UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

AUG 29 2012

REPLY TO THE ATTENTION OF:

WN-16J

VIA E-MAIL, AND CERTIFIED MAIL 7009 1680 0000 7672 5637
RETURN RECEIPT REQUESTED

Mr. Charles Leonard
Vice President - Navigation
Lake Michigan Carferry, Incorporated
P.O. Box 708
701 Maritime Drive
Ludington, Michigan 49431

Subject: National Pollutant Discharge Elimination System Individual Permit Application for the S.S. Badger

Dear Mr. Leonard:

The U.S. Environmental Protection Agency has concluded our review of the additional information submitted on May 23, 2012 in support of the National Pollutant Discharge Elimination System permit application for the S.S. Badger. We have identified issues with the collection and analysis of the five samples of coal ash taken by LMC from the S.S. Badger. We have determined that these issues, while significant, do not preclude using the data in developing a draft permitting decision. In accordance with 40 C.F.R. § 124.3, we have determined that LMC's permit application is complete.

Enclosed is a request for additional information pursuant to 40 C.F.R. § 124.3(c). We have determined that this information is necessary to clarify and supplement the information already submitted with and in support of the application. This information should be submitted as soon as possible, but no later than September 28, 2012.

EPA reserves the right to request additional information to clarify, modify or supplement previously submitted material after reviewing the information provided in response to this letter.

We received your July 25, 2012 letter in response to our July 18, 2012 determination that the application was incomplete. We respectfully disagree that our prior determination and the letter transmitting that determination was inconsistent with standard procedures and the regulations regarding processing of permit applications.

If you have any questions concerning this matter, please contact Sean Ramach of my staff at (312) 886-5284, or your counsel may contact Nicole Cantello, in the Office of Regional Counsel, at (312) 886-2870.

Sincerely,

Tinka G. Hyde
Director, Water Division

Enclosure

cc: Barry Selden, MDEQ w/enclosure
Susan Sylvester, WDNR w/enclosure
Barry Hartman, K&L Gates w/enclosure

Enclosure: Additional Information to Clarify or Supplement the Application pursuant to 40 C.F.R. § 124.3(c)

During the completeness review of the NPDES permit application submitted by LMC, EPA identified specific information necessary to clarify or supplement the information submitted with the application. Any submittal should contain a certification compliant with 40 C.F.R. §122.22(d) and include the certification statement provided at the end of this document. This information should be submitted as soon as possible, but no later than September 28, 2012, and is detailed below.

A. Attachment C to the application provides photos of various components and equipment associated with the generation and removal of coal ash from the vessel. Photos of the collector ash hoppers were not included. Please provide pictures of the collector ash hoppers and any surrounding infrastructure.

B. Attachment E to the application provides an excerpt from a 1991 study by West Shore Community College that estimated the economic benefit of the S.S. Badger to the ports and surrounding communities of Manitowoc, WI and Ludington, MI. Please submit the original study in its entirety.

C. Attachment F to the application provides an analysis for adverse societal costs saved from Badger operations. Please provide the calculations used to derive these statistics along with a copy of the original reports or studies from which the data is drawn.

D. Attachment G to the application provides a Table of Fatality Statistics by Mode. Please provide a copy of the entire report from which it is drawn.

E. Attachment H to the application provides Annual Vehicle Fuel Savings Resulting from Badger Operations. Please provide a copy of the entire report from which it is drawn.

F. Attachment R to the application provides photocopies of handwritten notes from the log maintained to estimate 2011 ash ratios. The columns and rows are not labeled adequately to fully understand the information provided. Please resubmit the information in a spreadsheet with clear column and row labels and an explanation and key for the information presented.

G. Attachment S to the application provides a spreadsheet of the complete log of notes reflecting the 2011 Estimate of Ash Ratios. The columns and rows are not labeled adequately to fully understand the information provided. Please resubmit the information with clear column and row labels and an explanation and key for the information presented.

H. Attachment V to the application provides an analysis of pumping the ash slurry off the vessel using the existing vacuum pump system. Please address the following points:

    1) Documents indicate that the Badger is capable of using only one pump to create sufficient vacuum to remove ash (August 9, 2012 letter to Sean Ramach). Please assess how using less than the full capacity of the two pumps may alter the calculated volume

of water necessary to use the existing vacuum system to remove the ash from the Badger. Please include in this assessment whether the volume of water may be reduced by using a variable speed pump that allows a lower volume of water while maintaining sufficient vacuum to remove ash from the Badger.

