	12	32	22.159	26.216	0	.	.
24	D	2002	3	51	13.538	15.851	1	02MAR02	02MAR02
24	D	2002	4	51	14.154	14.001	0	.	.
24	D	2002	5	39	18.154	22.234	0	.	.
24	D	2002	6	38	20.070	18.767	0	.	.
24	D	2002	7	38	19.370	24.165	0	.	.
24	D	2002	8	25	29.118	39.341	0	.	.
24	D	2002	9	37	20.099	24.092	0	.	.
24	D	2002	10	39	18.615	20.833	0	.	.
24	D	2002	11	34	21.723	19.567	0	.	.
24	D	2002	12	14	23.208	14.622	0	.	.
24	D	2003	3	27	13.667	11.802	1	16MAR03	16MAR03
24	D	2003	4	41	17.362	20.055	0	.	.
24	D	2003	5	29	25.684	21.164	0	.	.
24	D	2003	6	28	25.054	19.752	0	.	.
24	D	2003	7	25	30.503	26.552	0	.	.
24	D	2003	8	28	26.533	23.620	0	.	.
24	D	2003	9	30	23.628	20.006	0	.	.
24	D	2003	10	34	20.669	18.773	0	.	.
24	D	2003	11	24	32.507	29.808	0	.	.
24	D	2003	12	22	14.729	17.871	0	.	.
24	U	2000	1	1	16.083	.	1	04JAN00	04JAN00
24	U	2000	2	5	252.733	416.094	0	.	.
24	U	2000	3	12	65.049	62.833	0	.	.
24	U	2000	4	9	82.333	69.780	0	.	.
24	U	2000	5	6	84.792	49.385	0	.	.
24	U	2000	6	13	72.083	83.857	0	.	.
24	U	2000	7	13	55.962	44.378	0	.	.
24	U	2000	8	18	42.861	43.169	0	.	.
24	U	2000	9	17	38.093	43.722	0	.	.
24	U	2000	10	17	49.353	51.404	0	.	.
24	U	2000	11	38	18.820	20.273	0	.	.
24	U	2000	12	13	35.608	45.269	0	.	.
24	U	2001	1	9	30.861	32.125	1	03JAN01	03JAN01
24	U	2001	2	3	355.333	333.543	0	.	.
24	U	2001	3	9	80.194	64.757	0	.	.
24	U	2001	4	8	67.354	69.936	0	.	.
24	U	2001	5	11	87.561	146.369	0	.	.
24	U	2001	6	24	28.660	38.973	0	.	.
24	U	2001	7	24	31.938	39.077	0	.	.
24	U	2001	8	22	34.039	38.892	0	.	.
24	U	2001	9	35	19.842	13.890	0	.	.

average interarrival times and first lockage times for random arrivals 38
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LOCK_NO	DIRECTION	year	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
24	U	2001	10	9	84.602	77.700	0	.	.
24	U	2001	11	32	22.638	19.542	0	.	.
24	U	2001	12	25	26.520	26.146	0	.	.
24	U	2002	3	17	40.431	51.336	1	01MAR02	01MAR02
24	U	2002	4	24	31.486	34.820	0	.	.
24	U	2002	5	24	29.726	25.510	0	.	.
24	U	2002	6	31	23.833	23.337	0	.	.
24	U	2002	7	28	27.104	24.779	0	.	.
24	U	2002	8	19	37.610	38.497	0	.	.
24	U	2002	9	17	43.868	49.666	0	.	.
24	U	2002	10	23	30.315	24.033	0	.	.
24	U	2002	11	47	16.461	17.340	0	.	.
24	U	2002	12	17	20.882	21.153	0	.	.
24	U	2003	3	16	26.896	22.802	1	13MAR03	13MAR03
24	U	2003	4	15	47.989	49.695	0	.	.
24	U	2003	5	11	68.621	111.128	0	.	.
24	U	2003	6	14	45.768	42.585	0	.	.
24	U	2003	7	14	53.054	64.148	0	.	.
24	U	2003	8	10	76.617	78.876	0	.	.
24	U	2003	9	12	62.472	65.793	0	.	.
24	U	2003	10	16	43.229	50.132	0	.	.
24	U	2003	11	22	36.424	32.949	0	.	.
24	U	2003	12	19	15.342	16.758	0	.	.
25	D	2000	1	1	182.083	.	1	01JAN00	01JAN00
25	D	2000	2	5	250.533	304.710	0	.	.
25	D	2000	3	21	35.560	34.076	0	.	.
25	D	2000	4	23	29.772	26.900	0	.	.
25	D	2000	5	19	40.259	28.243	0	.	.
25	D	2000	6	23	31.221	32.028	0	.	.
25	D	2000	7	22	33.462	29.098	0	.	.
25	D	2000	8	25	25.830	24.696	0	.	.
25	D	2000	9	24	35.108	43.923	0	.	.
25	D	2000	10	28	26.423	22.512	0	.	.
25	D	2000	11	19	37.390	36.766	0	.	.
25	D	2000	12	16	28.958	36.720	0	.	.
25	D	2001	1	8	66.188	57.939	1	03JAN01	03JAN01
25	D	2001	2	20	38.083	49.625	0	.	.
25	D	2001	3	25	31.987	37.482	0	.	.
25	D	2001	4	22	27.102	27.693	0	.	.
25	D	2001	5	11	78.486	98.328	0	.	.
25	D	2001	6	31	22.526	25.162	0	.	.
25	D	2001	7	40	19.102	15.064	0	.	.
25	D	2001	8	39	19.250	17.010	0	.	.
25	D	2001	9	28	23.759	19.680	0	.	.
25	D	2001	10	23	34.370	35.346	0	.	.
25	D	2001	11	27	25.833	33.121	0	.	.
25	D	2001	12	15	37.839	32.699	0	.	.
25	D	2002	1	0	.	.	1	18JAN02	18JAN02
25	D	2002	2	1	965.467	.	0	.	.
25	D	2002	3	35	22.079	36.150	0	.	.
25	D	2002	4	16	35.165	24.437	0	.	.
25	D	2002	5	18	47.965	44.332	0	.	.
25	D	2002	6	17	43.490	38.825	0	.	.
25	D	2002	7	19	39.044	36.415	0	.	.
25	D	2002	8	21	35.476	28.967	0	.	.

average interarrival times and first lockage times for random arrivals 39
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LOCK_NO	DIRECTION	year	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
25	D	2002	9	12	50.840	54.863	0	.	.
25	D	2002	10	16	52.828	63.735	0	.	.
25	D	2002	11	18	39.968	31.056	0	.	.
25	D	2002	12	9	58.093	58.425	0	.	.
25	D	2003	1	0	.	.	1	11JAN03	11JAN03
25	D	2003	3	22	86.337	271.623	0	.	.
25	D	2003	4	25	28.757	24.951	0	.	.
25	D	2003	5	22	33.748	42.291	0	.	.
25	D	2003	6	26	26.431	21.227	0	.	.
25	D	2003	7	19	39.614	37.107	0	.	.
25	D	2003	8	19	39.030	38.073	0	.	.
25	D	2003	9	14	50.995	50.330	0	.	.
25	D	2003	10	12	64.590	59.719	0	.	.
25	D	2003	11	13	52.865	42.759	0	.	.
25	D	2003	12	6	72.667	75.027	0	.	.
25	U	2000	1	4	120.417	31.259	1	01JAN00	01JAN00
25	U	2000	2	32	29.872	72.324	0	.	.
25	U	2000	3	192	3.868	3.911	0	.	.
25	U	2000	4	191	3.786	3.640	0	.	.
25	U	2000	5	188	3.948	3.724	0	.	.
25	U	2000	6	195	3.701	3.748	0	.	.
25	U	2000	7	197	3.743	3.505	0	.	.
25	U	2000	8	186	3.985	4.036	0	.	.
25	U	2000	9	146	4.993	4.928	0	.	.
25	U	2000	10	179	4.129	4.566	0	.	.
25	U	2000	11	177	4.008	4.005	0	.	.
25	U	2000	12	65	10.051	21.164	0	.	.
25	U	2001	1	21	31.667	42.800	1	03JAN01	03JAN01
25	U	2001	2	55	12.671	19.481	0	.	.
25	U	2001	3	158	4.704	5.074	0	.	.
25	U	2001	4	143	4.650	8.948	0	.	.
25	U	2001	5	119	6.725	15.299	0	.	.
25	U	2001	6	214	3.380	3.416	0	.	.
25	U	2001	7	238	3.104	3.024	0	.	.
25	U	2001	8	207	3.612	3.619	0	.	.
25	U	2001	9	144	4.898	4.991	0	.	.
25	U	2001	10	164	4.602	4.391	0	.	.
25	U	2001	11	163	4.462	4.003	0	.	.
25	U	2001	12	91	7.857	7.883	0	.	.
25	U	2002	1	1	234.833	.	1	01JAN02	01JAN02
25	U	2002	2	9	128.417	339.535	0	.	.
25	U	2002	3	193	3.836	4.129	0	.	.
25	U	2002	4	177	4.062	3.705	0	.	.
25	U	2002	5	207	3.633	3.562	0	.	.
25	U	2002	6	230	3.129	2.692	0	.	.
25	U	2002	7	198	3.754	3.542	0	.	.
25	U	2002	8	171	4.353	3.629	0	.	.
25	U	2002	9	165	4.369	3.924	0	.	.
25	U	2002	10	191	3.902	4.165	0	.	.
25	U	2002	11	208	3.418	3.146	0	.	.
25	U	2002	12	60	6.866	7.930	0	.	.
25	U	2003	1	0	.	.	1	11JAN03	11JAN03
25	U	2003	3	140	13.621	108.041	0	.	.
25	U	2003	4	180	3.999	3.600	0	.	.
25	U	2003	5	177	4.209	3.667	0	.	.

average interarrival times and first lockage times for random arrivals 40
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LOCK_NO	DIRECTION	year	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
25	U	2003	6	187	3.82487	3.60466	0	.	.
25	U	2003	7	197	3.80795	3.66042	0	.	.
25	U	2003	8	145	5.01839	5.02681	0	.	.
25	U	2003	9	120	6.12847	6.58324	0	.	.
25	U	2003	10	150	4.96722	4.37163	0	.	.
25	U	2003	11	141	5.04787	5.14902	0	.	.
25	U	2003	12	61	6.65027	8.35680	0	.	.

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with fullmod = no 14:40 Friday, June 24, 2005

LOCK_NO	DIRECTION	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
20	D	1	0	.	.	1	01JAN01	01JAN01
20	D	2	14	130.124	311.535	2	27FEB00	11FEB02
20	D	3	392	7.110	9.576	1	10MAR03	10MAR03
20	D	4	559	4.752	4.396	0	.	.
20	D	5	516	6.227	32.876	0	.	.
20	D	6	703	4.095	3.638	0	.	.
20	D	7	743	4.000	3.428	0	.	.
20	D	8	676	4.404	3.890	0	.	.
20	D	9	546	5.258	4.918	0	.	.
20	D	10	627	4.777	4.848	0	.	.
20	D	11	760	3.768	3.555	0	.	.
20	D	12	347	7.020	27.608	0	.	.
20	U	2	13	29.019	34.369	3	22FEB00	27FEB02
20	U	3	187	15.478	21.203	1	07MAR03	07MAR03
20	U	4	163	16.009	15.548	0	.	.
20	U	5	141	23.088	64.549	0	.	.
20	U	6	165	17.272	15.796	0	.	.
20	U	7	188	15.612	16.067	0	.	.
20	U	8	202	14.878	15.629	0	.	.
20	U	9	205	14.094	13.846	0	.	.
20	U	10	251	11.909	12.566	0	.	.
20	U	11	265	10.885	10.534	0	.	.
20	U	12	147	16.278	53.533	0	.	.
21	D	1	16	43.328	55.689	2	01JAN01	09JAN02
21	D	2	29	66.612	156.878	1	24FEB00	24FEB00
21	D	3	203	13.286	13.543	1	13MAR03	13MAR03
21	D	4	202	13.603	12.339	0	.	.
21	D	5	135	23.558	45.708	0	.	.
21	D	6	158	18.098	20.087	0	.	.
21	D	7	156	18.930	19.977	0	.	.
21	D	8	185	16.107	14.040	0	.	.
21	D	9	187	15.477	14.670	0	.	.
21	D	10	220	13.593	12.770	0	.	.
21	D	11	201	14.233	12.228	0	.	.
21	D	12	114	22.142	41.683	0	.	.
21	U	1	5	137.333	139.160	2	01JAN01	09JAN02
21	U	2	10	145.243	203.720	1	28FEB00	28FEB00
21	U	3	129	24.859	42.634	1	10MAR03	10MAR03
21	U	4	139	19.206	17.425	0	.	.
21	U	5	134	22.875	46.770	0	.	.
21	U	6	138	21.535	21.007	0	.	.
21	U	7	150	19.969	19.666	0	.	.
21	U	8	137	21.602	18.631	0	.	.
21	U	9	146	20.110	22.156	0	.	.
21	U	10	191	15.434	14.157	0	.	.
21	U	11	237	12.122	11.858	0	.	.
21	U	12	129	19.117	36.678	0	.	.
22	D	1	14	59.167	91.966	2	05JAN01	01JAN02
22	D	2	18	44.167	64.302	1	24FEB00	24FEB00
22	D	3	131	29.383	105.599	1	14MAR03	14MAR03
22	D	4	159	16.783	15.494	0	.	.
22	D	5	101	31.151	49.819	0	.	.
22	D	6	125	22.646	22.727	0	.	.
22	D	7	104	28.892	28.404	0	.	.
22	D	8	124	23.521	22.423	0	.	.

average interarrival times and first lockage times for random arrivals 42
with fullmod = no 14:40 Friday, June 24, 2005

LOCK_NO	DIRECTION	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
22	D	9	126	23.625	24.178	0	.	.
22	D	10	136	21.916	20.491	0	.	.
22	D	11	108	26.304	26.494	0	.	.
22	D	12	75	25.472	22.020	0	.	.
22	U	1	10	78.683	78.412	2	03JAN01	10JAN02
22	U	2	9	61.250	84.167	1	24FEB00	24FEB00
22	U	3	130	30.575	95.576	1	12MAR03	12MAR03
22	U	4	144	18.482	17.822	0	.	.
22	U	5	121	25.811	70.517	0	.	.
22	U	6	187	15.894	17.788	0	.	.
22	U	7	180	16.415	16.145	0	.	.
22	U	8	174	17.400	16.771	0	.	.
22	U	9	164	17.298	16.433	0	.	.
22	U	10	180	16.677	15.439	0	.	.
22	U	11	230	12.604	12.493	0	.	.
22	U	12	103	17.743	24.250	0	.	.
24	D	1	18	58.231	59.855	2	08JAN00	01JAN01
24	D	2	23	69.438	85.788	0	.	.
24	D	3	145	17.577	18.636	2	02MAR02	16MAR03
24	D	4	174	15.556	16.248	0	.	.
24	D	5	130	23.949	34.110	0	.	.
24	D	6	142	20.436	16.854	0	.	.
24	D	7	145	20.469	20.710	0	.	.
24	D	8	126	23.619	27.158	0	.	.
24	D	9	151	19.076	19.007	0	.	.
24	D	10	156	18.821	18.508	0	.	.
24	D	11	126	23.491	23.474	0	.	.
24	D	12	88	23.290	32.657	0	.	.
24	U	1	10	29.383	30.646	2	04JAN00	03JAN01
24	U	2	8	291.208	365.431	0	.	.
24	U	3	54	48.519	52.815	2	01MAR02	13MAR03
24	U	4	56	49.202	53.210	0	.	.
24	U	5	52	56.542	88.465	0	.	.
24	U	6	82	36.640	47.576	0	.	.
24	U	7	79	37.920	42.426	0	.	.
24	U	8	69	43.494	48.464	0	.	.
24	U	9	81	35.030	42.253	0	.	.
24	U	10	65	45.990	50.057	0	.	.
24	U	11	139	21.688	22.535	0	.	.
24	U	12	74	23.951	27.872	0	.	.
25	D	1	9	79.065	66.556	4	01JAN00	11JAN03
25	D	2	26	114.608	232.520	0	.	.
25	D	3	103	40.957	129.522	0	.	.
25	D	4	86	29.797	25.798	0	.	.
25	D	5	70	46.201	53.516	0	.	.
25	D	6	97	29.309	29.242	0	.	.
25	D	7	100	29.947	29.061	0	.	.
25	D	8	104	27.722	27.000	0	.	.
25	D	9	78	36.306	41.226	0	.	.
25	D	10	79	39.882	44.880	0	.	.
25	D	11	77	36.553	35.905	0	.	.
25	D	12	46	43.255	47.500	0	.	.
25	U	1	26	53.135	63.362	4	01JAN00	11JAN03
25	U	2	96	29.256	112.790	0	.	.
25	U	3	683	6.052	49.082	0	.	.

average interarrival times and first lockage times for random arrivals 43
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LOCK_NO	DIRECTION	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
25	U	4	691	4.09091	5.2043	0	.	.
25	U	5	691	4.39870	7.2233	0	.	.
25	U	6	826	3.48638	3.3665	0	.	.
25	U	7	830	3.57761	3.4291	0	.	.
25	U	8	709	4.17630	4.0772	0	.	.
25	U	9	575	5.02681	5.1097	0	.	.
25	U	10	684	4.36287	4.3814	0	.	.
25	U	11	689	4.15029	4.0747	0	.	.
25	U	12	277	7.89164	12.4268	0	.	.

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using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table of lock by nxtstep

lock / Frequency / Percent / Row Pct / Col Pct	CONTSTOP	EnterMI	Other	Return	Total
19	2	130	662	3	797
	0.03	1.80	9.18	0.04	11.05
	0.25	16.31	83.06	0.38	
	3.51	8.55	11.88	5.00	
20	4	125	521	5	655
	0.06	1.73	7.22	0.07	9.08
	0.61	19.08	79.54	0.76	
	7.02	8.22	9.35	8.33	
21	2	137	647	3	789
	0.03	1.90	8.97	0.04	10.94
	0.25	17.36	82.00	0.38	
	3.51	9.01	11.61	5.00	
22	2	138	588	2	730
	0.03	1.91	8.15	0.03	10.12
	0.27	18.90	80.55	0.27	
	3.51	9.07	10.55	3.33	
24	11	192	774	2	979
	0.15	2.66	10.73	0.03	13.57
	1.12	19.61	79.06	0.20	
	19.30	12.62	13.89	3.33	
25	13	213	976	7	1209
	0.18	2.95	13.53	0.10	16.76
	1.08	17.62	80.73	0.58	
	22.81	14.00	17.51	11.67	
26	23	586	1406	38	2053
	0.32	8.13	19.50	0.53	28.47
	1.12	28.54	68.49	1.85	
	40.35	38.53	25.22	63.33	
Total	57	1521	5574	60	7212
	0.79	21.09	77.29	0.83	100.00

changes in configuration after downstream lockages 14:20 Friday, June 24, 2005 2
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table of lock by nxtstep

lock	nxtstep			
Frequency / Percent / Row Pct / Col Pct	CONTSTOP	EnterMI	Other	Return	Total
19	17	243	756	6	1022
	0.19	2.65	8.24	0.07	11.14
	1.66	23.78	73.97	0.59	
	12.88	10.87	11.20	10.91	
20	14	172	716	1	903
	0.15	1.87	7.80	0.01	9.84
	1.55	19.05	79.29	0.11	
	10.61	7.70	10.60	1.82	
21	19	265	744	4	1032
	0.21	2.89	8.11	0.04	11.25
	1.84	25.68	72.09	0.39	
	14.39	11.86	11.02	7.27	
22	18	185	680	6	889
	0.20	2.02	7.41	0.07	9.69
	2.02	20.81	76.49	0.67	
	13.64	8.28	10.07	10.91	
24	19	252	867	2	1140
	0.21	2.75	9.45	0.02	12.43
	1.67	22.11	76.05	0.18	
	14.39	11.28	12.84	3.64	
25	16	249	1111	6	1382
	0.17	2.71	12.11	0.07	15.06
	1.16	18.02	80.39	0.43	
	12.12	11.14	16.45	10.91	
26	29	869	1879	30	2807
	0.32	9.47	20.48	0.33	30.59
	1.03	30.96	66.94	1.07	
	21.97	38.88	27.82	54.55	
Total	132	2235	6753	55	9175
	1.44	24.36	73.60	0.60	100.00

data in regfile after picking up impairment data 14:20 Friday, June 24, 2005 3
using data from mdy(1,1,2000) to mdy(12,31,2003)

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	36290	0	145254456444	4002602.82	3494031.00	4332992.00
strtlcktime	Start/lockge/time	36290	0	4.8199883E13	1328186360	1262343000	1388404500
arrtime	Arriv/time	36290	0	4.8199866E13	1328185888	1262343000	1388404500
deptime	Leave/lockge/time	36290	0	4.8199917E13	1328187299	1262344020	1388405400
BOW_OVER_SILL	BOW_OVER_SILL	0	36290	.	.	.	.
END_OF_ENTRY	END_OF_ENTRY	0	36290	.	.	.	.
START_OF_EXIT	START_OF_EXIT	0	36290	.	.	.	.
SIGNAL_DATE	SIGNAL_DATE	0	36290	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	36290	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	0	36290	.	.	.	.
NUM_EMPTY_BRG	NUM_EMPTY_BRG	0	36290	.	.	.	.
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	36290	.	.	.	.
vess_no		36290	0	362899963710	9999999.00	9999999.00	9999999.00
vss_hp		0	36290	.	.	.	.
frsttime		36290	0	4.8199866E13	1328185888	1262343000	1388404500
lasttime		36290	0	4.8199917E13	1328187299	1262344020	1388405400
newpoolno		36290	0	682331.00	18.8021769	1.0000000	56.0000000
oldpoolno		36290	0	678607.00	18.6995591	1.0000000	56.0000000
waitmin	Wait/before/lockge	36290	0	285736.00	7.8736842	0	14400.00
lockmin	Wait/lockge/time	36290	0	567996.00	15.6515845	1.0000000	543.0000000
year		36290	0	72633972.00	2001.49	2000.00	2003.00
fly		36290	0	27435.00	0.7559934	0	1.0000000
turnback		36290	0	3387.00	0.0933315	0	1.0000000
exchange		36290	0	5468.00	0.1506751	0	1.0000000
lock		36290	0	662324.00	18.2508680	1.0000000	55.0000000
totmin		36290	0	853732.00	23.5252687	1.0000000	14410.00
month		36290	0	280817.00	7.7381372	1.0000000	12.0000000
day		36290	0	549284.00	15.1359603	1.0000000	31.0000000
sunrise		28673	7617	644722845	22485.36	19360.00	28091.00
sunset		28673	7617	2039491318	71129.33	59437.00	75777.00
sequpstr		36290	0	0	0	0	0
seqdstr		36290	0	0	0	0	0
plock		36290	0	616532.00	16.9890328	1.0000000	55.0000000
pempty		0	36290	.	.	.	.
pfull		0	36290	.	.	.	.
parrtime		36290	0	4.8199836E13	1328185074	1262331720	1388310900
pstrtlcktime		36290	0	4.8199854E13	1328185564	1262331720	1388310900
pdeptime		36290	0	4.8199888E13	1328186496	1262332920	1388312280
birth		36290	0	0	0	0	0
transithrs		36290	0	-6133.42	-0.1690112	-240.0000000	192.3500000
reclock		36290	0	36290.00	1.0000000	1.0000000	1.0000000
i		36290	0	7964983.00	219.4814825	58.0000000	401.0000000
pctpsysdn		19591	16699	2094.43	0.1069075	0	97.4360000
pctplckdn		19591	16699	697.3230000	0.0355940	0	97.9740000
cumdown		19417	16873	48060.00	2.4751506	0	31920.00
pctdown		19417	16873	632.3230000	0.0325654	0	97.9740000
pcttrandn		1746	34544	891.0290000	0.5103259	0	100.0000000
pctsysdn		19417	16873	2029.43	0.1045179	0	97.4360000
pctlckdn		19417	16873	632.3230000	0.0325654	0	97.9740000
stime		36290	0	1759992960	48498.01	0	86340.00
etime		36290	0	1790271120	49332.35	0	86340.00

data in regfile after picking up impairment data 14:20 Friday, June 24, 2005 4
using data from mdy(1,1,2000) to mdy(12,31,2003)

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
sdate		36290	0	557848646	15371.97	14610.00	16069.00
edate		36290	0	557848690	15371.97	14610.00	16069.00
hrsduration		36290	0	9466.60	0.2608597	0.0166667	9.0500000
ndays		36290	0	0	0	0	0
pctday		36277	13	2659047.98	73.2984529	0	100.0000000
pctpsysnite		36271	19	964957.00	26.6040914	0	100.0000000
pctplcknite		36278	12	970749.25	26.7586210	0	100.0000000
pcttrannite		36225	65	968424.49	26.7335952	0	100.0000000
pctsysnite		36277	13	961613.40	26.5075228	0	100.0000000
pctlcknite		36277	13	968652.02	26.7015471	0	100.0000000
stage		14452	21838	296681.83	20.5287732	8.3200000	33.2500000
flow		4880	31410	434735674	89085.18	16240.90	280143.91

changes in configuration after upstream lockages 14:20 Friday, June 24, 2005 5
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 1 of plockagetype by LOCKAGE_TYPE
Controlling for plock=19

plockagetype
LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	2:SINGLE	Total
2:SINGLE	587 100.00 100.00	587 100.00
Total	587 100.00	587 100.00

