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VIA EMAIL AND MESSENGER

October 27, 2008

All Confidential Business Information Redacted

Ryan Albert
Office of Water
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Attention: Docket ID No. EPA-HQ-OW-2008-0055
Regarding the U.S. Environmental Protection Agency's 2008 Proposed Issuance of a National Pollutant Discharge Elimination System ("NPDES") Vessel General Permit ("VGP") for Discharges Incidental to the Normal Operation of Commercial and Large Recreational Vessels

Dear Mr. Albert:

These comments are submitted on behalf of Lake Michigan Carferry, Inc. ("LMC") of Ludington, Michigan. LMC is the owner and operator of the S.S.[1] Badger, a large commercial car ferry operating on Lake Michigan and the Great Lakes that will be subject to the proposed National Pollutant Discharge Elimination System ("NPDES") Vessel General Permit ("VGP") for most if not all of its discharges. This letter supplements our submission of October 10, 2008 and provides more detail regarding the appropriate Best Available Technology Economically Achievable ("BAT") for the boiler effluent (coal ash) from the Badger's coal-fired boilers described in the October 10 submission. This submission also includes information to be provided shortly to EPA Region V in response to a Clean Water Act Section 308 Information Request ("Information Request"). We are also including information previously submitted to EPA in response to a Clean Air Act information request. ***This submission contains confidential information and we request confidential treatment. Because of the limited time for response, we have not yet provided a redacted version of this submission that excludes the confidential information, but will do so in the near future.***

[1] The prefix "S.S." is a short form for steamship.

As we explain below there is no existing technology that can be retrofitted on the Badger in order to achieve zero discharge of boiler effluent (coal ash). Given these considerations, and consistent with other streams subject to the VGP, the boiler effluent (coal ash) should be subject to the following Best Management practices:

(a) continuous efforts must be undertaken to ensure that the engine is operating efficiently;

(b) coal used to power the boilers should have ash content that does not exceed 10% by laboratory analysis;

(c) discharges of boiler effluent (coal ash) should occur no closer than 5 nautical miles (nm) from shore and in waters that are at least 100 feet deep, unless safety or necessary operational considerations dictate otherwise;

(d) discharges of boiler effluent (coal ash) should occur in intervals during the vessel's voyage to ensure appropriate mixing in discharge streams; and

(e) the operators of any such vessel should develop and implement a plan that commits them to undertake appropriate research and development of new technology processes, absent extraordinary circumstances, that will result in the substantial reduction or cessation of discharge boiler effluent containing coal ash, no later than May 1, 2012, if appropriate.

1. Effluent limits applicable to boiler effluent (coal ash) discharges

The EPA noted in the proposed VGP that it is required to set effluent limits for all point sources subject to NPDES permits at the Best Practical Control Technology currently available ("BPT"), Best Conventional Pollutant Control Technology ("BCT"), and Best Available Technology Economically Achievable ("BAT"). Fact Sheet at 44-45. The EPA determined that "[B]ecause of the nature of vessel discharges, it is not practicable to rely on numeric effluent limits to achieve these levels of control for the large majority discharge types until greater information is available," and that it is appropriate for the VGP to include non-numeric effluent limits that require permittees to engage in specific behaviors or best management practices ("BMP"s). *Id.* The Agency also observed that, for purposes of determining BPT, BCT, and BAT, currently there is no feasible, available or economically achievable and practicable means of eliminating the effluent discharge by the time the general permit comes into effect. *Id.* LMC believes that this conclusion should be applied to the boiler effluent (coal ash) discharged by the Badger.

BAT must be both "technologically available and economically achievable." Fact Sheet at 45. The factors to be considered in determining BAT include the cost of achieving BAT effluent reductions, the age of equipment and facilities involved, the process employed, potential process changes, non-water quality environmental impacts, including energy requirements, and other factors as the EPA Administrator deems appropriate. As EPA stated in the Fact Sheet accompanying the proposed VGP, and according to its Permit Writer's Manual, where there are no effluent limit guidelines as is the case here, EPA must use Best Professional Judgment ("BPJ") to establish such limits. Under section 304(b), this requires consideration of a number of factors:

For BPT requirements:

- The total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application
- The age of equipment and facilities involved*
- The process employed*
- The engineering aspects of the application of various types of control techniques*
- Process changes*
- Non-water quality environmental impact including energy requirements*

For BCT requirements:

- All items in the BPT requirements indicated by an asterisk (*) above
- The reasonableness of the relationship between the costs of attaining a reduction in effluent and the effluent reduction benefits derived
- The comparison of the cost and level of reduction of such pollutants from the discharge of POTWs to the cost and level of reduction of such pollutants from a class or category of industrial sources

For BAT requirements:

- All items in the BPT requirements indicated by an asterisk (*) above
- The cost of achieving such effluent reduction

40 C.F.R. §125.3; NPDES Permit Writer's Manual, Chapter 5 at 70 (emphasis added).

As explained below, as applied to the Badger, under this analysis, the VGP should provide for appropriate BMPs for the boiler effluent as described in our prior submission, and set forth in more detail as follows:

(a) continuous efforts must be undertaken to ensure that the engine is operating efficiently;

(b) coal used to power the boilers should have ash content that does not exceed 10% by laboratory analysis;

(c) discharges of boiler effluent (coal ash) should occur no closer than 5 nautical miles (nm) m from shore and in waters that are at least 100 feet deep, unless safety or operational considerations dictate otherwise;

(d) discharges of boiler effluent (coal ash) should occur in intervals during the vessel's voyage to ensure appropriate mixing in discharge streams; and

(e) the operators of any such vessel should develop and implement a plan that commits them to undertake appropriate research and development of new technology processes, absent extraordinary circumstances, that will result in the substantial reduction or cessation of discharge boiler effluent containing coal ash, no later than May 1, 2012, if appropriate.

2. The Badger

As explained in our October 10 submission, the Badger, like all other coal-fired vessels, was built to discharge its boiler effluent (coal ash). It maintains its original design from 1952. It is largely a unified single operation that cannot be disassembled. Steam is used to power the vessel and all of its equipment including water pumps and equipment necessary for safety and health. Steam is generated from the burning of coal. Coal combustion generates heat. Heat generates steam. Therefore, the boilers need to be operating continuously for the vessel systems to operate; they cannot be taken off line.

To accommodate the need to keep the boilers operating continuously, a system is built into the Badger's infrastructure to allow the removal of coal ash in its solid, dry form from the boilers without shutting them down. This system relies on vacuum created by water pressure that is pumped from a system powered by the boilers. The vacuum system draws out the dry ash, carries it in its dry state through the conveyor via the vacuum, and ultimately combines it with water flow in a 24-inch pipe so that it can then be ejected in a slurry form. The system is built to direct the

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ash to one location on each side of the Badger, in a fixed piping system constructed as part of the vessel's infrastructure when it was built. This system is illustrated in blue on Attachment B to our response to the Information Request, and is described in more detail in response to Question 2 in the Information Request.

In addition, as with other vessels, all equipment is manufactured for the marine environment. This environment involves special consideration for space, weight, motion, and corrosive atmosphere. Thus, off-the-shelf conveyor systems that might work at land-based operations have no application to a vessel. Virtually any system would require piercing watertight compartments. While constructing these systems into vessels when they are built is possible, restructuring the vessel after the fact presents far more technically complex and challenging issues.

3. What is the character of the coal ash?

In response to the Information Request, the Badger provided several analyses of the coal ash generated from the boiler. These can be found in response to Questions 8 and 14 in the Information Request, and as Attachments F, G, H, and I to the Information Request response. These results demonstrate that:

- the ash is not hazardous under applicable TCLP analyses;
- the ash contains only four constituents of concern – lead, barium, arsenic and, mercury. One sample from the collector (representing 25% of the ash generated during a single voyage) indicated mercury at a level of .16mg/kg. The analyses of ash in the economizer and boiler did not detect mercury at all. Based on this data, the total amount of mercury released in the discharge that contains collector ash during one trip is .000832 ounces per trip which converts to 0.256 ounces per year.

As described in response to Question 7 in the Information Request, given the quantity of ash, and quantity of water that facilitates its discharge from the Badger, the level of ash dust in the water may be between 2,500 and 3,000 ppm. EPA currently uses a narrative standard for Total Suspended Solids ("TSS") based on the potential impact of suspected solids discharged into a stream. Those concerns should not apply here since the size, depth and nature of the receiving waters, combined with the interval discharges of ash, create no risk that the ash will have the anticipated effects that might exist in a shallow confined stream.

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4. Management and disposal of coal ash

As explained in the Information Request response, in 2008 the Badger consumed approximately [redacted] tons of coal. Based on an experiment described in response to Question 7 of the Information Request, the Badger generates approximately [redacted] pounds of ash in a 12-hour operating period, or about [redacted] tons over the course of the 154-day season. The only theoretical alternative to discharge of the ash generated by the boiler furnaces is to store it on the vessel, then discharge it via land for disposal or other use. This in turn raises very serious engineering issues, for which no technology currently exists to address, including:

(a) Can the ash be safely stored on board?

(b) How is the ash to be conveyed from the boiler to a storage area?

(c) How will the ash be moved from the storage areas to land?

Each of these is discussed below.

a. Can the ash be safely stored on board the vessel?

Currently the ash is conveyed in its original solid form to the discharge point via the vacuum conveyor system. It forms a slurry when it combines with water in a 24-inch pipe just before being ejected. Based on rough calculations from a single experiment described in the Information Request response to Question 7, it is estimated that the Badger consumes about [redacted] tons of coal and generates approximately [redacted] pounds of solid ash every 12 hours of operation. Based on the amounts generated, and the dimensions of the locations where they were accumulated, as described in Question 7, approximately [redacted] cubic yards of space is needed to store the solid ash generated over a 12-hour period. However, because the Badger operates seven days a week during the season, and landfills to which the ash might be sent are not open on Saturdays or Sundays, the Badger may be required to store an additional 48 hours of ash, requiring as much as [redacted] cubic yards of storage.

