



US Army Corps
of Engineers
Huntington District

Shipper and Carrier Response to the August 2004 McAlpine Main Lock Closure



June 2005

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Final Report

June 2005

Prepared for
the Institute for Water Resources
Navigation Economic Technologies (NETS) program

Prepared by
the Planning Center of Expertise for Inland Navigation
Huntington District

**SHIPPER AND CARRIER RESPONSE TO THE
AUGUST 2004 MCAPLINE MAIN LOCK CLOSURE**

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SUMMARY

The 1200' x 110' main chamber at McAlpine Lock and Dam, Ohio River Mile 606.8, was closed for emergency repairs on 8 August 2004 at 16:57 hours. It was reopened on 19 August 2004 at 16:20 hours. Therefore, the main chamber was closed for 263.4 hours, or approximately 10 days and 23 hours. Since this is the only lock chamber at McAlpine there was a total river closure.

Surveys of the shippers and carriers affected by the McAlpine main lock closure were conducted between 1 March and 30 April 2005 for the purpose of discerning industry reactions to the closure and the associated costs. In addition to the industry surveys, an analysis of the Lock Performance Monitoring System (LPMS) data for McAlpine was conducted. The purpose of this analysis was to examine the detailed LPMS data for the McAlpine facility, particularly for the closure period, to identify changes in operating procedures attributable to the closure, and to draw comparisons with the industry survey responses.

The purposes of the shipper survey were to find out what measures were taken by industry, meaning primarily the commodity recipients, to mitigate the effects of the main chamber closure at McAlpine and to estimate the associated costs. A total of 60 companies were selected for survey as a part of the formal shipper survey. The shippers accounted for about 81 percent of total traffic. Completed survey forms were received from 19 companies, representing a response rate of 32 percent, and accounting for about 42 percent of total traffic.

Table 1 shows shippers had a wide variety of reactions to the outage, ranging from no changes in procedures to altering production during the closure period. The most common response was to stockpile product and wait for McAlpine traffic to clear. Most of the respondents felt that the closure was well-handled, that they had sufficient notification, and that they were able to adjust. Several respondents indicated that their experience with McAlpine caused them to do such things as increase stockpiles and switch to all-overland mode.

In addition to the shipper survey, a survey of the major carriers using the McAlpine facility was conducted. The purpose of this survey was to find out what specific measures were taken by carriers to address the McAlpine main chamber closure and to estimate the associated costs. A total of 19 companies were surveyed in this effort. These companies handled a total of 50.2 million tons of McAlpine commodity traffic in 2002, which was about 96 percent of total traffic through the facility. Completed survey forms were received back from ten of the 19 companies, representing a response rate of 53 percent. These ten companies accounted for about 73 percent of the traffic through the McAlpine facility in 2002.

All but one of the carriers indicated that notification of the scheduled closure was adequate. Although the companies pursued multiple courses of action during the closure,

the most common seems to be stockpiling product to wait out the delays and switching product from waterway to rail/truck delivery. Several companies complained that the overland options were too expensive. Three companies altered production during the closure period and two companies switched production to another facility. One company complained that although they switched to rail, rail was very expensive and they wouldn't be able to keep operating using only rail. Another company complained that the products are in very short supply and inventory build-up is impossible.

Shippers and carriers were requested, in the survey process, to provide estimates of additional costs incurred as a result of the closure event at McAlpine. Aside from delay costs, costs to industry were submitted totaling 2.2 million. Delay costs were computed separately using information from the Lock Performance Monitoring System (LPMS) and towing equipment costs. Delay costs were estimated to be about \$695 thousand. The total costs associated with the McAlpine main chamber closure event are estimated to be about \$2.9 million. The specific costs to industry, by type of costs, and the number of survey respondents providing the cost detail are shown in the table 1.

It should be noted that the \$2.9 million in total costs is only a partial total of actual industry costs because many companies declined to participate in the survey. Other companies participated in the survey and indicated they had had added costs during the closure period, but were unable to isolate and provide those costs for a variety of reasons. For these reasons, it is acknowledged that the total costs cited are likely understated.

In addition to the survey work, an analysis of the LPMS data for the closure period was undertaken to assess carrier reactions to and the impacts of the closure event. Total delay during the outage at McAlpine was more than 1440 hours. The maximum delay was about 257 hours for the closure period and the average delay per tow was about 77.3 hours.

Shippers & Carriers reacted to the scheduled closure by increasing tow arrivals immediately prior to the closure, eliminating arrivals at the facility at the onset of the closure, and then gradually increasing tow arrivals just before the end of the closure due to shippers/carriers anticipation of McAlpine reopening. Barges (and tons) per tow increased slightly immediately before the closure, and during the first few days of the closure, decreased to zero because there were no tow arrivals at the facility, and then gradually picked up again towards the end of the closure. The percent of empty barges for tow arrivals at beginning of the closure increased significantly. This is because both the main and auxiliary chamber at McAlpine were completely shut down during the closure period. Shippers/Carriers avoided the lock and waited for McAlpine to reopen. Towards the end of the closure, the percent of empty barges per tow arrivals gradually was reduced and then leveled off to normal similar to the pre-closure period.

**Table 1
McAlpine Closure Costs to Industry**

Type of Cost	Cost \$	*Respondents
Costs from Surveys		
no change in procedures	-	6
Stockpiling	unknown but significant	6
Overland Modal Shift	2,000,000 plus	5
Switched Waterway Routing	unknown but significant	2
Sourcing Shift	unknown	1
Altered Production Processes	10,000 - 15,000	3
Shift in Production Location	unknown	2
pipeline modal shift	unknown	1
Lost Sales	40,800 plus	1
Demurrage and carrying cost	104,000	1
Other Costs	\$175/barge/day	1
Subtotal	2,159,800 plus other costs	19
Computed Costs		
Delay at Lock	695,251	
Total	2,855,051	19

**Some Respondents had more than one type of cost*

SHIPPER AND CARRIER RESPONSE TO THE AUGUST 2004 MCALPINE MAIN LOCK CLOSURE

1. INTRODUCTION

Between 8 August and 19 August 2004, the main lock chamber at the McAlpine Locks and Dam, at Ohio River mile 606.8, was closed to navigation traffic for approximately 11 days. Originally, the lock had been scheduled to close from 3 August 2004 through 16 August 2004 for a 14-day period (re-opening on 16 August) for de-watering and emergency repairs. Prior to the closure, diver inspections have revealed cracks in critical structural members, which require repairs to prevent failure of a miter gate.

While queue and delay information is routinely collected at navigation projects under the Lock Performance Monitoring System (LPMS), this is an incomplete representation of the impacts of closure events. Because of this, a survey of the shippers and carriers affected by the McAlpine main lock closure was conducted between 1 Mar and 30 April 2004 for the purpose of discerning industry reactions to the closure and the associated costs. This report documents the results of those industry surveys. In addition to the industry surveys, an analysis of the LPMS data for McAlpine was conducted. The purpose of this analysis was to examine the detailed LPMS data for the McAlpine facility, particularly for the closure period, to identify changes in operating procedures attributable to the closure, and to draw comparisons with the industry survey responses.

2. PROJECT DESCRIPTION

The McAlpine Locks and Dam project is located at Ohio River Mile 606.8, downstream in the Louisville, Kentucky urban area (See the attached area map and schematic). The existing navigation project had two parallel locks along the left descending bank, 110'x1200' lock chambers and a 110'x 600' auxiliary chamber. The main 1200' lock chambers was operational in 1961 and the auxiliary 600' lock chamber was put into service in 1931.

The existing 110'x 600' auxiliary chamber will add a second 1200' lock in place of the existing 600' lock. Innovations associated with this project include roller compacted concrete walls, wrap around filling and emptying system with in-chamber culverts, a shortened guide wall and reduced cofferdam length. Construction began in 1996 and is scheduled for completion in 2006. The main chamber services the majority of commercial traffic during normal operations, while the smaller auxiliary chamber services recreational traffic and small tows. Tows on the Ohio River are typically sized to single-cut through the main 110'x1200' chamber (15 jumbo barges). The auxiliary lock at McAlpine has been closed since 1999 due to construction of a twin 1,200-foot lock chamber, so the closure of the 1200' lock leaves the river impassible in the area. Construction of the new 1200' auxiliary lock is scheduled for 2008.

Commodity traffic through the McAlpine facility for the period 2000-2004 is displayed in **Table 2**. The 2004 traffic mix is dominated by coal (33.1 percent), followed by iron and

steel (19.5 percent); chemicals (12 percent), petroleum (9.2 percent); ores & minerals (7.2), aggregates (6.6 percent); and grains (6.4 percent).

The overall traffic orientation for 2004 displayed in **Table 3** shows that most traffic through the facility is upbound (68.2 percent). Coal traffic is a little more than half upbound (56.2 %) while iron and steel traffic moves about three quarters upbound through McAlpine (77.1 percent). Chemicals traffic is largely upbound (86.3 percent). Petroleum products traffic at McAlpine is about a little more than half upbound (58 percent). Ores/minerals & Aggregates are almost entirely upbound at (94.6 and 94 percent, respectively).

3. ADVANCE CLOSURE NOTIFICATIONS

In an effort to enable industry to prepare for disruptive emergency closures McAlpine main chamber closure was contained in a 20 May 2004 Notice to Navigation Interests Notice No. 2004-005. In that notice, a tentative schedule for the closure was provided indicating that the emergency repairs would occur from 3 August 2004 through 16 August 2004 timeframe and would last for 14 days.

As a result of coordination with affected river carriers and river dependant industries and response to the initial notice for the McAlpine 1200' lock closure, closure dates have been slightly adjusted to increase the amount of time available to reschedule traffic around the closure. A second notification was given that provides a firm schedule for the anticipated closure. This notification was provided in a 01 June 2004 Notice to Navigation Interests Notice No. 2004-006 and indicated that the closure would occur during the period 9-22 August for critical repairs to miter gates. Since there is no auxiliary lock at McAlpine, this will be a 14 day total river closure.

Table 2
Commodity Traffic through the McAlpine Locks
2000-2004
(Millions of Tons)

	2000	2001	2002	2003	2004	% of Total 2004
Coal	19.1	21.1	18.8	16.0	17.4	33.1%
Petroleum	5.4	5.9	5.1	5.2	4.8	9.2%
Aggregates	4.6	4.3	3.3	2.8	3.5	6.6%
Grains	3.2	3.8	3.0	2.6	3.4	6.4%
Chemicals	6.2	5.7	5.8	6.1	6.3	12.0%
Ores&Minerals	3.6	3.2	3.4	4.4	3.8	7.2%
Iron&Steel	8.2	7.0	8.0	9.1	10.3	19.5%
Others	5.6	5.2	4.3	3.3	3.2	6.0%
Total	55.8	56.2	51.9	49.5	52.7	100.0%

Source: LPMS Data

Table 3
Commodity Traffic through the McAlpine Locks
by Direction, 2004
(Thousands of Tons)

	Upbound	% of Total	Downbound	% of Total	Total
Coal	9,809	56.2%	7,630	43.8%	17,439
Petroleum	2,806	58.0%	2,030	42.0%	4,836
Aggregates	3,264	94.0%	209	6.0%	3,473
Grains	325	9.7%	3,027	90.3%	3,353
Chemicals	5,451	86.3%	867	13.7%	6,318
Ores&Minerals	3,593	94.6%	205	5.4%	3,798
Iron&Steel	7,937	77.1%	2,353	22.9%	10,290
Others	2,732	86.2%	437	13.8%	3,169
Total	35,917	68.2%	16,759	31.8%	52,676

Source: LPMS Data

4. CHRONOLOGY OF EVENTS

a. Diver inspections at McAlpine 1200' main lock have revealed cracks in critical structural members, which require repairs to prevent failure of a miter gate. Additional diver inspections to monitor the condition of the miter gate will occur every two weeks beginning May 27, 2004.

b. On 20 May 2004, Notice to Navigation Interests Notice No. 2004-005 was issued to inform the navigation industry that the main lock chamber at McAlpine would be closed for emergency repairs beginning on (or about) 3 August 2004 and ending on (or about) 16 August 2004. The original scope of work called for dewatering the lock to make structural repairs.

c. On 01 June 2004, Notice to Navigation Interests Notice No. 2004-006 revised the closure start and end dates as a result of coordination with affected river carriers and river dependent industries and response to the initial notice for the McAlpine 1200' lock closure. Closure dates have been slightly adjusted to increase the amount of time available to reschedule traffic around the closure. The McAlpine lock will be closed beginning EDT 9 August 2004 and 22 August 2004 for critical repairs to miter gates.

d. On 08 August 2004 at 16:57 hours, LPMS data indicate that the main lock chamber at the McAlpine facility closed to navigation. As previously noted, this will be a 14 day total river closure since there is no auxiliary lock at McAlpine.

e. On 19 August 2004 at 16:20 hours, LPMS data indicate that the main lock chamber at the McAlpine facility reopened to navigation. The closure lasted 10 days and 23.4 hours.

f. On 20 August 2004 at 11:40 hours, the delay at the McAlpine facility returned to zero. The total closure-induced delay from the closure event was 1,448 hours. The time required for the delay at McAlpine to return to zero was 19.3 hours. The maximum delay during the closure was 10.7 Days.