Table 2 of plockagetype by LOCKAGE_TYPE
Controlling for plock=20

plockagetype
LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	2:SINGLE	Total
2:SINGLE	487 100.00 100.00	487 100.00
Total	487 100.00	487 100.00

changes in configuration after upstream lockages 14:20 Friday, June 24, 2005 6
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 3 of plockagetype by LOCKAGE_TYPE
Controlling for plock=21

plockagetype
LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	2:SINGLE	Total
2:SINGLE	573 100.00 100.00	573 100.00
Total	573 100.00	573 100.00

Table 4 of plockagetype by LOCKAGE_TYPE
Controlling for plock=22

plockagetype
LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	2:SINGLE	Total
2:SINGLE	519 100.00 100.00	519 100.00
Total	519 100.00	519 100.00

changes in configuration after upstream lockages 14:20 Friday, June 24, 2005 7
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 5 of plockagetype by LOCKAGE_TYPE
Controlling for plock=24

plockagetype	LOCKAGE_TYPE(LOCKAGE_TYPE)	
Frequency Percent Row Pct Col Pct	2:SINGLE	Total
2:SINGLE	698 100.00 100.00 100.00	698 100.00
Total	698 100.00	698 100.00

Table 6 of plockagetype by LOCKAGE_TYPE
Controlling for plock=25

plockagetype	LOCKAGE_TYPE(LOCKAGE_TYPE)	
Frequency Percent Row Pct Col Pct	2:SINGLE	Total
2:SINGLE	860 100.00 100.00 100.00	860 100.00
Total	860 100.00	860 100.00

changes in configuration after upstream lockages 14:20 Friday, June 24, 2005 8
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 7 of plockagetype by LOCKAGE_TYPE
Controlling for plock=26

plockagetype
LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	2:SINGLE	Total
2:SINGLE	1304 100.00 100.00 100.00	1304 100.00
Total	1304 100.00	1304 100.00

changes in configuration after upstream lockages 14:20 Friday, June 24, 2005 9
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by nxtstep

pnewpool / nxtstep Frequency Percent Row Pct Col Pct	CONTSTOP	Other	Return	Total
MI19U	5 0.10 0.85 12.82	576 11.46 98.13 11.67	6 0.12 1.02 10.91	587 11.67
MI20U	2 0.04 0.41 5.13	484 9.63 99.38 9.81	1 0.02 0.21 1.82	487 9.69
MI21U	4 0.08 0.70 10.26	565 11.24 98.60 11.45	4 0.08 0.70 7.27	573 11.40
MI22U	2 0.04 0.39 5.13	511 10.16 98.46 10.36	6 0.12 1.16 10.91	519 10.32
MI24U	2 0.04 0.29 5.13	694 13.80 99.43 14.07	2 0.04 0.29 3.64	698 13.88
MI25U	11 0.22 1.28 28.21	843 16.77 98.02 17.09	6 0.12 0.70 10.91	860 17.10
MI26U	13 0.26 1.00 33.33	1261 25.08 96.70 25.56	30 0.60 2.30 54.55	1304 25.93
Total	39 0.78	4934 98.13	55 1.09	5028 100.00

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changes in configuration after downstream lockages           14:20 Friday, June 24, 2005  10
 using data from mdy(1,1,2000) to mdy(12,31,2003)

               The FREQ Procedure

    Table 1 of plockagetype by LOCKAGE_TYPE
      Controlling for plock=19

      plockagetype
                  LOCKAGE_TYPE(LOCKAGE_TYPE)

      Frequency  |
      Percent    |
      Row Pct    |
      Col Pct    |2:SINGLE|  Total
                 |        |
      -----------+--------+
      2:SINGLE   |     724 |    724
                 |  100.00 | 100.00
                 |  100.00 |
                 | 100.00 |
      -----------+--------+
      Total           724      724
                   100.00   100.00


    Table 2 of plockagetype by LOCKAGE_TYPE
      Controlling for plock=20

      plockagetype
                  LOCKAGE_TYPE(LOCKAGE_TYPE)

      Frequency  |
      Percent    |
      Row Pct    |
      Col Pct    |2:SINGLE|  Total
                 |        |
      -----------+--------+
      2:SINGLE   |     644 |    644
                 |  100.00 | 100.00
                 |  100.00 |
                 | 100.00 |
      -----------+--------+
      Total           644      644
                   100.00   100.00
```

changes in configuration after downstream lockages 14:20 Friday, June 24, 2005 11
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 3 of plockagetype by LOCKAGE_TYPE
Controlling for plock=21

plockagetype	LOCKAGE_TYPE(LOCKAGE_TYPE)	
Frequency Percent Row Pct Col Pct	2:SINGLE	Total
2:SINGLE	734 100.00 100.00 100.00	734 100.00
Total	734 100.00	734 100.00

Table 4 of plockagetype by LOCKAGE_TYPE
Controlling for plock=22

plockagetype	LOCKAGE_TYPE(LOCKAGE_TYPE)	
Frequency Percent Row Pct Col Pct	2:SINGLE	Total
2:SINGLE	648 100.00 100.00 100.00	648 100.00
Total	648 100.00	648 100.00

```
changes in configuration after downstream lockages           14:20 Friday, June 24, 2005  12
 using data from mdy(1,1,2000) to mdy(12,31,2003)

               The FREQ Procedure

    Table 5 of plockagetype by LOCKAGE_TYPE
      Controlling for plock=24

      plockagetype
                  LOCKAGE_TYPE(LOCKAGE_TYPE)

      Frequency  |
      Percent    |
      Row Pct    |
      Col Pct    |2:SINGLE|  Total
                 |        |
      -----------+--------+
      2:SINGLE   |     770 |    770
                 |  100.00 | 100.00
                 |  100.00 |
                 | 100.00 |
      -----------+--------+
      Total           770      770
                   100.00   100.00


    Table 6 of plockagetype by LOCKAGE_TYPE
      Controlling for plock=25

      plockagetype
                  LOCKAGE_TYPE(LOCKAGE_TYPE)