The Badger has only two locations where this might be physically possible. One would require a substantial reduction in the size of the coal storage bins, impairing the vessel's fuel storage capabilities. The location of storage facilities in the coal bins is illustrated on Attachment B to the Information Request response in salmon color. These illustrations assume only a 12-hour hold time and do not account for the potential that additional holding areas might be necessary due to unavailability of landfills on weekends.[2]

The only other location on board that is large enough is a currently empty cargo hold (Hold 2 at frame 40-30 on Attachment B to the Information Request response). As a technological matter, however, there is no current means of access to this location without piercing watertight compartments. Piercing watertight compartments creates significant safety issues that require review and approval by the Coast Guard and the American Bureau of Shipping. As explained below, there is no vessel of which the Badger is aware that operates a system even remotely resembling this. Thus, the engineering aspects of this issue alone are completely unknown. However, at a minimum, there are serious safety issues associated with using this storage compartment to house boiler coal ash.

The ash from the boiler, and to a lesser extent the economizer and collectors, retains some heat when it enters the current vacuum conveyor system. However, because it is discharged gradually and in intervals, and is mixed with water just before being discharged, the thermal impacts in the water are relatively minor and are quickly dissipated. Accumulating potentially hot ash adjacent to coal bunkers presents very serious safety issues that to our knowledge have never been addressed on vessels before. Not only would an appropriate compartment have to be designed from scratch, but fire suppression equipment and other special devices would need to be designed and installed as well. LMC is unaware of any technology in existence today that addresses this concern.

By way of illustration, when the Badger conducted its October 12 experiment involving retaining ash in the boiler, economizers and collectors for a single 12-hour period, it needed to wait until the ash was cool before it could be vacuumed out of the system and into a truck, primarily because of the sensitivity of the filters on the vacuum truck. Since this was the last voyage of the season, time was not an issue. The Badger waited 36 hours before removing the ash. When it was removed, it was still hot enough to melt the vacuum hoses used to remove it. If the ash is consolidated into a closed location such as a cargo hold, the cumulative effect of the heated ash will be magnified. As more ash is added over the course of time, the heat will continue to be present, possibly increase and have little opportunity to dissipate.

This accumulation of ash would also create vessel stabilization issues due to its location. While the Badger can handle [redacted] ons of weight, the gradual collection of this weight over the course of the voyage presents stabilization issues. Currently, the Badger loads cars, trucks and other equipment (and passengers) while constantly keeping weight stabilization issues in mind.

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[2] LMC only learned about these landfill limitations in mid-October, when it experimented with holding ash in the furnace, as described in the response to Question 7 in the Information Request.

Other than passenger movement around the vessel, neither the weight nor the location of cars, trucks, and equipment moves during the voyage. Thus, weight balancing can be determined at the outset of a voyage and generally does not change. However, were ash to be gradually accumulated and stored in a forward cargo hold, the gradual increase of weight in the bow of the vessel by [redacted] tons would require consideration of weight redistribution in ways that have never been considered before.

LMC also considered simply holding the ash in the boiler, economizer and collector and discharging it each time the vessel reaches port. The experiment conducted on October 12 illustrates that this is neither feasible nor practical if the Badger is to continue to operate. As explained in response to Question 7 in the Information Request, the Badger operates approximately 154 days per year. During the height of the season, it operates 24 hours, seven days a week, making two round trips between Ludington and Manitowoc every 24 hours. There is a 1-2 hour layover in each port to load and unload passengers and equipment, load coal and perform other necessary tasks. [redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

Finally, LMC considered using a portable storage system, such as a roll-off, placed on the car deck. This is problematic because (a) the heat from the ashes in a large metal container located near cars and other equipment presents significant safety issues; (b) the weight distribution issues described above that impact stability still exist; (c) retrofit technology for getting the ash to such a location does not exist and piercing watertight bulkheads would be a very significant issue; and (d) no one has ever developed, designed or used such a system in the past.

The fact that there are no technological alternatives to discharging coal ash from the Badger at this time is consistent with the situations observed by EPA for other vessels subject to the VGP. As EPA has stated in concluding that non-numeric BMPs are appropriate:

> Vessels vary widely by type and/or class, size, and activity. Furthermore, most vessel designs are unique, onboard space is highly limited, and

> information on the characteristics of all discharges from those vessels is limited....Additionally, vessel operators cannot install equipment onboard their vessels until their equipment has been approved by the Coast Guard and, in some cases, their class societies. Hence, EPA could not require experimental equipment or technologies...without fully understanding the implications of these requirements.

Fact Sheet at 48.

b. How will the ash be conveyed to a new storage area on the Badger?

It is not possible to analyze how ash would be conveyed to a new storage area without first knowing where that storage area is. Several issues are clear, however. First, the boilers on the vessel must be operated continuously; they cannot be shut down, the ash cooled, and the solid ash then carried to a location elsewhere. Thus, some sort of conveyor system is required that allows sequential removal of ash without shutting down the boiler system. Such a conveyor system cannot use water to move the ash because the weight alone would create safety-prohibitive stability issues for the vessel. It is believed, therefore, that such a system must be based on the same vacuum concept that is currently used.

Second, there currently is no known location for such a system. The system must be directly connected and integrated into the boiler system, including the furnaces, economizers and collectors. Space alone to install piping is at a severe premium. LMC has been evaluating its options, and has even designed a theoretical alternative conveyor system that it is evaluating. Such a system does not exist today. Its possible location is shown on Attachment B to the response to the Information Request, in blue. But even since preparing this hypothetical retrofit plan, LMC has discovered that it needs to be reconfigured. For example, this hypothetical system requires that the ash be moved in entirely new directions, including potentially a 38-foot vertical rise. Whether a vacuum system exists that is capable of handling this in a vessel environment is completely unknown.

By way of illustration, Photo 10 provided in the Badger's Information Request response illustrates the confined and limited spaces that must be considered in the vessel. This photo is taken at location 10 on Attachment B and is very near the current confluence of the vacuum conveyor system and the pumping system that creates the vacuum and ultimately discharges the ash. It shows the water piping system, the current ash conveyor, the day bunker, the screw conveyor drive, a steam line, and a 10" permanent support stanchion. All of this equipment is within an area that is just six feet wide. This is also the location where new piping might be installed for a conveyor system that transmits, by vacuum, ash to and from a holding area. Other

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locations where these issues are particularly problematic are depicted on Attachment B in locations 4, 7, and 9 and in photographs 4, 7, and 9 that accompany the responses to the Information Request.

No vessel has any system installed that even remotely resembles this.

c. How will the ash be moved from the storage areas to land?

[redacted]

In summary, there currently exists no available off-the-shelf plan, system, technology or process that would allow the vessel to operate but contain its ash. LMC will literally need to conduct extensive research and development (which it has already begun) to invent such a system, design it with all the constraints of a vessel that was built for a different purpose, obtain all appropriate approvals, build, and then test it. The challenges involved in such a reconstruction are considerable, and it is not possible for the process to be complete before Section 122.3 expires on December 19, 2008 or before the Badger hopes to begin service in May of 2009. As indicated earlier, LMC believes that under the best of circumstances, because the Badger only operated 154 days per year, such an undertaking is likely to take until 2012 to complete successfully.

5. The BMPs for Boiler Effluent Coal Ash Can Be Modeled After the BMPs Accepted for Similar Streams

As we explained in our October 10 submission, the facts surrounding the coal ash discharges in the boiler effluent from the Badger, and the circumstances surrounding the management of these, are quite similar to the issues EPA has faced when developing standards for other discharges. Based on the record that was reviewed, it appears that EPA selected non-numeric standards and applied instead applied BMPs because of the uniqueness of vessels, the lack of technology, and the nature of the discharge. The same considerations warrant a similar result for the boiler effluent that contains coal ash. The discharge itself contains fewer constituents of concern, it presents less of a concern for the environment than other discharges where TSS is the main issue, it is discharged in a way that assures mixing and dissipation, and there is no technology available to otherwise address it at this time.

The BMP being suggested goes one step beyond those applicable to other vessels. While the current BMP would permit the continued discharge of coal ash under specific conditions that minimize its impact on the environment, we have also proposed that the permit include a proactive effort to undertake research and development with a goal of developing technology that would ultimately result in an amendment to the general permit that would eliminate this discharge in the future.

We appreciate the EPA's consideration of these coments. Please let us know if you have any questions.

Respectfully submitted,

Barry M. Hartman

Counsel for Lake Michigan Carferry, Inc.
SS/Badger

Enc: Clean Water Act Information Request Response
Clean Air Act Information Request Response

ATTACHMENT E-1

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Via Federal Express

June 26, 2008

Attn: Compliance Tracker, AE-17J
Air Enforcement and Compliance Assurance Branch
U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

RE: Response to Request to Provide Information Pursuant to the Clean Air Act
Lake Michigan Trans-Lake Shortcut, Inc.
A/K/A Lake Michigan Carferry Service
701 Maritime Drive
Ludington, Michigan 49431

To Whom It May Concern:

On behalf of Lake Michigan Carferry Service, we are submitting the attached information in response to the information requested by Cheryl L. Newton, Acting Director, Air and Radiation Division of the Environmental Protection Agency on May 27, 2008. As you know, Leslie A. Kirby-Miles agreed to an extension of the production date, such that our first response is due June 27, 2008. While we were provided with additional time to respond, we believe that the attached submission is complete. We have indicated that a limited number of documents being provided have been designated as "Confidential Business Information." Those documents will be prepared for submission along with a cover letter in the next few days. Please let us know if copies of CBI should be provided to all the recipients of this letter and information.

The documents provided are bates numbered LMCF00001 through LMCF00227. Where CBI is claimed, a notation is made at the appropriate place.

Please let us know if you have any questions.

Sincerely,

Barry M. Hartman
Akilah Green

Enclosures

cc: w/enc: Janice Denman
Cadillac District Office
Michigan Department of Environmental Quality

cc: w/o enc: Bill Baumann
Wisconsin Department of Natural Resources
Bureau of Air Management

Rick Wulk
Wisconsin Department of Natural Resources

Cheryl L. Newton
U.S. Environmental Protection Agency, Region 5

Leslie A. Kirby-Miles, Esq.
U.S. Environmental Protection Agency, Region 5

Robert Manglitz, President/CEO
Lake Michigan Car Ferry Service

June 26, 2008

Attn: Compliance Tracker, AE-17J
Air Enforcement and Compliance Assurance Branch
U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

RE: Lake Michigan Trans-Lake Shortcut, Inc.
A/K/A Lake Michigan Carferry Service
701 Maritime Drive
Ludington, Michigan 49431

Response to Request to Provide Information Pursuant to the Clean Air Act

1. **Describe the heat input capacity and design features of the S.S. Badger's coal-fired boilers (the "boilers").**

The S.S. Badger ("Badger") is equipped with the original Foster-Wheeler "D"-type marine steam generators with side, back, and roof tubes to protect the furnace refractory, interdeck super heaters, and economizers. The Badger is also equipped with forced draft, induced draft, high-velocity fans, and Pratt-Daniels cyclone separators. The boilers are fitted with Hoffman Combustion stoker fronts employing over feed stokers and dump grates. The normal evaporation rate is 29,500 lbs/hr with 44,000 lbs/hr maximum at 500 lbs/sq in gauge (a/k/a, psig) and 750 degrees Fahrenheit outlet.