2) Please assess the feasibility of discharging the ash from the boilers, economizers and collectors at the same time or in a reduced schedule while in port. Being docked in port may allow for additional personnel to assist with the discharge and reduce the time necessary to conduct the activities. Please assess if such a schedule would alter the calculated volume of water necessary to use the existing vacuum system to remove the ash from the Badger.

3) Please provide information related to the operation of the boilers in port versus when the vessel is underway (i.e., what is the minimum use of the boilers necessary to provide adequate steam in port). Please assess how this would affect the ability to remove the coal ash from multiple boilers at once. Please assess how boiler usage could be scheduled over the course of the day to minimize the need to discharge ash from each boiler at each port of call.

4) Please provide information on the feasibility and costs of using a barge as either a receiving facility to reduce the amount of piping necessary to remove the ash or as a secondary pumping platform to a land-based holding facility. This should consider the reduced volumes determined to be feasible above.

5) Please assess the feasibility of installing a dewatering facility to reduce the volume of ash slurry that needs to be removed to a landfill. EPA is aware that this activity would require a state issued NPDES permit for discharge and this requirement may be addressed in the assessment.

6) Please provide information on how the type of transportation and cost estimates for transportation and disposal of the ash in a landfill would change based upon the reduced volume of water or as dewatered solid product as calculated above.

I. Attachment Y to the application provides an analysis of the costs related to retaining the coal ash on board the Badger. Please itemize the costs to the extent possible and provide the sources of the estimated costs for each item. For example, how was the rate of $5 per hour for insurance derived?

J. Ash Retention and Removal Technologies

For requests 1-4 below, please address the following items:

a) Please describe the engineering aspects of the technology identified. This analysis should include at minimum preliminary design drawings, discussion of materials considered and the anticipated engineering issues with the system;

b) Please provide a detailed explanation of the process changes required to install, operate and maintain the referenced coal ash retention system; and

c) Please provide estimates of the costs associated with implementation of referenced coal ash retention system including supporting information showing the basis for the cost estimates. This analysis must include capital costs and operation and maintenance costs over an appropriate amortization period and consider a range of reasonable interest rates.

1) An August 16, 2012 letter to Regional Administrator Hedman stated that new information was available regarding the feasibility of retaining the coal ash onboard the Badger and disposing the coal ash on land. Please provide an assessment of this ash retention system. All requests following this one should be addressed in regard to the lower volumes of ash anticipated with the referenced ash retention system unless otherwise notated.

2) Please provide a separate "from collection to removal" assessment for a system to retain and remove the collector ash alone. This assessment should be prepared based the volumes of ash currently generated by the S.S. Badger.

3) The ash transport system presented in the application that would move ash to an onboard storage area discusses the challenge of a 38 foot rise in the system and the issues with a vacuum system. Please provide an assessment for installing and operating a vertical mechanical conveyor system to assist this transport.

4) Please provide an assessment of a land based removal system. This should consider all of the different types of conveyances that could be used to move the ash including mechanical and vacuum hoses/piping as well as a multiple pump system with portable pumps as appropriate.

5) Please provide estimates of the volumes of ash from each source that might be entrained into water discharged from the current vacuum system if it were used to transport the ash onboard the Badger to an onboard holding area. Please provide a comparison of those volumes to the current volumes discharged from each source of ash from the Badger.

6) EPA is aware of vessel in New Zealand that is similarly coal fired and uses an external vacuum truck to remove ash. The company indicated that they have purchased and are using vacuum hoses designed for temperatures of 120°C (248°F). Please provide an assessment of how using hoses designed for high heat applications may affect ash removal operations. EPA can provide contact information, if necessary.

K. Financial Information

1) Please provide three (3) years of balance and income statements and associated tax returns. EPA will use this information to determine the economic achievability of the

technologies under consideration for Best Available Technology for the coal ash discharge.

EPA recognizes that this information may include confidential business information. If you do not assert a claim of confidentiality at the time of submitting the information, EPA may make the information public without further notice to you. Claims of confidentiality will be handled in accordance with EPA's business confidentiality regulations at 40 CFR Part 2. We encourage you to review these regulations before submitting information that may be confidential.

L. Certification Statement

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."