      Frequency  |
      Percent    |
      Row Pct    |
      Col Pct    |2:SINGLE|  Total
                 |        |
      -----------+--------+
      2:SINGLE   |     993 |    993
                 |  100.00 | 100.00
                 |  100.00 |
                 | 100.00 |
      -----------+--------+
      Total           993      993
                   100.00   100.00
```

changes in configuration after downstream lockages 14:20 Friday, June 24, 2005 13
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 7 of plockagetype by LOCKAGE_TYPE
Controlling for plock=26

plockagetype
LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	2:SINGLE	Total
2:SINGLE	1742 100.00 100.00	1742 100.00
Total	1742 100.00	1742 100.00

changes in configuration after downstream lockages 14:20 Friday, June 24, 2005 14
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by nxtstep

pnewpool nxtstep

Frequency Percent Row Pct Col Pct	CONTSTOP	Other	Return	Total
MI20D	14	707	3	724
	0.22	11.30	0.05	11.57
	1.93	97.65	0.41	
	6.48	11.82	5.00	
MI21D	19	620	5	644
	0.30	9.91	0.08	10.30
	2.95	96.27	0.78	
	8.80	10.37	8.33	
MI22D	18	713	3	734
	0.29	11.40	0.05	11.73
	2.45	97.14	0.41	
	8.33	11.93	5.00	
MI24D	19	627	2	648
	0.30	10.02	0.03	10.36
	2.93	96.76	0.31	
	8.80	10.49	3.33	
MI25D	16	752	2	770
	0.26	12.02	0.03	12.31
	2.08	97.66	0.26	
	7.41	12.58	3.33	
MI26D	29	957	7	993
	0.46	15.30	0.11	15.88
	2.92	96.37	0.70	
	13.43	16.01	11.67	
MI27D	101	1603	38	1742
	1.61	25.63	0.61	27.85
	5.80	92.02	2.18	
	46.76	26.81	63.33	
Total	216	5979	60	6255
	3.45	95.59	0.96	100.00

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LOCK_NO	DIRECTION	year	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
20	D	2000	4	2	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2000	5	11	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2000	6	28	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2000	7	52	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2000	8	65	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2000	9	45	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2000	10	38	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2000	11	8	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2001	5	2	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2001	6	18	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2001	7	53	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2001	8	58	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2001	9	42	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2001	10	35	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2001	11	6	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2001	12	4	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2002	3	2	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2002	4	2	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2002	5	7	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2002	6	23	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2002	7	46	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2002	8	61	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2002	9	44	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2002	10	40	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2002	11	8	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2003	1	1	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2003	3	1	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2003	4	2	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2003	5	4	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2003	6	14	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2003	7	46	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2003	8	56	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2003	9	43	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2003	10	27	0.000	0.000	0.000	0.000	0.000	1.000
20	D	2003	11	10	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2000	4	8	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2000	5	27	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2000	6	24	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2000	7	42	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2000	8	49	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2000	9	23	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2000	10	6	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2001	3	3	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2001	4	1	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2001	5	4	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2001	6	21	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2001	7	38	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2001	8	39	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2001	9	23	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2001	10	5	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2001	11	1	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2001	12	1	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2002	3	1	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2002	4	7	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2002	5	19	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2002	6	27	0.000	0.000	0.000	0.000	0.000	1.000

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LOCK_NO	DIRECTION	year	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
20	U	2002	7	46	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2002	8	44	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2002	9	27	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2002	10	4	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2003	1	1	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2003	3	1	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2003	4	5	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2003	5	12	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2003	6	20	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2003	7	35	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2003	8	59	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2003	9	24	0.000	0.000	0.000	0.000	0.000	1.000
20	U	2003	10	8	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2000	3	4	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2000	4	7	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2000	5	19	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2000	6	29	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2000	7	67	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2000	8	73	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2000	9	42	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2000	10	39	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2000	11	9	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2000	12	1	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2001	4	1	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2001	5	1	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2001	6	19	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2001	7	52	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2001	8	52	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2001	9	41	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2001	10	39	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2001	11	10	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2001	12	2	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2002	1	1	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2002	3	1	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2002	4	2	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2002	5	14	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2002	6	41	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2002	7	57	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2002	8	69	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2002	9	51	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2002	10	39	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2002	11	7	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2003	3	1	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2003	4	5	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2003	5	9	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2003	6	28	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2003	7	45	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2003	8	58	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2003	9	49	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2003	10	37	0.000	0.000	0.000	0.000	0.000	1.000
21	D	2003	11	12	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2000	3	2	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2000	4	12	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2000	5	34	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2000	6	25	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2000	7	52	0.000	0.000	0.000	0.000	0.000	1.000

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LOCK_NO	DIRECTION	year	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
21	U	2000	8	55	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2000	9	25	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2000	10	8	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2000	11	1	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2001	3	3	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2001	4	2	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2001	5	5	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2001	6	25	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2001	7	45	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2001	8	43	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2001	9	28	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2001	10	6	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2001	11	1	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2002	1	1	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2002	3	1	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2002	4	8	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2002	5	20	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2002	6	35	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2002	7	51	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2002	8	58	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2002	9	51	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2002	10	4	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2003	3	2	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2003	4	4	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2003	5	17	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2003	6	32	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2003	7	39	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2003	8	55	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2003	9	29	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2003	10	8	0.000	0.000	0.000	0.000	0.000	1.000
21	U	2003	11	2	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2000	3	3	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2000	4	2	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2000	5	12	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2000	6	29	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2000	7	56	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2000	8	53	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2000	9	41	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2000	10	41	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2000	11	10	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2000	12	1	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2001	5	1	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2001	6	19	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2001	7	45	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2001	8	57	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2001	9	38	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2001	10	33	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2001	11	5	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2001	12	3	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2002	3	1	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2002	4	3	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2002	5	10	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2002	6	22	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2002	7	44	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2002	8	59	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2002	9	49	0.000	0.000	0.000	0.000	0.000	1.000

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LOCK_NO	DIRECTION	year	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
22	D	2002	10	38	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2002	11	8	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2003	4	3	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2003	5	8	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2003	6	23	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2003	7	40	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2003	8	44	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2003	9	39	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2003	10	35	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2003	11	13	0.000	0.000	0.000	0.000	0.000	1.000
22	D	2003	12	1	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2000	3	2	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2000	4	8	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2000	5	22	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2000	6	40	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2000	7	39	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2000	8	41	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2000	9	35	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2000	10	12	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2001	3	2	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2001	4	1	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2001	5	3	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2001	6	18	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2001	7	51	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2001	8	46	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2001	9	32	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2001	10	4	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2001	11	4	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2002	3	2	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2002	4	8	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2002	5	28	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2002	6	23	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2002	7	40	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2002	8	49	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2002	9	39	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2002	10	4	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2003	3	1	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2003	4	7	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2003	5	13	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2003	6	30	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2003	7	36	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2003	8	57	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2003	9	25	0.000	0.000	0.000	0.000	0.000	1.000
22	U	2003	10	9	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2000	3	2	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2000	4	6	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2000	5	21	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2000	6	35	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2000	7	72	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2000	8	67	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2000	9	77	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2000	10	52	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2000	11	14	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2000	12	1	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2001	3	1	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2001	5	3	0.000	0.000	0.000	0.000	0.000	1.000

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LOCK_NO	DIRECTION	year	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
24	D	2001	6	25	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2001	7	57	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2001	8	57	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2001	9	72	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2001	10	45	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2001	11	14	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2001	12	5	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2002	3	1	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2002	4	3	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2002	5	12	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2002	6	24	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2002	7	46	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2002	8	56	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2002	9	60	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2002	10	37	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2002	11	13	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2003	4	7	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2003	5	11	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2003	6	23	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2003	7	50	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2003	8	68	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2003	9	44	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2003	10	44	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2003	11	14	0.000	0.000	0.000	0.000	0.000	1.000
24	D	2003	12	1	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2000	3	4	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2000	4	10	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2000	5	33	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2000	6	36	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2000	7	53	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2000	8	56	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2000	9	65	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2000	10	16	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2000	11	1	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2001	3	4	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2001	4	2	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2001	5	3	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2001	6	31	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2001	7	50	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2001	8	70	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2001	9	48	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2001	10	20	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2001	11	6	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2001	12	1	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2002	3	2	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2002	4	10	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2002	5	20	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2002	6	39	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2002	7	50	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2002	8	70	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2002	9	38	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2002	10	14	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2002	11	2	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2003	3	1	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2003	4	9	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2003	5	18	0.000	0.000	0.000	0.000	0.000	1.000

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LOCK_NO	DIRECTION	year	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
24	U	2003	6	32	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2003	7	55	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2003	8	73	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2003	9	26	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2003	10	11	0.000	0.000	0.000	0.000	0.000	1.000