2. **Provide the flow rate or velocity of combustion gases exiting the vessel's smokestack.**

See Attachment A to these answers.

3. **Describe the coals used, the source of the coals used, and any specifications for heat content, ash, moisture, and sulfur contents, as well as blending and sizing requirements.**

Manitowoc Public Utilities ("MPU"), located in Manitowoc, Wisconsin, has been Lake Michigan Carferry ("LMC") Service's primary coal supplier since 2000. MPU purchases its coal from C. Reiss Coal Co. In 2003, LMC purchased coal from General Chemical, located in Manistee, Michigan. General Chemical went out of business in 2003. This coal was delivered by truck into the Badger coal bunkers on board ship in Ludington, Michigan. In 2003, LMC also purchased approximately 800 tons of "smokeless" coal from Cardigan Coal & Coke Corporation.

The Badger currently uses a blend of Westridge Coal (1.12 percent sulfur) and stoker coal (.97 percent sulfur) in a 2 to 1 ratio to produce a coal that has a 1.023 percent sulfur content.

See Attachment B to these answers for further coal analysis.

- Coals used ranged from 2" x 0" Crushed Run of Mine to 1 ½" x ¼" Stoker coal.
- Coals used were typically from the East Kentucky Region.
- Heat content ranged from 12,500 to 13,400/btu.
- Ash content ranged from 6.0 percent to 9.5 percent.
- Moisture content ranged from 4.0 percent to 7.0 percent.
- Sulfur content ranged from .47 percent to 1.15 percent.

4. Provide any and all test results and/or coal analysis from the last 5 years for the coals fired in the S.S. Badger's boilers.

See Attachment B to these answers.

5. Verify how and where coal is stored in both Michigan and Wisconsin, as applicable, and who owns coal handling facilities. If you do not own the coal handling facility(ies), explain your relationship with the coal handling facility (that is, do you or your corporate officers have an ownership interest in the facility(ies)?).

LMC does not own any coal handling facilities in Michigan or Wisconsin nor does it have any ownership interest in any coal facility. LMC and C. Reiss Coal Co. have a customer-vendor relationship. Coal used by LMC is stored at the C. Reiss Coal Co. dock in Manitowoc, Wisconsin.

6. To the extent that you own coal handling facilities, supply diagrams of the coal handling facility(ies) and indicate if there are dust suppression systems in place or other systems designed to limit emissions of coal dust. Explain how the coal is transferred to the S.S. Badger.

LMC does not own any coal handling facilities. C. Reiss Coal Co. has a wetting dust suppression system in place designed to limit emissions of coal dust.

The coal is transferred to the Badger in the following way: A driver (independent contractor) transfers coal from the C. Reiss Coal Co. facility in Manitowoc onto a Hopper semi-trailer. Using the Hopper semi-trailer, the driver then transfers the coal approximately 500 yards from the C. Reiss Coal Co. facility onto the Badger, where it is deposited in the bunker.

See Attachment C for pictures of this process.

7. **If applicable, provide all permits you hold for any coal handling facility(ies) located in either Manitowoc, Wisconsin or Ludington, Michigan. Describe your coal handling operation's current regulatory status (*i.e.*, affected source).**

   Not applicable. *See answer to question 5.*

8. **Provide the name(s) of your coal supplier(s) along with any contract(s) for coal since 2000.**

   Coal is primarily supplied to LMC by MPU through a Coal Acquisition and Storage Agreement between LMC and MPU. LMC does not typically use purchase orders for its purchases from MPU. (However, LMC did use a purchase order for its January 22, 2007 purchase from MPU.) LMC also used purchase orders for its 2003 purchases from General Chemical and Cardigan Coal & Coke Corporation (see answer to question 3). There are no other written contracts.

   Copies of purchase orders for purchases of coal dating back to 2000 are attached as Attachment D.

Year	Supplier
2000	C. Reiss Coal Co.
2001	C. Reiss Coal Co.
2002	C. Reiss Coal Co.
2003	Massey Industrial Coal Sales
2004	Alpha Coal Sales
2005	Alpha Coal Sales
2006	C. Reiss Coal Co.
2007	C. Reiss Coal Co.
2008	C. Reiss Coal Co.

   * Note: In 2003, 2004, and 2005, LMC continued to purchase its coal from MPU; however, MPU purchased its coal from suppliers other than C. Reiss Coal Co. in those years.

9. **Provide the current operating and maintenance manuals and procedures for the S.S. Badger's four coal-fired boilers.**

   The original boiler manual is attached as Attachment E to these answers. (The Operation and Maintenance manual provides a start-up procedure that is used for an oil-fired boiler; however, this start-up procedure is essentially the same procedure that is used to start the Badger.)

10. Describe how the coal is charged into the boilers.

Coal is charged into each furnace by two Hoffman Combustion Engineering Company Firite Type 2C-MDG stoker units as originally installed. Feed stroke is controlled from the Yokogawa master PID via Beck rotary positioners.

11. Describe how the coal ash is removed from the boilers and what happens to the ash once it's removed from the boilers.

Ash is removed from under the dump grates manually, directed into a United Conveyer Corporation 6" Marine ash conveyer, and disposed of as incidental discharges from routine operations of the vessel. 40 C.F.R. § 122.3.

See Attachment F to these answers. In particular, see Activity # 2970215, pgs. 2-3, 7-8.

12. Describe what procedures are in place to minimize emissions from the boilers.

The original Wager smoke-eyes allow the fireman to monitor individual boiler emissions from the boiler room, and a video monitor system installed in 2000 allows the engineer to observe overall stock gas opacity and feed rate from the engine room. This information is used to help the fireman adjust the combustion air in order to burn fuel more efficiently and minimize emissions.

See also the answers to question 17.

13. Describe the start-up procedures for the S.S. Badger.

To start up the Badger, a small amount of ignited fuel is manually introduced on to the furnace grates. Then, the stokers and fans are regulated by the fireman to bring the temperature and steam pressure up to operating levels.

For more information on start-up procedures, the Foster-Wheeler start-up procedure for boilers is located in Section 2-1 of the Operation and Maintenance manual, which is included as Attachment E to these answers.

14. Describe the steps taken to minimize the emissions from the boilers during the startups.

See the answers to questions 12 and 17. In addition, during start-up, boiler emissions are monitored by the fireman, and combustion air is regulated to minimize emissions.

15. Identify how often start-up of the boilers occurs and the average duration of start-up.

A cold start-up of the boilers is performed once per operating season with an average duration of approximately 10 hours. During the approximate 150-day operating season, three of the four boilers are used to provide propulsion and ship service steam demand. The fourth boiler is kept in a cold standby state and brought on-line when one of the other three boilers requires maintenance. Use of the fourth boiler occurs two or three times per season, with an average start-up time of eight hours. The fourth boiler is not usually started up at a port.

16. Provide any and all documents relating in any way to the quantification of emissions from the boilers, including, but not limited to, studies quantifying the emissions, sampling plans, sampling results, and correspondence with consultants or contractors to plan and/or implement any study or sampling effort for the S.S. Badger's boilers regardless of ownership.

See Attachments A, G, and I to these answers.

17. Describe all modifications made to the boilers, including new boiler operating controls, since your purchase of the S.S. Badger.

When LMC acquired the vessel, many of the automated operating controls were no longer functioning properly and had not been replaced or upgraded. In some instances, new or replacement parts were not available for these controls. As a result, many of the controls had been abandoned. Since LMC's acquisition of the vessel, the following changes have been made to improve the operating efficiency and reduce the emissions of the system:

A. In 1992, LMC designed and installed solid state circuitry to replace obsolete vacuum tube balance circuits in the plant master steam pressure control. LMC also designed and installed solid state circuitry to replace obsolete vacuum tube circuits in coal stoker drive controls. This was LMC's first attempt to automate, rather than to manually control, the system to produce more efficient fuel burn, which in turn reduces emissions.

B. In 1993, LMC replaced the solid state circuitry that LMC previously designed and installed a Johnson Yokogawa PID microprocessor controller to replace the plant master control. LMC also installed a Johnson Yokogawa steam pressure transducer to send steam pressure signals to the new plant master. These reforms allowed LMC to better control its fuel input, fuel combustion, and smoke emissions.

See Attachment H to these answers.

C. LMC installed Honeywell drive motors to interface the plant master signal to coal stoker drives. This was done in an effort to modernize the system and automate, rather than to manually control, the system to burn fuel more efficiently and to minimize emissions.

D. In 1993, LMC hired a consulting firm, Maurice L. Kelsey & Associates, Inc., to evaluate the Badger's boiler operations and make recommendations.

See Attachment I to these answers.

E. In 1994, LMC installed four new Beck drive motors on coal stokers and four API process control isolators to interface with the Johnson Yokogawa plant master to Beck drive motors. This installation completed the replacement of the previous circuit system that began in 1992 and described in answer 17A.

F. In 1994, LMC installed Wechsler digital/bar graph gauges to indicate the percentage of coal feed. This provides the operator with a visual indication of the amount of fuel being fed into the boiler and immediately alerts the operator when the vessel has a high rate of fuel feed, which can lead to a smokier and less efficient fuel combustion boiler operation.

G. LMC installed Dwyer differential pressure switch gauges to monitor combustion chamber pressure and to operate flue dampers to maintain constant pressure. LMC also installed Duff-Norton actuators on flue ID inlet dampers, which are operated either manually or automatically by the Dwyer pressure switch gauges to allow the vessel to maintain the most appropriate fuel/air ratio, which is crucial for running a cleaner stack and more efficient fire.

H. In 1995, LMC obtained a spare Johnson Yokogawa PID controller and a spare Johnson Yokogawa master pressure transducer for use in the event of microprocessor failure.

I. In 1997/1998, LMC replaced all wall and floor boiler tubes in all four boilers. This repair increased the efficiency of the boiler operation, thus minimizing emissions.