5. SHIPPER SURVEY

a. Survey Procedures.

An OMB-approved Shipper Survey (Control #0710-0001) was used to capture and evaluate shipper reactions to the closure of the main chamber at McAlpine lock. Shippers were defined as companies that receive commodity traffic transiting McAlpine. The formal shipper survey was conducted between 1 March and 30 April 2005. The purposes of the survey were to find out what measures were taken by industry to mitigate the effects of the main chamber closure at McAlpine and to estimate the total costs to industry that resulted from the closure event. A wide range of survey responses was anticipated based on such factors as companies' intensity and frequency of usage of the McAlpine facility; the time of year of the closure; the companies' transportation options; and the nature of the businesses.

At the outset of the process, several rules were adopted for including firms in the survey. First of all, a list was compiled that shows the parent companies for the McAlpine receiving docks along with the total tonnage in 2002. The parent company (e.g., owner) of each McAlpine receiving dock was first identified, and then receiving docks were grouped by their parent companies and their corresponding tonnages were summed. The parent companies were then ranked in descending order by their total tonnage received. 14 companies received 1,000,000 tons or more and 60 companies received 100,000 tons or more were included in the mail survey. 2002 LPMS data was used for this study. All of the contacts information for the top ranking companies were determined by comparing several contact lists. Contact lists included; a pre-closure survey; “Waterways Council Canvas of Users of the McAlpine Lock”, compiled with the assistance of various stakeholders and prepared by Don Matzzie of Linare Consulting dated July 15, 2004; a list of industry meeting attendees at the pre-closure McAlpine meeting that took place May 27, 2004; and contact information provided by the Navigation Planning Center in Huntington, WV. In the absence of any contact information, the internet was used as a search tool to verify correct contact information for these parent companies. In addition to the major shippers of the McAlpine lock, the top 20 carriers at McAlpine in 2002 were identified and contact information verified. The 60 shippers and 20 carriers were sent a mail survey followed by a telephone follow-up if the parent company or carrier sent no response after two weeks.

A total of 60 companies were selected for survey as a part of the formal shipper survey and 20 carriers as part of the formal carrier survey. Surveyed shipper companies handled about 82 percent of total traffic. Completed survey forms were received from 19 companies, representing a response rate of 32 percent and accounting for 42 percent of McAlpine’s total 2002 traffic. A listing of the types of responding companies is provided in **Table 5**.

b. Survey Questionnaire Responses.

Actual survey questions and response summaries are provided in italics in the following paragraphs. Please note that only survey questions that generated responses are included. Other questions are skipped.

General Description of Firm and Products Produced:

Response(R). The majority of the companies that responded to this shipper survey indicated that the commodities they ship/receive through the McAlpine lock comprise of mostly coal, steel, petroleum, and grain products. These commodities account for 84 percent of the respondent tonnage with 40 percent attributed to coal receipts, 26 percent is steel, 26 percent is petroleum, and only 8 percent is grain products. The remaining respondent tonnage that transits the McAlpine lock is attributed to chemicals, asphalt, iron ore, and aggregates.

Q1. Did your company have sufficient notice of the scheduled McAlpine closure to prepare a response plan?

R1. Table 4 shows all 19 of the responding companies provided a response of some kind to this question and 18 of the companies (95 percent) indicated that notification was sufficient to prepare a response. Two companies, one in the petroleum industry and one chemical company, felt the notice gave them ample time to plan accordingly. One coal company indicated that they reschedule shipments above and below the McAlpine lock for our plants. Another company is a steel company that mentioned the problem with the closure was that there is a shortage of products and inventory build-up is impossible. One company indicated that sufficient notice was received from the barge lines; however, there is still insufficient time to prepare for the closure because it all depends when vessels are scheduled and/or arrive in New Orleans.

Table 4
Response Summary Shipper Survey Question 1

Response	Count	Percent
Yes	18	95
No	1	5
Total	19	100

Q2. During the period of closure of the lock chamber at McAlpine, what was your company's response?

R2. Table 5 shows the shippers responses to question 2

Responses to this question were provided by 18 of the 19 companies giving a 95 percent response rate. Seven of the companies indicated that they had pursued multiple courses of action during the closure period. The most frequently cited a course of action was no change in procedures and stockpiling product and waiting for the McAlpine traffic to clear. The Third most common response that was indicated by five companies was to switch to overland mode for product delivery. Two of the companies, one steel and one chemical company, switched to rail but mentioned that rail would not be sufficient in the long run to keep their product moving due to the increased expense. Another company kept their material in barges because all the other options were more expensive. One petroleum company indicated that product originally shipped both via barge & pipeline is now being delivered solely by pipeline. A concrete/aggregate company indicated their sales were affected because they ran out of certain raw materials.

Table 5
Response Summary Shipper Survey Question 2

Number of Responses	Response Category	Types of Commodities Handled at Responding Companies
6	No change in procedures.	Grain; fertilizer; steel; salt; terminaling/warehousing; coal; soy processing/grain exporting; soybean meal & soy oil; trading company distributing pig iron to steel & foundries.
6	Stockpiled product and waited for McAlpine to reopen.	Structural steel beams; Receive, store, and distribute gasoline, diesel, and jet fuel; Refining, marketing, and transportation; Coal Supply; Asphalt Paving Company; Two River dock. Fleeting, warehousing Resell yard for aggregates.
5	Switched to all-overland mode for product delivery from existing sources.	Structural steel beams; On shore Refined Petroleum Products handling and storage facility (excluding production); Steel products, integrated steel mill; Acetone Producer (receive feedstocks from gulf coast); iron or steel coils.
2	Switched to different waterway routing for product delivery from existing sources.	Gas & Electric (move coal by Barge); Coal Supply company
1	Switched product source to an entirely new source.	Utility – Electricity
0	Ceased operations during the period of closure.	
3	Altered production during the period of closure.	De-Icing Salt, Steel, Coke, Grain & Feed Product; Acetone Producer; Asphalt Paving Company
2	Switched production to another facility.	Refining, marketing, and transportation; Acetone Producer.
0	Purchased intermediate or final product, rather than produced.	
2	Other or combinations of the above.	Structural steel beams; On shore Refined Petroleum Products handling and storage facility.
1	No answer.	

Other Comments:

- *Stockpiled product and also switched some product to rail/truck delivery (steel company)*

- *When locks went down all product deliveries were switched from barge and pipeline to solely pipeline (petroleum handling & storage facility).*
- *We did rail – but rail was very expensive and would never been enough to keep us operating (steel mill).*
- *Switched customer bases among production sites. Received product via rail as opposed to barge (chemical company).*
- *Our sales of limestone materials were affected, because we ran out of certain materials (fleeting/warehousing)*
- *Due to our customer base, we decided to keep the material in the barges, since all other options were more expensive (trading company).*

Q3. Which of your commodities and tonnages were affected by this closure?

R3. Of the 19 companies responding to the survey, 18 companies provided an answer giving a 95 percent response rate. Five companies cited no commodities were affected because they were able to plan ahead. Out of these five companies unaffected, one coal company mentioned they were able to switch suppliers between plants above and below the McAlpine lock. One general cargo terminal company was unaffected because this was there slow time of the year and they had space because they were forewarned of the closure. Another company stockpiled petroleum products and waited for McAlpine to open. One general cargo company had no change in procedures.

Table 6 shows the other 13 companies responding to the survey, indicated that one or more commodities were affected by the McAlpine closure. One general cargo terminal company cited several commodities including hi-way deicing salt, steel, coke, grain & feed products were delayed but did not give an estimated tonnage level. Three steel companies were affected by the McAlpine closure. One steel company replied that approximately 8 - 12,000 tons of steel beams that comprised about 5-10 barges were stockpiled and switched some product to rail/truck delivery. While another steel company noted that iron ore and lime were switched from barge to rail but gave no estimated tonnages. The other steel company that produces iron and steel coils said all of their commodities were switched to the overland mode for product delivery but again gave no estimated tonnages. One petroleum company mentioned their diesel products were affected because they had to stockpile an additional 4,000 barrels of fuel in a storage bank and switched product delivery from barge & pipeline to exclusively pipeline. Coal was affected for three coal companies, one cited they switched the product source to an entirely new source, approximately 25,000 tons of coal was affected. While another company had to stockpile and switch to different waterway routing for product delivery for approximately 30,000 tons of coal. The third coal company switched suppliers between the power plants above and below the lock. An asphalt company cited 38,000 tons of crushed stone had to be stockpiled and altered production during the 11 day closure. Lastly, an aggregate company mentioned that their limestone was stockpiled to offset the closure but lost sales because they ran out of inventory. A chemical company cited that acetone shipments and cumene receipts were affected because some product was switched from barge to rail and produced at another facility.

**Table 6
Response Summary Shipper Survey Question 3**

Commodities Affected	Tonnages Affected	Type of Facility
Hi-way Deicing salt, steel, coke, Grain & Feed products		General Cargo Terminal
coal suppliers		Gas & Electric Company
Structured Steel Beams	8,000 – 12,000 Tons (approx. 5 – 10 barges)	Steel Corporation
Fertilizer, Grain, Steel, & Salt		General Cargo Terminal
Flat rolled Steel		Terminal/warehouse
diesel	4,000 barrels	Refined Petroleum handling & storage facility
Iron ore, lime		Steel Mill
Coal	25,000 tons	Utility – Electricity Company
Acetone, cumene		Chemical Company
Coal	30,000 tons	Coal supplier
Pig Iron	25,000 MTons	Trading Company
Iron and Steel Coils		Steel Mill
Crush stone	38,000 tons	Asphalt Paving Company
Limestone		River dock

Additional Comments:

- *All commodities were delayed.*
- *We have power plants above and below the McAlpine lock and have coal suppliers above and below the lock. We were able to switch our suppliers between the plants.*
- *This was our slow time of year, we had space because of knowing of closure.*
- *All products were scheduled but product was on hand to wait out delays.*
- *None – we were able to plan ahead.*
- *N/A*

Q4. If a reasonable estimate can be made, what additional costs (over and above normal operations) did you incur as a result of the closure event at McAlpine? If possible, please itemize according to the categories in question 2.

R4. Table 7 shows a total of 19 shippers responding to the survey. Three coal companies accounted for 45 percent or almost half of the total respondent tonnage. The other half of the total respondent tonnage or 44 percent was attributed to three steel and three petroleum companies accounting for 22% each of the respondent tonnage. The remaining 12 percent was attributed to five general cargo terminals, one chemical company, and one concrete/aggregate company which accounted for 7, 2, and 3 percent of the total respondent tonnage, respectively.

**Table 7
Companies Responding to the Shipper Survey**

Company Type	Number Surveyed	Number Responding	% of Respondent Tonnage
Electric Utilities	2	0	0%
Steel Companies	7	3	22%
Petroleum/Asphalt Companies	7	4	22%
Chemical Companies	5	1	2%
General Cargo Terminals	19	5	7%
Concrete/Aggregates Companies	3	1	3%
Coal Companies/Docks	14	3	45%
Other	3	2	0%
Total	60	19	100%

Table 8 shows the McAlpine shipper costs from the surveys. Several companies cited they incurred significant costs due to the McAlpine closure of August 2004 but were unable or hesitant to provide actual dollar cost amount. The majority of the unknown survey costs associated with the closure was due to six companies that stated they stockpiled product and waited for McAlpine to reopen. Of these six companies, three were petroleum companies and the remaining three companies comprised of one steel, one coal, and one other company. Two coal companies cited that incurred considerable costs due to switching from waterway mode to rail/truck modes of transportation. A petroleum and chemical company indicated they incurred significant costs due to a shift in production to another facility but did not give a cost estimate. The other unknown costs were attributed to a coal company that switched product to a new source and a petroleum company that switched from waterway to pipeline mode of transportation.

The total shipper costs due to the McAlpine closure were estimated to be \$2.9 million plus these unknown costs. \$2.2 million in costs was determined from the shipper surveys and \$695 thousand was incurred delay costs at the lock calculated from LPMS data. \$2 million was attributed to a steel company switching from the waterway to overland (rail) transportation. Another significant closure cost stated in the shipper survey was \$104,000 which accounted for 96 percent in demurrage and 4% in /carrying costs for a petroleum/asphalt company. An aggregate company stated they lost over \$40,800 in sales due to a shortage of material on hand. One of the general cargo terminal companies altered production during the closure which costs between \$10 - \$15,000, while another general cargo company experienced a proportionate loss of revenue due to a delay in barge deliveries. Another company cited costs of \$175/barge/day for distributing material to steel mills. This cost was not included in the total estimated shipper costs because the

number of barges per day was not given by the shipper in the survey. One coal and one steel company noted that the additional costs are difficult to figure, and thus, a reasonable estimate cannot be made.