24	U	2003	11	1	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2000	1	1	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2000	3	2	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2000	4	6	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2000	5	32	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2000	6	38	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2000	7	85	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2000	8	79	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2000	9	71	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2000	10	52	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2000	11	11	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2000	12	1	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2001	4	3	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2001	5	6	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2001	6	27	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2001	7	62	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2001	8	64	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2001	9	68	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2001	10	50	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2001	11	14	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2001	12	4	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2002	3	1	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2002	4	4	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2002	5	12	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2002	6	37	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2002	7	71	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2002	8	89	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2002	9	92	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2002	10	50	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2002	11	12	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2002	12	2	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2003	4	8	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2003	5	13	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2003	6	42	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2003	7	59	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2003	8	81	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2003	9	71	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2003	10	46	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2003	11	15	0.000	0.000	0.000	0.000	0.000	1.000
25	D	2003	12	1	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2000	1	1	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2000	3	2	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2000	4	16	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2000	5	44	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2000	6	37	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2000	7	70	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2000	8	70	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2000	9	72	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2000	10	22	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2001	3	3	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2001	4	6	0.000	0.000	0.000	0.000	0.000	1.000

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LOCK_NO	DIRECTION	year	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
25	U	2001	5	10	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2001	6	28	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2001	7	56	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2001	8	65	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2001	9	44	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2001	10	21	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2001	11	8	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2001	12	1	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2002	3	2	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2002	4	10	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2002	5	23	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2002	6	52	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2002	7	64	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2002	8	97	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2002	9	65	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2002	10	16	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2002	11	2	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2002	12	2	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2003	3	1	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2003	4	13	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2003	5	22	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2003	6	37	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2003	7	62	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2003	8	92	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2003	9	52	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2003	10	19	0.000	0.000	0.000	0.000	0.000	1.000
25	U	2003	11	2	0.000	0.000	0.000	0.000	0.000	1.000

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LOCK_NO	DIRECTION	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
20	D	1	1	0.000	0.000	0.000	0.000	0.000	1.000
20	D	3	3	0.000	0.000	0.000	0.000	0.000	1.000
20	D	4	6	0.000	0.000	0.000	0.000	0.000	1.000
20	D	5	24	0.000	0.000	0.000	0.000	0.000	1.000
20	D	6	83	0.000	0.000	0.000	0.000	0.000	1.000
20	D	7	197	0.000	0.000	0.000	0.000	0.000	1.000
20	D	8	240	0.000	0.000	0.000	0.000	0.000	1.000
20	D	9	174	0.000	0.000	0.000	0.000	0.000	1.000
20	D	10	140	0.000	0.000	0.000	0.000	0.000	1.000
20	D	11	32	0.000	0.000	0.000	0.000	0.000	1.000
20	D	12	4	0.000	0.000	0.000	0.000	0.000	1.000
20	U	1	1	0.000	0.000	0.000	0.000	0.000	1.000
20	U	3	5	0.000	0.000	0.000	0.000	0.000	1.000
20	U	4	21	0.000	0.000	0.000	0.000	0.000	1.000
20	U	5	62	0.000	0.000	0.000	0.000	0.000	1.000
20	U	6	92	0.000	0.000	0.000	0.000	0.000	1.000
20	U	7	161	0.000	0.000	0.000	0.000	0.000	1.000
20	U	8	191	0.000	0.000	0.000	0.000	0.000	1.000
20	U	9	97	0.000	0.000	0.000	0.000	0.000	1.000
20	U	10	23	0.000	0.000	0.000	0.000	0.000	1.000
20	U	11	1	0.000	0.000	0.000	0.000	0.000	1.000
20	U	12	1	0.000	0.000	0.000	0.000	0.000	1.000
21	D	1	1	0.000	0.000	0.000	0.000	0.000	1.000
21	D	3	6	0.000	0.000	0.000	0.000	0.000	1.000
21	D	4	15	0.000	0.000	0.000	0.000	0.000	1.000
21	D	5	43	0.000	0.000	0.000	0.000	0.000	1.000
21	D	6	117	0.000	0.000	0.000	0.000	0.000	1.000
21	D	7	221	0.000	0.000	0.000	0.000	0.000	1.000
21	D	8	252	0.000	0.000	0.000	0.000	0.000	1.000
21	D	9	183	0.000	0.000	0.000	0.000	0.000	1.000
21	D	10	154	0.000	0.000	0.000	0.000	0.000	1.000
21	D	11	38	0.000	0.000	0.000	0.000	0.000	1.000
21	D	12	3	0.000	0.000	0.000	0.000	0.000	1.000
21	U	1	1	0.000	0.000	0.000	0.000	0.000	1.000
21	U	3	8	0.000	0.000	0.000	0.000	0.000	1.000
21	U	4	26	0.000	0.000	0.000	0.000	0.000	1.000
21	U	5	76	0.000	0.000	0.000	0.000	0.000	1.000
21	U	6	117	0.000	0.000	0.000	0.000	0.000	1.000
21	U	7	187	0.000	0.000	0.000	0.000	0.000	1.000
21	U	8	211	0.000	0.000	0.000	0.000	0.000	1.000
21	U	9	133	0.000	0.000	0.000	0.000	0.000	1.000
21	U	10	26	0.000	0.000	0.000	0.000	0.000	1.000
21	U	11	4	0.000	0.000	0.000	0.000	0.000	1.000
22	D	3	4	0.000	0.000	0.000	0.000	0.000	1.000
22	D	4	8	0.000	0.000	0.000	0.000	0.000	1.000
22	D	5	31	0.000	0.000	0.000	0.000	0.000	1.000
22	D	6	93	0.000	0.000	0.000	0.000	0.000	1.000
22	D	7	185	0.000	0.000	0.000	0.000	0.000	1.000
22	D	8	213	0.000	0.000	0.000	0.000	0.000	1.000
22	D	9	167	0.000	0.000	0.000	0.000	0.000	1.000
22	D	10	147	0.000	0.000	0.000	0.000	0.000	1.000
22	D	11	36	0.000	0.000	0.000	0.000	0.000	1.000
22	D	12	5	0.000	0.000	0.000	0.000	0.000	1.000
22	U	3	7	0.000	0.000	0.000	0.000	0.000	1.000
22	U	4	24	0.000	0.000	0.000	0.000	0.000	1.000
22	U	5	66	0.000	0.000	0.000	0.000	0.000	1.000

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LOCK_NO	DIRECTION	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
22	U	6	111	0.000	0.000	0.000	0.000	0.000	1.000
22	U	7	166	0.000	0.000	0.000	0.000	0.000	1.000
22	U	8	193	0.000	0.000	0.000	0.000	0.000	1.000
22	U	9	131	0.000	0.000	0.000	0.000	0.000	1.000
22	U	10	29	0.000	0.000	0.000	0.000	0.000	1.000
22	U	11	4	0.000	0.000	0.000	0.000	0.000	1.000
24	D	3	4	0.000	0.000	0.000	0.000	0.000	1.000
24	D	4	16	0.000	0.000	0.000	0.000	0.000	1.000
24	D	5	47	0.000	0.000	0.000	0.000	0.000	1.000
24	D	6	107	0.000	0.000	0.000	0.000	0.000	1.000
24	D	7	225	0.000	0.000	0.000	0.000	0.000	1.000
24	D	8	248	0.000	0.000	0.000	0.000	0.000	1.000
24	D	9	253	0.000	0.000	0.000	0.000	0.000	1.000
24	D	10	178	0.000	0.000	0.000	0.000	0.000	1.000
24	D	11	55	0.000	0.000	0.000	0.000	0.000	1.000
24	D	12	7	0.000	0.000	0.000	0.000	0.000	1.000
24	U	3	11	0.000	0.000	0.000	0.000	0.000	1.000
24	U	4	31	0.000	0.000	0.000	0.000	0.000	1.000
24	U	5	74	0.000	0.000	0.000	0.000	0.000	1.000
24	U	6	138	0.000	0.000	0.000	0.000	0.000	1.000
24	U	7	208	0.000	0.000	0.000	0.000	0.000	1.000
24	U	8	269	0.000	0.000	0.000	0.000	0.000	1.000
24	U	9	177	0.000	0.000	0.000	0.000	0.000	1.000
24	U	10	61	0.000	0.000	0.000	0.000	0.000	1.000
24	U	11	10	0.000	0.000	0.000	0.000	0.000	1.000
24	U	12	1	0.000	0.000	0.000	0.000	0.000	1.000
25	D	1	1	0.000	0.000	0.000	0.000	0.000	1.000
25	D	3	3	0.000	0.000	0.000	0.000	0.000	1.000
25	D	4	21	0.000	0.000	0.000	0.000	0.000	1.000
25	D	5	63	0.000	0.000	0.000	0.000	0.000	1.000
25	D	6	144	0.000	0.000	0.000	0.000	0.000	1.000
25	D	7	277	0.000	0.000	0.000	0.000	0.000	1.000
25	D	8	313	0.000	0.000	0.000	0.000	0.000	1.000
25	D	9	302	0.000	0.000	0.000	0.000	0.000	1.000
25	D	10	198	0.000	0.000	0.000	0.000	0.000	1.000
25	D	11	52	0.000	0.000	0.000	0.000	0.000	1.000
25	D	12	8	0.000	0.000	0.000	0.000	0.000	1.000
25	U	1	1	0.000	0.000	0.000	0.000	0.000	1.000
25	U	3	8	0.000	0.000	0.000	0.000	0.000	1.000
25	U	4	45	0.000	0.000	0.000	0.000	0.000	1.000
25	U	5	99	0.000	0.000	0.000	0.000	0.000	1.000
25	U	6	154	0.000	0.000	0.000	0.000	0.000	1.000
25	U	7	252	0.000	0.000	0.000	0.000	0.000	1.000
25	U	8	324	0.000	0.000	0.000	0.000	0.000	1.000
25	U	9	233	0.000	0.000	0.000	0.000	0.000	1.000
25	U	10	78	0.000	0.000	0.000	0.000	0.000	1.000
25	U	11	12	0.000	0.000	0.000	0.000	0.000	1.000
25	U	12	3	0.000	0.000	0.000	0.000	0.000	1.000

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LOCK_NO	DIRECTION	year	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
20	D	2000	4	1	702.98	.	1	01APR00	01APR00
20	D	2000	5	11	65.14	53.779	0	.	.
20	D	2000	6	28	26.64	31.684	0	.	.
20	D	2000	7	52	13.87	19.592	0	.	.
20	D	2000	8	65	11.76	14.923	0	.	.
20	D	2000	9	45	16.10	14.755	0	.	.
20	D	2000	10	38	19.42	21.563	0	.	.
20	D	2000	11	8	78.27	117.468	0	.	.
20	D	2001	5	1	99.93	.	1	22MAY01	22MAY01
20	D	2001	6	18	46.32	58.886	0	.	.
20	D	2001	7	53	13.58	12.345	0	.	.
20	D	2001	8	58	13.28	16.936	0	.	.
20	D	2001	9	42	16.47	15.449	0	.	.
20	D	2001	10	35	20.72	30.219	0	.	.
20	D	2001	11	6	87.06	71.469	0	.	.
20	D	2001	12	4	181.31	170.634	0	.	.
20	D	2002	3	1	168.27	.	1	24MAR02	24MAR02
20	D	2002	4	2	350.70	152.452	0	.	.
20	D	2002	5	7	98.25	86.648	0	.	.
20	D	2002	6	23	34.75	45.002	0	.	.
20	D	2002	7	46	14.98	18.007	0	.	.
20	D	2002	8	61	13.07	14.924	0	.	.
20	D	2002	9	44	16.38	14.375	0	.	.
20	D	2002	10	40	18.43	18.918	0	.	.
20	D	2002	11	8	51.68	40.452	0	.	.
20	D	2003	1	0	.	.	1	08JAN03	08JAN03
20	D	2003	3	1	1847.60	.	0	.	.
20	D	2003	4	2	280.09	60.682	0	.	.
20	D	2003	5	4	185.44	146.656	0	.	.
20	D	2003	6	14	66.71	116.774	0	.	.
20	D	2003	7	46	17.78	20.509	0	.	.
20	D	2003	8	56	11.92	14.125	0	.	.
20	D	2003	9	43	18.41	19.701	0	.	.
20	D	2003	10	27	27.55	27.732	0	.	.
20	D	2003	11	10	45.46	44.803	0	.	.
20	U	2000	4	7	99.20	95.927	1	01APR00	01APR00
20	U	2000	5	27	27.81	29.590	0	.	.
20	U	2000	6	24	29.95	27.011	0	.	.
20	U	2000	7	42	17.24	21.736	0	.	.
20	U	2000	8	49	15.54	21.558	0	.	.
20	U	2000	9	23	31.57	43.304	0	.	.
20	U	2000	10	6	87.33	139.440	0	.	.
20	U	2001	3	2	36.89	13.824	1	24MAR01	24MAR01
20	U	2001	4	1	308.72	.	0	.	.
20	U	2001	5	4	311.31	563.560	0	.	.
20	U	2001	6	21	32.15	29.294	0	.	.
20	U	2001	7	38	20.28	22.098	0	.	.
20	U	2001	8	39	18.98	22.663	0	.	.
20	U	2001	9	23	32.55	50.532	0	.	.
20	U	2001	10	5	82.04	68.314	0	.	.
20	U	2001	11	1	522.97	.	0	.	.
20	U	2001	12	1	981.75	.	0	.	.
20	U	2002	3	0	.	.	1	23MAR02	23MAR02
20	U	2002	4	7	130.52	174.923	0	.	.
20	U	2002	5	19	38.96	31.898	0	.	.

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LOCK_NO	DIRECTION	year	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
20	U	2002	6	27	24.91	22.450	0	.	.
20	U	2002	7	46	17.38	18.844	0	.	.
20	U	2002	8	44	16.88	19.974	0	.	.
20	U	2002	9	27	25.64	51.613	0	.	.
20	U	2002	10	4	150.19	89.932	0	.	.
20	U	2003	1	0	.	.	1	08JAN03	08JAN03
20	U	2003	3	1	1957.58	.	0	.	.
20	U	2003	4	5	137.98	234.276	0	.	.
20	U	2003	5	12	63.94	104.918	0	.	.
20	U	2003	6	20	37.65	28.670	0	.	.
20	U	2003	7	35	18.45	17.666	0	.	.
20	U	2003	8	59	13.87	21.160	0	.	.
20	U	2003	9	24	27.66	32.754	0	.	.
20	U	2003	10	8	84.76	85.367	0	.	.
21	D	2000	3	3	47.00	58.031	1	24MAR00	24MAR00
21	D	2000	4	7	83.49	77.542	0	.	.
21	D	2000	5	19	46.66	64.731	0	.	.
21	D	2000	6	29	25.54	27.918	0	.	.
21	D	2000	7	67	10.74	12.147	0	.	.
21	D	2000	8	73	10.56	15.420	0	.	.
21	D	2000	9	42	16.57	18.233	0	.	.
21	D	2000	10	39	19.66	17.963	0	.	.
21	D	2000	11	9	50.19	48.227	0	.	.
21	D	2000	12	1	361.25	.	0	.	.
21	D	2001	4	0	.	.	1	14APR01	14APR01
21	D	2001	5	1	1005.90	.	0	.	.
21	D	2001	6	19	44.11	42.633	0	.	.
21	D	2001	7	52	14.23	15.591	0	.	.
21	D	2001	8	52	14.41	15.316	0	.	.
21	D	2001	9	41	17.35	19.478	0	.	.
21	D	2001	10	39	18.43	24.966	0	.	.
21	D	2001	11	10	53.02	42.268	0	.	.
21	D	2001	12	2	312.50	139.654	0	.	.
21	D	2002	1	0	.	.	1	27JAN02	27JAN02
21	D	2002	3	1	1343.48	.	0	.	.
21	D	2002	4	2	212.42	33.470	0	.	.
21	D	2002	5	14	86.33	150.740	0	.	.
21	D	2002	6	41	17.64	19.631	0	.	.
21	D	2002	7	57	12.53	13.160	0	.	.
21	D	2002	8	69	11.19	12.067	0	.	.
21	D	2002	9	51	14.03	14.309	0	.	.
21	D	2002	10	39	19.03	17.177	0	.	.
21	D	2002	11	7	41.27	47.026	0	.	.
21	D	2003	3	0	.	.	1	16MAR03	16MAR03
21	D	2003	4	5	201.60	178.393	0	.	.
21	D	2003	5	9	76.86	88.342	0	.	.
21	D	2003	6	28	30.16	59.694	0	.	.
21	D	2003	7	45	16.07	18.006	0	.	.
21	D	2003	8	58	12.75	14.925	0	.	.
21	D	2003	9	49	15.17	14.007	0	.	.
21	D	2003	10	37	20.07	19.828	0	.	.
21	D	2003	11	12	42.00	35.830	0	.	.
21	U	2000	3	1	149.83	.	1	25MAR00	25MAR00
21	U	2000	4	12	57.68	45.610	0	.	.
21	U	2000	5	34	22.55	21.615	0	.	.

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LOCK_NO	DIRECTION	year	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
21	U	2000	6	25	28.75	36.330	0	.	.
21	U	2000	7	52	13.92	15.668	0	.	.
21	U	2000	8	55	13.60	20.180	0	.	.
21	U	2000	9	25	29.45	35.369	0	.	.
21	U	2000	10	8	84.00	97.555	0	.	.
21	U	2000	11	1	551.42	.	0	.	.
21	U	2001	3	2	36.75	9.075	1	24MAR01	24MAR01
21	U	2001	4	2	217.83	104.888	0	.	.
21	U	2001	5	5	225.67	448.681	0	.	.
21	U	2001	6	25	28.86	36.993	0	.	.
21	U	2001	7	45	15.88	17.327	0	.	.
21	U	2001	8	43	17.89	18.171	0	.	.
21	U	2001	9	28	24.96	36.547	0	.	.
21	U	2001	10	6	87.83	85.463	0	.	.
21	U	2001	11	1	762.83	.	0	.	.
21	U	2002	1	0	.	.	1	27JAN02	27JAN02
21	U	2002	3	1	1317.67	.	0	.	.
21	U	2002	4	8	114.21	167.652	0	.	.
21	U	2002	5	20	37.49	33.366	0	.	.
21	U	2002	6	35	20.53	18.556	0	.	.
21	U	2002	7	51	14.57	18.582	0	.	.
21	U	2002	8	58	12.92	15.986	0	.	.
21	U	2002	9	51	13.99	20.427	0	.	.
21	U	2002	10	4	142.90	84.729	0	.	.
21	U	2003	3	1	334.58	.	1	16MAR03	16MAR03
21	U	2003	4	4	167.83	256.852	0	.	.
21	U	2003	5	17	46.30	52.962	0	.	.
21	U	2003	6	32	23.64	23.573	0	.	.
21	U	2003	7	39	16.39	18.454	0	.	.
21	U	2003	8	55	15.00	22.677	0	.	.
21	U	2003	9	29	25.59	30.150	0	.	.
21	U	2003	10	8	72.70	58.876	0	.	.
21	U	2003	11	2	332.21	216.669	0	.	.
22	D	2000	3	2	70.08	61.507	1	24MAR00	24MAR00
22	D	2000	4	2	205.47	61.707	0	.	.
22	D	2000	5	12	83.68	102.557	0	.	.
22	D	2000	6	29	27.72	31.481	0	.	.
22	D	2000	7	56	13.02	14.301	0	.	.
22	D	2000	8	53	14.16	19.401	0	.	.
22	D	2000	9	41	17.00	21.142	0	.	.
22	D	2000	10	41	18.78	20.071	0	.	.
22	D	2000	11	10	47.15	46.298	0	.	.
22	D	2000	12	1	363.50	.	0	.	.
22	D	2001	5	0	.	.	1	26MAY01	26MAY01
22	D	2001	6	19	44.00	49.661	0	.	.
22	D	2001	7	45	16.49	18.184	0	.	.
22	D	2001	8	57	13.07	13.696	0	.	.
22	D	2001	9	38	18.82	20.554	0	.	.
22	D	2001	10	33	17.40	16.148	0	.	.
22	D	2001	11	5	135.35	99.122	0	.	.
22	D	2001	12	3	263.61	189.539	0	.	.
22	D	2002	3	0	.	.	1	25MAR02	25MAR02
22	D	2002	4	3	224.81	173.177	0	.	.
22	D	2002	5	10	84.46	98.534	0	.	.
22	D	2002	6	22	37.37	43.359	0	.	.

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LOCK_NO	DIRECTION	year	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
22	D	2002	7	44	16.284	22.696	0	.	.
22	D	2002	8	59	13.072	14.942	0	.	.
22	D	2002	9	49	14.454	13.669	0	.	.
22	D	2002	10	38	19.772	21.063	0	.	.
22	D	2002	11	8	59.958	61.561	0	.	.
22	D	2003	4	2	120.583	39.527	1	09APR03	09APR03
22	D	2003	5	8	108.421	161.538	0	.	.
22	D	2003	6	23	36.443	72.084	0	.	.
22	D	2003	7	40	19.164	21.209	0	.	.
22	D	2003	8	44	16.953	21.318	0	.	.
22	D	2003	9	39	18.444	15.454	0	.	.
22	D	2003	10	35	21.312	31.582	0	.	.
22	D	2003	11	13	38.468	27.965	0	.	.
22	D	2003	12	1	353.083	.	0	.	.
22	U	2000	3	1	170.083	.	1	24MAR00	24MAR00
22	U	2000	4	8	72.156	76.456	0	.	.
22	U	2000	5	22	40.227	41.511	0	.	.
22	U	2000	6	40	17.980	21.423	0	.	.
22	U	2000	7	39	18.501	17.067	0	.	.
22	U	2000	8	41	18.724	21.805	0	.	.
22	U	2000	9	35	20.498	32.577	0	.	.
22	U	2000	10	12	55.906	67.002	0	.	.
22	U	2001	3	1	29.333	.	1	24MAR01	24MAR01
22	U	2001	4	1	334.283	.	0	.	.
22	U	2001	5	3	410.350	660.439	0	.	.
22	U	2001	6	18	42.282	44.461	0	.	.
22	U	2001	7	51	14.072	15.579	0	.	.
22	U	2001	8	46	16.734	19.353	0	.	.
22	U	2001	9	32	22.518	34.426	0	.	.
22	U	2001	10	4	132.008	61.772	0	.	.
22	U	2001	11	4	184.929	127.164	0	.	.
22	U	2002	3	1	167.500	.	1	23MAR02	23MAR02
22	U	2002	4	8	81.208	118.372	0	.	.
22	U	2002	5	28	30.185	35.375	0	.	.
22	U	2002	6	23	31.377	26.861	0	.	.
22	U	2002	7	40	18.492	24.423	0	.	.
22	U	2002	8	49	15.313	19.389	0	.	.
22	U	2002	9	39	17.120	25.899	0	.	.
22	U	2002	10	4	154.438	67.285	0	.	.
22	U	2003	3	0	.	.	1	30MAR03	30MAR03
22	U	2003	4	7	106.774	134.244	0	.	.
22	U	2003	5	13	53.776	55.952	0	.	.
22	U	2003	6	30	25.600	26.388	0	.	.
22	U	2003	7	36	17.255	25.562	0	.	.
22	U	2003	8	57	14.856	23.992	0	.	.
22	U	2003	9	25	29.560	23.979	0	.	.
22	U	2003	10	9	50.972	60.890	0	.	.
24	D	2000	3	1	435.467	.	1	08MAR00	08MAR00
24	D	2000	4	6	140.881	117.621	0	.	.
24	D	2000	5	21	33.083	30.852	0	.	.
24	D	2000	6	35	22.037	21.106	0	.	.
24	D	2000	7	72	10.195	13.692	0	.	.
24	D	2000	8	67	11.143	12.366	0	.	.
24	D	2000	9	77	9.412	12.484	0	.	.
24	D	2000	10	52	13.820	14.347	0	.	.

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LOCK_NO	DIRECTION	year	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
24	D	2000	11	14	35.730	35.119	0	.	.
24	D	2000	12	1	383.200	.	0	.	.
24	D	2001	3	0	.	.	1	07MAR01	07MAR01
24	D	2001	5	3	681.306	994.670	0	.	.
24	D	2001	6	25	27.751	30.336	0	.	.
24	D	2001	7	57	13.565	15.746	0	.	.
24	D	2001	8	57	12.987	11.722	0	.	.
24	D	2001	9	72	10.031	11.680	0	.	.
24	D	2001	10	45	16.360	21.512	0	.	.
24	D	2001	11	14	44.771	41.207	0	.	.
24	D	2001	12	5	135.183	61.553	0	.	.
24	D	2002	3	0	.	.	1	25MAR02	25MAR02
24	D	2002	4	3	159.594	218.671	0	.	.
24	D	2002	5	12	92.065	137.611	0	.	.
24	D	2002	6	24	31.474	33.256	0	.	.
24	D	2002	7	46	14.998	11.948	0	.	.
24	D	2002	8	56	14.193	15.987	0	.	.
24	D	2002	9	60	11.889	12.858	0	.	.
24	D	2002	10	37	19.964	16.305	0	.	.
24	D	2002	11	13	53.695	56.399	0	.	.
24	D	2003	4	6	99.694	130.500	1	04APR03	04APR03
24	D	2003	5	11	63.138	96.281	0	.	.
24	D	2003	6	23	33.658	58.005	0	.	.
24	D	2003	7	50	15.348	19.134	0	.	.
24	D	2003	8	68	10.932	14.432	0	.	.
24	D	2003	9	44	16.323	18.555	0	.	.
24	D	2003	10	44	16.943	16.906	0	.	.
24	D	2003	11	14	36.470	28.634	0	.	.
24	D	2003	12	1	348.950	.	0	.	.
24	U	2000	3	3	185.733	202.398	1	08MAR00	08MAR00
24	U	2000	4	10	71.960	93.152	0	.	.
24	U	2000	5	33	22.767	18.391	0	.	.
24	U	2000	6	36	19.938	19.842	0	.	.
24	U	2000	7	53	13.499	15.818	0	.	.
24	U	2000	8	56	13.862	16.904	0	.	.
24	U	2000	9	65	11.016	14.327	0	.	.
24	U	2000	10	16	44.607	40.107	0	.	.
24	U	2000	11	1	119.417	.	0	.	.
24	U	2001	3	3	154.194	202.859	1	07MAR01	07MAR01
24	U	2001	4	2	217.067	123.060	0	.	.
24	U	2001	5	3	367.456	575.429	0	.	.
24	U	2001	6	31	24.781	23.940	0	.	.
24	U	2001	7	50	13.874	13.355	0	.	.
24	U	2001	8	70	11.444	15.468	0	.	.
24	U	2001	9	48	14.688	23.522	0	.	.
24	U	2001	10	20	33.732	29.467	0	.	.
24	U	2001	11	6	89.050	56.347	0	.	.
24	U	2001	12	1	424.000	.	0	.	.
24	U	2002	3	1	164.417	.	1	22MAR02	22MAR02
24	U	2002	4	10	74.960	98.801	0	.	.
24	U	2002	5	20	37.062	37.554	0	.	.
24	U	2002	6	39	19.162	21.801	0	.	.
24	U	2002	7	50	14.336	16.406	0	.	.
24	U	2002	8	70	10.997	15.118	0	.	.
24	U	2002	9	38	18.309	22.911	0	.	.

average interarrival times and first lockage times for random arrivals 29
with fullmod = no 14:20 Friday, June 24, 2005

LOCK_NO	DIRECTION	year	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
24	U	2002	10	14	40.863	39.76	0	.	.
24	U	2002	11	2	207.708	282.67	0	.	.
24	U	2003	3	0	.	.	1	29MAR03	29MAR03
24	U	2003	4	9	77.593	75.58	0	.	.