J. In 1999, LMC installed four additional Beck motor drives to operate forced draft dampers under direct manual operation by the fireman. This conversion allowed the vessel to better control its air/fuel ratio consumption and minimize smoke.

K. In 1999, LMC installed four Wechsler digital bar graph instruments to indicate the percentage of forced draft primary combustion air, which allowed the crew to monitor the positioning of the forced air damper feed back.

L. In 1999, LMC again retained Maurice L. Kelsey & Associates, Inc. to review some of the recent additions and installations and offer more recommendations for achieving a more efficient fuel combustion and cleaner stack.

See Attachment I to these answers.

M. In 2000, LMC added a stack cam video camera, which focuses on the top of the stack and allows the engineer on duty below to monitor the stack smoke and ensure that the vessel's smoke emissions are as low as possible.

N. In approximately 2000, LMC replaced generating, screen, and superheater tubes, as well as related brick work for the forward and after starboard boilers. These replacements allowed the boilers to operate more efficiently.

O. Stokers are overhauled during every off season, and all force draft fans, induced draft fan turbines, and over fire air fans have been overhauled in the last five years.

P. In 2004, LMC replaced the superheater tubes in the afterport and forwardport boilers, some of which were plugged and operating inefficiently. This replacement increased the efficiency of the boiler operation, thus minimizing emissions.

Q. In 2008, the stoker secondary air supply was ducted so that it is fed from the forced draft, which allows greater flexibility and results in more burn efficiency and better smoke control.

R. The dump grates on all four boilers have been replaced with a redesigned pattern to allow improved forced draft, which has decreased gas velocity through the furnace to allow more air into the boiler so that the boilers burn cleaner.

S. Tachometers have been installed to allow remote monitoring of the induced draft fan turbine speeds to better control the fuel combustion and minimize smoke.

T. The Pratt-Daniels cyclones have been renewed to more efficiently remove fly ash from emissions.

U. In 2007/2008, LMC replaced all the condenser tubes on the port and starboard side. A number of these tubes were plugged and were causing the vessel to operate less efficiently. Because of the added cooling capacity, the Badger has a better vacuum, which allows the vessel to have more torque and use less fuel when maneuvering. This also helps the Badger to reduce its smoke.

V. The Badger has reduced fuel consumption and smoke emissions by approximately 20 percent by taking one of the four boilers off-line and using it as a standby boiler.

LMC has worked hard to increase burn efficiency and operate with the best fuel combustion to ultimately reduce the Badger's emissions.

18. Provide the amount of coal the boilers use on average for a single voyage across Lake Michigan.

The Badger consumes approximatel CBI single voyage across Lake Michigan.

19. Explain the emissions event on April 30, 2008 (photograph attached) and the steps that you have taken to reduce the emissions since April 30, 2008.

On April 30, 2008, during an annual inspection by the U.S. Coast Guard, LMC performed a safety test on all of the Badger's systems, including engines, boilers, safety valves, fire drills, and lifeboat drills. This safety test required the Badger to get under way (*i.e.*, leave the dock). As the vessel returned to the dock, the vessel experienced a "two-step" or "double" failure. First, the microprocessor incorrectly read low steam pressure and requested extra coal feed. At the same time, a coal bridge was created over the stoker from coal being stuck and unable to move from the bin into the stoker and into the boiler. When one of the boilers experienced a drop in pressure due to the lack of coal feed, the microprocessor requested even more coal feed for the other two boilers. Essentially, the microprocessor requested more coal feed than was necessary. When the coal bridge broke loose, a very large amount of coal entered the stoker and the boiler – much more than was needed for fuel, which smothered the fire and caused the smoky plume. These issues occurred as the vessel was attempting to dock. The event lasted for approximately three to five minutes and was quickly remedied. As a safety precaution, LMC has replaced and calibrated the master microprocessor and transducer and balanced the boiler load. These precautions should prevent the microprocessor from misreading coal feed needs.

It is important to note that the Badger's system is a propulsion plant that has extreme variations of dynamic steam requirements and demand, which results in often and sudden changes. Docking is the most dynamic time of the Badger's operation because, during this time, the vessel experiences approximately 25 engine changes or 25 different steam demands ranging from "stop," with no demand at all from the propellers, to a quarter back, a quarter ahead, a half back, a half ahead, three quarters back, and three quarters ahead. This range of demands is possible for both engines simultaneously; therefore, the steam demand could change 25 times in 10 minutes, changing from one extreme to the other. If the Badger had not been docking when the two-step failure occurred, the crew could have regulated the engine to immediately eliminate the fluctuation of steam demand, and the crew could have remedied the failure much sooner.

20. **Estimate the number of days per year that the S.S. Badger's boilers are operating.**

The Badger's boilers operate approximately 150 days per year.

21. **Estimate the number of hours per year that the S.S. Badger's boilers are operating when in Manitowoc, Wisconsin and Ludington, Michigan.**

Manitowoc, Wisconsin: 521.5 hours
Ludington, Michigan: 1710.5 hours

22. **Please identify the individual(s), including title, responsible for responding to this request.**

Robert A. Manglitz, President, LMC
Charles Cart, Chief Engineer, LMC

Certification Statement

I certify under penalty of law that I have examined and am familiar with the information in the enclosed documents, including all attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are, to the best of my knowledge and belief, true and complete. I am aware that there are significant penalties for knowingly submitting false statements and information, including the possibility of fines or imprisonment pursuant to section 113(c)(2) of the Clean Air Act, and 18 U.S.C. §§ 1001 and 1341.

6-25-08
Date

Robert A. Manglitz Pres.
President/CEO
Lake Michigan Car Ferry Service

Table of Contents

C.4 Picture of coal transfer from the C. Reiss Coal facility in Manitowoc, Wisconsin to the S.S. Badger

Attachment D

D.1 January 2007 Purchase Order for Manitowoc Public Utilities

D.2 2006 Coal Acquisition and Storage Agreement between Manitowoc Public Utilities and Lake Michigan Carferry, Inc.

D.3 April 2003 Purchase Order for Cardigan Coal & Coke Corporation

D.4 March 2003 Purchase Order for General Chemical

D.5 1992 Lease and Coal Purchase Agreement by and between City of Manitowoc, Wisconsin and Lake Michigan Carferry, Inc.

Attachment E

E.1 Original Boiler Manual

Attachment F

F.1 United States Coast Guard Vessel Critical Profile, July 2007

Attachment G

G.1 Hoffman Combustion Engineering Company Industrial Stokers Assessment, August 1951

Attachment H

H.1 ERH Electronics Proposals for S.S. Badger Combustion Control Upgrade, January 1993

Attachment I

I.1 Maurice L. Kelsey & Associates, Inc. S.S. Badger Boiler Operation Survey, August 1993

I.2 Maurice L. Kelsey & Associates, Inc. S.S. Badger Boiler Operation Observation, Testing and Recommendations

A

1

LMCF00004

Lake Michigan Carferry, SS Badger
Boiler: AS stack

VELOCITY AND VOLUMETRIC FLOW

				Calculated	
Duct Dia., inches	0		**Duct Area, ft2**	**0.0000**	
Duct Size (LXW), inches	46	39	**Duct Area, ft2**	**12.4583**	
%CO2 (0 if Air)	7		**Md**	**29.68**	
%O2	13.9		**Ms**	**29.26**	
%CO	0		**Moisture, Bws**	**0.0358**	
Td, F	371		**Duct Prssure, "Hg**	**29.20**	
Tw, F	124		**Density, #/ft3**	**0.0471**	
Vp @ Tw, "Hg	**3.848**		**Avg. VP, "w.g.**	**0.105**	
Atm. Pressure, "Hg	29.22		**Velocity, fpm**	**1,618.1**	**18.4 mph**
Duct SP, "w.g.	-0.21		**Gas, ACFM**	**20,159.2**	
Pitot, Cp	0.99		**Mass, #/min**	**948.7**	
			#DG/min	**927.8**	
			#H2O/min	**20.9**	
			#H2O/#DG	**0.0225**	
Elevation, ft	650		**Atm. Pressure, "Hg**	**29.22**	

LMCF00005

Lake Michigan Carferry, SS Badger
Boiler: FP stack

VELOCITY AND VOLUMETRIC FLOW

				Calculated	
Duct Dia., inches	0		**Duct Area, ft2**	**0.0000**	
Duct Size (LXW), inches	46	39	**Duct Area, ft2**	**12.4583**	
%CO2 (0 if Air)	5.6		**Md**	**29.51**	
%O2	15.3		**Ms**	**28.79**	
%CO	0		**Moisture, Bws**	**0.0623**	
Td, F	313		**Duct Prssure, "Hg**	**29.21**	
Tw, F	125		**Density, #/ft3**	**0.0498**	
Vp @ Tw, "Hg	**3.954**		**Avg. VP, "w.g.**	**0.109**	
Atm. Pressure, "Hg	29.22		**Velocity, fpm**	**1,609.0**	**18.3 mph**
Duct SP, "w.g.	-0.09		**Gas, ACFM**	**20,045.7**	
Pitot, Cp	0.99		**Mass, #/min**	**998.2**	
			#DG/min	**959.4**	
			#H2O/min	**38.9**	
			#H2O/#DG	**0.0405**	
Elevation, ft	650		**Atm. Pressure, "Hg**	**29.22**	

LMCF00006

Lake Michigan Carferry, SS Badger

Boiler: FS stack

VELOCITY AND VOLUMETRIC FLOW

				Calculated	
Duct Dia., inches	0		Duct Area, ft2	0.0000	
Duct Size (LXW), inches	46	39	Duct Area, ft2	12.4583	
%CO2 (0 if Air)	8		Md	29.80	
%O2	12.9		Ms	29.41	
%CO	0		Moisture, Bws	0.0325	
Td, F	400		Duct Prssure, "Hg	29.21	
Tw, F	126		Density, #/ft3	0.0457	
Vp @ Tw, "Hg	4.063		Avg. VP, "w.g.	0.146	
Atm. Pressure, "Hg	29.22		Velocity, fpm	1,939.4	22.0 mph
Duct SP, "w.g.	-0.11		Gas, ACFM	24,161.8	
Pitot, Cp	0.99		Mass, #/min	1,104.8	
			#DG/min	1,082.8	
			#H2O/min	22.0	
			#H2O/#DG	0.0203	
Elevation, ft	650		Atm. Pressure, "Hg	29.22	

2

AMEREX
INDUSTRIES, INC.