**Table 8
McAlpine Closure Shipper Costs**

McAlpine Closure Costs to Industry		
Type of Cost	Cost \$	*Respondents
Costs from Surveys		
no change in procedures	-	6
Stockpiling	unknown but significant	6
Overland Modal Shift	2,000,000 plus	5
Switched Waterway Routing	unknown but significant	2
Sourcing Shift	unknown	1
Altered Production Processes	10,000 - 15,000	3
Shift in Production Location	unknown	2
pipeline modal shift	unknown	1
Lost Sales	40,800 plus	1
Demurrage and carrying cost	104,000	1
Other Costs	\$175/barge/day	1
Subtotal	2,159,800 + unknown costs	19
Computed Costs		
Delay at Lock	695,251	
Total	2,855,051	19

**Some Respondents had more than one type of cost*

Q5. Has the closure at McAlpine caused your company to alter its long-term transportation strategy (e.g. switch to all-overland modes, increase stockpiles, etc.)? How will this impact your total commodity transportation or other costs (per year)? Please explain.

R5. Out of the 19 companies that responded to the shipper survey, 18 replied to question 5 for a 95 percent response rate. 17 companies out of the 18 that responded indicated that the McAlpine closure would not alter their long-term transportation strategy. One company did not respond. In the short term, during the lock closure, one coal company was able to switch suppliers above and below the McAlpine lock while a petroleum company was able to stockpile enough products to get through the closure period. Another petroleum company was able to switch production temporarily to another facility. A chemical company indicated they were able to return to normal operations after the

closure. A general cargo company cited they stopped shipping bulk commodities North of McAlpine lock during the closure and this had no additional financial cost and continued to resume normal operations after the closure. One petroleum/asphalt company mentioned there will be no changes in the long-run but the commodity used at their facility can only economically be transported by barge from the quarries. A concrete/aggregate company indicated that in the long term their commodity cannot be shipped via rail/truck long haul because of the low dollar material being shipped. A steel company mentioned they are supplied solely by barges. Another company stated the closure won't change their long-term transportation strategy, but they need to be aware of upcoming closures in order to keep the customer informed.

Q6. Has the closure at McAlpine caused your company to take any other long-term permanent measures? (switch production to another facility, purchase intermediate or final product rather than produce, etc) Please explain. How will this affect your company's long-term operating costs (per year)?

R6. Out of the 19 survey respondents, 17 answered question 6 for an 89 percent response rate. The 17 companies that responded stated that there will be "No" long-term permanent measures but one chemical company indicated that as long as they continue to receive sufficient notice, alterations can be made to accommodate short-term closures, however, closures increase shipper costs considerably.

Q7. Has your company been impacted by other navigation system disruptions? Did they influence your response to the McAlpine closure?

R7. Out of the 19 respondents, 14 responded to question number seven which is a 74% response rate. One general cargo terminal company indicated that the McAlpine closure was not necessarily disruptive, but the entire Ohio River shut down was a major impact to their operations. Four companies that comprised of two coal companies, one steel company, and one asphalt company cited that the Belleville lock and dam closure resulted in major disruptions. A coal company stated that they have large amount of contract coal above the McAlpine lock and need to increase tonnage receipts after the closure to compensate for lost tonnage receipts during the closure. A steel company had to reduce production and several commodities to include coal, iron ore, and lime were in short supply. An asphalt company mentioned that the Belleville lock and dam loss of pool caused bank failure along their plant property and estimated the cost to correct this failure at \$150,000. In addition to the Belleville closure disruptions, three companies, two general cargo and one steel company, responded that "Yes" they have been impacted by other navigation system disruptions, but having experienced such disruptions, allowed us to respond more quickly and efficiently and prepared us for the recent McAlpine closure. Another general cargo terminal company mentioned that the New Orleans/Baton Rouge flooding affected their company, but did not state specifically how the company was affected. Another company said they have been impacted by other disruptions, but these closures did not influence their response during the McAlpine closure. Conversely, three

companies, one petroleum, one steel, and one coal company cited that “No” previous navigation closures did not influence their response to the McAlpine closure.

Q8. Other Comments.

Six shippers provided additional comments to the shipper survey. Among the shippers responding, comments varied significantly. Two steel companies mentioned that the river is vital to our operations and one steel company added that they ship and receive approximately 100 barges per month, and thus, this closure impacted them and their barge carriers. Two companies, one petroleum and another company, indicated that the closure had little negative effect on their operations, but due to sufficient advance notice they were able to evaluate their requirements and adjust operations during the closure period to meet their needs. Still, another company mentioned that the navigation system should always be working by keeping alternative locks open while undergoing repairs because a total river closure is a tremendous problem and results in significant cost increases.

6. CARRIER SURVEY

a. Survey Procedures.

The OMB-approved Carrier Survey (Control #0710-0001) was a more targeted survey conducted of the major towing companies that normally use McAlpine lock. The purpose of this survey was to identify carrier reactions to the closure of the main chamber at McAlpine. Like the shipper survey, the formal carrier survey was conducted between 1 Mar and 30 April 2005. The purposes of the survey were to find out what measures were taken specifically by the carriers to adapt to the main chamber closure at McAlpine and to estimate the total costs incurred by them as a result of the closure event. The main chamber closure at McAlpine caused the Ohio River to be closed to navigation traffic due to the construction of McAlpine auxiliary chamber.

The firms included in the carrier survey were the 20 largest users of the McAlpine facility in tonnage terms for year 2002. The companies that were sent a survey moved a total of 52.2 million tons through the McAlpine project in 2002, which was about 96 percent of total traffic. Completed survey forms were received from ten companies, representing a response rate of 50 percent. Responding companies moved about 38.0 million tons of traffic through McAlpine in 2002, representing about 73 percent of total traffic.

b. Survey Questionnaire Responses.

Like the shipper survey results, actual survey questions and response summaries are provided in the following paragraphs. Please note as well that only survey questions that generated responses are included and that other questions are skipped.

Q1. Did your company have sufficient notice of the scheduled closure at McAlpine to prepare a response plan?

R1. **Table 9** shows out of the 10 companies that responded, 9 companies responded to this question which was a 90 percent response rate. Eight of the carriers answered “Yes” they had sufficient notice to prepare a response plan while only one carrier answered “No” they didn’t have sufficient notice. Three companies mentioned that the ten week notice of the McAlpine closure was well enough in advance to plan accordingly and one company even stated that the closure of McAlpine was the best planned, executed, and communicated lock closure in the entire river system. Another company indicated that they notified their customers that they would not operate in the area until the locks were open.

Table 9
Summary Response Carrier Survey Question 1

Response	Count	Percent
Yes	8	80
No	1	10
No Answer	1	10
Total	10	100

Q2. How did your company operate during the scheduled main chamber outage at McAlpine? Check as many items as are applicable and explain any unusual procedures.

R3. The intent of this question is to gather information on specific courses of action taken by the carriers during the scheduled McAlpine lock closure. **Table 10** shows all of the companies involved answered this question and all pursued multiple courses of action. Eight out of the ten companies that responded cited the barges were tied up at fleeting areas, while the towboats operated elsewhere in the system. One of these same company mentioned that lost barge days resulted in lost revenues due to the barges sitting and awaiting completion of the emergency repairs at McAlpine. Two out of these same eight companies stated that some of the towboats also remained in queue with the barges. Five out of these eight companies indicated that they avoided the lock when possible, and one of these same companies stated that loadings were planned to be stopped well in advance of the outage and very few cargoes were stranded needing to go through McAlpine. The remaining two companies did not operate during the McAlpine closure.

Table 10
Response Summary Carrier Survey Question 2

Number of Responses	Response Category	Types of Commodities Handled at Responding Companies
8	Barges were tied up at fleeting areas; towboats operated elsewhere in the system	All commodities: dry and liquid cargoes; petroleum based products; coal; limestone; sand; gravel;; iron ore, alumina, coke, stone, scrap iron, and various petrochemicals; chemicals; steel products, fertilizer, grain.
2	Towboats remained in queue with barges	General Cargo; liquid cargo.
0	Towboats (light) held positions in queue.	
5	Company avoided the lock when possible.	Dry and Liquid cargoes including coal, iron ore, alumina, coke, stone, scrap iron, various petrochemicals, limestone, sand, gravel, steel products, fertilizer, and grain.
2	Other (please explain)-see below	Petroleum products, bulk commodities.

Other (please explain):

- *We did not operate this area during this time (petroleum products).*
- *Keep our equipment out of this area (bulk commodities).*

Additional Comments:

- *Loadings were planned to be stopped well in advance of the outage. Very few cargoes were stranded needing to go through McAlpine (Dry and Liquid cargoes: coal, iron ore, alumina, coke, stone, scrap iron, and various petrochemicals)*
- *Barge days and thus revenue opportunities were lost as the barges sat “on station” awaiting completion of the work (petroleum based products, chemicals and coal)*

Q3. If a reasonable estimate can be made, what additional costs (over and above normal operations) did you incur as a result of the closure event at McAlpine? 3. If a reasonable estimate can be made, what additional costs (over and above normal operations) did you incur as a result of the closure event at McAlpine?

R3. Table 11 shows the total costs from the carrier survey were estimated to be \$1,981,000. Nine out of the ten companies responded to question 3. Four out of the nine these companies that responded indicated that the McAlpine closure event did not incur additional costs due to advance notice and careful advance planning. The other four out of the nine companies indicated that they incurred a substantial loss of revenue but only two provided an estimate. One company stated that loss of revenue was mainly due to fleeting charges for barges that were tied-up and remained unoccupied during the closure. The majority of loss of revenue for these companies was because of additional barge delays and fleeting and operating costs. Of these four companies that incurred revenue loss, two companies actually provided an estimation of the additional cost they incurred.

One company cited that the McAlpine lock closure costs them \$542,000 as a result of stopping, waiting, and diverting tows during the closure. While, another company cited the McAlpine closure event costs them \$1,439,000 because of barge delays and lost barges days. One company incurred a tremendous loss of revenue due to additional fleeting and shifting of delayed barges and operating costs for boats trapped above the lock.

**Table 11
McAlpine Closure Costs Identified during Carrier Survey**

Costs During Scheduled Closure	Type of Cost	Types of Commodities Handled at Responding Companies
diminimus	unknown	petroleum products
unknown	Fleeting costs & loss of revenues	Coal, limestone, sand, gravel
-	-	petroleum products
\$1,439,000	delay	all commodities
minimal	unknown	Dry and Liquid cargoes including coal, iron ore, alumina, coke, stone, scrap iron, and various petrochemicals.
tremendous	loss of revenue, delay, & fleeting/operating costs	petroleum based products, chemicals and coal.
-	-	General Dry Cargo, liquid cargo
insignificant	-	bulk commodities.
no response	-	Dry cargo, coal, steel products, fertilizer, grain.
\$542,000	Stopping, waiting, & diverting tows	liquid cargoes.
\$1,981,000	Total known Costs	

Additional Comments:

- *Financial impact was minimal due to careful advance planning with our customers (dry and liquid cargoes)*
- *In addition to a tremendous amount of lost revenues, canal barge experienced additional fleeting and shifting for delayed barges and operating costs for boats trapped above the lock (petroleum based products, chemicals and coal)*

Q4. Prior to the outage at McAlpine, towing industry representatives, in cooperation with the Corps of Engineers, developed some operating procedures that were put in place at the time of the closure. Do you believe this effort was (a) effective, C1, C2 (b) ineffective or (c) only partially effective? (Please explain)

*R4. Nine out of the ten companies responded to question #4. **Table 12** shows the results of eight out of the nine companies that stated the operating procedures that the towing industry and Corps of Engineers put together for the closure period was extremely effective. Although, one company indicated they were not sure what procedures were put into place. One company indicated that the planning and communication process was*

extremely effective and that prior planning as to what work had to be accomplished and how it would be accomplished was a critical element to minimize the closure time. This same company cited they pre-positioned equipment on lock walls to minimize lock outage time. Another company implemented plans to minimize the need to transit the lock at the beginning of repairs. Two companies stated that the Corps procedures were very effective in returning navigation to the Ohio River once repairs at McAlpine were completed. Lastly, one company had complained that the Corps “must bear the burden of responsibility for not sufficiently funding the alternative chamber renovations”.