24	U	2003	5	18	45.060	67.78	0	.	.
24	U	2003	6	32	22.718	22.98	0	.	.
24	U	2003	7	55	13.425	21.48	0	.	.
24	U	2003	8	73	10.253	14.02	0	.	.
24	U	2003	9	26	27.551	31.04	0	.	.
24	U	2003	10	11	63.533	46.71	0	.	.
24	U	2003	11	1	116.467	.	0	.	.
25	D	2000	1	0	.	.	1	12JAN00	12JAN00
25	D	2000	3	2	886.542	638.22	0	.	.
25	D	2000	4	6	140.006	115.26	0	.	.
25	D	2000	5	32	23.481	30.49	0	.	.
25	D	2000	6	38	18.981	20.15	0	.	.
25	D	2000	7	85	8.617	14.83	0	.	.
25	D	2000	8	79	9.190	11.80	0	.	.
25	D	2000	9	71	10.498	13.42	0	.	.
25	D	2000	10	52	13.785	12.68	0	.	.
25	D	2000	11	11	54.647	51.86	0	.	.
25	D	2000	12	1	306.967	.	0	.	.
25	D	2001	4	2	12.775	16.18	1	13APR01	13APR01
25	D	2001	5	6	178.903	282.22	0	.	.
25	D	2001	6	27	28.691	29.85	0	.	.
25	D	2001	7	62	12.036	15.82	0	.	.
25	D	2001	8	64	11.570	12.48	0	.	.
25	D	2001	9	68	10.633	15.42	0	.	.
25	D	2001	10	50	14.741	15.00	0	.	.
25	D	2001	11	14	37.775	34.54	0	.	.
25	D	2001	12	4	197.258	64.44	0	.	.
25	D	2002	3	0	.	.	1	25MAR02	25MAR02
25	D	2002	4	4	126.500	102.63	0	.	.
25	D	2002	5	12	88.833	135.30	0	.	.
25	D	2002	6	37	20.554	23.11	0	.	.
25	D	2002	7	71	10.407	13.81	0	.	.
25	D	2002	8	89	8.419	9.77	0	.	.
25	D	2002	9	92	7.791	10.83	0	.	.
25	D	2002	10	50	14.810	17.24	0	.	.
25	D	2002	11	12	46.167	51.58	0	.	.
25	D	2002	12	2	238.333	265.17	0	.	.
25	D	2003	4	7	89.219	123.04	1	04APR03	04APR03
25	D	2003	5	13	53.045	68.64	0	.	.
25	D	2003	6	42	18.337	32.12	0	.	.
25	D	2003	7	59	12.686	15.94	0	.	.
25	D	2003	8	81	9.220	12.18	0	.	.
25	D	2003	9	71	10.086	14.48	0	.	.
25	D	2003	10	46	16.168	23.02	0	.	.
25	D	2003	11	15	43.072	40.89	0	.	.
25	D	2003	12	1	216.750	.	0	.	.
25	U	2000	1	0	.	.	1	12JAN00	12JAN00
25	U	2000	3	2	944.583	1134.22	0	.	.
25	U	2000	4	16	45.547	66.85	0	.	.
25	U	2000	5	44	16.898	20.01	0	.	.
25	U	2000	6	37	19.572	21.23	0	.	.

average interarrival times and first lockage times for random arrivals 30
with fullmod = no 14:20 Friday, June 24, 2005

LOCK_NO	DIRECTION	year	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
25	U	2000	7	70	10.206	12.509	0	.	.
25	U	2000	8	70	11.030	12.616	0	.	.
25	U	2000	9	72	9.933	13.039	0	.	.
25	U	2000	10	22	28.311	35.818	0	.	.
25	U	2001	3	2	37.208	24.336	1	23MAR01	23MAR01
25	U	2001	4	6	76.569	113.521	0	.	.
25	U	2001	5	10	107.658	223.373	0	.	.
25	U	2001	6	28	27.571	34.531	0	.	.
25	U	2001	7	56	13.260	16.388	0	.	.
25	U	2001	8	65	11.526	16.670	0	.	.
25	U	2001	9	44	15.727	24.637	0	.	.
25	U	2001	10	21	32.798	28.413	0	.	.
25	U	2001	11	8	60.465	56.618	0	.	.
25	U	2001	12	1	649.767	.	0	.	.
25	U	2002	3	1	546.250	.	1	06MAR02	06MAR02
25	U	2002	4	10	74.858	91.667	0	.	.
25	U	2002	5	23	32.250	36.301	0	.	.
25	U	2002	6	52	14.428	17.724	0	.	.
25	U	2002	7	64	11.188	12.061	0	.	.
25	U	2002	8	97	7.991	11.475	0	.	.
25	U	2002	9	65	10.650	12.809	0	.	.
25	U	2002	10	16	38.776	45.350	0	.	.
25	U	2002	11	2	192.375	241.182	0	.	.
25	U	2002	12	2	393.458	485.134	0	.	.
25	U	2003	3	0	.	.	1	29MAR03	29MAR03
25	U	2003	4	13	59.500	66.772	0	.	.
25	U	2003	5	22	33.534	56.050	0	.	.
25	U	2003	6	37	18.993	20.290	0	.	.
25	U	2003	7	62	12.464	18.215	0	.	.
25	U	2003	8	92	8.057	13.581	0	.	.
25	U	2003	9	52	13.719	19.660	0	.	.
25	U	2003	10	19	30.488	35.591	0	.	.
25	U	2003	11	2	108.633	114.928	0	.	.

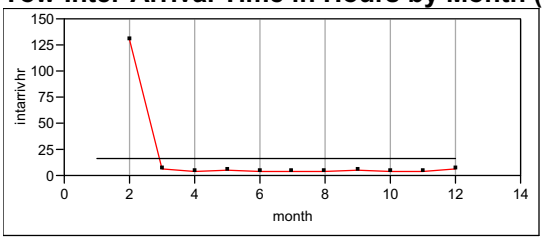
average interarrival times and first lockage times for random arrivals 31
with fullmod = no 14:20 Friday, June 24, 2005

LOCK_NO	DIRECTION	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
20	D	1	0	.	.	1	08JAN03	08JAN03
20	D	3	2	1007.93	1187.47	1	24MAR02	24MAR02
20	D	4	5	392.91	194.99	1	01APR00	01APR00
20	D	5	23	97.65	90.69	1	22MAY01	22MAY01
20	D	6	83	39.92	62.88	0	.	.
20	D	7	197	14.96	17.72	0	.	.
20	D	8	240	12.50	15.18	0	.	.
20	D	9	174	16.83	16.07	0	.	.
20	D	10	140	21.03	24.54	0	.	.
20	D	11	32	63.02	72.09	0	.	.
20	D	12	4	181.31	170.63	0	.	.
20	U	1	0	.	.	1	08JAN03	08JAN03
20	U	3	3	677.12	1108.95	2	24MAR01	23MAR02
20	U	4	20	130.34	161.77	1	01APR00	01APR00
20	U	5	62	56.51	151.68	0	.	.
20	U	6	92	30.64	26.64	0	.	.
20	U	7	161	18.26	20.04	0	.	.
20	U	8	191	16.03	21.23	0	.	.
20	U	9	97	29.18	44.74	0	.	.
20	U	10	23	96.22	96.61	0	.	.
20	U	11	1	522.97	.	0	.	.
20	U	12	1	981.75	.	0	.	.
21	D	1	0	.	.	1	27JAN02	27JAN02
21	D	3	4	371.12	649.97	2	24MAR00	16MAR03
21	D	4	14	144.09	128.92	1	14APR01	14APR01
21	D	5	43	88.20	176.57	0	.	.
21	D	6	117	26.89	38.91	0	.	.
21	D	7	221	13.11	14.61	0	.	.
21	D	8	252	12.03	14.42	0	.	.
21	D	9	183	15.66	16.37	0	.	.
21	D	10	154	19.29	20.03	0	.	.
21	D	11	38	46.71	41.28	0	.	.
21	D	12	3	328.75	102.68	0	.	.
21	U	1	0	.	.	1	27JAN02	27JAN02
21	U	3	5	375.12	540.80	3	25MAR00	16MAR03
21	U	4	26	104.34	141.05	0	.	.
21	U	5	76	45.16	119.34	0	.	.
21	U	6	117	24.92	28.61	0	.	.
21	U	7	187	15.08	17.37	0	.	.
21	U	8	211	14.65	19.38	0	.	.
21	U	9	133	21.73	29.86	0	.	.
21	U	10	26	90.47	80.71	0	.	.
21	U	11	4	494.67	241.43	0	.	.
22	D	3	2	70.08	61.51	2	24MAR00	25MAR02
22	D	4	7	189.50	114.82	1	09APR03	09APR03
22	D	5	30	90.54	115.85	1	26MAY01	26MAY01
22	D	6	93	35.49	49.91	0	.	.
22	D	7	185	15.97	19.00	0	.	.
22	D	8	213	14.15	17.25	0	.	.
22	D	9	167	17.01	17.71	0	.	.
22	D	10	147	19.33	22.67	0	.	.
22	D	11	36	59.11	61.07	0	.	.
22	D	12	5	301.48	143.75	0	.	.
22	U	3	3	122.31	80.53	4	24MAR00	30MAR03
22	U	4	24	96.19	116.29	0	.	.

average interarrival times and first lockage times for random arrivals 32
with fullmod = no 14:20 Friday, June 24, 2005

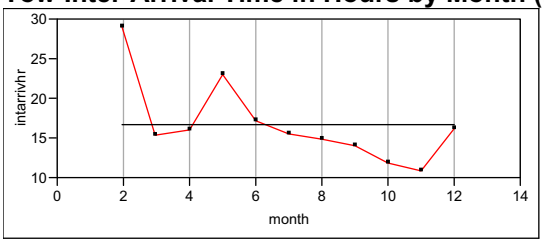
LOCK_NO	DIRECTION	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
22	U	5	66	55.459	145.749	0	.	.
22	U	6	111	26.756	29.468	0	.	.
22	U	7	166	16.868	20.590	0	.	.
22	U	8	193	16.241	21.234	0	.	.
22	U	9	131	21.715	29.684	0	.	.
22	U	10	29	78.462	73.566	0	.	.
22	U	11	4	184.929	127.164	0	.	.
24	D	3	1	435.467	.	3	08MAR00	25MAR02
24	D	4	15	128.149	135.950	1	04APR03	04APR03
24	D	5	47	96.552	272.736	0	.	.
24	D	6	107	27.987	36.207	0	.	.
24	D	7	225	13.176	15.323	0	.	.
24	D	8	248	12.198	13.682	0	.	.
24	D	9	253	11.377	13.745	0	.	.
24	D	10	178	16.511	17.393	0	.	.
24	D	11	55	42.466	40.777	0	.	.
24	D	12	7	201.152	123.761	0	.	.
24	U	3	7	169.171	166.209	4	08MAR00	29MAR03
24	U	4	31	83.925	93.958	0	.	.
24	U	5	74	46.027	123.165	0	.	.
24	U	6	138	21.451	21.963	0	.	.
24	U	7	208	13.771	17.008	0	.	.
24	U	8	269	11.508	15.282	0	.	.
24	U	9	177	16.006	22.363	0	.	.
24	U	10	61	43.595	38.608	0	.	.
24	U	11	10	118.560	113.969	0	.	.
24	U	12	1	424.000	.	0	.	.
25	D	1	0	.	.	1	12JAN00	12JAN00
25	D	3	2	886.542	638.223	1	25MAR02	25MAR02
25	D	4	19	105.059	109.819	2	13APR01	04APR03
25	D	5	63	56.831	115.175	0	.	.
25	D	6	144	21.018	26.677	0	.	.
25	D	7	277	10.708	15.054	0	.	.
25	D	8	313	9.465	11.507	0	.	.
25	D	9	302	9.607	13.434	0	.	.
25	D	10	198	14.839	17.126	0	.	.
25	D	11	52	44.809	43.587	0	.	.
25	D	12	8	223.677	115.249	0	.	.
25	U	1	0	.	.	1	12JAN00	12JAN00
25	U	3	5	501.967	726.780	3	23MAR01	29MAR03
25	U	4	45	60.228	78.013	0	.	.
25	U	5	99	33.329	80.076	0	.	.
25	U	6	154	19.150	23.209	0	.	.
25	U	7	252	11.690	14.846	0	.	.
25	U	8	324	9.375	13.519	0	.	.
25	U	9	233	12.072	17.317	0	.	.
25	U	10	78	32.196	35.643	0	.	.
25	U	11	12	90.478	105.507	0	.	.
25	U	12	3	478.894	373.598	0	.	.

LOCK_NO=20, DIRECTION=D
Tow Inter-Arrival Time in Hours by Month (Level 1)



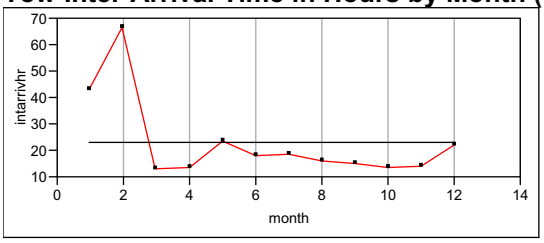
Mean	16.503206
Std	35.947334
N	11

LOCK_NO=20, DIRECTION=U
Tow Inter-Arrival Time in Hours by Month (Level 1)



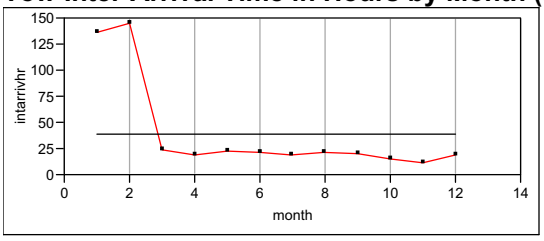
Mean	16.774779
Std	4.8901481
N	11

LOCK_NO=21, DIRECTION=D
Tow Inter-Arrival Time in Hours by Month (Level 1)



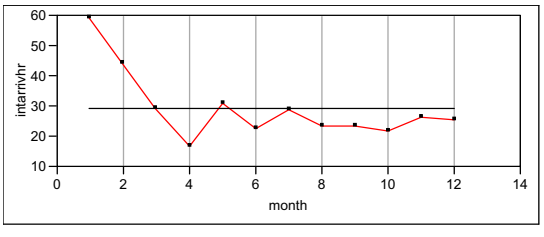
Mean	23.247233
Std	15.297824
N	12

LOCK_NO=21, DIRECTION=U
Tow Inter-Arrival Time in Hours by Month (Level 1)



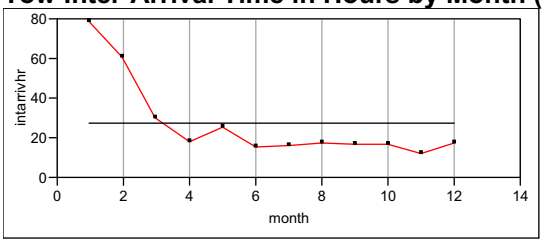
Mean	39.95054
Std	45.458619
N	12

LOCK_NO=22, DIRECTION=D
Tow Inter-Arrival Time in Hours by Month (Level 1)



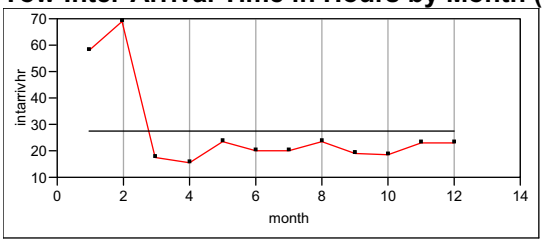
Mean	29.418873
Std	11.034697
N	12

LOCK_NO=22, DIRECTION=U
Tow Inter-Arrival Time in Hours by Month (Level 1)



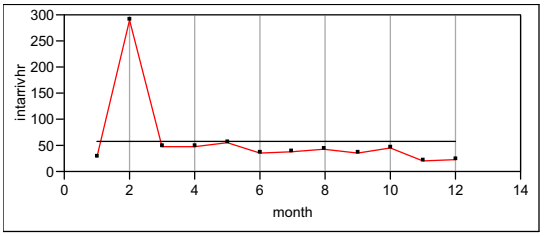
Mean	27.402703
Std	19.896004
N	12

LOCK_NO=24, DIRECTION=D
Tow Inter-Arrival Time in Hours by Month (Level 1)



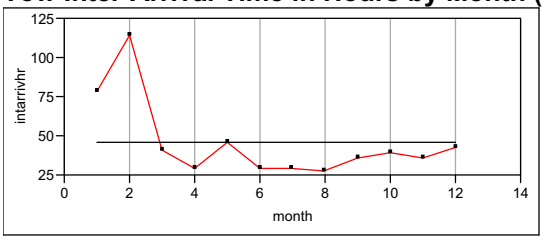
Mean	27.829538
Std	16.457422
N	12

LOCK_NO=24, DIRECTION=U
Tow Inter-Arrival Time in Hours by Month (Level 1)



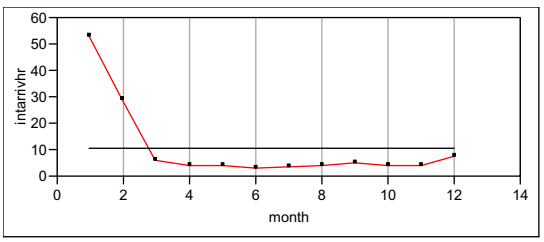
Mean	59.963996
Std	70.443703
N	12

LOCK_NO=25, DIRECTION=D
Tow Inter-Arrival Time in Hours by Month (Level 1)



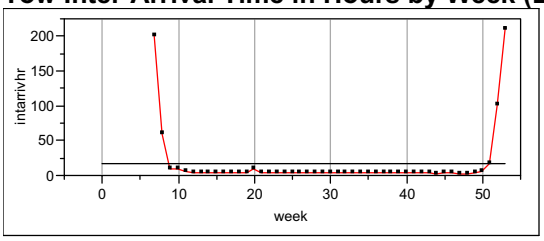
Mean	46.133504
Std	24.47218
N	12

LOCK_NO=25, DIRECTION=U
Tow Inter-Arrival Time in Hours by Month (Level 1)



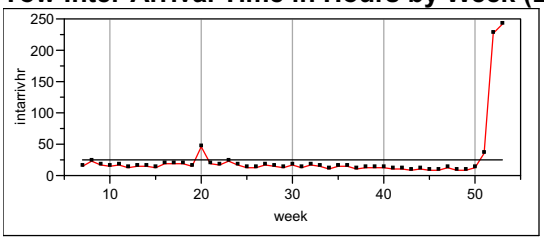
Mean	10.800309
Std	14.486638
N	12

LOCK_NO=20, DIRECTION=D
Tow Inter-Arrival Time in Hours by Week (Level 1)



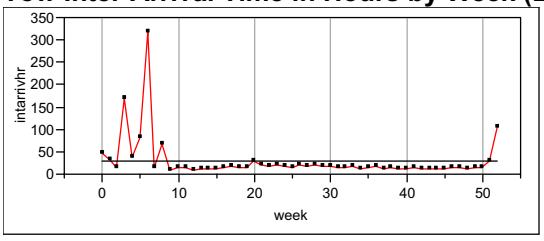
Mean	17.086143
Std	42.888512
N	47

LOCK_NO=20, DIRECTION=U
Tow Inter-Arrival Time in Hours by Week (Level 1)



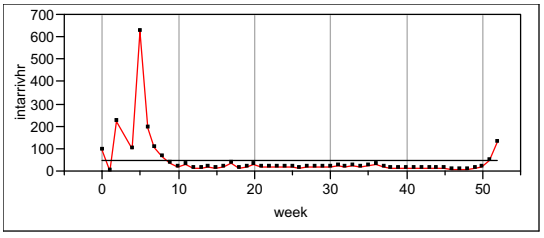
Mean	25.542159
Std	44.784078
N	47

LOCK_NO=21, DIRECTION=D
Tow Inter-Arrival Time in Hours by Week (Level 1)



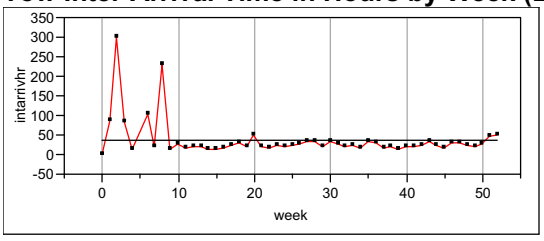
Mean	30.510221
Std	48.056406
N	53

LOCK_NO=21, DIRECTION=U
Tow Inter-Arrival Time in Hours by Week (Level 1)



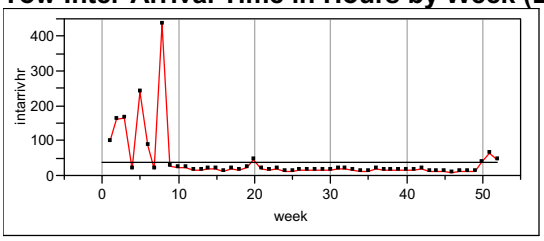
Mean	47.094071
Std	91.809531
N	52

LOCK_NO=22, DIRECTION=D
Tow Inter-Arrival Time in Hours by Week (Level 1)



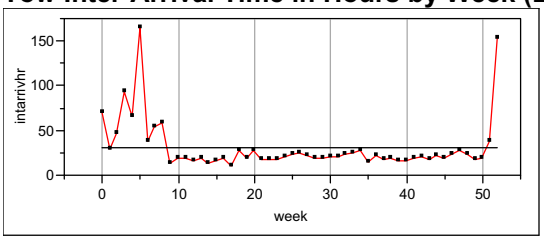
Mean	38.40544
Std	49.796593
N	52

LOCK_NO=22, DIRECTION=U
Tow Inter-Arrival Time in Hours by Week (Level 1)



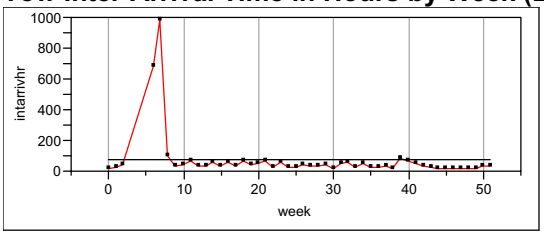
Mean	40.966042
Std	70.521289
N	52

LOCK_NO=24, DIRECTION=D
Tow Inter-Arrival Time in Hours by Week (Level 1)



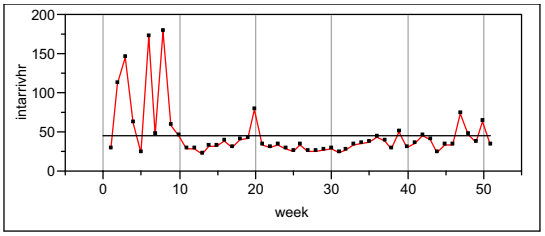
Mean	31.66308
Std	29.799189
N	53

LOCK_NO=24, DIRECTION=U
Tow Inter-Arrival Time in Hours by Week (Level 1)



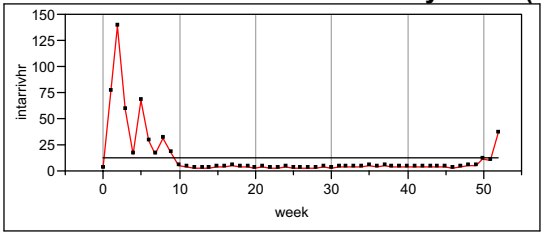
Mean	75.112288
Std	161.28162
N	49

LOCK_NO=25, DIRECTION=D
Tow Inter-Arrival Time in Hours by Week (Level 1)



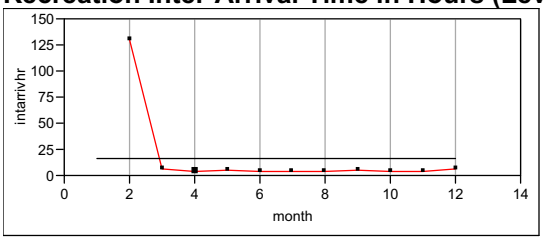
Mean	46.658878
Std	33.937818
N	51

LOCK_NO=25, DIRECTION=U
Tow Inter-Arrival Time in Hours by Week (Level 1)



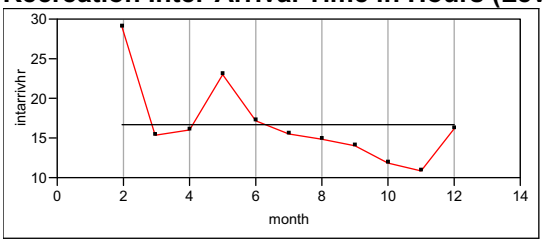
Mean	13.041631
Std	23.680594
N	53

LOCK_NO=20, DIRECTION=D
Recreation Inter-Arrival Time in Hours (Level 1)



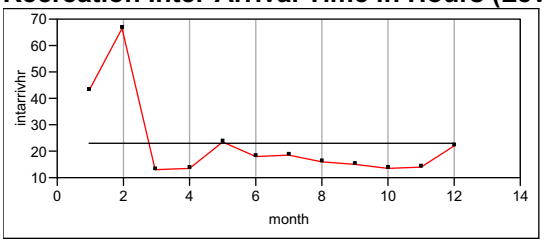
Mean	16.503206
Std	35.947334
N	11

LOCK_NO=20, DIRECTION=U
Recreation Inter-Arrival Time in Hours (Level 1)



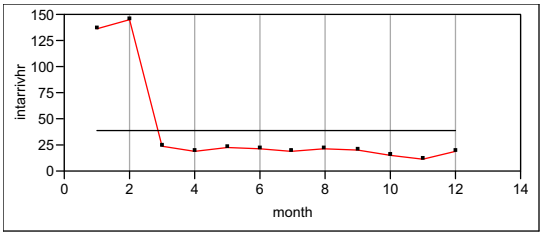
Mean	16.774779
Std	4.8901481
N	11

LOCK_NO=21, DIRECTION=D
Recreation Inter-Arrival Time in Hours (Level 1)



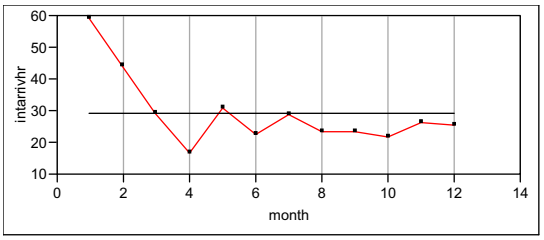
Mean	23.247233
Std	15.297824
N	12

LOCK_NO=21, DIRECTION=U
Recreation Inter-Arrival Time in Hours (Level 1)



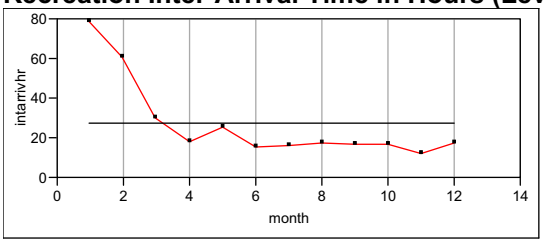
Mean	39.95054
Std	45.458619
N	12

LOCK_NO=22, DIRECTION=D
Recreation Inter-Arrival Time in Hours (Level 1)



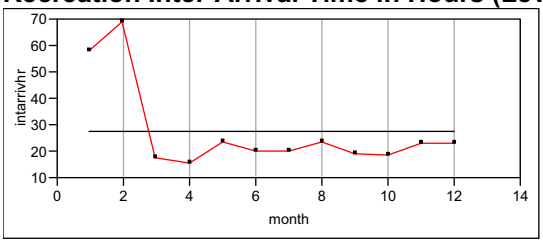
Mean	29.418873
Std	11.034697
N	12

LOCK_NO=22, DIRECTION=U
Recreation Inter-Arrival Time in Hours (Level 1)



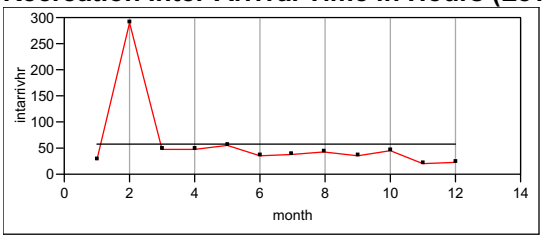
Mean	27.402703
Std	19.896004
N	12

LOCK_NO=24, DIRECTION=D
Recreation Inter-Arrival Time in Hours (Level 1)



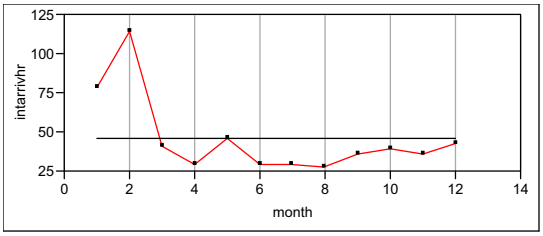
Mean	27.829538
Std	16.457422
N	12

LOCK_NO=24, DIRECTION=U
Recreation Inter-Arrival Time in Hours (Level 1)



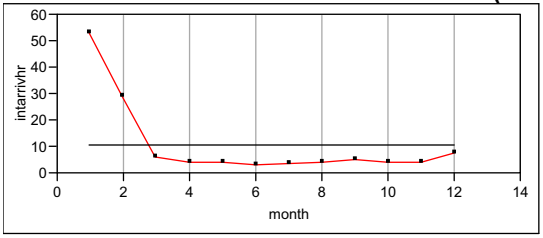
Mean	59.963996
Std	70.443703
N	12

LOCK_NO=25, DIRECTION=D
Recreation Inter-Arrival Time in Hours (Level 1)



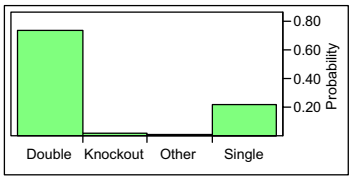
Mean	46.133504
Std	24.47218
N	12

LOCK_NO=25, DIRECTION=U
Recreation Inter-Arrival Time in Hours (Level 1)



Mean	10.800309
Std	14.486638
N	12

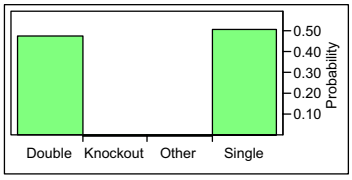
LOCK_NO=20, DIRECTION=D
Tow Arrival Type (Level 1)



Frequencies

Level	Count	Prob
Double	4358	0.74028
Knockout	126	0.02140
Other	90	0.01529
Single	1313	0.22303
Total	5887	1.00000

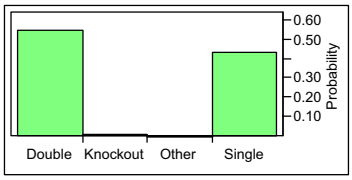
LOCK_NO=20, DIRECTION=U
Tow Arrival Type (Level 1)



Frequencies

Level	Count	Prob
Double	926	0.47954
Knockout	12	0.00621
Other	2	0.00104
Single	991	0.51321
Total	1931	1.00000

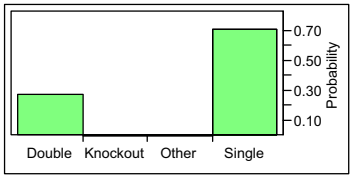
LOCK_NO=21, DIRECTION=D
Tow Arrival Type (Level 1)



Frequencies

Level	Count	Prob
Double	997	0.55083
Knockout	20	0.01105
Other	5	0.00276
Single	788	0.43536
Total	1810	1.00000

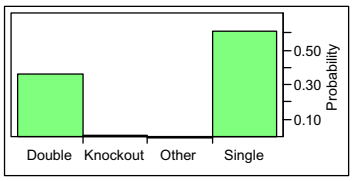
LOCK_NO=21, DIRECTION=U
Tow Arrival Type (Level 1)



Frequencies

Level	Count	Prob
Double	430	0.27760
Knockout	7	0.00452
Other	2	0.00129
Single	1110	0.71659
Total	1549	1.00000

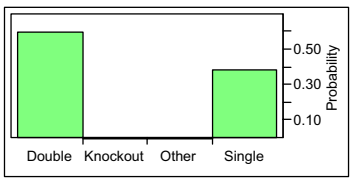
LOCK_NO=22, DIRECTION=D
Tow Arrival Type (Level 1)



Frequencies

Level	Count	Prob
Double	450	0.36735
Knockout	18	0.01469
Other	2	0.00163
Single	755	0.61633
Total	1225	1.00000

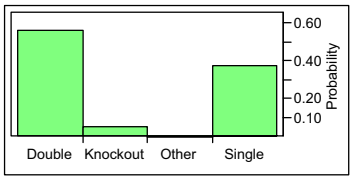
LOCK_NO=22, DIRECTION=U
Tow Arrival Type (Level 1)



Frequencies

Level	Count	Prob
Double	984	0.60147
Knockout	11	0.00672
Other	4	0.00244
Single	637	0.38936
Total	1636	1.00000

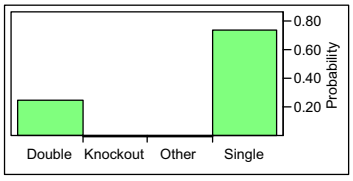
LOCK_NO=24, DIRECTION=D
Tow Arrival Type (Level 1)



Frequencies

Level	Count	Prob
Double	810	0.56723
Knockout	74	0.05182
Other	1	0.00070
Single	543	0.38025
Total	1428	1.00000

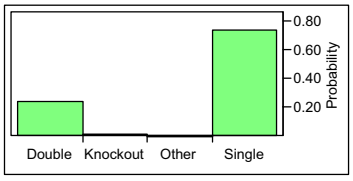
LOCK_NO=24, DIRECTION=U
Tow Arrival Type (Level 1)



Frequencies

Level	Count	Prob
Double	191	0.24709
Knockout	3	0.00388
Other	2	0.00259
Single	577	0.74644
Total	773	1.00000

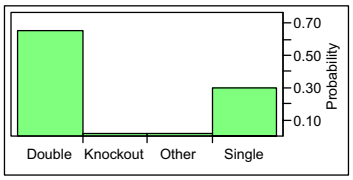
LOCK_NO=25, DIRECTION=D
Tow Arrival Type (Level 1)



Frequencies

Level	Count	Prob
Double	215	0.24460
Knockout	9	0.01024
Other	2	0.00228
Single	653	0.74289
Total	879	1.00000

LOCK_NO=25, DIRECTION=U
Tow Arrival Type (Level 1)



Frequencies

Level	Count	Prob
Double	4474	0.65978
Knockout	131	0.01932
Other	139	0.02050
Single	2037	0.30040
Total	6781	1.00000

changes in configuration after upstream lockages 15:10 Friday, June 24, 2005 1
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table of lock by nxtstep

lock / Frequency / Percent / Row Pct / Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
19	18	3810	1477	1	137	127	5570
	0.04	7.57	2.94	0.00	0.27	0.25	11.07
	0.32	68.40	26.52	0.02	2.46	2.28	
	11.54	11.36	13.76	0.71	8.15	3.13	
20	12	3992	1323	1	192	403	5923
	0.02	7.93	2.63	0.00	0.38	0.80	11.77
	0.20	67.40	22.34	0.02	3.24	6.80	
	7.69	11.90	12.33	0.71	11.43	9.92	
21	9	4452	797	2	118	623	6001
	0.02	8.85	1.58	0.00	0.23	1.24	11.93
	0.15	74.19	13.28	0.03	1.97	10.38	
	5.77	13.27	7.43	1.43	7.02	15.33	
22	10	4123	1340	2	60	224	5759
	0.02	8.19	2.66	0.00	0.12	0.45	11.45
	0.17	71.59	23.27	0.03	1.04	3.89	
	6.41	12.29	12.48	1.43	3.57	5.51	
24	4	5218	429	3	71	265	5990
	0.01	10.37	0.85	0.01	0.14	0.53	11.90
	0.07	87.11	7.16	0.05	1.19	4.42	
	2.56	15.56	4.00	2.14	4.23	6.52	
25	12	4938	620	75	672	464	6781
	0.02	9.81	1.23	0.15	1.34	0.92	13.48
	0.18	72.82	9.14	1.11	9.91	6.84	
	7.69	14.72	5.78	53.57	40.00	11.42	
26	91	7012	4748	56	430	1957	14294
	0.18	13.94	9.44	0.11	0.85	3.89	28.41
	0.64	49.06	33.22	0.39	3.01	13.69	
	58.33	20.90	44.23	40.00	25.60	48.17	
Total	156	33545	10734	140	1680	4063	50318
	0.31	66.67	21.33	0.28	3.34	8.07	100.00

changes in configuration after downstream lockages 15:10 Friday, June 24, 2005 2
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table of lock by nxtstep

lock / Frequency / Percent / Row Pct / Col Pct	Birth	CONTNOSTOP	CONTSTOP	EnterMI	Other	Return	Total
19	13	3778	1333	1	62	333	5520
	0.03	7.57	2.67	0.00	0.12	0.67	11.06
	0.24	68.44	24.15	0.02	1.12	6.03	
	7.69	11.91	21.52	0.02	8.10	6.58	
20	10	4319	1017	1	114	426	5887
	0.02	8.65	2.04	0.00	0.23	0.85	11.79
	0.17	73.37	17.28	0.02	1.94	7.24	
	5.92	13.61	16.42	0.02	14.90	8.42	
21	22	4220	1146	0	95	546	6029
	0.04	8.45	2.30	0.00	0.19	1.09	12.08
	0.36	70.00	19.01	0.00	1.58	9.06	
	13.02	13.30	18.50	0.00	12.42	10.79	
22	7	4580	718	1	58	442	5806
	0.01	9.17	1.44	0.00	0.12	0.89	11.63
	0.12	78.88	12.37	0.02	1.00	7.61	
	4.14	14.44	11.59	0.02	7.58	8.73	
24	10	4618	897	0	69	452	6046
	0.02	9.25	1.80	0.00	0.14	0.91	12.11
	0.17	76.38	14.84	0.00	1.14	7.48	
	5.92	14.56	14.48	0.00	9.02	8.93	
25	5	5399	323	1	96	454	6278
	0.01	10.81	0.65	0.00	0.19	0.91	12.57
	0.08	86.00	5.14	0.02	1.53	7.23	
	2.96	17.02	5.22	0.02	12.55	8.97	
26	102	4810	759	6013	271	2408	14363
	0.20	9.63	1.52	12.04	0.54	4.82	28.77
	0.71	33.49	5.28	41.86	1.89	16.77	
	60.36	15.16	12.26	99.93	35.42	47.58	
Total	169	31724	6193	6017	765	5061	49929
	0.34	63.54	12.40	12.05	1.53	10.14	100.00

data in regfile after picking up impairment data 15:10 Friday, June 24, 2005 3
using data from mdy(1,1,2000) to mdy(12,31,2003)

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
OPS_ID	OPS_ID	145569	0	614018209679	4218056.11	3515664.00	4331559.00
strtlcktime	Start/lockge/time	145569	0	1.9303608E14	1326079581	1262304600	1388533680
arrtime	Arriv/time	145569	0	1.9303506E14	1326072578	1262304600	1388530800
deptime	Leave/lockge/time	145569	0	1.9303668E14	1326083731	1262305620	1388536080
BOW_OVER_SILL	BOW_OVER_SILL	143341	2228	1.9009093E14	1326144848	1262304900	1388534700
END_OF_ENTRY	END_OF_ENTRY	143341	2228	1.90091E14	1326145368	1262304960	1388535000
START_OF_EXIT	START_OF_EXIT	143341	2228	1.9009109E14	1326146001	1262305560	1388535600
SIGNAL_DATE	SIGNAL_DATE	0	145569	.	.	.	.
DEPARTURE_DATE	DEPARTURE_DATE	0	145569	.	.	.	.
NUM_LOADED_BRG	NUM_LOADED_BRG	134357	11212	980334.00	7.2964862	0	28.0000000
NUM_EMPTY_BRG	NUM_EMPTY_BRG	134357	11212	531215.00	3.9537575	0	50.0000000
NEW_FLOTILLA_NO	NEW_FLOTILLA_NO	0	145569	.	.	.	.
vess_no		145569	0	101287364241	695803.12	2611.00	8888864.00
vss_hp		144799	770	629975827	4350.69	60.0000000	81800.00
frsttime		145569	0	1.9303506E14	1326072578	1262304600	1388530800
lasttime		145569	0	1.9303668E14	1326083731	1262305620	1388536080
newpoolno		145569	0	3437500.00	23.6142311	1.0000000	55.0000000
oldpoolno		145569	0	3449095.00	23.6938840	1.0000000	56.0000000
waitmin	Wait/before/lockge	145569	0	16989907.00	116.7137715	0	16396.00
lockmin	Wait/lockge/time	145569	0	10069822.00	69.1755937	1.0000000	7660.00
year		145569	0	291353055	2001.48	2000.00	2003.00
fly		145569	0	51327.00	0.3525957	0	1.0000000
turnback		145569	0	49518.00	0.3401686	0	1.0000000
exchange		145569	0	44717.00	0.3071877	0	1.0000000
lock		145569	0	3370513.00	23.1540575	1.0000000	55.0000000
totmin		145569	0	27059729.00	185.8893652	1.0000000	16498.00
month		145569	0	1024090.00	7.0350830	1.0000000	12.0000000
day		145569	0	2286351.00	15.7063042	1.0000000	31.0000000
sunrise		139280	6289	3208437367	23035.88	19392.00	27155.00
sunset		139280	6289	9525367596	68390.06	59489.00	75152.00
sequpstr		145569	0	40844.00	0.2805817	0	1.0000000
seqdstr		145569	0	41812.00	0.2872315	0	1.0000000
plock		143709	1860	3321185.00	23.1104872	1.0000000	27.0000000
pempty		134447	11122	481458.00	3.5810245	0	50.0000000
pfull		134447	11122	1029522.00	7.6574561	0	28.0000000
parrtime		143709	1860	1.905567E14	1325990044	1262304600	1388521920
pstrtlcktime		143709	1860	1.9055771E14	1325997077	1262304600	1388521920
pdeptime		143709	1860	1.9055832E14	1326001298	1262305620	1388523540
birth		145569	0	1860.00	0.0127774	0	1.0000000
transithrs		143709	1860	7126987.63	49.5931892	-249.0333333	8099.42
reclock		145569	0	0	0	0	0
i		145569	0	33841208.00	232.4753759	58.0000000	401.0000000
pctpsysdn		137338	8231	151443.42	1.1027058	0	98.9510000
pctplckdn		137338	8231	73866.98	0.5378481	0	98.3000000
cumdown		139194	6375	10831740.00	77.8175783	0	107520.00
pctdown		139194	6375	74747.88	0.5370050	0	98.3000000
pcttrandn		136865	8704	201278.99	1.4706389	0	100.0000000
pctsysdn		139194	6375	153424.84	1.1022375	0	98.9510000
pctlckdn		139194	6375	74747.88	0.5370050	0	98.3000000
stime		145569	0	6406918980	44012.94	0	86340.00
etime		145569	0	6412010700	44047.91	0	86340.00
sdate		145569	0	2234139717	15347.63	14610.00	16070.00

data in regfile after picking up impairment data 15:10 Friday, June 24, 2005 4
using data from mdy(1,1,2000) to mdy(12,31,2003)

The MEANS Procedure

Variable	Label	N	N Miss	Sum	Mean	Minimum	Maximum
edate		145569	0	2234146651	15347.68	14610.00	16071.00
hrsduration		145569	0	167830.37	1.1529266	0.0166667	127.6666667
ndays		145569	0	8.0000000	0.000054957	0	5.0000000
pctday		145290	279	7642957.80	52.6048441	0	100.0000000
pctpsysnite		142974	2595	6739626.33	47.1388248	0	100.0000000
pctplcknite		143477	2092	6807447.49	47.4462631	0	100.0000000
pcttrannite		138230	7339	6487690.87	46.9340293	0	100.0000000
pctsysnite		144550	1019	6789914.73	46.9727758	0	100.0000000
pctlcknite		145290	279	6886042.20	47.3951559	0	100.0000000
stage		88893	56676	1771891.12	19.9328532	8.3200000	35.3200000
flow		35115	110454	3208150134	91361.25	16077.99	306262.78