A Benetech Company

1950 VAUGHN ROAD, STE 200
KENNESAW, GA 30144
Phone: 770-693-2100
Fax: 770-693-2108 *
www.amerexind.com

FAX TRANSMISSION

***Address fax responses to 770-693-2108; include a TYPED cover page with the recipient's full name or e-mail address.**

To:
James E. Anderson

From: JIM BOEN

Subject: Badger revised proposal and flowrates

Message:

Dear Mr. Anderson:

Please find on the following pages the revised proposal and flowrate measurements. The collector has been sized for 65,000 ACFM. The last few pages of the proposal show the measurements. An origianl proposal will be sent to you this week.

Regards,

Jim

AMEREX PROPOSAL AP-000816 REVISION 1
SEPTEMBER 25, 2001

LAKE MICHIGAN CARFERRY
701 MARITIME DRIVE
LUDINGTON, MI 49431

ATTENTION: JAMES E. ANDERSON
(231) 843-4448 Phone
(231) 843-4558 Fax

SS BADGER STEAMSHIP
BOILER BAGHOUSE

Prepared by:

JIM BOEN
SALES
(770) 693-2113 Direct Phone
(770) 693-2102 Fax
jboen@amerexind.com

Amerex Industries, Inc.
1950 Vaughn Road, Suite 200
Kennesaw, Georgia 30144

Amerex Represetative:

1.0 PROCESS AND DESIGN SPECIFICATION

SS Badger Boiler Baghouse

Volume:	65,000 ACFM
Temperature:	375 °F Maximum
Service:	Fly ash emissions from boiler at idle.
Inlet Loading:	20 gr/ACF (Assumed)
Outlet Loading:	=< 0.02 gr/dscf
Baghouse Design:	Standard top access plenum with dual pyramidal hoppers and hopper support for existing structural steel.
Air to Cloth Ratio:	3.61 :1
Filter Area:	18009 ft^2
Bag Spacing:	8-inches center to center (2-inches between bags and minimum of 2" between outside bags and wall.)
Can Velocity:	approximately 173 fpm
Bags/Pulse valve:	Seven (7)
Bags/Module:	Four hundred fifty-five (455)

2.0 SCOPE OF SUPPLY

Amerex will provide the following equipment and services.

DESCRIPTION

SS Badger Boiler Baghouse

Model #: RP-7-455 D6 (7X65) HSI

The collector is shop-assembled in three sections with access doors, compressed air cleaning system, housing, and trough hopper. The construction will be as follows:

Casing:	10 Gauge, Carbon Steel.
Tube sheet:	3/16" Plate, Carbon Steel.
Hopper:	10 Gauge, Carbon Steel
Hopper Volume:	840 ft^3
Hopper Flanges:	10 inches X 458 inches
Hopper Access Door:	Min 24" hinged access door.
Hopper Grid:	Not provided.
Hopper Side Slope:	Min. 64 degrees
Hopper Valley Angle:	Min 55.4 degrees
Design Pressure:	- 17" w.g. with CS stiffeners.
Support Steel:	Not provided. A support flange around the trough hopper is provided for mounting on existing structural steel.
Stairway:	Not provided.
Ladder:	Not provided.

Platform:	Not provided..
Blowpipe Assembly:	1-1/2" diameter, Schedule carbon steel pipe. Comp. Air Manifold: 6" diameter carbon steel w/dial Pressure Gauge; 1-1/2" diameter cast aluminum diaphragms with integral solenoid valves.
Inlet Openings:	Four inlets that are flanged and designed for 1500 fpm velocity.
Outlet Openings:	Flanged and designed for 1500 fpm velocity.
Timer:	Solid state timers in NEMA-4 boxes for controlling pulse duration and interval.
Control Panel:	Not beyond that described above.
Pressure Gauge:	1 Magnehelic
Paint:	All exterior carbon steel surfaces shall be surface prepared utilizing method SSPC-SP-6 and are primed with Intertherm 237 (1.0 mils D.F.T). and finish painted with Intertherm 875 (Aluminum) (1.5 mils D.F.T).
Screw Conveyor:	10" x 40'-0" screw conveyor driven by a 3 HP TEFC motor.
Hopper Valves:	10"x10" rotary valves driven by a 1/2 HP TEFC motor.
Accessories:	Nothing beyond those described.
Insulation:	Not Provided.
Baghouse Size:	6'4" by 43'-8" inside dimensions. 7'-4" by 44'-2" outside. Empty Weight – 29,500 Lbs. Full Weight – 59,000 Lbs. (Hoppers full with 35#/ft^3 ash)
Pleated Filter Bags:	
Number:	455
Diameter:	5-11/16 inches nominal
Length:	6'-8"
Design:	Top Access Snap Ring
Fabric:	Ryton, 10 oz.
Area:	30 pleates, 39.58 ft^2 / pleated filter
Guarantee:	Not provided.
Inlet Dampers:	Inlet dampers located in the housing section to isolate any one of the four boilers.
Outlet Dampers:	Not Provided.
Compressor; Dryer; Filter and Receiver:	Not Provided.
Ductwork:	Not Provided.
Stack:	Not Provided.
Expansion Joints:	Not Provided.
Instrumentation:	None beyond that described above..
Fan & Motor:	Not Provided.
Air Flow Damper:	Not Provided.
One Lot:	Start-Up Advisor (Per Diem to Apply).
Freight:	Is not included.

3.0 SCHEDULE AND TERMS OF PAYMENT

SCHEDULE

DOCUMENTS	DAYS/MONTHS AFTER ORDER
G. A. Drawings & Loads (For Approval):	21 Days
Completion of Engineering:	90 Days
O&M Manuals:	90 Days
Spare Parts List:	90 Days

DELIVERY SCHEDULE

Delivery: 14 – 16 weeks after approval drawings..

PAYMENT TERMS

It is our intent that the following provide a payment schedule that is neutral to both parties, prevents negative cash flow, and provides our customers sufficient retainage. This proposal is based on the following payment terms:

- **30%** due upon Amerex mailing or electronically transmitting the initial submittal drawings to client for review
- **20%** due upon receipt of material at fabricator's shop
- **50%** due upon arrival of equipment at jobsite

All billings are **net 30** days from date of receipt of invoice.

Definitions:

authorization to proceed -This is normally a written purchase order however, in the event that the customer desires to provide Amerex a P.O. number with mutually acceptable written authorization to expedite the start of engineering, this would serve as the authorization to proceed. The first billing is triggered at the same time the customer releases Amerex to start the order regardless of the actual method used.

Initial operation – For the purposes of payment and warranty, initial operation is defined as the first introduction of the flow medium (air or gas depending on the application) through the equipment.

4.0 PRICING

For the Amerex Model RP-7-455 D6 pleated bag collector described above, the budgetary price is: **$287,900.**

5.0 PERFORMANCE GUARANTEE

PERFORMANCE TEST PROVISIONS

The particulate emissions will be determined in accordance with EPA Test Procedures as set forth in CFR Title 40, Chapter 1, Part 60. The mass solid particulate emissions shall be determined by EPA Test Method 5, dry portion only.

PERFORMANCE GUARANTEES

Subject to the conditions and limitations contained herein and provided the baghouse is operated within the operating conditions as set forth in the specification and Seller's O&M manual, then the performance guarantees shall be as stipulated below.

SOLID PARTICULATE EMISSION

The proposed equipment, at time of testing (within 60 days after achieving the normal plant production rate at which the facility will be operated, but not later than 120 days after completing erection), will comply with the specified total particulate emission rate of less than 0.02 gr./dscf.

OPACITY GUARANTEE

Amerex guarantees that at the specified Design Conditions the effluent opacity measured at the stack shall not exceed an average of ten percent (10%) for more than a six minute average in any hour. Opacity resulting from any matter formed beyond the collector outlet flange such as, but not limited to, condensables or chemically-formed emissions will be excluded from this guarantee. This warranty is only valid per all the conditions outlined in Appendix I and the baghouse is operated in accordance with the manufacturer's operating instructions.

EQUIPMENT REMEDY

If prior to the expiration of the Guarantee Period set forth herein, Seller received written notice from the Owner that the equipment fails to meet the above Performance Guarantee (as determined by results of the Field Performance Testing Methods stated herein), Seller agrees to make such repairs or modifications at no cost to the Purchaser as are reasonably required to meet the performance requirements in accordance with the F.O.B. terms of the contract.

EQUIPMENT WARRANTY

Amerex Industries, Inc. warrants the furnished equipment to be free of defects in material and workmanship for a period of twelve (12) months from date of start-up or eighteen (18) months from date of shipment, whichever comes first.

This warranty is subject to the following conditions: (a) Seller's instructions as to handling, installation, operation, and maintenance have been followed; (b) the Equipment and associated equipment have been used under normal operating conditions; (c) the Equipment has been properly operated and maintained and has not been affected by misuse, neglect or accident; (d) Owner has not attempted or performed corrective work without Seller's prior written consent; and (e) Seller shall have received written notice of any defect no later than ten (10) days after owner first have knowledge of same.

The above Warranty does not cover, and Seller makes no warranty which extends to damage to the equipment due to deterioration or wear occasioned by abrasion, corrosion, erosions, or chemicals.

THIS WARRANTY IS IN SUBSTITUTION FOR, AND IN LIEU OF, ANY AND ALL OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING WARRANTIES OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Remedial action in the manner and within the period of time specified above shall constitute fulfillment of all liabilities from Seller to Owner and shall be Seller's sole remedy thereunder whether based on contract, warranty, negligence, or otherwise.

LIMITATION OF LIABILITY

In no event shall the total liability of the Seller arising out of the performance or breach of this Purchase Order, whether based on contract, warranty, negligence, indemnity, strict liability or otherwise exceed the Purchase Order price.

The Seller shall in no event be liable for any consequential, incidental, indirect, special, or punitive damages arising out of this Purchase Order or any breach thereof, or any defect in the Equipment purchased hereunder, including, but not limited to, lost profits or revenue, work stoppage, impairment of other goods, loss by reason of shutdown or nonoperation or increased expenses of operation, whether or not such loss or damage is based on contract, warranty, negligence, indemnity, strict liability or otherwise.