**Table 12
Response Summary Carrier Survey Question 4**

Rating	Additional comments	Types of Commodities Handled at Responding Companies
Effective		Petroleum products
Effective		Coal, limestone, sand, gravel
Extremely Effective	Planning & communication process was extremely effective. Prior planning as to what work had to be accomplished and how it would be accomplished was a critical element to minimize the closure time. Pre-positioning equipment on lock walls was also critical to minimize lock outage time.	all commodities
Effective	We implemented plans to minimize the need to transit the lock at the beginning of repairs. Corps procedures worked well to ensure an orderly re-opening once repairs were completed.	Dry and Liquid cargoes including coal, iron ore, alumina, coke, stone, scrap iron, and various petrochemicals.
Effective	Yes, they were effective and the restart went off very smoothly	petroleum based products, chemicals and coal.
Effective	For our company notification was more than adequate.	Barge Line operating the inland waterway transporting bulk commodities
Effective	The effort was effective in bringing some order to the outage. However, the Corps must bear the burden of responsibility for not sufficiently funding the alternate chamber renovations.	Dry cargo, coal, steel products, fertilizer, grain.
Effective	Yes, the work that the Corps did in cooperation with industry was very effective in returning navigation to the Ohio River.	liquid cargo.
No Response		Petroleum products

Unrated comment included for the record are:

- *Not sure what procedures were put in place (general dry cargo, liquid cargo)*

Q5. Did the experience with the outage at McAlpine cause your company to adopt any new operating procedures to accommodate lock outages elsewhere in the system? (Please explain.)

R5. Eight of the ten companies responded to Question 5 which accounted for an 80 percent response rate. Three of these eight companies said “Yes” they adopted new operating procedures to accommodate lock outages while four of these companies said “No” new operating procedures emerged. One petroleum company is concerned with the long term reliability of the river infrastructure and is in the process of developing enhanced contingency plans to deal with river shutdowns in the future. Another company that carries coal, limestone, sand, and gravel indicated they will not expend company resources of boats, barges, and personnel and, instead will not operate during disruptive closures. Another carriers that ships commodities of petroleum products, chemicals and coal indicated they instituted new planning mechanisms with their customers to ensure they had adequate product supply during the closure and mentioned that the McAlpine closure created imbalances in the transportation system that took considerable time to correct. On the other hand, one company stated that the Corps adequately provided timely notification of lock closure for industry preparedness, and thus, minimal impact due to the lock outage. Lastly, a general cargo carrier mentioned the Corps needs to continue to keep carriers informed of upcoming lock closures with advance notices and formal meetings.

7. LOCK PERFORMANCE MONITORING SYSTEM ANALYSIS

a. Introduction.

This analysis uses the LPMS data collected from the U.S. Army Corps of Engineers Operation & Maintenance of Navigation Installations data, OMNI, and contains highly-detailed, operational-type navigation data for every lock in the system. These data permit an examination of whether shippers and carriers who transited McAlpine before and after the scheduled 08 August 2004 main chamber closure, reacted by modifying their tow configurations or arrival patterns.

b. Commodity Groups.

Table 13 contains commodity traffic by commodity group that arrives at the McAlpine facility for periods prior to the closure event, 1 January – 30 June 2004, and immediately before the closure, 1 July – 7 August 2004, during the closure itself, 8 August – 19 August 2004, and for the post-closure period, 20 August – 31 December 2004.

Many of the respondents to the shipper survey indicated that their reaction to the main chamber closure at McAlpine was to stockpile product prior to the closure. It was expected that this stockpiling would be evident in the tons per day during the immediate pre-closure period (1 July – 7 August). Commodity groups that show an increase in tons

per day relative to the pre-closure (1) period are coal, petroleum, aggregates, chemicals, iron and steel, and others.

Table 13
Comparison of Commodity Tonnages at McAlpine Prior to, During
and Following the Closure Event
(Arrival Traffic in Tons per Day)

Commodity	Pre-Closure(1)	Pre-Closure(2)	Closure Period	Closure Period	Post-Closure
	1Jan -30 June 2004	1 Jul - 7 Aug 2004	Scheduled 8 Aug - 19 Aug 2004	as % of Pre-Closure	20 Aug-31 Dec 2004
Coal	48,639	56,956	0	0%	47,506
Petroleum	13,042	17,123	1,636	13%	13,257
Aggregates	8,921	14,406	457	5%	9,570
Grains	9,852	4,346	0	0%	10,374
Chemicals	17,731	19,529	3,123	18%	17,128
Ores & Minerals	12,464	10,405	436	4%	8,351
Iron & Steel	27,321	29,602	9,678	35%	30,273
Others	7,137	13,955	1,366	19%	9,782
Total	145,107	166,323	16,698	12%	146,240
SOURCE: LPMS Data					

c. Arrivals - Entire Year.

One way of determining whether shippers and carriers reacted to the closure is to look at the number of commercial tow arrivals per day. If we can discern that the arrival pattern changed during the closure, we can conclude that the closure caused commercial carriers and shippers to change the way they used McAlpine during the closure. **Figure 1 through Figure 3** show the 3 day moving average of the number of tow arrivals per day, TAPD, for the years 2003 and 2004 respectively.

Figure 1
Tow Arrivals per Day at McAlpine in 2003

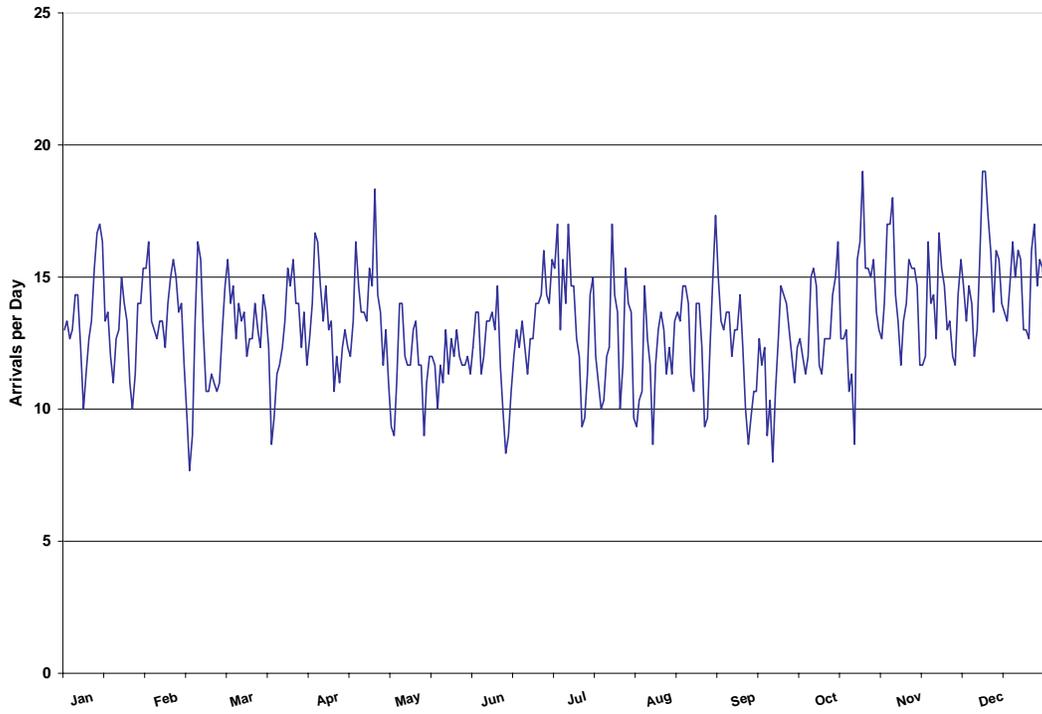
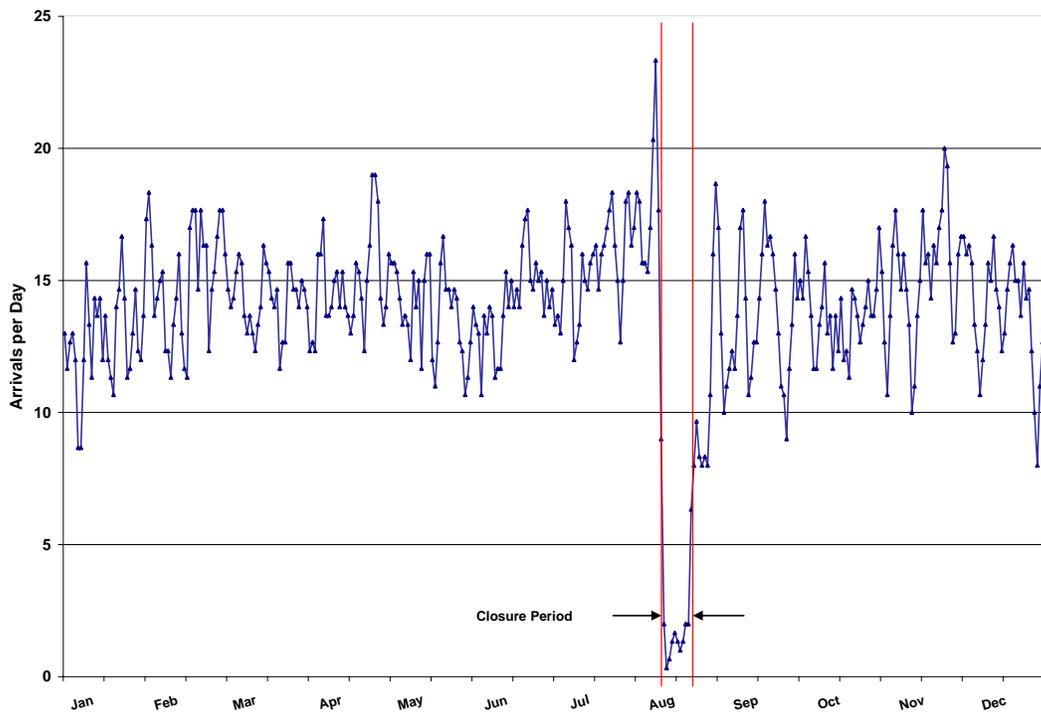


Figure 2
Tow Arrivals per Day at McAlpine in 2004



d. Arrivals – Closure Period.

Figure 3 shows the TAPD arrival pattern at McAlpine for the period 8 August – 19 August 2004.

- For all of 2004, the TAPD was 13.9. This compares with 13.1 for all of 2003 and 13.7 for 2002.
- **Table 14** shows for the part of 2004 prior to the closure, 1 Jan– 30 June, the TAPD was 14.2.
- For the period from the announcement of a closure to the start of closure, 20 May to 8 Aug, the TAPD was 15.0.
- **Table 14** shows for the part of 2004 immediately prior to the closure, 1 July – 7 Aug, the TAPD was 16.0.
- For the period immediately before the closure, 15 Jul – Aug 7, the TAPD increased to 18.5.
- The rate was 1.6 TAPD during the closure. **Table 14** shows that the TAPD during the closure was only 11% of the TAPD for the pre-closure (1) period.
- The TAPD was 5.0 from the end of the closure to the time the queue returned to zero, a period of 19.33 hours.

- For the one month period after the queue returned to zero, 20 August 2004 through 19 September 2004, the TAPD was 13.1.
- **Table 14** shows for the post closure period, 20 Aug -31 Dec, the TAPD was 13.8.

The TAPD values above indicate the arrival rate has slightly increased from 2002 through 2004. There was only a 1.5% increase between 2002 and 2004.

Historically, the arrival rate increases sharply just before the closure. For this closure, the arrival rate did increase before the closure began. Arrival rates remained high, at pre-closure levels of 14.2, and increased to 18.5 or 30 % immediately prior to the closure. The arrival rate declined drastically during the closure to only 1.6 TAPD, but delays have risen to high levels with the maximum delay reaching 257.1 hours. The reason for this significant decrease in arrival rates and sharp increase in delays is due to the fact that both the main and auxiliary chambers were completely inoperable at McAlpine during the closure. For the period after the closure up until the queue returned to zero, the arrival rate gradually increased but still remained relatively low at only 5 TAPD. One month after the queue returned to zero, TAPD returned almost back to normal at 13.1.