changes in configuration after upstream lockages 15:10 Friday, June 24, 2005 5
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 1 of plockagetype by LOCKAGE_TYPE
Controlling for plock=19

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00
5:OTHER	1 0.02 100.00 0.03	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02
3:KNOCKOUT	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00
2:SINGLE	3727 67.00 67.02 99.97	1 0.02 0.02 100.00	124 2.23 2.23 100.00	1599 28.74 28.75 99.94	110 1.98 1.98 100.00	5561 99.96
4:JACKNIFE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02 100.00 0.06	0 0.00 0.00 0.00	1 0.02
Total	3728 67.01	1 0.02	124 2.23	1600 28.76	110 1.98	5563 100.00

changes in configuration after upstream lockages 15:10 Friday, June 24, 2005 6
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 2 of plockagetype by LOCKAGE_TYPE
Controlling for plock=20

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	40 0.68 0.96 68.97	1 0.02 0.02 100.00	0 0.00 0.00 0.00	4121 69.68 99.01 70.47	0 0.00 0.00 0.00	4162 70.38
5:OTHER	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00
3:KNOCKOUT	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	92 1.56 100.00 1.57	0 0.00 0.00 0.00	92 1.56
2:SINGLE	18 0.30 1.17 31.03	0 0.00 0.00 0.00	5 0.08 0.32 100.00	1519 25.68 98.38 25.97	2 0.03 0.13 100.00	1544 26.11
4:JACKNIFE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	116 1.96 100.00 1.98	0 0.00 0.00 0.00	116 1.96
Total	58 0.98	1 0.02	5 0.08	5848 98.88	2 0.03	5914 100.00

changes in configuration after upstream lockages 15:10 Friday, June 24, 2005 7
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 3 of plockagetype by LOCKAGE_TYPE
Controlling for plock=21

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	4178 69.88 97.32 98.40	0 0.00 0.00 0.00	14 0.23 0.33 13.59	101 1.69 2.35 6.67	0 0.00 0.00 0.00	4293 71.80
5:OTHER	5 0.08 62.50 0.12	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.05 37.50 0.20	0 0.00 0.00 0.00	8 0.13
3:KNOCKOUT	9 0.15 8.26 0.21	0 0.00 0.00 0.00	78 1.30 71.56 75.73	19 0.32 17.43 1.25	3 0.05 2.75 2.61	109 1.82
2:SINGLE	54 0.90 3.74 1.27	1 0.02 0.07 100.00	4 0.07 0.28 3.88	1385 23.16 95.91 91.48	0 0.00 0.00 0.00	1444 24.15
4:JACKNIFE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	7 0.12 5.60 6.80	6 0.10 4.80 0.40	112 1.87 89.60 97.39	125 2.09
Total	4246 71.02	1 0.02	103 1.72	1514 25.32	115 1.92	5979 100.00

changes in configuration after upstream lockages 15:10 Friday, June 24, 2005 8
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 4 of plockagetype by LOCKAGE_TYPE
Controlling for plock=22

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	4266 74.11 98.59 99.51	5 0.09 0.12 62.50	11 0.19 0.25 9.82	45 0.78 1.04 3.67	0 0.00 0.00 0.00	4327 75.17
5:OTHER	1 0.02 33.33 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.03 66.67 0.16	0 0.00 0.00 0.00	3 0.05
3:KNOCKOUT	7 0.12 6.14 0.16	0 0.00 0.00 0.00	95 1.65 83.33 84.82	11 0.19 9.65 0.90	1 0.02 0.88 0.81	114 1.98
2:SINGLE	13 0.23 1.11 0.30	3 0.05 0.26 37.50	1 0.02 0.09 0.89	1159 20.14 98.55 94.61	0 0.00 0.00 0.00	1176 20.43
4:JACKNIFE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5 0.09 3.68 4.46	8 0.14 5.88 0.65	123 2.14 90.44 99.19	136 2.36
Total	4287 74.48	8 0.14	112 1.95	1225 21.28	124 2.15	5756 100.00

changes in configuration after upstream lockages 15:10 Friday, June 24, 2005 9
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 5 of plockagetype by LOCKAGE_TYPE
Controlling for plock=24

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	4363 72.89 97.91 98.91	1 0.02 0.02 50.00	14 0.23 0.31 10.69	77 1.29 1.73 5.89	1 0.02 0.02 0.74	4456 74.44
5:OTHER	1 0.02 33.33 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.03 66.67 0.15	0 0.00 0.00 0.00	3 0.05
3:KNOCKOUT	9 0.15 7.26 0.20	0 0.00 0.00 0.00	99 1.65 79.84 75.57	13 0.22 10.48 0.99	3 0.05 2.42 2.22	124 2.07
2:SINGLE	38 0.63 3.00 0.86	1 0.02 0.08 50.00	16 0.27 1.26 12.21	1212 20.25 95.66 92.73	0 0.00 0.00 0.00	1267 21.17
4:JACKNIFE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.03 1.47 1.53	3 0.05 2.21 0.23	131 2.19 96.32 97.04	136 2.27
Total	4411 73.69	2 0.03	131 2.19	1307 21.83	135 2.26	5986 100.00

changes in configuration after upstream lockages 15:10 Friday, June 24, 2005 10
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 6 of plockagetype by LOCKAGE_TYPE
Controlling for plock=25

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	4443 65.61 99.35 99.40	1 0.01 0.02 50.00	2 0.03 0.04 1.61	26 0.38 0.58 1.27	0 0.00 0.00 0.00	4472 66.04
5:OTHER	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00
3:KNOCKOUT	11 0.16 8.40 0.25	0 0.00 0.00 0.00	112 1.65 85.50 90.32	3 0.04 2.29 0.15	5 0.07 3.82 3.68	131 1.93
2:SINGLE	16 0.24 0.79 0.36	1 0.01 0.05 50.00	4 0.06 0.20 3.23	2009 29.67 98.97 98.48	0 0.00 0.00 0.00	2030 29.98
4:JACKNIFE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	6 0.09 4.32 4.84	2 0.03 1.44 0.10	131 1.93 94.24 96.32	139 2.05
Total	4470 66.01	2 0.03	124 1.83	2040 30.12	136 2.01	6772 100.00

changes in configuration after upstream lockages 15:10 Friday, June 24, 2005 11
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 7 of plockagetype by LOCKAGE_TYPE
Controlling for plock=26

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	312 3.78 85.48 7.11	0 0.00 0.00 0.00	5 0.06 1.37 3.57	48 0.58 13.15 1.34	0 0.00 0.00 0.00	365 4.42
5:OTHER	1 0.01 9.09 0.02	1 0.01 9.09 25.00	0 0.00 0.00 0.00	9 0.11 81.82 0.25	0 0.00 0.00 0.00	11 0.13
3:KNOCKOUT	5 0.06 7.25 0.11	0 0.00 0.00 0.00	21 0.25 30.43 15.00	43 0.52 62.32 1.20	0 0.00 0.00 0.00	69 0.84
2:SINGLE	4073 49.37 52.26 92.76	3 0.04 0.04 75.00	113 1.37 1.45 80.71	3479 42.17 44.64 97.15	126 1.53 1.62 94.03	7794 94.47
4:JACKNIFE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.01 9.09 0.71	2 0.02 18.18 0.06	8 0.10 72.73 5.97	11 0.13
Total	4391 53.22	4 0.05	140 1.70	3581 43.41	134 1.62	8250 100.00

changes in configuration after upstream lockages 15:10 Friday, June 24, 2005 12
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by nxtstep

pnewpool nxtstep

Frequency Percent Row Pct Col Pct	CONTNOSTOP	CONTSTOP	Other	Return	Total
MI19U	3406 7.70 61.23 11.38	1689 3.82 30.36 22.01	135 0.31 2.43 8.74	333 0.75 5.99 6.58	5563 12.58
MI20U	3810 8.62 64.42 12.73	1477 3.34 24.97 19.24	201 0.45 3.40 13.01	426 0.96 7.20 8.42	5914 13.37
MI21U	3992 9.03 66.77 13.33	1323 2.99 22.13 17.24	118 0.27 1.97 7.64	546 1.23 9.13 10.79	5979 13.52
MI22U	4452 10.07 77.35 14.87	797 1.80 13.85 10.38	65 0.15 1.13 4.21	442 1.00 7.68 8.73	5756 13.02
MI24U	4123 9.32 68.88 13.77	1340 3.03 22.39 17.46	71 0.16 1.19 4.60	452 1.02 7.55 8.93	5986 13.54
MI25U	5218 11.80 77.05 17.43	429 0.97 6.33 5.59	671 1.52 9.91 43.43	454 1.03 6.70 8.97	6772 15.31
MI26U	4938 11.17 59.85 16.49	620 1.40 7.52 8.08	284 0.64 3.44 18.38	2408 5.45 29.19 47.58	8250 18.66
Total	29939 67.70	7675 17.36	1545 3.49	5061 11.45	44220 100.00

changes in configuration after downstream lockages 15:10 Friday, June 24, 2005 13
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 1 of plockagetype by LOCKAGE_TYPE
Controlling for plock=19

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00
5:OTHER	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02 100.00 0.10	0 0.00 0.00 0.00	1 0.02
3:KNOCKOUT	1 0.02 100.00 0.02	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.02
2:SINGLE	4305 78.23 78.26 99.98	4 0.07 0.07 100.00	120 2.18 2.18 100.00	987 17.94 17.94 99.90	85 1.54 1.55 100.00	5501 99.96
4:JACKNIFE	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00
Total	4306 78.25	4 0.07	120 2.18	988 17.95	85 1.54	5503 100.00

changes in configuration after downstream lockages 15:10 Friday, June 24, 2005 14
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 2 of plockagetype by LOCKAGE_TYPE
Controlling for plock=20

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	4336 73.87 99.50 97.53	2 0.03 0.05 66.67	5 0.09 0.11 4.35	15 0.26 0.34 1.22	0 0.00 0.00 0.00	4358 74.24
5:OTHER	2 0.03 50.00 0.04	1 0.02 25.00 33.33	0 0.00 0.00 0.00	1 0.02 25.00 0.08	0 0.00 0.00 0.00	4 0.07
3:KNOCKOUT	28 0.48 22.22 0.63	0 0.00 0.00 0.00	92 1.57 73.02 80.00	3 0.05 2.38 0.24	3 0.05 2.38 3.80	126 2.15
2:SINGLE	79 1.35 6.10 1.78	0 0.00 0.00 0.00	8 0.14 0.62 6.96	1207 20.56 93.13 98.37	2 0.03 0.15 2.53	1296 22.08
4:JACKNIFE	1 0.02 1.16 0.02	0 0.00 0.00 0.00	10 0.17 11.63 8.70	1 0.02 1.16 0.08	74 1.26 86.05 93.67	86 1.47
Total	4446 75.74	3 0.05	115 1.96	1227 20.90	79 1.35	5870 100.00

changes in configuration after downstream lockages 15:10 Friday, June 24, 2005 15
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 3 of plockagetype by LOCKAGE_TYPE
Controlling for plock=21

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	4493 74.68 99.16 98.92	3 0.05 0.07 60.00	23 0.38 0.51 15.86	12 0.20 0.26 0.96	0 0.00 0.00 0.00	4531 75.32
5:OTHER	2 0.03 50.00 0.04	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.03 50.00 0.16	0 0.00 0.00 0.00	4 0.07
3:KNOCKOUT	9 0.15 7.14 0.20	0 0.00 0.00 0.00	107 1.78 84.92 73.79	4 0.07 3.17 0.32	6 0.10 4.76 7.79	126 2.09
2:SINGLE	38 0.63 2.98 0.84	2 0.03 0.16 40.00	10 0.17 0.78 6.90	1227 20.40 96.08 98.40	0 0.00 0.00 0.00	1277 21.23
4:JACKNIFE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5 0.08 6.41 3.45	2 0.03 2.56 0.16	71 1.18 91.03 92.21	78 1.30
Total	4542 75.50	5 0.08	145 2.41	1247 20.73	77 1.28	6016 100.00

changes in configuration after downstream lockages 15:10 Friday, June 24, 2005 16
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 4 of plockagetype by LOCKAGE_TYPE
Controlling for plock=22

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	4518 77.91 99.38 98.00	3 0.05 0.07 75.00	6 0.10 0.13 3.51	17 0.29 0.37 1.82	2 0.03 0.04 2.53	4546 78.39
5:OTHER	3 0.05 60.00 0.07	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 0.03 40.00 0.21	0 0.00 0.00 0.00	5 0.09
3:KNOCKOUT	33 0.57 22.45 0.72	0 0.00 0.00 0.00	108 1.86 73.47 63.16	1 0.02 0.68 0.11	5 0.09 3.40 6.33	147 2.53
2:SINGLE	55 0.95 5.38 1.19	1 0.02 0.10 25.00	52 0.90 5.08 30.41	915 15.78 89.44 97.86	0 0.00 0.00 0.00	1023 17.64
4:JACKNIFE	1 0.02 1.28 0.02	0 0.00 0.00 0.00	5 0.09 6.41 2.92	0 0.00 0.00 0.00	72 1.24 92.31 91.14	78 1.35
Total	4610 79.50	4 0.07	171 2.95	935 16.12	79 1.36	5799 100.00

changes in configuration after downstream lockages 15:10 Friday, June 24, 2005 17
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 5 of plockagetype by LOCKAGE_TYPE
Controlling for plock=24

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	4695 77.78 99.53 99.64	0 0.00 0.00 0.00	13 0.22 0.28 6.74	9 0.15 0.19 0.86	0 0.00 0.00 0.00	4717 78.15
5:OTHER	3 0.05 100.00 0.06	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 0.05
3:KNOCKOUT	8 0.13 4.26 0.17	1 0.02 0.53 50.00	173 2.87 92.02 89.64	0 0.00 0.00 0.00	6 0.10 3.19 7.69	188 3.11
2:SINGLE	6 0.10 0.57 0.13	1 0.02 0.10 50.00	2 0.03 0.19 1.04	1042 17.26 99.14 99.14	0 0.00 0.00 0.00	1051 17.41
4:JACKNIFE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5 0.08 6.49 2.59	0 0.00 0.00 0.00	72 1.19 93.51 92.31	77 1.28
Total	4712 78.06	2 0.03	193 3.20	1051 17.41	78 1.29	6036 100.00

changes in configuration after downstream lockages 15:10 Friday, June 24, 2005 18
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 6 of plockagetype by LOCKAGE_TYPE
Controlling for plock=25

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	322 5.25 6.90 96.41	1 0.02 0.02 100.00	5 0.08 0.11 10.20	4341 70.80 92.97 75.61	0 0.00 0.00 0.00	4669 76.15
5:OTHER	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00 . 0.00	0 0.00
3:KNOCKOUT	2 0.03 1.12 0.60	0 0.00 0.00 0.00	39 0.64 21.91 79.59	137 2.23 76.97 2.39	0 0.00 0.00 0.00	178 2.90
2:SINGLE	9 0.15 0.74 2.69	0 0.00 0.00 0.00	3 0.05 0.25 6.12	1199 19.56 99.01 20.88	0 0.00 0.00 0.00	1211 19.75
4:JACKNIFE	1 0.02 1.37 0.30	0 0.00 0.00 0.00	2 0.03 2.74 4.08	64 1.04 87.67 1.11	6 0.10 8.22 100.00	73 1.19
Total	334 5.45	1 0.02	49 0.80	5741 93.64	6 0.10	6131 100.00

changes in configuration after downstream lockages 15:10 Friday, June 24, 2005 19
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table 7 of plockagetype by LOCKAGE_TYPE
Controlling for plock=26

plockagetype LOCKAGE_TYPE(LOCKAGE_TYPE)

Frequency Percent Row Pct Col Pct	1:DOUBLE	5:OTHER	3:KNOCKOUT	2:SINGLE	4:JACKNIFE	Total
1:DOUBLE	70 0.49 9.86 39.11	0 0.00 0.00 0.00	4 0.03 0.56 2.80	635 4.47 89.44 4.58	1 0.01 0.14 5.00	710 5.00
5:OTHER	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	9 0.06 100.00 0.06	0 0.00 0.00 0.00	9 0.06
3:KNOCKOUT	1 0.01 0.47 0.56	0 0.00 0.00 0.00	33 0.23 15.64 23.08	177 1.25 83.89 1.28	0 0.00 0.00 0.00	211 1.48
2:SINGLE	108 0.76 0.81 60.34	11 0.08 0.08 100.00	105 0.74 0.79 73.43	13014 91.56 98.20 93.89	15 0.11 0.11 75.00	13253 93.24
4:JACKNIFE	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.01 3.23 0.70	26 0.18 83.87 0.19	4 0.03 12.90 20.00	31 0.22
Total	179 1.26	11 0.08	143 1.01	13861 97.52	20 0.14	14214 100.00

changes in configuration after downstream lockages 15:10 Friday, June 24, 2005 20
using data from mdy(1,1,2000) to mdy(12,31,2003)

The FREQ Procedure

Table of pnewpool by nxtstep

pnewpool nxtstep

Frequency Percent Row Pct Col Pct	CONTNOSTOP	CONTSTOP	Other	Return	Total
MI20D	4319 8.71 78.48 12.64	1017 2.05 18.48 9.65	40 0.08 0.73 5.01	127 0.26 2.31 3.13	5503 11.10
MI21D	4220 8.51 71.89 12.35	1146 2.31 19.52 10.87	101 0.20 1.72 12.66	403 0.81 6.87 9.92	5870 11.84
MI22D	4580 9.24 76.13 13.40	718 1.45 11.93 6.81	95 0.19 1.58 11.90	623 1.26 10.36 15.33	6016 12.14
MI24D	4618 9.32 79.63 13.52	897 1.81 15.47 8.51	60 0.12 1.03 7.52	224 0.45 3.86 5.51	5799 11.70
MI25D	5399 10.89 89.45 15.80	323 0.65 5.35 3.06	49 0.10 0.81 6.14	265 0.53 4.39 6.52	6036 12.18
MI26D	4810 9.70 78.45 14.08	759 1.53 12.38 7.20	98 0.20 1.60 12.28	464 0.94 7.57 11.42	6131 12.37
MI27D	6221 12.55 43.77 18.21	5681 11.46 39.97 53.89	355 0.72 2.50 44.49	1957 3.95 13.77 48.17	14214 28.68
Total	34167 68.93	10541 21.27	798 1.61	4063 8.20	49569 100.00

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LOCK_NO	DIRECTION	year	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
20	D	2000	2	4	0.000	1.000	0.000	0.000	0.000	0.000
20	D	2000	3	119	0.664	0.286	0.000	0.042	0.008	0.000
20	D	2000	4	171	0.708	0.216	0.023	0.047	0.006	0.000
20	D	2000	5	169	0.757	0.195	0.030	0.018	0.000	0.000
20	D	2000	6	164	0.841	0.110	0.018	0.030	0.000	0.000
20	D	2000	7	183	0.809	0.158	0.005	0.027	0.000	0.000
20	D	2000	8	162	0.759	0.210	0.019	0.012	0.000	0.000
20	D	2000	9	153	0.699	0.242	0.020	0.039	0.000	0.000
20	D	2000	10	146	0.753	0.219	0.014	0.014	0.000	0.000
20	D	2000	11	195	0.769	0.169	0.031	0.031	0.000	0.000
20	D	2000	12	74	0.703	0.203	0.014	0.068	0.014	0.000
20	D	2001	1	1	0.000	0.000	0.000	1.000	0.000	0.000
20	D	2001	2	9	0.111	0.778	0.000	0.111	0.000	0.000
20	D	2001	3	87	0.471	0.494	0.000	0.034	0.000	0.000
20	D	2001	4	93	0.624	0.344	0.000	0.032	0.000	0.000
20	D	2001	5	41	0.732	0.268	0.000	0.000	0.000	0.000
20	D	2001	6	207	0.749	0.213	0.014	0.024	0.000	0.000
20	D	2001	7	196	0.786	0.194	0.015	0.005	0.000	0.000
20	D	2001	8	192	0.740	0.224	0.016	0.021	0.000	0.000
20	D	2001	9	152	0.645	0.329	0.013	0.013	0.000	0.000
20	D	2001	10	141	0.695	0.291	0.014	0.000	0.000	0.000
20	D	2001	11	178	0.781	0.191	0.022	0.006	0.000	0.000
20	D	2001	12	119	0.697	0.294	0.000	0.008	0.000	0.000
20	D	2002	2	3	0.000	1.000	0.000	0.000	0.000	0.000
20	D	2002	3	118	0.593	0.347	0.000	0.059	0.000	0.000
20	D	2002	4	154	0.760	0.201	0.019	0.019	0.000	0.000
20	D	2002	5	164	0.823	0.146	0.006	0.024	0.000	0.000
20	D	2002	6	172	0.843	0.128	0.017	0.006	0.006	0.000
20	D	2002	7	189	0.820	0.164	0.005	0.011	0.000	0.000
20	D	2002	8	168	0.798	0.173	0.012	0.018	0.000	0.000
20	D	2002	9	127	0.677	0.276	0.016	0.031	0.000	0.000
20	D	2002	10	183	0.705	0.262	0.016	0.016	0.000	0.000
20	D	2002	11	220	0.818	0.136	0.023	0.023	0.000	0.000
20	D	2002	12	67	0.701	0.254	0.015	0.030	0.000	0.000
20	D	2003	3	69	0.507	0.464	0.000	0.029	0.000	0.000
20	D	2003	4	141	0.823	0.170	0.000	0.007	0.000	0.000
20	D	2003	5	142	0.824	0.141	0.014	0.021	0.000	0.000
20	D	2003	6	160	0.819	0.156	0.006	0.019	0.000	0.000
20	D	2003	7	175	0.783	0.189	0.023	0.006	0.000	0.000
20	D	2003	8	154	0.727	0.247	0.013	0.013	0.000	0.000
20	D	2003	9	114	0.623	0.351	0.018	0.009	0.000	0.000
20	D	2003	10	157	0.656	0.293	0.038	0.013	0.000	0.000
20	D	2003	11	167	0.743	0.222	0.006	0.030	0.000	0.000
20	D	2003	12	87	0.678	0.264	0.023	0.034	0.000	0.000
20	U	2000	2	2	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2000	3	5	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2000	4	4	0.250	0.750	0.000	0.000	0.000	0.000
20	U	2000	5	7	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2000	6	2	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2000	7	10	0.100	0.900	0.000	0.000	0.000	0.000
20	U	2000	8	5	0.400	0.600	0.000	0.000	0.000	0.000
20	U	2000	9	6	0.167	0.833	0.000	0.000	0.000	0.000
20	U	2000	10	3	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2000	11	8	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2000	12	4	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2001	2	3	0.000	1.000	0.000	0.000	0.000	0.000

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LOCK_NO	DIRECTION	year	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
20	U	2001	3	7	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2001	4	1	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2001	5	1	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2001	6	7	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2001	7	3	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2001	8	2	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2001	9	7	0.143	0.857	0.000	0.000	0.000	0.000
20	U	2001	10	6	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2001	11	4	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2001	12	4	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2002	2	1	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2002	3	1	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2002	4	7	0.143	0.857	0.000	0.000	0.000	0.000
20	U	2002	5	6	0.167	0.833	0.000	0.000	0.000	0.000
20	U	2002	6	6	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2002	7	3	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2002	8	3	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2002	9	1	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2002	10	1	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2002	11	10	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2002	12	6	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2003	3	7	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2003	4	4	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2003	5	5	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2003	6	8	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2003	7	4	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2003	8	2	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2003	9	9	0.333	0.667	0.000	0.000	0.000	0.000
20	U	2003	10	7	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2003	11	9	0.000	1.000	0.000	0.000	0.000	0.000
20	U	2003	12	4	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2000	2	4	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2000	3	4	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2000	4	3	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2000	5	1	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2000	6	2	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2000	7	5	0.200	0.800	0.000	0.000	0.000	0.000
21	D	2000	8	3	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2000	9	1	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2000	10	3	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2000	11	6	0.167	0.833	0.000	0.000	0.000	0.000
21	D	2000	12	2	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2001	1	3	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2001	2	2	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2001	3	5	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2001	4	3	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2001	5	1	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2001	6	6	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2001	8	1	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2001	9	2	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2001	10	4	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2001	12	1	1.000	0.000	0.000	0.000	0.000	0.000
21	D	2002	3	7	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2002	4	1	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2002	5	5	0.800	0.200	0.000	0.000	0.000	0.000
21	D	2002	6	4	0.000	1.000	0.000	0.000	0.000	0.000