FLOWRATE MEASUREMENT TESTS

On September 10, 2001, outlet flowrate measurements were performed on three of the four stacks of the S. S. Badger. These measurements were taken by John Hanley and Jim Boen of Amerex Industries, Inc. The three stacks that were measured are called forward-port, forward-starboard and aft-starboard. The aft-port stack was no operating.

All four stacks are laid out in a rectangular patter and are of the same 46" x 39" size. The two forward and the two aft stacks share a common wall between them. There is a 48" wide walkway between the forward and aft stacks.

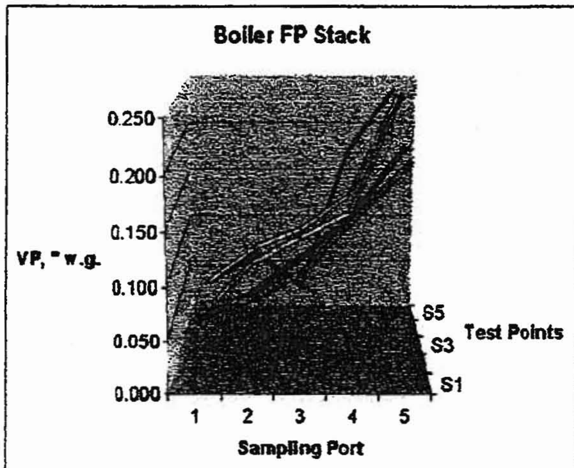
Five holes were drilled in three stacks to measure the velocity pressures using a 25-point pattern. Amerex would like to thank Charles Cart and his crew for their work in drilling this holes and their support.

The results from these measurements are listed below and a computer disk copy was given to James Anderson.

Forward-Port Stack

Temperatures:	313°F dry bulb, 125°F wet bulb
Atmospheric Pressure:	29.22" Hg
Duct Static Pressure:	-0.09" w.g.
Duct Pressure:	29.21" Hg
Percent Carbon Dioxide:	5.6%
Percent Oxygen:	15.3%
Percent Moisture:	6.2% by volume
Average Velocity Pressure:	0.109" w.g.
Gas Density:	0.0498 pounds per cubic foot
Gas Velocity:	1,609 feet per minute
Gas Flowrate:	20,046 actual cubic feet per minute
Mass Flowrate:	998.2 pounds per minute

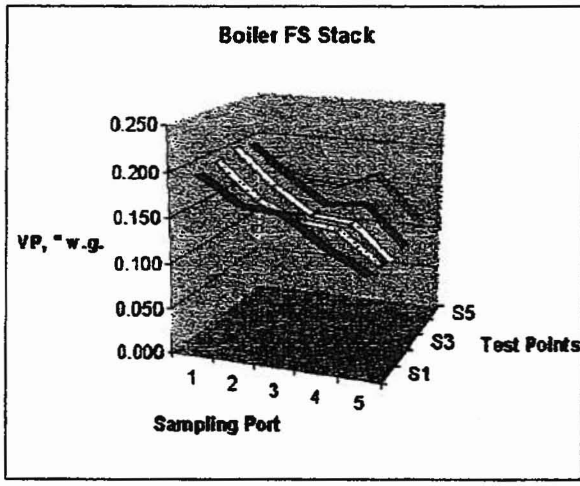
The graph to the right shows the velocity pressure distribution in this stack. The view is looking towards the front of the ship.



Forward-Starboard Stack

Temperatures:	400°F dry bulb, 126°F wet bulb
Atmospheric Pressure:	29.22" Hg
Duct Static Pressure:	-0.11" w.g.
Duct Pressure:	29.21" Hg
Percent Carbon Dioxide:	8.0%
Percent Oxygen:	12.9%
Percent Moisture:	3.3% by volume
Average Velocity Pressure:	0.146" w.g.
Gas Density:	0.0457 pounds per cubic foot
Gas Velocity:	1,939 feet per minute
Gas Flowrate:	24,162 actual cubic feet per minute
Mass Flowrate:	1,104.8 pounds per minute

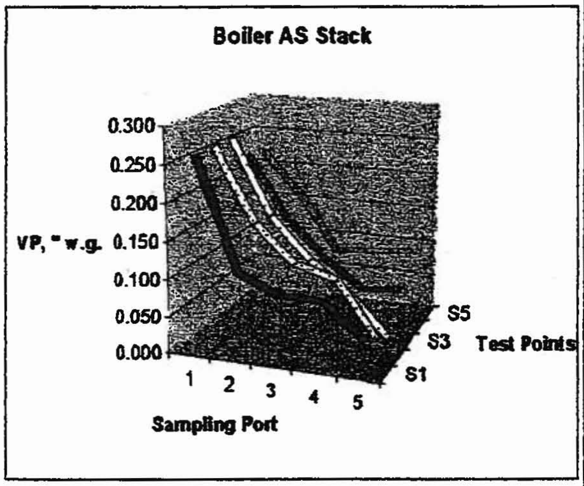
The graph to the right shows the velocity pressure distribution in this stack. The view is looking towards the front of the ship.



Aft-Starboard Stack

Temperatures:	371°F dry bulb, 124°F wet bulb
Atmospheric Pressure:	29.22" Hg
Duct Static Pressure:	-0.21" w.g.
Duct Pressure:	29.20" Hg
Percent Carbon Dioxide:	7.0%
Percent Oxygen:	13.9%
Percent Moisture:	3.6% by volume
Average Velocity Pressure:	0.105" w.g.
Gas Density:	0.0471 pounds per cubic foot
Gas Velocity:	1,618 feet per minute
Gas Flowrate:	20,159 actual cubic feet per minute
Mass Flowrate:	948.7 pounds per minute

The graph to the right shows the velocity pressure distribution in this stack. The view is looking towards the front of the ship.



B

HORIZON LABORATORIES

General Offices: P.O. Box 995 Price, Utah 84501 435-637-4343
Laboratory: 545 East 100 North Price, Utah 84501

Submitted to:
UtahAmerican Energy, Inc
Westridge
P.O. Box 1077
Price, Utah 84501

April 15, 2008

CARFERRY
2008

Date Sampled: 4/7/2008
Date Received: 4/7/2008

Sample Identification:
Joe Block

USED AS 33%
OF BLEND FOR
2008 SEASON

Sampled By: SCT
Identification By: WRRI

Analysis Report #: Composite 69392 & 69341

CERTIFICATE OF ANALYSIS

Proximate

	As Received Basis	Dry Basis
% Moisture	6.68	-----
% Ash	9.47	10.15
% Volatile Matter	35.57	38.09
% Fixed Carbon	48.30	51.76
	100.00	100.00
% Sulfur	1.12	1.20
% Chlorine	0.027	0.027
Btu/Lb.	12531	13429

Moisture Ash Free Btu/Lb. 14946

Mercury ppm 0.068

Respectfully Submitted,
HORIZON LABORATORIES

Laboratory Manager

LMCF00021

2

06-05-2007 04:02PM FROM-Mineral Labs 6063496109 T-186 P 002/002 F-090

085.45 TON RECD. 6/6/07

MINERAL LABS, INC.

Box 549
Salyersville, Kentucky 41465
Phone (606) 349-6145

CERTIFICATE OF ANALYSIS

Company

C.REISS COAL CO/PO#384-07
2528 HARRODSBURG RD SUITE 130
ATTN: FLETCHER DENNIS
LEXINGTON, KY 40504

Lab No. 170600021 5188
Date Rec'd. 6/01/2007
Date Analyzed 6/01/2007 Y

SAMPLE IDENTIFICATION AS SUPPLIED BY SAMPLER
IVEL
STOKER
PO# 384-07 110 CARS
PERMIT# P141 TONS: 10085.48
LA# 165 TL# L479
*OBSERVED AUTOMATIC SAMPLER

Sampled By *LAB

Sample Type: CONT. BR
AUTOMAT

CALFERLY 4 / 2008 / C.REISS

USED AS L
OF BLEND
FOR 2008SE

(D3302-99)	% Moisture	% Ash D3174-97	% Volatile D3175-97	% Fixed Carbon (Calculated)	BTU D5865-98a	% Sulfur D4239-97 (Method C)
Rec'd.	4.44	6.42	XXX	XXX	13,251	.97
Dry Basis		6.72	XXX	XXX	13,866	1.02
M.A.F.B.T.U. (Calculated)					14,865	

Free Swelling Index No. D720 91: 3

Grindability Index No. D409 97a: XXX

FUSION TEMPERATURE OF ASH D1857-87 (1994)

	Reducing	Oxidizing
Initial	2640 °F	XXX °F
Softening	2700+ °F	XXX °F
Hemispherical	[illegible] °F	[illegible]
Fluid	2700+ °F	XXX

SCREEN ANALYSIS D 4749-87

SIZE	% WT. RETAINED
+1 1/4	.92%
1 1/4 X 1	8.80%
1 X 1/2	52.85%
1/2 X 1/4	28.39%
1/4 X 0	9.04%
	100.00%

WEIGHT DETERMINATION

Average Light Draft	X X X
Average Loaded Draft	X X X
Weight of Coal Loaded	X X X Tons

3060089

Submitted By

3

MLI
MINERAL LABS, INC.
Box 549
Salyersville, Kentucky 41465
Phone (606) 349-6145

085.45 TON RECD 6/6/07

CERTIFICATE OF ANALYSIS

Company

C.REISS COAL CO/PO#384-07
2528 HARRODSBURG RD SUITE 130
ATTN: FLETCHER DENNIS
LEXINGTON, KY 40504

Lab No. 170600021 5188
Date Rec'd. 6/01/2007
Date Analyzed 6/01/2007 Y

SAMPLE IDENTIFICATION AS SUPPLIED BY SAMPLER
IVEL
STOKER
PO# 384-07 110 CARS
PERMIT# P141 TONS: 10085.45
LA# 165 TL# L478
*OBSERVED AUTOMATIC SAMPLER

Sampled By *LAB
Sample Type: CONT. BF. AUTOMAT

CALFERL 4 2007 C.REISS

(D3302-99)	% Moisture	% Ash D3174-97	% Volatile D3175-97	% Fixed Carbon (Calculated)	BTU D5865-99a	% Sulfur D4239-97 (Method C)
As Rec'd.	4.44	6.42	XXX	XXX	13,251	.97
Dry Basis		6.72	XXX	XXX	13,866	1.02
M.A.F.B.T.U. (Calculated)					14,865	

Free Swelling Index No. D720 91 — 9
Grindability Index No. D409 97a — XXX

-FUSION TEMPERATURE OF ASH- D1857-87 (1994)	Reducing	Oxidizing
Initial	2640 °F	XXX °F
Softening	2700+ °F	XXX °F
Hemispherical	2700+ °F	XXX
Fluid	2700+ °F	XXX

SCREEN ANALYSIS D 4749-87

SIZE	% WT. RETAINED
+1 1/4	.92%
1 1/4 X 1	8.80%
1 X 1/2	52.85%
1/2 X 1/4	28.39%
1/4 X 0	9.04%
	100.00%

WEIGHT DETERMINATION

Average Light Draft	X X X	
Average Loaded Draft	X X X	
Weight of Coal Loaded	X X X	Tons

3060089

Submitted By

4

MINERAL LABS, INC.