Figure 3
Tow Arrivals per Day at McAlpine August 2004

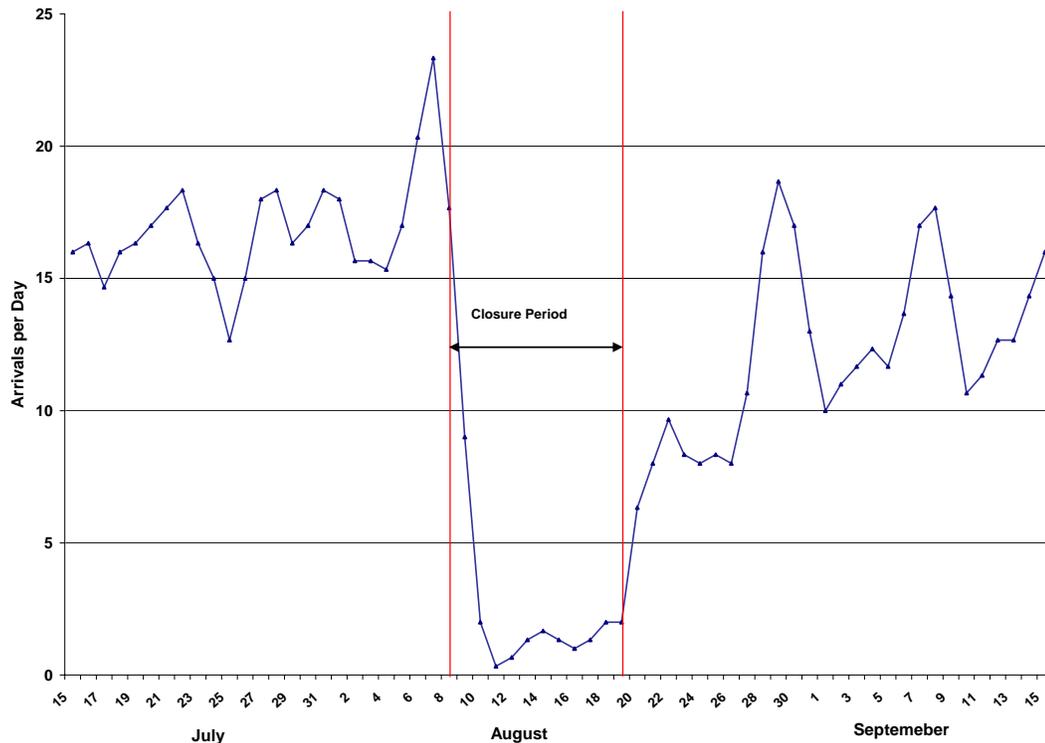


Table 14
Lockage-Related Statistics for Vessels Arriving at McAlpine Prior to,
During and Following the Closure Event

	Pre-closure (1) 1 Jan- 30 Jun 2004	Pre-closure (2) 1 Jul- 7 Aug 2004	Closure Period		Post-Closure 20 Aug - 31 Dec 2004
			Scheduled 8 Aug - 19 Aug 2004	Closure as % of Pre-Closure (1)	
Arrivals/Day	14.2	16.0	1.6	11%	13.8
Total Delay (Hours)	2,103	1,486	1,466	70%	1,760
Hours Delay Per Tow	0.82	2.39	104.7	12840%	0.95
Commercial Lockages/Day	14.2	16.0	0.0	0.0	13.8
Commercial Lockage Cuts/Day					
1-cut	14.2	15.9	0.0	0%	13.8
2-cut	0.0	0.1	0.0	0%	0.0
Average Processing Time (Minutes)	55.6	62.4	0.0	0%	57.9

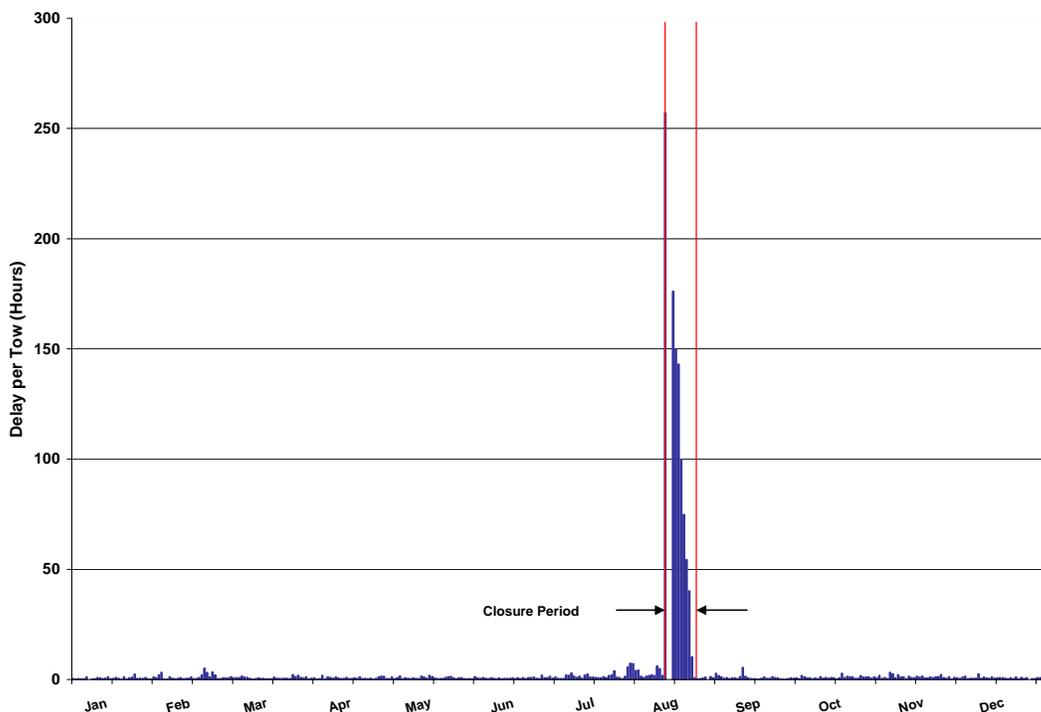
Source: LPMS Data

e. Delays Entire Year.

Table 14 shows the total delay of the 11 day closure at McAlpine was 1,466 hours, while during the pre-closure (2) period, 1 Jul – 7 Aug, the total delay was 1,486 hours. Thus, the tows that arrived during the 11 day closure experienced just as much delay as all the tows arriving in the entire month preceding the closure. The pre-closure period (1) over 6 month prior to the closure, 1 Jan – 30 Jun, was only 0.82 hours per tow. Delays started to increase during the pre-closure period (2) just before the closure to about 2.4 hours per tow then rose sharply during the closure, 8 Aug – 19 Aug, to 104.7 hours per tow.

Figure 4 shows the average delay per tow for each day of 2004. The average tow delay from the start of the closure up until the queue returned to zero was 77.3 hours or (3.2 days). The average normal delay outside of the closure period for all of 2004 was only 1.1 hours; therefore, the closure caused an additional delay of 76.2 hours per tow. The total closure caused an additional 1,448 hours of tow delay, at a cost of \$695 thousand. The maximum delay experienced by a single tow was 257 hours (10.7 days), with more than half (58%) of the tows that arrived waiting over 2 days before they were served.

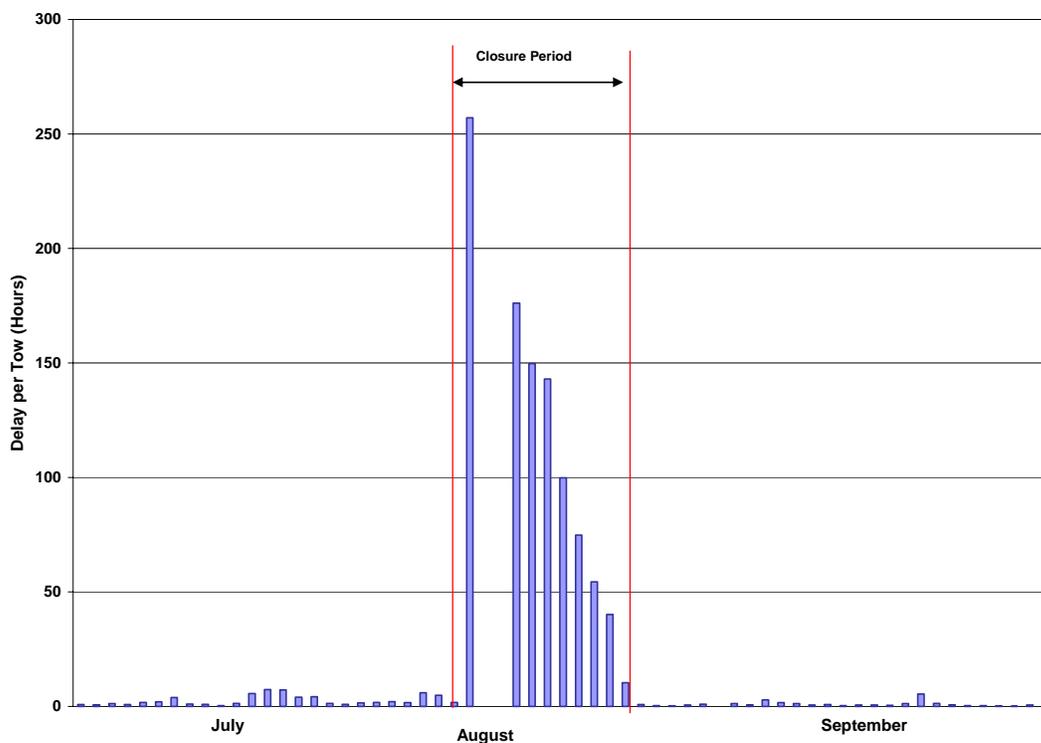
Figure 4
Average Daily Tow Delay at McAlpine in 2004



f. Delays - Closure Period.

Figure 5 shows tow delays for the August 2004 period. It shows that delays rapidly rose during the start of the closure to 257 hours and then gradually continued to decline from 175 hours down to 10 hours. Tows that arrived during the closure period were forced to wait until the lock reopened to transit through McAlpine because there was no auxiliary chamber available when the main chamber was shut down. Thus, the earlier the tow arrived during the closure, the longer the tow waited, which is shown in the average daily tow delay bar graph. After the main chamber opened, it took about 19.3 hours for the queue to dissipate and the delays to return to normal.

Figure 5
Average Daily Tow Delays at McAlpine August 2004



g. Flotilla Characteristics

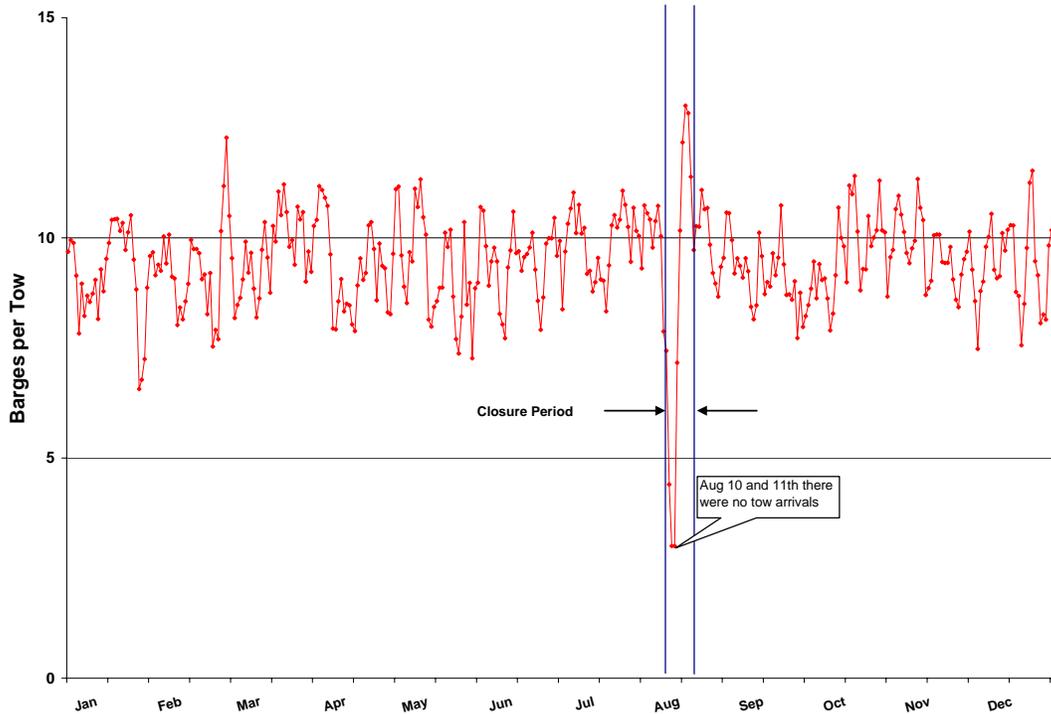
1. Barges per Tow.

Another way shippers and carriers could react to the closure would be to change their flotilla configurations. **Figure 6** shows the 3 day moving average for barges per tow at McAlpine. Immediately after the closure began, the average barges per tow significantly declines because there were no tow arrivals at the onset of the closure. Then, the average barges per tow increased and peaked at 13.0 towards the end of the closure. The reason for this may be because both the McAlpine main and auxiliary chambers were completely inoperable during the closure period.

- For the period outside of the closure in 2004, the average barges per tow at McAlpine was 9.5. This compares with 9.3 during 2003 and 9.1 during 2002.
- **Table 15** shows that over the entire closure period, the barges per tow at McAlpine averaged 10.7, 14% higher than the pre-closure (1) period.

One of the ways shippers reacted to the closure was to wait for McAlpine to reopen and to push larger tows near the end of the closure.

Figure 6
Barges per Tow at McAlpine in 2004
3-Day Moving Average



2. Tons per Tow.

Another measure of whether shippers and carriers reacted to the closure is tons per tow. The value is dependent on the barges per tow and percent empty barges statistics that will be presented here because it is a good single statistic to consider if we want to know how much tow configuration changed during the closure. **Figure 7** shows the 3 day moving average of tons per tow during 2004 at McAlpine. Once again, because there were no tow arrivals at McAlpine at the onset of the closure, the average tons per tow sharply decline. Then towards the end of the closure, the average tons per tow reach a peak at 19,517.

- For the period outside of the closure in 2004, the average tons per tow at McAlpine was 10,431. This compares with 10,357 during 2003 and 10,403 during 2002.
- **Table 15** shows that over the entire closure period, tons per tow averaged 10,704, 5 % more than the pre-closure period (1).