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LOCK_NO	DIRECTION	year	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
21	D	2002	7	2	0.500	0.500	0.000	0.000	0.000	0.000
21	D	2002	8	2	0.500	0.500	0.000	0.000	0.000	0.000
21	D	2002	9	1	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2002	10	4	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2002	11	2	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2003	3	6	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2003	4	4	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2003	5	3	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2003	7	1	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2003	8	2	0.000	0.500	0.500	0.000	0.000	0.000
21	D	2003	9	3	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2003	10	7	0.286	0.714	0.000	0.000	0.000	0.000
21	D	2003	11	1	1.000	0.000	0.000	0.000	0.000	0.000
21	U	2000	3	3	0.333	0.667	0.000	0.000	0.000	0.000
21	U	2000	4	5	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2000	5	7	0.429	0.571	0.000	0.000	0.000	0.000
21	U	2000	6	3	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2000	7	5	0.400	0.600	0.000	0.000	0.000	0.000
21	U	2000	8	4	0.250	0.750	0.000	0.000	0.000	0.000
21	U	2000	9	2	0.500	0.500	0.000	0.000	0.000	0.000
21	U	2000	10	2	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2000	11	4	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2000	12	3	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2001	1	1	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2001	3	2	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2001	4	6	0.333	0.667	0.000	0.000	0.000	0.000
21	U	2001	5	4	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2001	6	3	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2001	7	6	0.333	0.667	0.000	0.000	0.000	0.000
21	U	2001	9	5	0.400	0.600	0.000	0.000	0.000	0.000
21	U	2001	10	2	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2001	11	4	0.250	0.750	0.000	0.000	0.000	0.000
21	U	2001	12	4	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2002	1	1	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2002	2	1	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2002	3	1	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2002	4	2	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2002	5	1	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2002	6	3	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2002	7	2	0.500	0.500	0.000	0.000	0.000	0.000
21	U	2002	8	2	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2002	10	7	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2002	11	3	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2002	12	2	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2003	3	3	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2003	4	2	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2003	5	6	0.667	0.167	0.167	0.000	0.000	0.000
21	U	2003	6	3	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2003	7	2	0.500	0.500	0.000	0.000	0.000	0.000
21	U	2003	8	3	0.667	0.333	0.000	0.000	0.000	0.000
21	U	2003	9	2	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2003	10	4	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2003	11	2	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2003	12	2	0.000	1.000	0.000	0.000	0.000	0.000
22	D	2000	3	1	0.000	1.000	0.000	0.000	0.000	0.000
22	D	2000	4	4	0.000	1.000	0.000	0.000	0.000	0.000

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LOCK_NO	DIRECTION	year	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
22	D	2000	5	3	0.667	0.333	0.000	0.000	0.000	0.000
22	D	2000	8	1	0.000	1.000	0.000	0.000	0.000	0.000
22	D	2000	9	1	0.000	1.000	0.000	0.000	0.000	0.000
22	D	2000	10	2	0.500	0.500	0.000	0.000	0.000	0.000
22	D	2000	12	1	0.000	1.000	0.000	0.000	0.000	0.000
22	D	2001	4	2	1.000	0.000	0.000	0.000	0.000	0.000
22	D	2001	5	2	0.000	1.000	0.000	0.000	0.000	0.000
22	D	2001	6	5	0.200	0.800	0.000	0.000	0.000	0.000
22	D	2001	7	3	0.000	1.000	0.000	0.000	0.000	0.000
22	D	2001	8	2	1.000	0.000	0.000	0.000	0.000	0.000
22	D	2001	9	2	1.000	0.000	0.000	0.000	0.000	0.000
22	D	2001	10	4	0.250	0.750	0.000	0.000	0.000	0.000
22	D	2001	12	2	0.000	1.000	0.000	0.000	0.000	0.000
22	D	2002	1	3	0.333	0.667	0.000	0.000	0.000	0.000
22	D	2002	3	5	0.400	0.600	0.000	0.000	0.000	0.000
22	D	2002	4	3	0.000	1.000	0.000	0.000	0.000	0.000
22	D	2002	5	2	0.000	1.000	0.000	0.000	0.000	0.000
22	D	2002	6	2	0.500	0.500	0.000	0.000	0.000	0.000
22	D	2002	7	4	0.500	0.500	0.000	0.000	0.000	0.000
22	D	2002	8	1	1.000	0.000	0.000	0.000	0.000	0.000
22	D	2002	10	1	0.000	1.000	0.000	0.000	0.000	0.000
22	D	2002	12	1	0.000	1.000	0.000	0.000	0.000	0.000
22	D	2003	5	1	1.000	0.000	0.000	0.000	0.000	0.000
22	D	2003	6	1	0.000	1.000	0.000	0.000	0.000	0.000
22	D	2003	8	2	0.000	0.500	0.500	0.000	0.000	0.000
22	D	2003	9	3	0.000	1.000	0.000	0.000	0.000	0.000
22	D	2003	10	1	0.000	1.000	0.000	0.000	0.000	0.000
22	D	2003	11	1	0.000	1.000	0.000	0.000	0.000	0.000
22	U	2000	2	1	0.000	1.000	0.000	0.000	0.000	0.000
22	U	2000	3	7	0.429	0.571	0.000	0.000	0.000	0.000
22	U	2000	4	2	0.500	0.500	0.000	0.000	0.000	0.000
22	U	2000	5	1	0.000	1.000	0.000	0.000	0.000	0.000
22	U	2000	6	2	0.500	0.500	0.000	0.000	0.000	0.000
22	U	2000	7	2	0.000	1.000	0.000	0.000	0.000	0.000
22	U	2000	8	1	1.000	0.000	0.000	0.000	0.000	0.000
22	U	2000	9	1	0.000	1.000	0.000	0.000	0.000	0.000
22	U	2000	10	1	0.000	1.000	0.000	0.000	0.000	0.000
22	U	2000	11	6	0.000	1.000	0.000	0.000	0.000	0.000
22	U	2000	12	2	0.000	1.000	0.000	0.000	0.000	0.000
22	U	2001	1	1	0.000	1.000	0.000	0.000	0.000	0.000
22	U	2001	3	3	0.333	0.667	0.000	0.000	0.000	0.000
22	U	2001	4	1	1.000	0.000	0.000	0.000	0.000	0.000
22	U	2001	5	2	1.000	0.000	0.000	0.000	0.000	0.000
22	U	2001	6	2	0.000	1.000	0.000	0.000	0.000	0.000
22	U	2001	7	4	1.000	0.000	0.000	0.000	0.000	0.000
22	U	2001	8	3	0.333	0.667	0.000	0.000	0.000	0.000
22	U	2001	9	2	0.000	1.000	0.000	0.000	0.000	0.000
22	U	2001	11	1	0.000	1.000	0.000	0.000	0.000	0.000
22	U	2001	12	2	0.000	1.000	0.000	0.000	0.000	0.000
22	U	2002	3	1	0.000	1.000	0.000	0.000	0.000	0.000
22	U	2002	5	1	0.000	1.000	0.000	0.000	0.000	0.000
22	U	2002	6	2	0.000	1.000	0.000	0.000	0.000	0.000
22	U	2002	7	1	1.000	0.000	0.000	0.000	0.000	0.000
22	U	2002	9	1	1.000	0.000	0.000	0.000	0.000	0.000
22	U	2002	10	2	0.500	0.500	0.000	0.000	0.000	0.000
22	U	2002	11	3	0.000	1.000	0.000	0.000	0.000	0.000

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LOCK_NO	DIRECTION	year	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
22	U	2002	12	1	0.000	1.000	0.000	0.000	0.000	0.000
22	U	2003	3	2	0.500	0.500	0.000	0.000	0.000	0.000
22	U	2003	5	1	1.000	0.000	0.000	0.000	0.000	0.000
22	U	2003	6	1	0.000	1.000	0.000	0.000	0.000	0.000
22	U	2003	7	1	0.000	1.000	0.000	0.000	0.000	0.000
22	U	2003	8	1	0.000	1.000	0.000	0.000	0.000	0.000
22	U	2003	9	2	1.000	0.000	0.000	0.000	0.000	0.000
22	U	2003	11	2	0.500	0.500	0.000	0.000	0.000	0.000
22	U	2003	12	3	0.000	1.000	0.000	0.000	0.000	0.000
24	D	2000	1	1	0.000	1.000	0.000	0.000	0.000	0.000
24	D	2000	2	2	0.000	1.000	0.000	0.000	0.000	0.000
24	D	2000	3	6	0.333	0.667	0.000	0.000	0.000	0.000
24	D	2000	4	5	0.400	0.600	0.000	0.000	0.000	0.000
24	D	2000	5	2	0.500	0.500	0.000	0.000	0.000	0.000
24	D	2000	8	3	0.000	1.000	0.000	0.000	0.000	0.000
24	D	2000	10	1	1.000	0.000	0.000	0.000	0.000	0.000
24	D	2001	1	1	1.000	0.000	0.000	0.000	0.000	0.000
24	D	2001	2	2	0.500	0.500	0.000	0.000	0.000	0.000
24	D	2001	4	3	0.333	0.667	0.000	0.000	0.000	0.000
24	D	2001	5	1	0.000	1.000	0.000	0.000	0.000	0.000
24	D	2001	6	1	1.000	0.000	0.000	0.000	0.000	0.000
24	D	2001	8	4	1.000	0.000	0.000	0.000	0.000	0.000
24	D	2001	9	2	0.500	0.500	0.000	0.000	0.000	0.000
24	D	2001	11	1	0.000	1.000	0.000	0.000	0.000	0.000
24	D	2001	12	2	0.500	0.500	0.000	0.000	0.000	0.000
24	D	2002	3	5	0.000	1.000	0.000	0.000	0.000	0.000
24	D	2002	4	3	0.000	1.000	0.000	0.000	0.000	0.000
24	D	2002	5	3	0.333	0.667	0.000	0.000	0.000	0.000
24	D	2002	6	3	0.333	0.667	0.000	0.000	0.000	0.000
24	D	2002	7	2	1.000	0.000	0.000	0.000	0.000	0.000
24	D	2002	9	1	0.000	1.000	0.000	0.000	0.000	0.000
24	D	2002	10	1	0.000	1.000	0.000	0.000	0.000	0.000
24	D	2002	11	2	0.500	0.500	0.000	0.000	0.000	0.000
24	D	2003	3	2	0.000	1.000	0.000	0.000	0.000	0.000
24	D	2003	4	3	0.000	1.000	0.000	0.000	0.000	0.000
24	D	2003	5	2	1.000	0.000	0.000	0.000	0.000	0.000
24	D	2003	6	2	1.000	0.000	0.000	0.000	0.000	0.000
24	D	2003	8	2	0.000	1.000	0.000	0.000	0.000	0.000
24	D	2003	9	1	1.000	0.000	0.000	0.000	0.000	0.000
24	D	2003	10	4	0.250	0.750	0.000	0.000	0.000	0.000
24	D	2003	11	4	0.250	0.750	0.000	0.000	0.000	0.000
24	D	2003	12	2	1.000	0.000	0.000	0.000	0.000	0.000
24	U	2000	1	2	0.000	1.000	0.000	0.000	0.000	0.000
24	U	2000	2	1	1.000	0.000	0.000	0.000	0.000	0.000
24	U	2000	3	2	0.000	1.000	0.000	0.000	0.000	0.000
24	U	2000	4	2	0.000	1.000	0.000	0.000	0.000	0.000
24	U	2000	5	3	0.667	0.333	0.000	0.000	0.000	0.000
24	U	2000	6	1	1.000	0.000	0.000	0.000	0.000	0.000
24	U	2000	7	1	0.000	1.000	0.000	0.000	0.000	0.000
24	U	2000	9	2	0.500	0.500	0.000	0.000	0.000	0.000
24	U	2000	10	3	0.000	1.000	0.000	0.000	0.000	0.000
24	U	2000	11	3	0.333	0.667	0.000	0.000	0.000	0.000
24	U	2000	12	2	0.000	1.000	0.000	0.000	0.000	0.000
24	U	2001	3	1	1.000	0.000	0.000	0.000	0.000	0.000
24	U	2001	5	2	1.000	0.000	0.000	0.000	0.000	0.000
24	U	2001	6	3	0.000	1.000	0.000	0.000	0.000	0.000

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LOCK_NO	DIRECTION	year	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
24	U	2001	7	5	0.400	0.600	0.000	0.000	0.000	0.000
24	U	2001	8	1	1.000	0.000	0.000	0.000	0.000	0.000
24	U	2001	11	4	0.000	1.000	0.000	0.000	0.000	0.000
24	U	2001	12	2	0.000	1.000	0.000	0.000	0.000	0.000
24	U	2002	3	3	0.000	1.000	0.000	0.000	0.000	0.000
24	U	2002	4	3	0.000	1.000	0.000	0.000	0.000	0.000
24	U	2002	5	2	1.000	0.000	0.000	0.000	0.000	0.000
24	U	2002	6	6	0.000	1.000	0.000	0.000	0.000	0.000
24	U	2002	7	4	0.500	0.500	0.000	0.000	0.000	0.000
24	U	2002	8	3	0.333	0.667	0.000	0.000	0.000	0.000
24	U	2002	10	2	0.000	1.000	0.000	0.000	0.000	0.000
24	U	2002	11	5	0.400	0.600	0.000	0.000	0.000	0.000
24	U	2003	3	4	0.750	0.250	0.000	0.000	0.000	0.000
24	U	2003	4	1	0.000	1.000	0.000	0.000	0.000	0.000
24	U	2003	5	1	1.000	0.000	0.000	0.000	0.000	0.000
24	U	2003	6	1	0.000	1.000	0.000	0.000	0.000	0.000
24	U	2003	9	3	1.000	0.000	0.000	0.000	0.000	0.000
24	U	2003	11	1	0.000	1.000	0.000	0.000	0.000	0.000
25	D	2000	4	5	0.600	0.400	0.000	0.000	0.000	0.000
25	D	2000	5	2	0.000	1.000	0.000	0.000	0.000	0.000
25	D	2000	6	4	0.000	1.000	0.000	0.000	0.000	0.000
25	D	2000	7	3	0.000	1.000	0.000	0.000	0.000	0.000
25	D	2000	8	1	0.000	1.000	0.000	0.000	0.000	0.000
25	D	2000	10	3	0.333	0.667	0.000	0.000	0.000	0.000
25	D	2000	11	2	0.500	0.500	0.000	0.000	0.000	0.000
25	D	2000	12	5	0.600	0.400	0.000	0.000	0.000	0.000
25	D	2001	1	3	0.667	0.333	0.000	0.000	0.000	0.000
25	D	2001	2	6	0.333	0.667	0.000	0.000	0.000	0.000
25	D	2001	4	2	0.000	1.000	0.000	0.000	0.000	0.000
25	D	2001	5	1	0.000	1.000	0.000	0.000	0.000	0.000
25	D	2001	6	4	0.250	0.750	0.000	0.000	0.000	0.000
25	D	2001	7	4	0.000	1.000	0.000	0.000	0.000	0.000
25	D	2001	8	7	0.429	0.571	0.000	0.000	0.000	0.000
25	D	2001	9	5	0.400	0.600	0.000	0.000	0.000	0.000
25	D	2001	10	4	0.000	1.000	0.000	0.000	0.000	0.000
25	D	2001	11	4	0.750	0.250	0.000	0.000	0.000	0.000
25	D	2001	12	2	0.500	0.500	0.000	0.000	0.000	0.000
25	D	2002	3	7	0.143	0.857	0.000	0.000	0.000	0.000
25	D	2002	4	1	0.000	1.000	0.000	0.000	0.000	0.000
25	D	2002	5	2	0.500	0.500	0.000	0.000	0.000	0.000
25	D	2002	6	1	0.000	1.000	0.000	0.000	0.000	0.000
25	D	2002	7	3	0.667	0.333	0.000	0.000	0.000	0.000
25	D	2002	8	2	0.500	0.500	0.000	0.000	0.000	0.000
25	D	2002	11	3	0.333	0.667	0.000	0.000	0.000	0.000
25	D	2002	12	2	0.000	1.000	0.000	0.000	0.000	0.000
25	D	2003	4	1	0.000	1.000	0.000	0.000	0.000	0.000
25	D	2003	5	3	0.667	0.333	0.000	0.000	0.000	0.000
25	D	2003	6	5	0.400	0.600	0.000	0.000	0.000	0.000
25	D	2003	7	1	1.000	0.000	0.000	0.000	0.000	0.000
25	D	2003	10	1	0.000	1.000	0.000	0.000	0.000	0.000
25	D	2003	11	2	0.000	1.000	0.000	0.000	0.000	0.000
25	D	2003	12	1	1.000	0.000	0.000	0.000	0.000	0.000
25	U	2000	1	5	0.400	0.600	0.000	0.000	0.000	0.000
25	U	2000	2	32	0.750	0.250	0.000	0.000	0.000	0.000
25	U	2000	3	192	0.766	0.182	0.016	0.036	0.000	0.000
25	U	2000	4	191	0.806	0.136	0.031	0.026	0.000	0.000

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LOCK_NO	DIRECTION	year	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
25	U	2000	5	188	0.787	0.176	0.011	0.027	0.000	0.000
25	U	2000	6	195	0.723	0.231	0.036	0.010	0.000	0.000
25	U	2000	7	197	0.751	0.213	0.025	0.010	0.000	0.000
25	U	2000	8	186	0.688	0.290	0.011	0.011	0.000	0.000
25	U	2000	9	146	0.658	0.315	0.014	0.014	0.000	0.000
25	U	2000	10	179	0.715	0.235	0.039	0.011	0.000	0.000
25	U	2000	11	177	0.424	0.520	0.040	0.017	0.000	0.000
25	U	2000	12	65	0.277	0.723	0.000	0.000	0.000	0.000
25	U	2001	1	22	0.591	0.364	0.000	0.045	0.000	0.000
25	U	2001	2	55	0.473	0.527	0.000	0.000	0.000	0.000
25	U	2001	3	158	0.544	0.424	0.006	0.025	0.000	0.000
25	U	2001	4	143	0.594	0.385	0.007	0.014	0.000	0.000
25	U	2001	5	119	0.824	0.134	0.008	0.034	0.000	0.000
25	U	2001	6	214	0.696	0.276	0.014	0.014	0.000	0.000
25	U	2001	7	238	0.689	0.269	0.017	0.025	0.000	0.000
25	U	2001	8	207	0.618	0.348	0.014	0.019	0.000	0.000
25	U	2001	9	144	0.576	0.382	0.014	0.028	0.000	0.000
25	U	2001	10	164	0.652	0.299	0.024	0.024	0.000	0.000
25	U	2001	11	163	0.552	0.387	0.006	0.055	0.000	0.000
25	U	2001	12	91	0.319	0.615	0.033	0.033	0.000	0.000
25	U	2002	1	2	0.000	1.000	0.000	0.000	0.000	0.000
25	U	2002	2	9	0.889	0.111	0.000	0.000	0.000	0.000
25	U	2002	3	193	0.756	0.197	0.021	0.026	0.000	0.000
25	U	2002	4	177	0.774	0.198	0.011	0.017	0.000	0.000
25	U	2002	5	207	0.681	0.295	0.014	0.010	0.000	0.000
25	U	2002	6	230	0.674	0.313	0.004	0.009	0.000	0.000
25	U	2002	7	198	0.783	0.197	0.015	0.005	0.000	0.000
25	U	2002	8	171	0.596	0.363	0.018	0.023	0.000	0.000
25	U	2002	9	165	0.636	0.297	0.036	0.030	0.000	0.000
25	U	2002	10	191	0.654	0.283	0.037	0.026	0.000	0.000
25	U	2002	11	208	0.490	0.457	0.029	0.024	0.000	0.000
25	U	2002	12	60	0.167	0.800	0.017	0.017	0.000	0.000
25	U	2003	1	1	0.000	1.000	0.000	0.000	0.000	0.000
25	U	2003	3	140	0.821	0.164	0.014	0.000	0.000	0.000
25	U	2003	4	180	0.733	0.244	0.017	0.006	0.000	0.000
25	U	2003	5	177	0.695	0.277	0.028	0.000	0.000	0.000
25	U	2003	6	187	0.711	0.262	0.021	0.005	0.000	0.000
25	U	2003	7	197	0.711	0.269	0.010	0.010	0.000	0.000
25	U	2003	8	145	0.710	0.248	0.021	0.021	0.000	0.000
25	U	2003	9	120	0.692	0.233	0.042	0.033	0.000	0.000
25	U	2003	10	150	0.647	0.267	0.040	0.047	0.000	0.000
25	U	2003	11	141	0.567	0.340	0.050	0.043	0.000	0.000
25	U	2003	12	61	0.246	0.721	0.033	0.000	0.000	0.000

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LOCK_NO	DIRECTION	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
20	D	1	1	0.000	0.000	0.000	1.000	0.000	0.000
20	D	2	16	0.063	0.875	0.000	0.063	0.000	0.000
20	D	3	393	0.573	0.382	0.000	0.043	0.003	0.000
20	D	4	559	0.737	0.222	0.013	0.027	0.002	0.000
20	D	5	516	0.795	0.171	0.016	0.019	0.000	0.000
20	D	6	703	0.809	0.155	0.014	0.020	0.001	0.000
20	D	7	743	0.799	0.176	0.012	0.012	0.000	0.000
20	D	8	676	0.756	0.213	0.015	0.016	0.000	0.000
20	D	9	546	0.663	0.297	0.016	0.024	0.000	0.000
20	D	10	627	0.702	0.266	0.021	0.011	0.000	0.000
20	D	11	760	0.780	0.176	0.021	0.022	0.000	0.000
20	D	12	347	0.695	0.259	0.012	0.032	0.003	0.000
20	U	2	6	0.000	1.000	0.000	0.000	0.000	0.000
20	U	3	20	0.000	1.000	0.000	0.000	0.000	0.000
20	U	4	16	0.125	0.875	0.000	0.000	0.000	0.000
20	U	5	19	0.053	0.947	0.000	0.000	0.000	0.000
20	U	6	23	0.000	1.000	0.000	0.000	0.000	0.000
20	U	7	20	0.050	0.950	0.000	0.000	0.000	0.000
20	U	8	12	0.167	0.833	0.000	0.000	0.000	0.000
20	U	9	23	0.217	0.783	0.000	0.000	0.000	0.000
20	U	10	17	0.000	1.000	0.000	0.000	0.000	0.000
20	U	11	31	0.000	1.000	0.000	0.000	0.000	0.000
20	U	12	18	0.000	1.000	0.000	0.000	0.000	0.000
21	D	1	3	0.000	1.000	0.000	0.000	0.000	0.000
21	D	2	6	0.000	1.000	0.000	0.000	0.000	0.000
21	D	3	22	0.000	1.000	0.000	0.000	0.000	0.000
21	D	4	11	0.000	1.000	0.000	0.000	0.000	0.000
21	D	5	10	0.400	0.600	0.000	0.000	0.000	0.000
21	D	6	12	0.000	1.000	0.000	0.000	0.000	0.000
21	D	7	8	0.250	0.750	0.000	0.000	0.000	0.000
21	D	8	8	0.125	0.750	0.125	0.000	0.000	0.000
21	D	9	7	0.000	1.000	0.000	0.000	0.000	0.000
21	D	10	18	0.111	0.889	0.000	0.000	0.000	0.000
21	D	11	9	0.222	0.778	0.000	0.000	0.000	0.000
21	D	12	3	0.333	0.667	0.000	0.000	0.000	0.000
21	U	1	2	0.000	1.000	0.000	0.000	0.000	0.000
21	U	2	1	0.000	1.000	0.000	0.000	0.000	0.000
21	U	3	9	0.111	0.889	0.000	0.000	0.000	0.000
21	U	4	15	0.133	0.867	0.000	0.000	0.000	0.000
21	U	5	18	0.389	0.556	0.056	0.000	0.000	0.000
21	U	6	12	0.000	1.000	0.000	0.000	0.000	0.000
21	U	7	15	0.400	0.600	0.000	0.000	0.000	0.000
21	U	8	9	0.333	0.667	0.000	0.000	0.000	0.000
21	U	9	9	0.333	0.667	0.000	0.000	0.000	0.000
21	U	10	15	0.000	1.000	0.000	0.000	0.000	0.000
21	U	11	13	0.077	0.923	0.000	0.000	0.000	0.000
21	U	12	11	0.000	1.000	0.000	0.000	0.000	0.000
22	D	1	3	0.333	0.667	0.000	0.000	0.000	0.000
22	D	3	6	0.333	0.667	0.000	0.000	0.000	0.000
22	D	4	9	0.222	0.778	0.000	0.000	0.000	0.000
22	D	5	8	0.375	0.625	0.000	0.000	0.000	0.000
22	D	6	8	0.250	0.750	0.000	0.000	0.000	0.000
22	D	7	7	0.286	0.714	0.000	0.000	0.000	0.000
22	D	8	6	0.500	0.333	0.167	0.000	0.000	0.000
22	D	9	6	0.333	0.667	0.000	0.000	0.000	0.000
22	D	10	8	0.250	0.750	0.000	0.000	0.000	0.000

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LOCK_NO	DIRECTION	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
22	D	11	1	0.000	1.000	0.000	0.000	0.000	0.000
22	D	12	4	0.000	1.000	0.000	0.000	0.000	0.000
22	U	1	1	0.000	1.000	0.000	0.000	0.000	0.000
22	U	2	1	0.000	1.000	0.000	0.000	0.000	0.000
22	U	3	13	0.385	0.615	0.000	0.000	0.000	0.000
22	U	4	3	0.667	0.333	0.000	0.000	0.000	0.000
22	U	5	5	0.600	0.400	0.000	0.000	0.000	0.000
22	U	6	7	0.143	0.857	0.000	0.000	0.000	0.000
22	U	7	8	0.625	0.375	0.000	0.000	0.000	0.000
22	U	8	5	0.400	0.600	0.000	0.000	0.000	0.000
22	U	9	6	0.500	0.500	0.000	0.000	0.000	0.000
22	U	10	3	0.333	0.667	0.000	0.000	0.000	0.000
22	U	11	12	0.083	0.917	0.000	0.000	0.000	0.000
22	U	12	8	0.000	1.000	0.000	0.000	0.000	0.000
24	D	1	2	0.500	0.500	0.000	0.000	0.000	0.000
24	D	2	4	0.250	0.750	0.000	0.000	0.000	0.000
24	D	3	13	0.154	0.846	0.000	0.000	0.000	0.000
24	D	4	14	0.214	0.786	0.000	0.000	0.000	0.000
24	D	5	8	0.500	0.500	0.000	0.000	0.000	0.000
24	D	6	6	0.667	0.333	0.000	0.000	0.000	0.000
24	D	7	2	1.000	0.000	0.000	0.000	0.000	0.000
24	D	8	9	0.444	0.556	0.000	0.000	0.000	0.000
24	D	9	4	0.500	0.500	0.000	0.000	0.000	0.000
24	D	10	6	0.333	0.667	0.000	0.000	0.000	0.000
24	D	11	7	0.286	0.714	0.000	0.000	0.000	0.000
24	D	12	4	0.750	0.250	0.000	0.000	0.000	0.000
24	U	1	2	0.000	1.000	0.000	0.000	0.000	0.000
24	U	2	1	1.000	0.000	0.000	0.000	0.000	0.000
24	U	3	10	0.400	0.600	0.000	0.000	0.000	0.000
24	U	4	6	0.000	1.000	0.000	0.000	0.000	0.000
24	U	5	8	0.875	0.125	0.000	0.000	0.000	0.000
24	U	6	11	0.091	0.909	0.000	0.000	0.000	0.000
24	U	7	10	0.400	0.600	0.000	0.000	0.000	0.000
24	U	8	4	0.500	0.500	0.000	0.000	0.000	0.000
24	U	9	5	0.800	0.200	0.000	0.000	0.000	0.000
24	U	10	5	0.000	1.000	0.000	0.000	0.000	0.000
24	U	11	13	0.231	0.769	0.000	0.000	0.000	0.000
24	U	12	4	0.000	1.000	0.000	0.000	0.000	0.000
25	D	1	3	0.667	0.333	0.000	0.000	0.000	0.000
25	D	2	6	0.333	0.667	0.000	0.000	0.000	0.000
25	D	3	7	0.143	0.857	0.000	0.000	0.000	0.000
25	D	4	9	0.333	0.667	0.000	0.000	0.000	0.000
25	D	5	8	0.375	0.625	0.000	0.000	0.000	0.000
25	D	6	14	0.214	0.786	0.000	0.000	0.000	0.000
25	D	7	11	0.273	0.727	0.000	0.000	0.000	0.000
25	D	8	10	0.400	0.600	0.000	0.000	0.000	0.000
25	D	9	5	0.400	0.600	0.000	0.000	0.000	0.000
25	D	10	8	0.125	0.875	0.000	0.000	0.000	0.000
25	D	11	11	0.455	0.545	0.000	0.000	0.000	0.000
25	D	12	10	0.500	0.500	0.000	0.000	0.000	0.000
25	U	1	30	0.500	0.467	0.000	0.033	0.000	0.000
25	U	2	96	0.604	0.396	0.000	0.000	0.000	0.000
25	U	3	683	0.723	0.239	0.015	0.023	0.000	0.000
25	U	4	691	0.735	0.232	0.017	0.016	0.000	0.000
25	U	5	691	0.738	0.230	0.016	0.016	0.000	0.000
25	U	6	826	0.700	0.272	0.018	0.010	0.000	0.000

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LOCK_NO	DIRECTION	month	totrand	propdoub	propsing	propjack	propko	propoth	proprec
25	U	7	830	0.731	0.239	0.017	0.013	0.000	0.000
25	U	8	709	0.650	0.316	0.016	0.018	0.000	0.000
25	U	9	575	0.638	0.310	0.026	0.026	0.000	0.000
25	U	10	684	0.668	0.270	0.035	0.026	0.000	0.000
25	U	11	689	0.504	0.433	0.030	0.033	0.000	0.000
25	U	12	277	0.260	0.704	0.022	0.014	0.000	0.000