Box 549
Salyersville, Kentucky 41465
Phone (606) 349-6145

CERTIFICATE OF ANALYSIS

Company

C. REISS COAL CO/PO #333-06
2525 HARRODSBURG RD SUITE 130
ATTN: FLETCHER DENNIS
LEXINGTON, KY 40504

Lab No. 560800921 5062

Date Rec'd. 8/12/2006

Date Analyzed 8/12/2006 Y

SAMPLE IDENTIFICATION AS SUPPLIED BY SAMPLER

Sampled By *LAB

Sample Type: AUTOMATIC

FORK CREEK
UT# L-272 85 CARS
PO# 333-06 PERMIT 184 LA# 128
SAMPLING TIME 13' 45"
SAMPLE WT. = 92.4 LBS
*OBSERVED AUTOMATIC SAMPLER

CALFERRY 2006 C.REISS

(D3302-99)	% Moisture	% Ash D3174-97	% Volatile D3175-97	% Fixed Carbon (Calculated)	BTU[a] D5865-99a	% Sulfur D4239-97 (Method C)
As Rec'd.	4.61	7.69	XXX	XXX	13,112	1.13
Dry Basis		8.06	XXX	XXX	13,745	1.19
M.A.F.B.T.U. (Calculated)					14,951	

Free Swelling Index No. D720-91: 6

Grindability Index No. D409-97a: XXX

-FUSION TEMPERATURE OF ASH- D1857-87 (1994)

	Reducing	Oxidizing
Initial	2610 °F	XXX
Softening	2700+ °F	XXX
Hemispherical	2700+ °F	XXX
Fluid	2700+ °F	XXX

SCREEN ANALYSIS D 4749-87

SIZE	% WT. RETAINED
+ 1 1/4	8.63%
1 1/4 X 1	26.35%
1 X 1/2	51.69%
1/2 X 1/4	7.45%
1/4 X 0	5.88%
	100.00%

WEIGHT DETERMINATION

Average Light Draft	X X X
Average Loaded Draft	X X X
Weight of Coal Loaded	X X X

84860

Submitted By: R. [signature]

5

FROM (THU)MAY 12 2005 14:56/ST. 14:55/No. 6808562376 P 1

MARLIN GOHLKE 001

Post-it® Fax Note 7671	Date	# of pages
To Danielle	From Linda	
Co./Dept.	Co.	
Phone #	Phone #	
Fax #	Fax #	

SGS

May 12, 2005

ALPHA COAL SALES CO., LLC
One Energy Place
Latrobe, PA 15650

Sample identification by
ALPHA COAL SALES CO., LLC

Kind of sample reported to us	Calculated Composite of Coal Loaded to Vessel
Sample taken at	Pikeville, KY
Sample taken by	SGS Minerals Services
Date sampled	------
Date received	May 10, 2005

CONSIGNMENT:	Elbow
TONNAGE:	15068.00
NO OF CARS:	158
VESSEL:	John J. Boland

Coal sampled and analyzed at mine end by SGS Minerals Pikeville, KY

Analysis Report No. 68-75330C

PROXIMATE ANALYSIS

	As Received	Dry Basis		
% Moisture	5.81	xxxxx		
% Ash	7.22	7.67		
% Volatile	35.30	37.48		
% Fixed Carbon	51.67	54.85		
	100.00	100.00		
Btu/lb	12977	13778	MAF	14923
% Sulfur	0.71	0.75		

FUSION TEMPERATURE OF ASH, (°F)

	Reducing	Oxidizing
Initial Deformation (IT)	2640	xxxx
Softening (ST)	2690	xxxx
Hemispherical (HT)	2700+	xxxx
Fluid (FT)	2700+	xxxx

FREE SWELLING INDEX = 5.0

CARFERRY
2005
ALPHA COAL SALES

Respectfully submitted,
SGS NORTH AMERICA INC.

Coal Laboratory

6

Post-it® Fax Note 7671

Date	# of pages
To	From
Co./Dept.	Co.
Phone #	Phone #
Fax #	Fax #

SGS

June 17, 2004

ALPHA COAL SALES CO., LLC
One Energy Place
Latrobe, PA 15650

Sample identification by
ALPHA COAL SALES CO., LLC

Kind of sample reported to us: Coal

Sample taken at: C & O Dock, Toledo, OH

Sample taken by: SGS Minerals Services

Date sampled: May 20, 2004

Date received: May 20, 2004

TONNAGE: 9829.38

VESSEL: R.Reiss

CARFERRY
2004
ALPHA COAL SALES

Analysis Report No. 91-6911

PROXIMATE ANALYSIS

	As Received	Dry Basis
% Moisture	5.76	xxxxx
% Ash	8.13	8.63
% Volatile	35.41	37.57
% Fixed Carbon	50.70	53.80
	100.00	100.00
Btu/lb	12828	13612
% Sulfur	0.74	0.79
MAF Btu		14898
Alk. as Sodium Oxide	0.15	0.16

ULTIMATE ANALYSIS

	As Received	Dry Basis
% Moisture	5.76	xxxxx
% Carbon	70.62	74.94
% Hydrogen	4.61	4.89
% Nitrogen	1.41	1.50
% Sulfur	0.74	0.79
% Ash	8.13	8.63
% Oxygen(diff)	8.73	9.25
	100.00	100.00

FUSION TEMPERATURE OF ASH, (°F)

	Reducing	Oxidizing
Initial Deformation (IT)	2600	xxxx
Softening (ST)	2640	xxxx
Hemispherical (HT)	2700+	xxxx
Fluid (FT)	2700+	xxxx

FREE SWELLING INDEX = 3.0

MEMBER ACIL

Respectfully submitted,
SGS NORTH AMERICA INC.

James P. Nelson

Cleveland Laboratory

7

MINERAL LABS, INC.

MLI MINERAL LABS, INC.
Box 549
Salyersville, Kentucky 41465
Phone (606) 349-6145

OMPANY REQUESTING ANALYSIS:

Date Analyzed: 4/01/03

Lab No.: 013040060 3467

Sample Taken By: CUSTOMER

LAKE MICHIGAN CARFERRY SERVICE
701 MARITIME DRIVE
PO BOX 708
ATTN: CHUCK LEONARD
LUDINGTON, MICHIGAN 49431

2003

Sample I.D.:
IL-IN;SAMPLE B;PO# 2003-395;ATTN:JAMES E. ANDERSON;18.00

Coal Purchased from GE Chemical

PROXIMATE ANALYSIS	As Received	Dry Basis	M.A.F. B.T.U.
% Moisture	5.23		
% Ash	5.40	5.70	
% Volatile	XXX	XXX	
% Fixed Carbon	XXX	XXX	
B.T.U.	13,053	13,773	14,065
% Sulfur	0.47	0.50	

ULTIMATE ANALYSIS	As Received	Dry Basis
Moisture	XXX	
Carbon	XXX	XXX
Hydrogen	XXX	XXX
Nitrogen	XXX	XXX
Chlorine	XXX	XXX
Sulfur	XXX	XXX
Ash	XXX	XXX
Oxygen (diff.)	XXX	XXX

- SULFUR FORMS -		
% Pyritic Sulfur	XXX	XXX
% Sulfate Sulfur	XXX	XXX
% Organic Sulfur	XXX	XXX
% Total Sulfur	XXX	XXX
T-250 Temp. of Ash	XXX	XXX

- FUSION TEMPERATURE OF ASH -	Reducing	Oxidizing
Initial	2360 °F	XXX °F
Softening	2440 °F	XXX °F
Hemispherical	2500 °F	XXX °F
Fluid	2620 °F	XXX °F

- MINERAL ANALYSIS -	% Wt. Ignited Basis
Phos. pentoxide, P_2O_5	0.50
Silica, SiO_2	44.96
Ferric oxide, Fe_2O_3	15.13
Alumina, Al_2O_3	29.41
Titania, TiO_2	1.27
Lime, CaO	2.03
Magnesia, MgO	0.80
Sulfur trioxide, SO_3	1.91
Potassium oxide, K_2O	1.03
Sodium oxide, Na_2O	0.43
Undetermined	2.53

Base/Acid Ratio XXX

% Mercury XXX

Water Soluable Alkalies

As Na_2O XXX

As K_2O XXX

- HARDGROVE GRINDABILITY INDEX XXX
- FREE SWELLING INDEX XXX
- EQUILIBRIUM MOISTURE XXX

5040503

Submitted By [signature]

LMCF00033

8

SGS

ADDRESS ALL CORRESPONDENCE TO:
COMMERCIAL TESTING & ENGINEERING CO.
1818 ISLAND CREEK ROAD
PIKEVILLE, KY 41801
TEL: (606) 438-2511
FAX: (606) 437-4657

December 19, 2003

CARDIGAN COAL & COKE CORP.
P O BOX 120582
COVINGTON KY 41012
Mr. Charles E. Welsh

Sample identification by

SAMPLE ID

Baystar #2
Stoker

Kind of sample reported to us: Coal

Sample taken at: xxxx

Sample taken by: xxxx

Date sampled: ------

Date received: December 18, 2003

(sample delivered)

Sample Weight = 28.7 lbs

Analysis Report No. 48-146769

PROXIMATE ANALYSIS

	As Received	Dry Basis		
% Moisture	5.33	xxxxx		
% Ash	9.50	10.03		
% Volatile	14.53	15.35		
% Fixed Carbon	70.64	74.62		
	100.00	100.00		
Btu/lb	13388	14142	MAF	15719
% Sulfur	0.54	0.57		

FUSION TEMPERATURE OF ASH (ºF)

	Reducing	Oxidizing
Initial Deformation (IT)	2700+	xxxx
Softening (ST)	2700+	xxxx
Hemispherical (HT)	2700+	xxxx
Fluid (FT)	2700+	xxxx