This statistic shows that the shippers reacted to the closure initially by waiting for McAlpine to reopen and then by pushing tows that were more heavily loaded than normal near the end of the closure.

Figure 7
Tons per Tow at McAlpine in 2004
3-Day Moving Average

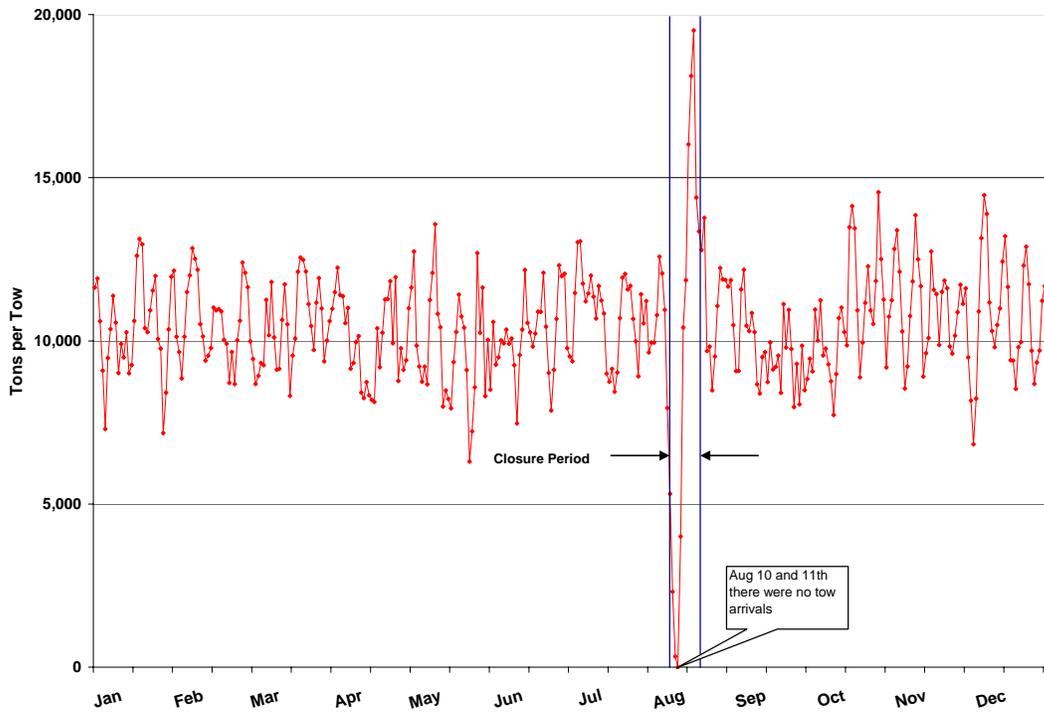


Table 15
Flotilla Characteristics of Vessels Arriving at McAlpine Prior to,
During and Following the Closure Event

Commodity	Pre-Closure(1) 1 Jan - 30 June 2004	Pre-Closure(2) 1 Jul - 7 Aug 2004	Closure Period		Post-Closure 20 Aug - 31 Dec 2004
			Scheduled 8 Aug - 19 Aug 2004	Closure as % of Pre-Closure	
Tows/Day:	14.2	16.0	1.6	11%	13.8
Barges/Day:					
Loaded	90.19	103.28	12.11	13%	91.2
Empty	42.33	53.82	4.56	11%	39.61
Percent Empty	31.9%	34.3%	27.4%		30.3%
Total	132.52	157.1	16.67	13%	130.81
Barges Per Tow	9.4	9.8	10.7	114%	9.5
Tons Per Tow	10,240	10,415	10,704	105%	10,566
Tons Per Day	145,107	166,323	16,698	12%	146,240

Source: LPMS Data

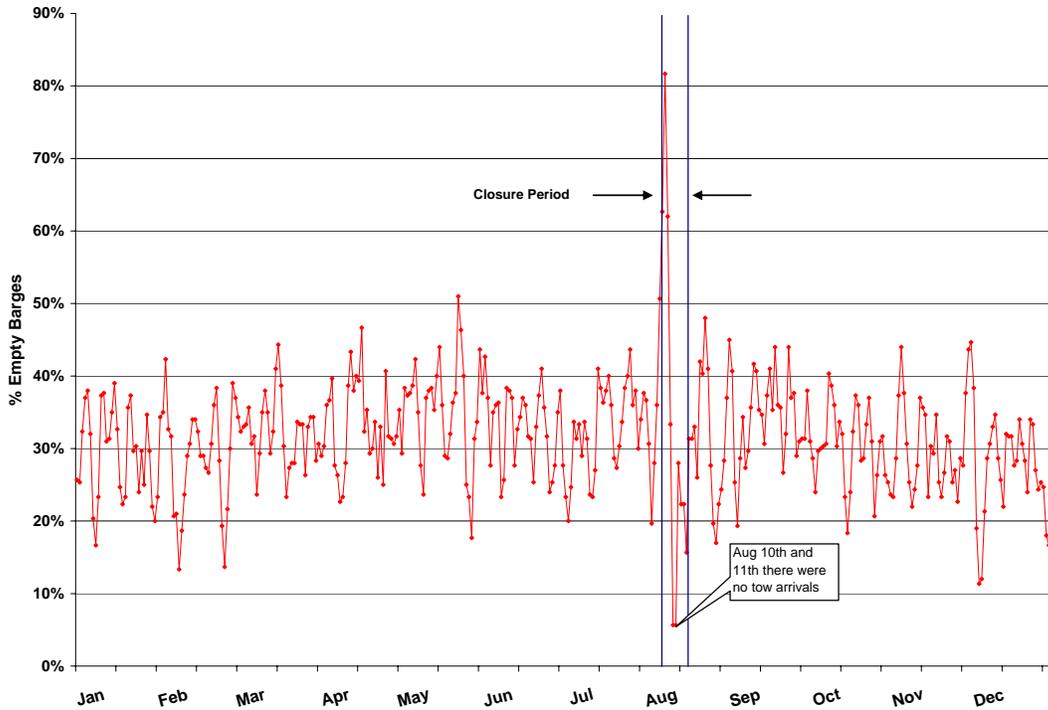
3. Percent Empty Barges.

Another way that shippers and carriers could respond to the anticipated closure would be to push tows that have fewer empty barges. **Figure 8** shows the 3 day moving average for the percent of empty barges that arrive at McAlpine during 2004. At the very beginning of the closure, tows were pushing mostly empty barges, the % empty barges reached a peak at 81.7%, then a few days into the closure, there were no tow arrivals, thus, 0% empty barges and 0% loaded barges. Towards the end of the closure, the % empty barges gradually increases, but still is less than the % empty barges outside of the closure.

- Outside of the closure period in 2004, the percent of empty barges averaged 31.5. This compares with 30.7 % during 2003 and 29.0 % during 2002.
- During the closure, the percent of empty barges averaged 27.4% or 13 % less than outside the 2004 closure period.

Once again, the shippers reacted to the closure by reducing tow arrivals at McAlpine at the start of the closure and then increasing tow arrivals with a higher percentage of loaded barges per tow towards the end of closure.

Figure 8
Percentage of Empty Barges that Arrive at McAlpine in 2004
3-Day Moving Average



h. Conclusions

This document describes an analysis of OMNI data at McAlpine. The following conclusions were reached as a result of this analysis;

- The Louisville District followed established procedures for notifying navigation interests regarding the main chamber closure at McAlpine.
- Tow delays greatly exceeded normal levels during the closure. Average tow delay at McAlpine during normal operation for 2004 was only 1.1 hours while during closure, average delay increased to 104.7 hours.
- The number of tow arrivals per day increased during the period following announcement of the closure and continued to increase up until the start of the closure then significantly decreased during the closure. This sharp decline in tow arrivals during the closure was mainly because both the main and auxiliary chambers at McAlpine were inoperable.

- We can be quite certain that carriers reacted to the closure by increasing tow arrivals prior to the closure then drastically reducing tow arrivals at the onset of the closure. Towards the end of closure, the shippers/carriers anticipation of the reopening of McAlpine's main chamber resulted in a gradual increase in tow arrivals with larger tow sizes and a lower percentage of empty barges.
- Commodity groups shows an increase in tons per day relative to the pre-closure (1) period, 1 July – 7 Aug) are coal, petroleum, aggregates, chemicals, iron and steel, and others. Overall, this was about a 15% increase in commodity throughput prior to the McAlpine closure of 2004.
- Immediately notifying industry and then accommodating their request to delay closure allowed carriers to give priority to moving commodity versus positioning empties.

A Appendix:

McAlpine Impacts Shipper/Carrier Survey Procedures

McAlpine Impacts - Plan of Attack

The Waterways Council, Inc. recognizes that the emergency closure for repairs of the McAlpine Lock, scheduled for August 9 through 22, 2004, will cause disruption to users (shippers and receivers) and barge lines throughout a wide portion of the inland waterways system.

This emergency closure shows the importance of adequate and steady re-investment in maintenance and capital improvements to the system. It is important that government officials recognize the dependence of industry on navigation and the effects of lack of adequate re-investment.

The Waterways Council, Inc. intends to compile information on the nature and magnitude of impacts on industry, through a canvass of users of the McAlpine Lock, so it will be able to “tell the story” to our government. The following steps are planned:

- Step 1 Identify industrial users (shippers and receivers) of the McAlpine L/D. We will depend on the Corps of Engineers for a list of users. The Corps has already provided a list of about 100 major users of the Greenup L/D which will be surveyed by the Corps regarding the Greenup closure during 2003. We should obtain a similar list of major users of the McAlpine Lock, although many of the users will be the same.
- Step 2 Enlist the assistance of stakeholders to make a phone canvass of the identified (shipping and receiving) companies. The WCI will provide a “script” and a “form” to be used in the canvass. The objective would be to identify companies which know that they will be adversely affected and to obtain information on their perceived impacts and anticipated responses. Also, set the stage for follow-up contacts, either in the near future or during or after the closure has occurred. If the companies have completed the Corps survey on the Greenup closure, request a copy of the form (if they retained a copy) be sent to the WCI.
- Step 3 Compile the information from the phone canvass and decide on any and make needed follow-up contacts.
- Step 4 Tell the story by describing the anticipated effects (in both quantitative and qualitative terms). Make systemwide estimates of effects if possible. Develop case study descriptions of particularly severe or far-reaching impacts.
- Step 5 After the closure has occurred, recontact some or all of the companies to determine what they actually did and what the actual cost (and other) impacts were.

B Appendix:

Notices To Navigation Interests



**US Army Corps
of Engineers**
Louisville District

Notice to Navigation Interests

Notice No. 2004-005 Date: 20-MAY-2004

http://www.lrl.usace.army.mil/or/text/nav_notice.htm

In Reply Refer to:

CELRL-OP-TM P.O. Box 59, Louisville, KY 40201-0059 (502) 315-6703

<http://infoport.lrh.usace.army.mil>

LOUISVILLE DISTRICT

McALPINE LOCKS AND DAM

1200' CHAMBER CLOSURE

OHIO RIVER MILE 606.8

1. McAlpine Locks and Dam (Mile 606.8) The 1200-foot lock chamber is now being scheduled for emergency repairs from **August 3, 2004 through August 16, 2004**. Since this is the only lock chamber at McAlpine this will be a **total river closure for 14 days**. During this period, a repair crew will dewater the lock to make structural repairs. Shippers are strongly urged to coordinate with all effected river related industries and to re-schedule shipments in advance of or after the closure to the extent practical.

2. Diver inspections have revealed cracks in critical structural members, which require repairs to prevent failure of a miter gate. Additional diver inspections to monitor the condition of the miter gate will occur every two weeks beginning May 27, 2004. These diver inspections may identify the need for an earlier closure if failure is imminent.

3. Comments related to the schedule can be directed to the undersigned or to Colonel Robert Rowlette, District Commander at (502/315-6102) or Robert.A.Rowlette@lrl02.usace.army.mil. The schedule has been established weighing both adequate notice to river users and potential risk of gate failure.