average interarrival times and first lockage times for random arrivals 31
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LOCK_NO	DIRECTION	year	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
20	D	2000	2	3	14.167	6.623	1	27FEB00	27FEB00
20	D	2000	3	119	6.200	5.526	0	.	.
20	D	2000	4	171	4.182	3.793	0	.	.
20	D	2000	5	169	4.465	4.415	0	.	.
20	D	2000	6	164	4.409	3.524	0	.	.
20	D	2000	7	183	4.087	3.285	0	.	.
20	D	2000	8	162	4.599	4.031	0	.	.
20	D	2000	9	153	4.629	4.416	0	.	.
20	D	2000	10	146	5.166	5.510	0	.	.
20	D	2000	11	195	3.700	3.308	0	.	.
20	D	2000	12	74	10.035	47.672	0	.	.
20	D	2001	1	0	.	.	1	01JAN01	01JAN01
20	D	2001	2	9	154.959	387.049	0	.	.
20	D	2001	3	87	8.580	7.915	0	.	.
20	D	2001	4	93	5.406	5.414	0	.	.
20	D	2001	5	41	23.647	115.463	0	.	.
20	D	2001	6	207	3.477	3.131	0	.	.
20	D	2001	7	196	3.794	3.169	0	.	.
20	D	2001	8	192	3.872	3.433	0	.	.
20	D	2001	9	152	4.741	4.787	0	.	.
20	D	2001	10	141	5.282	5.197	0	.	.
20	D	2001	11	178	3.988	4.028	0	.	.
20	D	2001	12	119	5.651	7.139	0	.	.
20	D	2002	2	2	192.300	97.651	1	11FEB02	11FEB02
20	D	2002	3	118	6.605	12.291	0	.	.
20	D	2002	4	154	4.681	4.205	0	.	.
20	D	2002	5	164	4.511	4.606	0	.	.
20	D	2002	6	172	4.160	3.489	0	.	.
20	D	2002	7	189	3.922	3.119	0	.	.
20	D	2002	8	168	4.486	3.879	0	.	.
20	D	2002	9	127	5.583	5.227	0	.	.
20	D	2002	10	183	4.129	4.146	0	.	.
20	D	2002	11	220	3.270	2.516	0	.	.
20	D	2002	12	67	4.144	3.406	0	.	.
20	D	2003	3	68	7.701	11.493	1	10MAR03	10MAR03
20	D	2003	4	141	5.090	4.492	0	.	.
20	D	2003	5	142	5.276	4.654	0	.	.
20	D	2003	6	160	4.502	4.377	0	.	.
20	D	2003	7	175	4.224	4.116	0	.	.
20	D	2003	8	154	4.774	4.239	0	.	.
20	D	2003	9	114	6.430	5.189	0	.	.
20	D	2003	10	157	4.718	4.575	0	.	.
20	D	2003	11	167	4.268	4.323	0	.	.
20	D	2003	12	87	8.545	32.239	0	.	.
20	U	2000	2	1	143.750	.	1	22FEB00	22FEB00
20	U	2000	3	5	153.680	172.597	0	.	.
20	U	2000	4	4	155.213	110.847	0	.	.
20	U	2000	5	7	122.598	175.242	0	.	.
20	U	2000	6	2	319.283	372.716	0	.	.
20	U	2000	7	10	78.875	95.513	0	.	.
20	U	2000	8	5	133.750	130.027	0	.	.
20	U	2000	9	6	98.628	94.651	0	.	.
20	U	2000	10	3	321.500	219.148	0	.	.
20	U	2000	11	8	91.427	71.578	0	.	.
20	U	2000	12	4	65.496	30.317	0	.	.

average interarrival times and first lockage times for random arrivals 32
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LOCK_NO	DIRECTION	year	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
20	U	2001	2	2	87.51	66.716	1	19FEB01	19FEB01
20	U	2001	3	7	94.00	180.743	0	.	.
20	U	2001	4	1	554.25	.	0	.	.
20	U	2001	5	1	861.50	.	0	.	.
20	U	2001	6	7	111.76	87.496	0	.	.
20	U	2001	7	3	276.31	178.892	0	.	.
20	U	2001	8	2	376.50	142.011	0	.	.
20	U	2001	9	7	104.45	120.021	0	.	.
20	U	2001	10	6	107.56	110.913	0	.	.
20	U	2001	11	4	202.29	212.086	0	.	.
20	U	2001	12	4	151.67	116.810	0	.	.
20	U	2002	2	0	.	.	1	27FEB02	27FEB02
20	U	2002	3	1	219.88	.	0	.	.
20	U	2002	4	7	166.07	205.520	0	.	.
20	U	2002	5	6	69.20	84.147	0	.	.
20	U	2002	6	6	174.77	255.590	0	.	.
20	U	2002	7	3	98.87	114.719	0	.	.
20	U	2002	8	3	401.63	310.204	0	.	.
20	U	2002	9	1	599.33	.	0	.	.
20	U	2002	10	1	812.73	.	0	.	.
20	U	2002	11	10	86.85	71.916	0	.	.
20	U	2002	12	6	48.63	55.200	0	.	.
20	U	2003	3	6	84.06	92.882	1	07MAR03	07MAR03
20	U	2003	4	4	197.45	96.595	0	.	.
20	U	2003	5	5	144.98	123.101	0	.	.
20	U	2003	6	8	87.30	128.365	0	.	.
20	U	2003	7	4	145.54	108.888	0	.	.
20	U	2003	8	2	278.75	99.113	0	.	.
20	U	2003	9	9	120.97	159.020	0	.	.
20	U	2003	10	7	94.82	127.472	0	.	.
20	U	2003	11	9	91.31	82.245	0	.	.
20	U	2003	12	4	53.44	32.633	0	.	.
21	D	2000	2	3	40.06	36.448	1	24FEB00	24FEB00
21	D	2000	3	4	164.21	163.237	0	.	.
21	D	2000	4	3	199.00	138.402	0	.	.
21	D	2000	5	1	480.00	.	0	.	.
21	D	2000	6	2	415.13	520.136	0	.	.
21	D	2000	7	5	202.58	229.730	0	.	.
21	D	2000	8	3	65.28	55.344	0	.	.
21	D	2000	9	1	846.92	.	0	.	.
21	D	2000	10	3	383.50	452.557	0	.	.
21	D	2000	11	6	135.74	73.499	0	.	.
21	D	2000	12	2	105.63	36.475	0	.	.
21	D	2001	1	2	246.33	18.503	1	01JAN01	01JAN01
21	D	2001	2	2	384.75	488.611	0	.	.
21	D	2001	3	5	143.78	159.755	0	.	.
21	D	2001	4	3	195.86	157.501	0	.	.
21	D	2001	5	1	809.50	.	0	.	.
21	D	2001	6	6	136.31	106.602	0	.	.
21	D	2001	8	1	1105.53	.	0	.	.
21	D	2001	9	2	603.23	306.330	0	.	.
21	D	2001	10	4	162.79	128.882	0	.	.
21	D	2001	12	1	1353.17	.	0	.	.
21	D	2002	3	6	118.65	115.880	1	01MAR02	01MAR02
21	D	2002	4	1	556.28	.	0	.	.

average interarrival times and first lockage times for random arrivals 33
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LOCK_NO	DIRECTION	year	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
21	D	2002	5	5	176.93	162.642	0	.	.
21	D	2002	6	4	169.26	220.039	0	.	.
21	D	2002	7	2	400.67	40.069	0	.	.
21	D	2002	8	2	70.62	15.969	0	.	.
21	D	2002	9	1	1149.33	.	0	.	.
21	D	2002	10	4	179.30	128.740	0	.	.
21	D	2002	11	2	417.12	283.031	0	.	.
21	D	2003	3	5	85.67	61.130	1	13MAR03	13MAR03
21	D	2003	4	4	83.88	49.149	0	.	.
21	D	2003	5	3	279.83	141.786	0	.	.
21	D	2003	7	1	1202.23	.	0	.	.
21	D	2003	8	2	524.88	439.066	0	.	.
21	D	2003	9	3	279.25	227.660	0	.	.
21	D	2003	10	7	123.75	90.235	0	.	.
21	D	2003	11	1	114.25	.	0	.	.
21	U	2000	3	2	63.79	86.562	1	02MAR00	02MAR00
21	U	2000	4	5	245.03	324.913	0	.	.
21	U	2000	5	7	111.39	68.205	0	.	.
21	U	2000	6	3	163.47	57.219	0	.	.
21	U	2000	7	5	158.29	155.276	0	.	.
21	U	2000	8	4	224.45	154.502	0	.	.
21	U	2000	9	2	193.13	129.224	0	.	.
21	U	2000	10	2	329.83	207.772	0	.	.
21	U	2000	11	4	290.35	216.318	0	.	.
21	U	2000	12	3	180.36	154.407	0	.	.
21	U	2001	1	0	.	.	1	15JAN01	15JAN01
21	U	2001	3	2	700.13	787.304	0	.	.
21	U	2001	4	6	149.39	178.876	0	.	.
21	U	2001	5	4	244.58	383.379	0	.	.
21	U	2001	6	3	58.53	39.567	0	.	.
21	U	2001	7	6	198.00	262.749	0	.	.
21	U	2001	9	5	299.02	519.035	0	.	.
21	U	2001	10	2	238.75	156.247	0	.	.
21	U	2001	11	4	201.42	106.911	0	.	.
21	U	2001	12	4	180.25	241.407	0	.	.
21	U	2002	1	0	.	.	1	09JAN02	09JAN02
21	U	2002	2	1	625.08	.	0	.	.
21	U	2002	3	1	885.18	.	0	.	.
21	U	2002	4	2	439.66	278.824	0	.	.
21	U	2002	5	1	790.33	.	0	.	.
21	U	2002	6	3	263.06	398.432	0	.	.
21	U	2002	7	2	433.75	514.067	0	.	.
21	U	2002	8	2	230.53	237.824	0	.	.
21	U	2002	10	7	247.39	373.737	0	.	.
21	U	2002	11	3	205.95	178.097	0	.	.
21	U	2002	12	2	131.46	94.340	0	.	.
21	U	2003	3	2	56.93	75.448	1	17MAR03	17MAR03
21	U	2003	4	2	286.23	20.836	0	.	.
21	U	2003	5	6	170.93	225.599	0	.	.
21	U	2003	6	3	235.67	231.735	0	.	.
21	U	2003	7	2	293.08	58.572	0	.	.
21	U	2003	8	3	202.28	286.421	0	.	.
21	U	2003	9	2	507.11	290.468	0	.	.
21	U	2003	10	4	180.72	76.511	0	.	.
21	U	2003	11	2	281.57	105.217	0	.	.

average interarrival times and first lockage times for random arrivals 34
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LOCK_NO	DIRECTION	year	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
21	U	2003	12	2	290.68	258.16	0	.	.
22	D	2000	3	0	.	.	1	01MAR00	01MAR00
22	D	2000	4	4	325.12	308.64	0	.	.
22	D	2000	5	3	273.93	365.70	0	.	.
22	D	2000	8	1	2053.87	.	0	.	.
22	D	2000	9	1	484.55	.	0	.	.
22	D	2000	10	2	540.92	68.85	0	.	.
22	D	2000	12	1	870.75	.	0	.	.
22	D	2001	4	1	1.17	.	1	18APR01	18APR01
22	D	2001	5	2	487.25	115.61	0	.	.
22	D	2001	6	5	91.58	38.17	0	.	.
22	D	2001	7	3	313.91	312.23	0	.	.
22	D	2001	8	2	347.26	487.68	0	.	.
22	D	2001	9	2	336.33	268.94	0	.	.
22	D	2001	10	4	193.88	72.62	0	.	.
22	D	2001	12	2	697.06	674.29	0	.	.
22	D	2002	1	2	111.33	154.03	1	01JAN02	01JAN02
22	D	2002	3	5	385.97	620.93	0	.	.
22	D	2002	4	3	157.86	74.01	0	.	.
22	D	2002	5	2	393.50	15.86	0	.	.
22	D	2002	6	2	422.03	559.16	0	.	.
22	D	2002	7	4	193.67	145.13	0	.	.
22	D	2002	8	1	114.03	.	0	.	.
22	D	2002	10	1	1478.30	.	0	.	.
22	D	2002	12	1	1435.22	.	0	.	.
22	D	2003	5	0	.	.	1	03MAY03	03MAY03
22	D	2003	6	1	749.60	.	0	.	.
22	D	2003	8	2	1021.00	1234.84	0	.	.
22	D	2003	9	3	95.56	61.89	0	.	.
22	D	2003	10	1	895.62	.	0	.	.
22	D	2003	11	1	565.55	.	0	.	.
22	U	2000	2	0	.	.	1	24FEB00	24FEB00
22	U	2000	3	7	108.35	99.66	0	.	.
22	U	2000	4	2	342.00	87.33	0	.	.
22	U	2000	5	1	214.50	.	0	.	.
22	U	2000	6	2	673.74	386.49	0	.	.
22	U	2000	7	2	321.48	12.79	0	.	.
22	U	2000	8	1	373.65	.	0	.	.
22	U	2000	9	1	971.15	.	0	.	.
22	U	2000	10	1	664.13	.	0	.	.
22	U	2000	11	6	162.90	228.32	0	.	.
22	U	2000	12	2	126.42	176.47	0	.	.
22	U	2001	1	0	.	.	1	19JAN01	19JAN01
22	U	2001	3	3	542.27	658.32	0	.	.
22	U	2001	4	1	465.45	.	0	.	.
22	U	2001	5	2	500.58	614.84	0	.	.
22	U	2001	6	2	177.29	99.90	0	.	.
22	U	2001	7	4	283.23	399.65	0	.	.
22	U	2001	8	3	262.42	398.36	0	.	.
22	U	2001	9	2	188.37	220.35	0	.	.
22	U	2001	11	1	1145.80	.	0	.	.
22	U	2001	12	2	691.89	505.00	0	.	.
22	U	2002	3	0	.	.	1	06MAR02	06MAR02
22	U	2002	5	1	1464.85	.	0	.	.
22	U	2002	6	2	461.57	533.44	0	.	.

average interarrival times and first lockage times for random arrivals 35
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LOCK_NO	DIRECTION	year	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
22	U	2002	7	1	1104.87	.	0	.	.
22	U	2002	9	1	1302.98	.	0	.	.
22	U	2002	10	2	418.70	454.65	0	.	.
22	U	2002	11	3	180.21	97.79	0	.	.
22	U	2002	12	1	428.92	.	0	.	.
22	U	2003	3	1	195.92	.	1	14MAR03	14MAR03
22	U	2003	5	1	1066.00	.	0	.	.
22	U	2003	6	1	1185.63	.	0	.	.
22	U	2003	7	1	263.78	.	0	.	.
22	U	2003	8	1	1268.58	.	0	.	.
22	U	2003	9	2	269.71	349.37	0	.	.
22	U	2003	11	2	869.25	1155.81	0	.	.
22	U	2003	12	3	56.96	36.21	0	.	.
24	D	2000	1	0	.	.	1	20JAN00	20JAN00
24	D	2000	2	2	436.42	103.24	0	.	.
24	D	2000	3	6	102.92	125.48	0	.	.
24	D	2000	4	5	165.43	142.96	0	.	.
24	D	2000	5	2	269.21	41.90	0	.	.
24	D	2000	8	3	726.92	1052.14	0	.	.
24	D	2000	10	1	1193.42	.	0	.	.
24	D	2001	1	0	.	.	1	01JAN01	01JAN01
24	D	2001	2	2	503.88	710.82	0	.	.
24	D	2001	4	3	506.75	551.33	0	.	.
24	D	2001	5	1	879.17	.	0	.	.
24	D	2001	6	1	623.25	.	0	.	.
24	D	2001	8	4	445.69	772.32	0	.	.
24	D	2001	9	2	285.12	81.85	0	.	.
24	D	2001	11	1	1368.33	.	0	.	.
24	D	2001	12	2	378.87	120.86	0	.	.
24	D	2002	3	4	134.04	145.36	1	06MAR02	06MAR02
24	D	2002	4	3	252.58	188.29	0	.	.
24	D	2002	5	3	120.69	42.85	0	.	.
24	D	2002	6	3	360.33	321.72	0	.	.
24	D	2002	7	2	391.25	409.53	0	.	.
24	D	2002	9	1	1471.92	.	0	.	.
24	D	2002	10	1	265.50	.	0	.	.
24	D	2002	11	2	493.29	577.18	0	.	.
24	D	2003	3	1	99.88	.	1	17MAR03	17MAR03
24	D	2003	4	3	159.58	116.02	0	.	.
24	D	2003	5	2	307.80	335.71	0	.	.
24	D	2003	6	2	583.83	803.27	0	.	.
24	D	2003	8	2	791.83	491.84	0	.	.
24	D	2003	9	1	301.92	.	0	.	.
24	D	2003	10	4	278.58	307.23	0	.	.
24	D	2003	11	4	209.19	145.72	0	.	.
24	D	2003	12	2	114.67	137.06	0	.	.
24	U	2000	1	1	16.08	.	1	04JAN00	04JAN00
24	U	2000	2	1	1263.67	.	0	.	.
24	U	2000	3	2	68.88	32.56	0	.	.
24	U	2000	4	2	613.75	735.98	0	.	.
24	U	2000	5	3	221.69	109.60	0	.	.
24	U	2000	6	1	586.83	.	0	.	.
24	U	2000	7	1	931.92	.	0	.	.
24	U	2000	9	2	634.75	599.74	0	.	.
24	U	2000	10	3	314.36	325.38	0	.	.

average interarrival times and first lockage times for random arrivals 36
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LOCK_NO	DIRECTION	year	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
24	U	2000	11	3	230.25	25.15	0	.	.
24	U	2000	12	2	277.29	69.83	0	.	.
24	U	2001	3	0	.	.	1	17MAR01	17MAR01
24	U	2001	5	2	823.87	1135.33	0	.	.
24	U	2001	6	3	239.34	193.78	0	.	.
24	U	2001	7	5	162.55	125.53	0	.	.
24	U	2001	8	1	589.00	.	0	.	.
24	U	2001	11	4	550.17	868.25	0	.	.
24	U	2001	12	2	319.58	402.70	0	.	.
24	U	2002	3	2	54.87	29.40	1	04MAR02	04MAR02
24	U	2002	4	3	379.57	600.72	0	.	.
24	U	2002	5	2	263.61	8.28	0	.	.
24	U	2002	6	6	160.11	196.69	0	.	.
24	U	2002	7	4	192.65	307.56	0	.	.
24	U	2002	8	3	264.50	27.55	0	.	.
24	U	2002	10	2	691.30	382.40	0	.	.
24	U	2002	11	5	146.20	185.70	0	.	.
24	U	2003	3	3	55.25	47.93	1	19MAR03	19MAR03
24	U	2003	4	1	284.17	.	0	.	.
24	U	2003	5	1	696.17	.	0	.	.
24	U	2003	6	1	1154.00	.	0	.	.
24	U	2003	9	3	620.86	1017.89	0	.	.
24	U	2003	11	1	1412.75	.	0	.	.
25	D	2000	4	4	149.04	122.72	1	02APR00	02APR00
25	D	2000	5	2	408.38	233.05	0	.	.
25	D	2000	6	4	126.85	102.69	0	.	.
25	D	2000	7	3	230.22	212.61	0	.	.
25	D	2000	8	1	437.00	.	0	.	.
25	D	2000	10	3	682.44	719.18	0	.	.
25	D	2000	11	2	200.46	26.93	0	.	.
25	D	2000	12	5	141.77	176.84	0	.	.
25	D	2001	1	2	99.29	132.05	1	08JAN01	08JAN01
25	D	2001	2	6	157.08	152.40	0	.	.
25	D	2001	4	2	450.61	581.44	0	.	.
25	D	2001	5	1	1206.12	.	0	.	.
25	D	2001	6	4	167.37	170.55	0	.	.
25	D	2001	7	4	165.41	132.17	0	.	.
25	D	2001	8	7	135.90	222.66	0	.	.
25	D	2001	9	5	157.07	81.17	0	.	.
25	D	2001	10	4	196.06	132.53	0	.	.
25	D	2001	11	4	117.10	90.07	0	.	.
25	D	2001	12	2	401.46	292.09	0	.	.
25	D	2002	3	6	98.50	120.23	1	04MAR02	04MAR02
25	D	2002	4	1	559.25	.	0	.	.
25	D	2002	5	2	293.04	123.21	0	.	.
25	D	2002	6	1	856.33	.	0	.	.
25	D	2002	7	3	303.72	243.55	0	.	.
25	D	2002	8	2	365.42	396.10	0	.	.
25	D	2002	11	3	749.11	856.19	0	.	.
25	D	2002	12	2	105.17	19.92	0	.	.
25	D	2003	4	0	.	.	1	29APR03	29APR03
25	D	2003	5	3	193.39	192.94	0	.	.
25	D	2003	6	5	176.80	229.34	0	.	.
25	D	2003	7	1	178.00	.	0	.	.
25	D	2003	10	1	2805.25	.	0	.	.

average interarrival times and first lockage times for random arrivals 37
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LOCK_NO	DIRECTION	year	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
25	D	2003	11	2	104.258	31.478	0	.	.
25	D	2003	12	1	691.733	.	0	.	.
25	U	2000	1	4	120.417	31.259	1	01JAN00	01JAN00
25	U	2000	2	32	29.872	72.324	0	.	.
25	U	2000	3	192	3.868	3.911	0	.	.
25	U	2000	4	191	3.786	3.640	0	.	.
25	U	2000	5	188	3.948	3.724	0	.	.
25	U	2000	6	195	3.701	3.748	0	.	.
25	U	2000	7	197	3.743	3.505	0	.	.
25	U	2000	8	186	3.985	4.036	0	.	.
25	U	2000	9	146	4.993	4.928	0	.	.
25	U	2000	10	179	4.129	4.566	0	.	.
25	U	2000	11	177	4.008	4.005	0	.	.
25	U	2000	12	65	10.051	21.164	0	.	.
25	U	2001	1	21	31.667	42.800	1	03JAN01	03JAN01
25	U	2001	2	55	12.671	19.481	0	.	.
25	U	2001	3	158	4.704	5.074	0	.	.
25	U	2001	4	143	4.650	8.948	0	.	.
25	U	2001	5	119	6.725	15.299	0	.	.
25	U	2001	6	214	3.380	3.416	0	.	.
25	U	2001	7	238	3.104	3.024	0	.	.
25	U	2001	8	207	3.612	3.619	0	.	.
25	U	2001	9	144	4.898	4.991	0	.	.
25	U	2001	10	164	4.602	4.391	0	.	.
25	U	2001	11	163	4.462	4.003	0	.	.
25	U	2001	12	91	7.857	7.883	0	.	.
25	U	2002	1	1	234.833	.	1	01JAN02	01JAN02
25	U	2002	2	9	128.417	339.535	0	.	.
25	U	2002	3	193	3.836	4.129	0	.	.
25	U	2002	4	177	4.062	3.705	0	.	.
25	U	2002	5	207	3.633	3.562	0	.	.
25	U	2002	6	230	3.129	2.692	0	.	.
25	U	2002	7	198	3.754	3.542	0	.	.
25	U	2002	8	171	4.353	3.629	0	.	.
25	U	2002	9	165	4.369	3.924	0	.	.
25	U	2002	10	191	3.902	4.165	0	.	.
25	U	2002	11	208	3.418	3.146	0	.	.
25	U	2002	12	60	6.866	7.930	0	.	.
25	U	2003	1	0	.	.	1	11JAN03	11JAN03
25	U	2003	3	140	13.621	108.041	0	.	.
25	U	2003	4	180	3.999	3.600	0	.	.
25	U	2003	5	177	4.209	3.667	0	.	.
25	U	2003	6	187	3.825	3.605	0	.	.
25	U	2003	7	197	3.808	3.660	0	.	.
25	U	2003	8	145	5.018	5.027	0	.	.
25	U	2003	9	120	6.128	6.583	0	.	.
25	U	2003	10	150	4.967	4.372	0	.	.
25	U	2003	11	141	5.048	5.149	0	.	.
25	U	2003	12	61	6.650	8.357	0	.	.

average interarrival times and first lockage times for random arrivals 38
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LOCK_NO	DIRECTION	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
20	D	1	0	.	.	1	01JAN01	01JAN01
20	D	2	14	130.124	311.535	2	27FEB00	11FEB02
20	D	3	392	7.110	9.576	1	10MAR03	10MAR03
20	D	4	559	4.752	4.396	0	.	.
20	D	5	516	6.227	32.876	0	.	.
20	D	6	703	4.095	3.638	0	.	.
20	D	7	743	4.000	3.428	0	.	.
20	D	8	676	4.404	3.890	0	.	.
20	D	9	546	5.258	4.918	0	.	.
20	D	10	627	4.777	4.848	0	.	.
20	D	11	760	3.768	3.555	0	.	.
20	D	12	347	7.020	27.608	0	.	.
20	U	2	3	106.256	57.270	3	22FEB00	27FEB02
20	U	3	19	113.190	146.354	1	07MAR03	07MAR03
20	U	4	16	195.464	175.035	0	.	.
20	U	5	19	150.515	214.872	0	.	.
20	U	6	23	137.738	181.664	0	.	.
20	U	7	20	124.821	126.010	0	.	.
20	U	8	12	265.346	203.928	0	.	.
20	U	9	23	130.914	160.253	0	.	.
20	U	10	17	181.549	223.286	0	.	.
20	U	11	31	104.220	102.593	0	.	.
20	U	12	18	76.344	73.563	0	.	.
21	D	1	2	246.333	18.503	1	01JAN01	01JAN01
21	D	2	5	177.933	309.828	1	24FEB00	24FEB00
21	D	3	20	125.800	121.394	2	01MAR02	13MAR03
21	D	4	11	188.761	165.745	0	.	.
21	D	5	10	301.367	239.196	0	.	.
21	D	6	12	193.763	232.148	0	.	.
21	D	7	8	377.060	386.734	0	.	.
21	D	8	8	311.548	417.241	0	.	.
21	D	9	7	577.207	379.749	0	.	.
21	D	10	18	188.063	203.560	0	.	.
21	D	11	9	195.878	170.798	0	.	.
21	D	12	3	521.472	720.730	0	.	.
21	U	1	0	.	.	2	15JAN01	09JAN02
21	U	2	1	625.083	.	0	.	.
21	U	3	7	360.983	499.899	2	02MAR00	17MAR03
21	U	4	15	238.219	238.114	0	.	.
21	U	5	18	198.556	258.930	0	.	.
21	U	6	12	180.181	215.249	0	.	.
21	U	7	15	228.873	243.802	0	.	.
21	U	8	9	218.413	191.529	0	.	.
21	U	9	9	321.728	400.476	0	.	.
21	U	10	15	239.452	261.015	0	.	.
21	U	11	13	242.159	150.595	0	.	.
21	U	12	11	191.488	180.507	0	.	.
22	D	1	2	111.333	154.031	1	01JAN02	01JAN02
22	D	3	5	385.967	620.927	1	01MAR00	01MAR00
22	D	4	8	221.904	239.160	1	18APR01	18APR01
22	D	5	7	369.043	237.123	1	03MAY03	03MAY03
22	D	6	8	256.448	327.855	0	.	.
22	D	7	7	245.202	217.161	0	.	.
22	D	8	6	817.403	928.571	0	.	.
22	D	9	6	240.647	210.211	0	.	.

average interarrival times and first lockage times for random arrivals 39
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LOCK_NO	DIRECTION	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
22	D	10	8	528.91	463.782	0	.	.
22	D	11	1	565.55	.	0	.	.
22	D	12	4	925.02	523.399	0	.	.
22	U	1	0	.	.	1	19JAN01	19JAN01
22	U	2	0	.	.	1	24FEB00	24FEB00
22	U	3	11	234.65	363.788	2	06MAR02	14MAR03
22	U	4	3	383.15	94.303	0	.	.
22	U	5	5	749.30	591.625	0	.	.
22	U	6	7	544.40	441.930	0	.	.
22	U	7	8	393.07	389.357	0	.	.
22	U	8	5	485.90	522.593	0	.	.
22	U	9	6	531.72	516.068	0	.	.
22	U	10	3	500.51	351.327	0	.	.
22	U	11	12	366.86	529.265	0	.	.
22	U	12	8	279.55	347.787	0	.	.
24	D	1	0	.	.	2	20JAN00	01JAN01
24	D	2	4	470.15	416.522	0	.	.
24	D	3	11	113.96	120.274	2	06MAR02	17MAR03
24	D	4	14	255.99	283.533	0	.	.
24	D	5	8	299.41	280.823	0	.	.
24	D	6	6	478.65	432.963	0	.	.
24	D	7	2	391.25	409.533	0	.	.
24	D	8	9	616.35	746.669	0	.	.
24	D	9	4	586.02	592.538	0	.	.
24	D	10	6	428.88	443.788	0	.	.
24	D	11	7	455.95	495.922	0	.	.
24	D	12	4	246.77	185.471	0	.	.
24	U	1	1	16.08	.	1	04JAN00	04JAN00
24	U	2	1	1263.67	.	0	.	.
24	U	3	7	59.04	33.641	3	17MAR01	19MAR03
24	U	4	6	441.73	521.344	0	.	.
24	U	5	8	442.03	518.041	0	.	.
24	U	6	11	310.87	347.459	0	.	.
24	U	7	10	251.52	309.693	0	.	.
24	U	8	4	345.63	163.802	0	.	.
24	U	9	5	626.42	779.761	0	.	.
24	U	10	5	465.14	363.481	0	.	.
24	U	11	13	387.32	571.772	0	.	.
24	U	12	4	298.44	237.227	0	.	.
25	D	1	2	99.29	132.052	1	08JAN01	08JAN01
25	D	2	6	157.08	152.405	0	.	.
25	D	3	6	98.50	120.227	1	04MAR02	04MAR02
25	D	4	7	293.80	312.707	2	02APR00	29APR03
25	D	5	8	398.64	367.392	0	.	.
25	D	6	14	208.37	246.114	0	.	.
25	D	7	11	221.95	172.168	0	.	.
25	D	8	10	211.91	256.603	0	.	.
25	D	9	5	157.07	81.170	0	.	.
25	D	10	8	704.60	966.274	0	.	.
25	D	11	11	302.29	482.439	0	.	.
25	D	12	10	241.38	247.564	0	.	.
25	U	1	26	53.13	63.362	4	01JAN00	11JAN03
25	U	2	96	29.26	112.790	0	.	.
25	U	3	683	6.05	49.082	0	.	.
25	U	4	691	4.09	5.204	0	.	.

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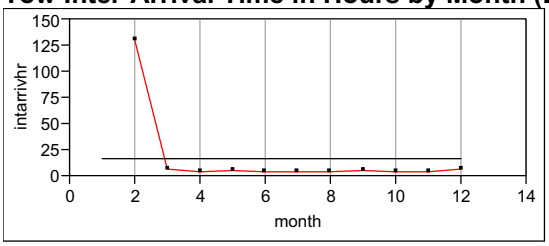
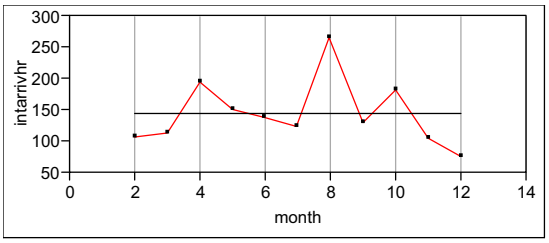
LOCK_NO	DIRECTION	month	numarriv	intarrivhr	stdarrhr	nfirst	minfirst	maxfirst
25	U	5	691	4.39870	7.2233	0	.	.
25	U	6	826	3.48638	3.3665	0	.	.
25	U	7	830	3.57761	3.4291	0	.	.
25	U	8	709	4.17630	4.0772	0	.	.
25	U	9	575	5.02681	5.1097	0	.	.
25	U	10	684	4.36287	4.3814	0	.	.
25	U	11	689	4.15029	4.0747	0	.	.
25	U	12	277	7.89164	12.4268	0	.	.

LOCK_NO=20, DIRECTION=D
Tow Inter-Arrival Time in Hours by Month (Level 2)



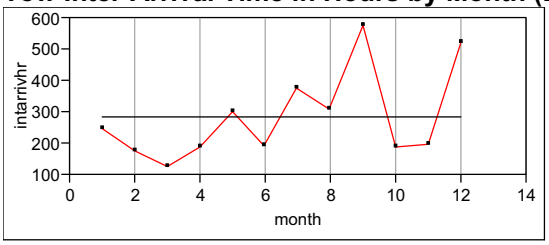
Mean	16.503206
Std	35.947334
N	11

LOCK_NO=20, DIRECTION=U
Tow Inter-Arrival Time in Hours by Month (Level 2)



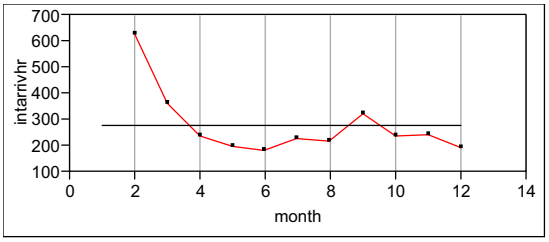
Mean	144.2142
Std	50.395855
N	11

LOCK_NO=21, DIRECTION=D
Tow Inter-Arrival Time in Hours by Month (Level 2)



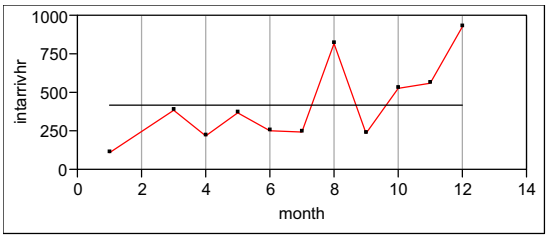
Mean	283.76541
Std	136.61457
N	12

LOCK_NO=21, DIRECTION=U
Tow Inter-Arrival Time in Hours by Month (Level 2)



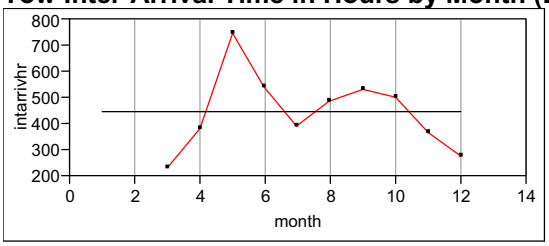
Mean	276.83044
Std	121.70443
N	11

LOCK_NO=22, DIRECTION=D
Tow Inter-Arrival Time in Hours by Month (Level 2)



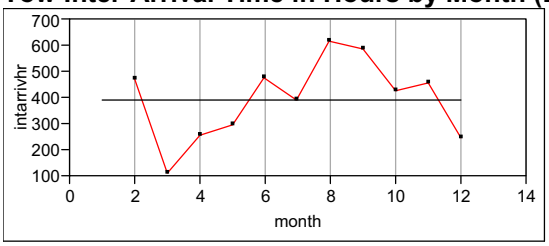
Mean	424.31131
Std	247.45225
N	11

LOCK_NO=22, DIRECTION=U
Tow Inter-Arrival Time in Hours by Month (Level 2)



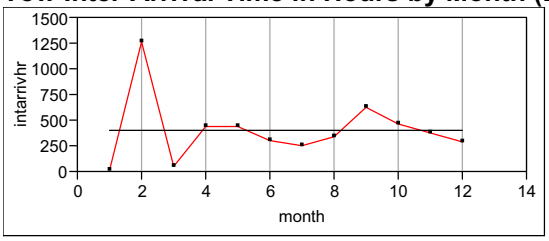
Mean	446.91048
Std	141.05548
N	10

LOCK_NO=24, DIRECTION=D
Tow Inter-Arrival Time in Hours by Month (Level 2)



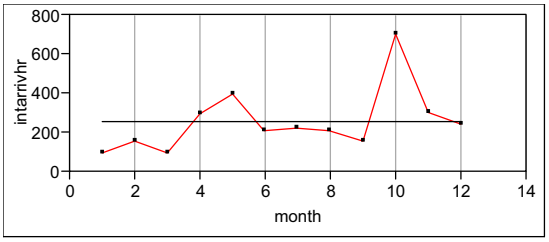
Mean	394.85271
Std	145.35957
N	11

LOCK_NO=24, DIRECTION=U
Tow Inter-Arrival Time in Hours by Month (Level 2)



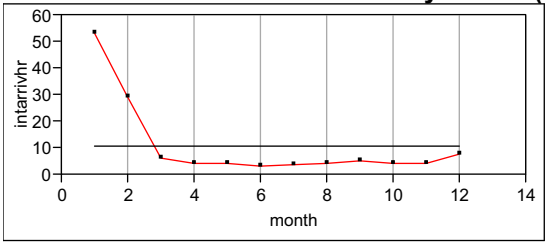
Mean	408.98864
Std	304.28003
N	12

LOCK_NO=25, DIRECTION=D
Tow Inter-Arrival Time in Hours by Month (Level 2)



Mean	257.90827
Std	158.01925
N	12

LOCK_NO=25, DIRECTION=U
Tow Inter-Arrival Time in Hours by Month (Level 2)



Mean	10.800309
Std	14.486638
N	12