Robert G. Fuller
Ch. Operations Division
Phone: (502) 315-6731

Robert.G.Fuller@lrl02.usace.army.mil



US Army Corps
of Engineers
Louisville District

Notice to Navigation Interests

Notice No. 2004-006 Date: 01-June-2004

http://www.lrl.usace.army.mil/or/text/nav_notice.htm

In Reply Refer to:

CELRL-OP-TM P.O. Box 59, Louisville, KY 40201-0059 (502) 315-6703

<http://infoport.lrh.usace.army.mil>

LOUISVILLE DISTRICT

REVISED

McALPINE LOCK AND DAM

1200' CHAMBER AND OHIO RIVER CLOSURE

OHIO RIVER MILE 606.8

1. McAlpine Locks and Dam (Mile 606.8) As a result of coordination with affected river carriers and river dependant industries and response to the initial notice for the McAlpine 1200' lock closure; closure dates have been slightly adjusted to increase the amount of time available to reschedule traffic around the closure. The McAlpine Lock will be closed beginning 0800 EDT **August 9, 2004 through August 22, 2004** for critical repairs to miter gates.
2. As previously noted, this will be a 14 day total river closure since there is **no auxiliary lock** at McAlpine. Ongoing periodic diving inspections may identify the need for an earlier closure if failure is imminent.
3. In addition, due to concerns regarding congestion leading up to the McAlpine closure, the previously scheduled July 7, 2004 through July 24, 2004 main chamber closure at Cannelton Locks and Dam, mile 720.7 is cancelled.
4. Comments related to the closure can be addressed to the Louisville District website, <http://www.lrl.usace.army.mil/> and click on McAlpine Lock Closure. We expect that continuous close coordination, planning and resolution of issues associated with this closure will take place in the coming weeks ahead and river interests are urged to visit the web site established for this closure or contact Louisville District staff.

Peter W. Frick
Operations Manager
Locks and Dam Project Office

C Appendix:

Locking Process

McAlpine Reopening Locking Process

Background

The only existing lock chamber at the McAlpine Lock, mile 607 Ohio River will be closed to all traffic during a repair project August 9 – 22, 2004. A significant queue of waiting vessels and tows is expected to develop on each side of this facility. Due to the significant impact that this closure and the resultant delays will have on the inland towing industry, it is imperative that upon reopening of the chamber, waiting traffic is passed through McAlpine in a safe, timely, expeditious and efficient manner.

Scope

The Coast Guard, Army Corps of Engineers and Towing Industry have established a McAlpine Queue Management Committee. Among other things this committee is tasked with the operation of the McAlpine Command Center. This Command Center, staffed 24/7 by licensed pilothouse personnel and government agency representatives will coordinate traffic throughout the closure and reopening period.

McAlpine Command Center

Phone – (812) 288-1784

VHF channel 14

Email – mc Alpine.command@acbl.net

Fax – (812) 288-1745

General Guidelines

1. Following the closure of the chamber, all traffic arriving to wait turn will be required to contact the McAlpine Command Center. A Regulated Navigation Area (RNA) will exist from Markland to Cannelton locks. The McAlpine Command Center will control movement of traffic in the RNA under the authority of the Coast Guard.
2. Once a definite date and time for reopening is established, the Command Center will begin advising tows to position or stage for lockage.
3. During the closure period the Queue List will be broadcast on VHF channel 14 daily at 0900 and again at 1500 Eastern Time.
4. Tows in queue are required to monitor VHF channel 13/16 and cell phone at all times. Failure to answer a call from the Command Center could result in loss of position in queue.

D Appendix:

McAlpine Lock Closure Synopsis

Synopsis

August 2004 Main Chamber Maintenance Closure McAlpine Lock and Dam

Closure Began	16:57 hours 8 August 2004
Closure Ended	16:20 hours 19 August 2004
Delay Returned to Zero	11:40 hours 20 August 2004
Closure Duration	10 Days, 23.4 Hours
Time Required for Queue to Return to Zero	19.33 Hours
Closure Induced Delay	1448.3 Hours
Closure Induced Processing Time	0.0 Hours
Total Closure Induced Extra Time	1448.3 Hours
Maximum Delay	257.08 hours ~ 10.7 Days
Tow Cost @ McAlpine	\$ 480.0 per Hour ¹
Total Closure Induced Cost	\$695 Thousand

¹ FY03 price level, 0.05875 discount rate

August 2004 Main Chamber Maintenance Closure McAlpine Lock and Dam

Chronology

The 1200' x 110' main chamber at McAlpine Lock and Dam, Ohio River Mile 606.8, was closed for maintenance on 8 August 2004 at 16:57 hours. It was reopened on 19 August 2004 at 16:20 hours. Therefore, the main chamber was closed for 263.4 hours, or approximately 10 days and 23 hours.

Tow Arrivals

Figure 2 shows the arrivals per day at McAlpine L&D for the month of July through August. Average tow arrivals per day for the period of 15 July – 7 August was 18.5 tows per day. Average arrivals per day for the closure period 8 August – 19 August were 1.5 tows per day.

Tow Processing Time

During the closure of the 1200' chamber, there were no tows lockages through McAlpine, thus, no induced processing time.

Tow Delays

Figure 4 shows delays at McAlpine L&D for August 2004. Delays started building soon after the 1200' chamber closed and continued until 20 August 2004 at 1140 hours. This means that the 263.4 hour closure impacted traffic for 282.7 hours. The 19.3 hour difference represents the time required for the reopened 1200' chamber to serve the 19 tows in queue and bring the delay back to zero. During the impact period, 1468.6 hours of tow delay were experienced by 19 tows. This works out to an average delay of 77.3 hours/tow. By comparison, 5071 tows were served at McAlpine outside the August 2004 closure. The average delay per tow was 63.5 minutes or 1.1 hours. Therefore, on average, each tow experienced 76.2 hours more delay during the closure than normal. Given that the average additional delay per tow was 76.2 hours, and that 19 tows were impacted, the closure caused 1448.4 hours of additional delay. The maximum delay was 257.1 hours, which is about 10.7 days. The maximum queue length was 3 tows.

² discrepancies due to rounding

Cost Impact

Time is money to the towing industry. The most recent information available indicates that the average tow transit costs at McAlpine are about \$480 per hour. Given the analysis above which shows that the closure caused an additional 1448.4 hours of additional delay, and that transit costs at McAlpine are about \$480 per hour, the August 2004 closure cost approximately \$695 thousand.

For purposes of comparison, let's compare the delay caused by this closure with the delay experienced for all of 2003. The total delay experienced at McAlpine in 2003 was 4048.1 hours. The total delay caused by this 10+ day closure was 1468.6 hours. This means that the delay caused by the closure was 0.4 times as much as what was experienced for all of 2003.

E Appendix:

Shipper and Carrier Survey Forms



**U.S. Army Corps of Engineers
502 8th Street
Navigation Planning Center, RM 3418
Huntington, WV 25701**

REPLY TO
ATTENTION OF

The Corps of Engineers is conducting a survey of companies that normally ship/receive commodity traffic through the McAlpine lock at Ohio River mile 607. Your facility has been identified as one such company. If your company functions as a public terminal or transfer facility and is not the final user of the commodity traffic in question, we would appreciate it if you would share this survey form with your customer(s).

As you may be aware, the lock chamber at McAlpine was closed for repairs between 9 and 20 August 2004. This closure halted river traffic through this river reach, due to the lack of an auxiliary chamber at the McAlpine facility. During the closure period, companies whose waterborne commodity shipments/receipts normally transited the McAlpine facility were faced with some important challenges. Company responses to the closure were varied. Some companies stockpiled product and were able to continue to operate despite the situation at McAlpine. Some companies redirected their commodity traffic to overland modes. Still other companies re-directed production to other plants. All of the measures taken resulted in additional costs to the companies involved.

This survey has been initiated in an attempt to identify the actions taken and the total costs to industry associated with the closure event at McAlpine. An accurate assessment of the total costs to industry will provide important information that will bear on future repair, rehabilitation or other construction-related decisions regarding the McAlpine facility.

The attached survey questionnaire contains some fairly detailed questions aimed at identifying the measures taken and tabulating the costs. We would greatly appreciate it if you would examine the questionnaire and answer the questions to the best of your ability. A partial response is preferable to no response. Please bear in mind that any information provided will be treated as confidential and that participation in the survey is voluntary. Participation in the survey demonstrates support for the continued, efficient operation of the navigation system.

Please return your completed survey form to this office by 30 March 2005. Should you have any questions regarding the survey, please do not hesitate to contact Sharon Weekly of my staff. She can be reached via phone at (304) 399-5334 or email at SharonW@lrh.usace.army.mil.

Sincerely,

David A. Weekly, Chief
Navigation Planning Center

MCALPINE CLOSURE SHIPPER SURVEY

Date: _____

Firm: _____

Address: _____

Phone: _____ FAX: _____

Point of Contact: _____ E-Mail _____

Title: _____

General Description of Firm and Products Produced: _____

NOTE: ALL RESPONSES WILL BE TREATED AS CONFIDENTIAL

1. Did your company have sufficient notice of the scheduled McAlpine closure to prepare a response plan? (a) Yes (b) No

Comments:

2. During the period of closure of the lock chamber at McAlpine, what was your company's response?

- a. No change in procedures.
- b. Stockpiled product and waited for McAlpine to re-open.
- c. Switched to all-overland mode for product delivery from existing sources.
- d. Switched to different waterway routing for product delivery from existing sources
- e. Switched product source to an entirely new source.
- f. Ceased operations during the period of closure.
- g. Altered production during the period of closure.
- h. Switched production to another facility.

- ___i. Purchased intermediate or final product, rather than produced.
- ___j. Other or combinations of the above. (Please explain.) _____

(2.j.
cont'd.) _____

Other Comments:

3. Which of your commodities and tonnages were affected by this closure?

4. If a reasonable estimate can be made, what additional costs (over and above normal operations) did you incur as a result of the closure event at McAlpine? If possible, please itemize according to the categories in question 2.

5. Has the closure at McAlpine caused your company to alter its long-term transportation strategy (e.g. switch to all-overland modes, increase stockpiles, etc.)? How will this impact your total commodity transportation or other costs (per year). Please explain.

6. Has the closure at McAlpine caused your company to take any other long-term permanent measures? (switch production to another facility, purchase intermediate or final product rather than produce, etc) Please explain. How will this affect your company's long-term operating costs (per year)?

7. Has your company been impacted by other navigation system disruptions? Did they influence your response to the McAlpine closure?

8. Other Comments.

Note: The Corps of Engineers may not conduct and respondents need not respond to a survey questionnaire unless it displays a currently-valid OMB number. It is estimated that the information requested can be gathered in about 30 minutes.



**U.S. Army Corps of Engineers
502 8th Street
Navigation Planning Center, RM 3418
Huntington, WV 25701**

REPLY TO
ATTENTION OF

The Corps of Engineers is conducting a survey of the major carriers that normally use the McAlpine lock at Ohio River mile 607. Your company has been identified as one such company.

As you may be aware, the lock chamber at McAlpine was closed for repairs between 9 and 20 August 2004. This closure halted river traffic through this river reach, due to the lack of an auxiliary chamber at the McAlpine facility. During the closure period, companies whose waterborne commodity receipts normally transited the McAlpine facility were faced with some important challenges. Company responses to the closure were varied.

This survey has been initiated in an attempt to identify carrier reactions to the closure event. An accurate assessment of carrier reactions/procedures will provide important information that will bear on future repair, rehabilitation or other construction-related decisions regarding the McAlpine facility.

The attached survey questionnaire contains some fairly detailed questions aimed at gathering this information. We would greatly appreciate it if you would examine the questionnaire and answer the questions to the best of your ability. A partial response is preferable to no response. Please bear in mind that any information provided will be treated as confidential and that participation in the survey is voluntary. Participation in the survey demonstrates support for the continued, efficient operation of the navigation system.

Please return your completed survey form to this office by 1 April 2005. Should you have any questions regarding the survey, please do not hesitate to contact Sharon Weekley in the Navigation Planning Center. Mrs. Weekley can be reached via phone at (304)-399-5334 or email at SharonW@lrh.usace.army.mil.

Sincerely,

David A. Weekly, Chief
Navigation Planning Center

MCALPINE CLOSURE CARRIER SURVEY

Date: _____

Firm: _____

Address: _____

Phone: _____ FAX: _____

Point of Contact: _____ E-Mail _____

Title: _____

General Description of Firm/Commodities Handled: _____

NOTE: ALL RESPONSES WILL BE TREATED AS CONFIDENTIAL

1. Did your company have sufficient notice of the scheduled closure at McAlpine to prepare a response plan? (a) Yes (b) No

Comments: _____

2. How did your company operate during the scheduled main chamber outage at McAlpine? Check as many items as are applicable and explain any unusual procedures.

___ a. Barges were tied up at fleeting areas; towboats operated elsewhere in the system.

___ b. Towboats remained in queue with barges.

___ c. Towboats (light) held positions in queue.

___ d. Company avoided the lock when possible.

___ e. Other (Please explain). _____

Comments: _____

3. If a reasonable estimate can be made, what additional costs (over and above normal operations) did you incur as a result of the closure event at McAlpine?

4. Prior to the outage at McAlpine, towing industry representatives, in cooperation with the Corps of Engineers, developed some operating procedures that were put in place at the time of the closure. Do you believe this effort was (a) effective, (b) ineffective or (c) only partially effective? (Please explain)

5. Did the experience with the outage at McAlpine cause your company to adopt any new operating procedures to accommodate lock outages elsewhere in the system? (Please explain.)

Note: The Corps of Engineers may not conduct and respondents need not respond to a survey questionnaire unless it displays a currently-valid OMB number. It is estimated that the information requested can be gathered in about 30 minutes.

F Appendix:

Coast Guard Information

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

33 CFR Part 165

[CGD08-04-029]

RIN 1625-AA11

Regulated Navigation Area; Ohio River Mile Marker 531.5 to
Mile Marker 720.7

AGENCY: Coast Guard, DHS.

ACTION: Temporary Regulated Navigation Area.

—

SUMMARY: The Coast Guard is establishing a temporary regulated navigation area for all waters of the Ohio River from mile 531.5 to mile 720.7, extending the entire width of the waterway. This regulated navigation area is needed to control vessel operations within the specified area because of the hazards created by extreme waterway congestion resulting from the closure of the McAlpine Lock and Dam, located at mile 606.8, near Louisville, KY.

DATES: This rule is effective from 6 a.m. on August 8, 2004 until 6 p.m. on September 5, 2004.

ADDRESSES: Documents indicated in this preamble as being available in the docket, are part of docket [CGD08-04-029]

and are available for inspection or copying at Commander, Eighth Coast Guard District (m), Hale Boggs Federal Bldg., 500 Poydras Street, New Orleans, LA 70131 between 8 a.m. and 3:30 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Lieutenant (LT) Kevin Lynn, Project Manager for the Eighth Coast Guard District Commander, Hale Boggs Federal Bldg., 500 Poydras Street, New Orleans, LA 70130, telephone (504) 589-6271.

SUPPLEMENTARY INFORMATION:

Background and Purpose

The Main Chamber of the McAlpine Lock and Dam, located at mile 606.8 on the Ohio River, will be closed by the U.S. Army Corps of Engineers for emergency repairs. This closure is to commence at 6 a.m. on August 8, 2004, and is expected to last for approximately two weeks. The Auxiliary Chamber is currently being reconstructed and cannot be used as an alternate means to lock vessels through the McAlpine Lock and Dam. This will result in the accumulation of an unusual amount of towing vessels waiting to lock through the McAlpine Lock and Dam.

A regulated navigation area is needed to safeguard vessels and mariners from the hazards associated with extreme congestion in the vicinity of the McAlpine Lock and

Dam during its closure and immediately following its re-opening. This regulated navigation area affects mainly towing vessels, however, there will be some impact on recreational vessel traffic. It is anticipated that many towing vessels will desire to lock through the McAlpine Lock and Dam as soon as possible after re-opening, and this may result in many towing vessels maneuvering dangerously in order to improve their position and reduce the time spent waiting in line. This regulated navigation area will require all vessels entering into, departing from, or moving within the regulated area to contact the Commander, Eighth Coast Guard District or a designated representative prior to taking such action. The Captain of the Port Louisville is the designated representative for the Commander, Eighth Coast Guard District. Additionally, vessels desiring to enter into the regulated area for the purpose of locking through the McAlpine Lock and Dam must follow all orders and directions issued by the Captain of the Port Louisville.

Representatives from the maritime industry will be providing recommendations on vessel movements into or within the regulated navigation area; however, only the Captain of the Port Louisville will give vessel traffic management orders.

While the McAlpine Lock and Dam is closed, all recreational vessels will be permitted to operate within the regulated navigation area and do not have to contact the Captain of the Port Louisville. Once the McAlpine Lock and Dam is re-opened, recreational vessel traffic will not be allowed between mile 602.5 and 607.4, without first obtaining permission from the Captain of the Port Louisville. This action is necessary to prevent hazardous situations associated with the complexities of moving large towing vessels through an extremely congested area.

Discussion of Rule

The Coast Guard is establishing a temporary regulated navigation area for all the waters of the Ohio River from mile 531.5 to mile 720.7, extending the entire width of the waterway. All vessels entering into, departing from, or moving within the regulated area must contact the Commander, Eighth Coast Guard District or a designated representative prior to taking such action. The Captain of the Port Louisville is the designated representative for the Commander, Eighth Coast Guard District. Vessels desiring to enter into the regulated area for the purpose of locking through the McAlpine Lock and Dam must follow all orders and directions issued by the Captain of the Port Louisville.

While the McAlpine Lock and Dam is closed, all recreational vessels will be permitted to operate within the regulated navigation area and do not have to contact the Captain of the Port Louisville. Once the McAlpine Lock and Dam is re-opened, recreational vessel traffic will not be allowed between mile 602.5 and 607.4, without first obtaining permission from the Captain of the Port Louisville. The Captain of the Port Louisville will inform the public of the current status of the McAlpine Lock and Dam through broadcast notices to mariners.

The Captain of the Port Louisville may be reached on VHF-FM channels 14 or 13, or by telephone at (812) 288-1784. This regulation is effective from 6 a.m. on August 8, 2004 until 6 p.m. on September 5, 2004.

Regulatory Evaluation

This rule is not a "significant regulatory action" under section 3(f) of Executive Order 12866, Regulatory Planning and Review, and does not require an assessment of potential costs and benefits under section 6(a)(3) of that Order. The Office of Management and Budget has not reviewed it under that Order. It is not "significant" under the regulatory policies and procedures of the Department of Homeland Security (DHS).

We expect the economic impact of this rule to be so

minimal that a full Regulatory Evaluation under the regulatory policies and procedures of DHS is unnecessary.

This regulated navigation area spans a distance of approximately 189 miles and will be effective for 29 days. Vessels are permitted to enter into, depart from, and move within the regulated navigation area provided they contact the Captain of the Port Louisville prior to taking such action. Vessels entering into the regulated navigation area for the purpose of conducting cargo operations at a waterfront facility, which do not have to lock through the McAlpine Lock and Dam, are not expected to experience any delay. All recreational vessels will be allowed to enter into and move within the safety zone without having to obtain permission from the Captain of the Port Louisville, with the exception of those conditions listed in the DISCUSSION OF RULE section of this preamble. Finally, recreational vessels may use alternate launches in order to transit above or below the McAlpine Lock and Dam.

Small Entities

Under the Regulatory Flexibility Act (5 U.S.C. 601-612), we have considered whether this rule will have a significant economic impact on a substantial number of small entities. The term "small entities" comprises small businesses, not-for-profit organizations that are

independently owned and operated and are not dominant in their fields, and governmental jurisdictions with populations of less than 50,000.

The Coast Guard certifies under 5 U.S.C. 605(b) that this rule will not have a significant economic impact on a substantial number of small entities.

This rule will affect the following entities, some of which may be small entities: the owners or operators of vessels intending to transit the waters of the Ohio River between mile 720.7 and mile 531.5, from 6 a.m. on August 8, 2004 until 6 p.m. on September 5, 2004. This rule will not have a significant economic impact on a substantial number of small entities for the reasons enumerated earlier in this preamble.

If you are a small business entity and are significantly affected by this regulation please contact LT Kevin Lynn, Commander, Eighth Coast Guard District, at (504) 589-6271.

Assistance for Small Entities

Under section 213(a) of the Small Business Regulatory Enforcement Fairness Act of 1996 (Public Law 104-121), we offered to assist small entities in understanding the rule so they could better evaluate its effects on them and participate in the rulemaking process. Small businesses

may send comments on the actions of Federal employees who enforce, or otherwise determine compliance with, Federal regulations to the Small Business and Agriculture Regulatory Enforcement Ombudsman and the Regional Small Business Regulatory Fairness Boards. The Ombudsman evaluates these actions annually and rates each agency's responsiveness to small business. If you wish to comment on actions by employees of the Coast Guard, call 1-888-REG-FAIR (1-888-734-3247). The Coast Guard will not retaliate against small entities that question or complain about this rule or any policy or action of the Coast Guard.

Collection of Information

This rule calls for no new collection of information under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501-3520).

Federalism

A rule has implications for federalism under Executive Order 13132, Federalism, if it has a substantial direct effect on State or local governments and would either preempt State law or impose a substantial direct cost of compliance on them. We have analyzed this rule under that Order and have determined that it does not have implications for federalism.

Unfunded Mandates Reform Act

The Unfunded Mandates Reform Act of 1995 (2 U.S.C. 1531-1538) requires Federal agencies to assess the effects of their discretionary regulatory actions. In particular, the Act addresses actions that may result in the expenditure by a State, local, or tribal government, in the aggregate, or by the private sector of \$100,000,000 or more in any one year. Though this rule will not result in such expenditure, we do discuss the effects of this rule elsewhere in this preamble.

Taking of Private Property

This rule will not effect a taking of private property or otherwise have taking implications under Executive Order 12630, Governmental Actions and Interference with Constitutionally Protected Property Rights.

Civil Justice Reform

This rule meets applicable standards in sections 3(a) and 3(b)(2) of Executive Order 12988, Civil Justice Reform, to minimize litigation, eliminate ambiguity, and reduce burden.

Protection of Children

We have analyzed this rule under Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks. This rule is not an economically significant rule and would not create an environmental risk

to health or risk to safety that might disproportionately affect children.

Indian Tribal Governments

This rule does not have tribal implications under Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, because it would not have a substantial direct effect on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes.

Energy Effects

We have analyzed this rule under Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use. We have determined that it is not a "significant energy action" under that Order because it is not a "significant regulatory action" under Executive Order 12866 and is not likely to have a significant adverse effect on the supply, distribution, or use of energy. The Administrator of the Office of Information and Regulatory Affairs has not designated it as a significant energy action. Therefore, it does not require a Statement of Energy Effects under Executive Order 13211.

Technical Standards

The National Technology Transfer and Advancement Act (NTTAA) (15 U.S.C. 272 note) directs agencies to use voluntary consensus standards in their regulatory activities unless the agency provides Congress, through the Office of Management and Budget, with an explanation of why using these standards would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., specifications of materials, performance, design, or operation; test methods; sampling procedures; and related management systems practices) that are developed or adopted by voluntary consensus standards bodies.

This rule does not use technical standards. Therefore, we did not consider the use of voluntary consensus standards.

Environment

We have analyzed this rule under Commandant Instruction M16475.1D, which guides the Coast Guard in complying with the National Environmental Policy Act of 1969 (NEPA)(42 U.S.C. 4321-4370f), and have concluded that there are no factors in this case that would limit the use of a categorical exclusion under section 2.B.2 of the Instruction. Therefore, this rule is categorically

excluded, under figure 2-1, paragraph (34)(g), of the Instruction, from further environmental documentation because this rule is not expected to result in any significant adverse environmental impact as described in the National Environmental Policy Act of 1969 (NEPA).

A final "Environmental Analysis Check List" and a final "Categorical Exclusion Determination" are available in the docket where indicated under ADDRESSES.

List of Subjects in 33 CFR Part 165

Harbors, Marine safety, Navigation (water), Reporting and recordkeeping requirements, Security measures, Waterways.

For the reasons discussed in the preamble, the Coast Guard proposes to amend 33 CFR part 165 as follows:

PART 165--REGULATED NAVIGATION AREAS AND LIMITED ACCESS AREAS

1. The authority citation for part 165 continues to read as follows:

Authority: 33 U.S.C. 1226, 1231; 46 U.S.C. Chapter 701; 50 U.S.C. 191, 195; 33 CFR 1.05-1(g), 6.04-1, 6.04-6, and 160.5; Pub. L. 107-295, 116 Stat. 2064; Department of Homeland Security Delegation No. 0170.1

2. A new temporary § 165.T08-034 is added to read as follows:

§ 165.T08-034 Regulated Navigation Area; Ohio River Mile
Marker 531.5 to Mile Marker 720.7.

(a) Location. The following area is a regulated navigation area: all waters of Ohio River from mile 720.7 to mile 531.5, extending the entire width of the waterway.

(b) Effective date. This section is effective from 6 a.m. on August 8, 2004 until 6 p.m. on September 5, 2004.

(c) Regulations. (1) In accordance with the general regulations in §165.13 of this part, the following applies:

(i) All vessels entering into, departing from, or moving within the regulated area must contact the Commander, Eighth Coast Guard District or a designated representative prior to taking such action. The Captain of the Port Louisville is the designated representative for the Commander, Eighth Coast Guard District.

(ii) Vessels desiring to enter into the regulated area for the purpose of locking through the McAlpine Lock and Dam must follow all orders and directions issued by the Captain of the Port Louisville.

(iii) While the McAlpine Lock and Dam is closed, all recreational vessels will be permitted within the regulated navigation area and do not have to contact the Captain of the Port Louisville. Once the McAlpine Lock and Dam is re-opened, recreational vessel traffic will not be allowed

between mile 602.5 and 607.4, without first obtaining permission from the Captain of the Port Louisville. The Captain of the Port Louisville will inform the public of the current status of the McAlpine Lock and Dam through broadcast notice to mariners.

(2) The Captain of the Port Louisville may be reached on VHF-FM channels 14 or 13, or by telephone at (812) 288-1784.

(3) Deviation from this section is prohibited unless specifically authorized by the Commander, Eighth Coast Guard District or the Captain of the Port Louisville.

Dated:

R. F. DUNCAN
Rear Admiral, U.S. Coast Guard
Commander, Eighth Coast Guard District