MEMBER ACIL

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

C

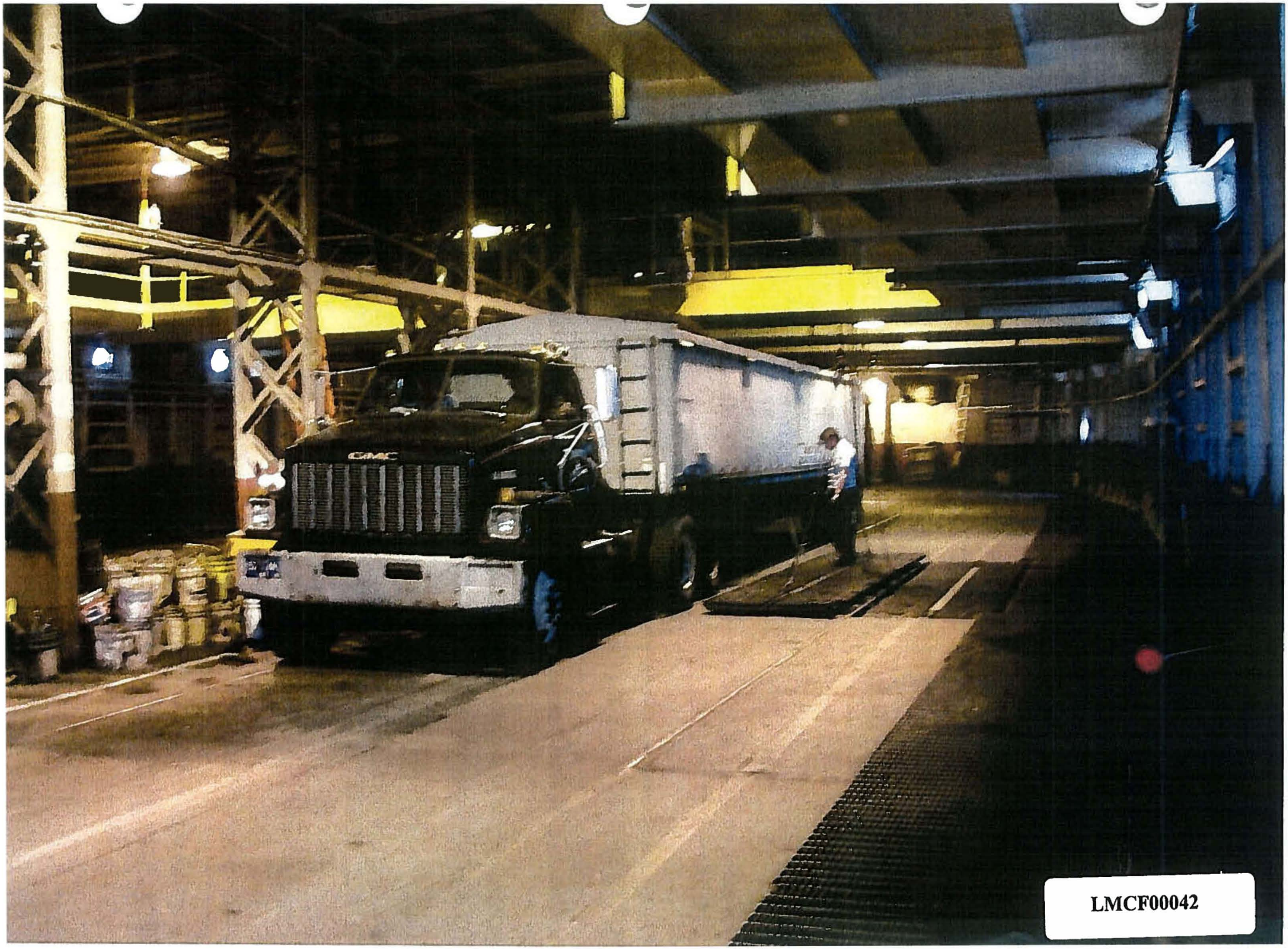
1

LMCF00038

LMCF00040

3

LMCF00041



LMCF00042

4

LMCF00044

D

Printed: [illegible]

Trans. Date: [illegible]

MANITOWOC PUBLIC UTILITIES

Manitowoc Public Utilities
PO Box 1090
1303 S 8th Street
Manitowoc WI 54221-1090
(920) 683-4600
Fax: (920) 686-4348

PURCHASE ORDER

Number: P0012457

Email sent to:

Vendor: 744007

C REISS COAL COMPANY
P O BOX 188
GREN BAY WI 54305

Ship To: 701 COLUMBUS ST
MANITOWOC WI 54220
ATTN: DALE KOCH

Material Received

Date	Qty	Item # or Description	Initials
		All Material Received - PO Complete	

Item	Item Description	Units	Unit Price	Extended Price
	DALE KOCH - POWER PLANT			
1	APPROX. 7,500-10,000 TON OF STOKER COAL PER YOUR QUOTE DATED 12/20/06 AND REVISED ON 1/16/07 FOR USE BY LMC DELIVERY IN JULY 2007 QUALITY OF THE FUEL OFFERED AS FOLLOWS: EAST KENTUCKY BLACK DIAMOND STOKER COAL SIZE : 1 1/4" X 1/4" FINES: 10% MAX -LESS THAN 1/4" AT MINE MOISTURE: 6% MAX ASH: 8% FUSION: 2700 DEGREES F. MIN. BTU: 13200 MIN SULPHUR: 1.0% MAX FAS: C. REISS COAL DOCK, MANITOWOC WISCONSIN BELOW SPECIFICATION PERTAIN TO ITEM 1: - WEIGHT TO BE DETERMINED BY CERTIFIED RAIL CAR WEIGHTS AT TIME OF VESSEL LOADING - DELIVERY TO BE COORDINATED BY MPU - QUALITY DETERMINATION: AS DETERMINED BY A MUTUALLY AGREED TO INDEPENDENT TESTING	7,500.00 TON		

RECEIVING COPY

CONTINUED

ORIGINATOR: DALE KOCH	DISCOUNT:
TERMS:	ADDL. CHARGES:
	TOTAL:

Item	Account	Amount	Item	Account	Amount
*	E4I1-25401-151953-4595-				

LMCF00047

P0012457

Printed: 01/25/2007

Trans. Date: 01/22/2007

MANITOWOC PUBLIC UTILITIES

Manitowoc Public Utilities

PO Box 1090
1303 S 8th Street
Manitowoc WI 54221-1090
(920) 683-4600
Fax: (920) 686-4348

PURCHASE ORDER

Number: P0012457

Email sent to:

Vendor: **744007**

C REISS COAL COMPANY
P O BOX 188
GREN BAY WI 54305

Ship To: 701 COLUMBUS ST
MANITOWOC WI 54220
ATTN: DALE KOCH

Material Received			
Date	Qty	Item # or Description	Initials
	All Material Received - PO Complete		

Item	Item Description	Units	Unit Price	Extended Price
	LABORATORY AT RAILCAR LOADING USING ASTM METHOD, D2234-02; (AT LEAST AS RELIABLE AS I-C-2 AUTOMATIC SAMPLING PART STREAM CUT) PREPARATION OF SAMPLES TO BE DONE ACCORDING TO THE LATEST VERSION OF ASTM D-2013. SAMPLES TO BE TESTED USING THE LATEST VERSIONS ASTM D-3177, OR D-4239, D-5865, D-3174, D-3173 AND D-3176 FOR % MOISTURE, % SULPHUR, % ASH, BTU FUSION, FSI, AND SIEVE ANALYSIS PERFORMED PLUS A FULL ULTIMATE TEST AND MINERAL ASH ANALYSIS INCLUDING BERYLLIUM AND MERCURY - RESULTING REPORTS TO BE FORWARDED TO MPU PROMPTLY - SAMPLING AND TESTING TO BE PAID FOR BY C. REISS - CALORIFIC ADJUSTMENTS: IF THE VALUE IS BETWEEN 13,100 - 13,300 NO ADJUSTMENT IN THE PRICE ADD .0034 PER BTU ABOVE 13,300 OR SUBTRACT .0034 PER BTU BELOW 13,100 BTU - MPU RESERVES THE RIGHT TO A PRICE ADJUSTMENT ON THE FUEL DELIVERED TO MANITOWOC			

RECEIVING COPY

CONTINUED

ORIGINATOR: DALE KOCH	DISCOUNT:
TERMS:	ADDL. CHARGES:
	TOTAL:

Item	Account	Amount	Item	Account	Amount

P0012457

Printed: 01/25/2007

Trans. Date: 01/22/2007

MPU
MANITOWOC PUBLIC UTILITIES

Manitowoc Public Utilities

PO Box 1090
1303 S 8th Street
Manitowoc WI 54221-1090
(920) 683-4600
Fax: (920) 686-4348

PURCHASE ORDER

Number: P0012457

Email sent to:

Vendor: 744007

C REISS COAL COMPANY
P O BOX 188
GREN BAY WI 54305

Ship To: 701 COLUMBUS ST
MANITOWOC WI 54220
ATTN: DALE KOCH

Material Received

Date	Qty	Item # or Description	Initials
		All Material Received - PO Complete	

Item	Item Description	Units	Unit Price	Extended Price
	FOR USE BY LMC IF THE FUEL DOES NOT MEET THE QUALITY LISTED.			

RECEIVING COPY

ORIGINATOR: DALE KOCH	DISCOUNT: .00
TERMS:	ADDL. CHARGES: .00
	TOTAL:

Item	Account	Amount	Item	Account	Amount

P0012457

LMCF00049

CONFIDENTIAL BUSINESS INFORMATION

BATES NO. LMCF00051 – LMCF00058

3

LAKE MICHIGAN CARFERRY SERVICE
701 MARITIME DRIVE
P.O. Box 708
LUDINGTON, MICHIGAN 49431
(231) 843-1904
FAX (231) 843-4558

purchase order

Date: 04/16/03 P.O. No.: 2003/00489
Page No.: 01

VENDOR:
CARDIGAN COAL & COKE CORP.
P.O. BOX 120582
COVINGTON, KY 41012-0582

(859) 442-8240 Ext. 0000
(859) 442-8245 Ext. 0000

SHIP TO:
Lake Michigan Carferry Service
701 Maritime Drive
P.O. Box 708
Ludington MI 49431

SHIP VIA	FOB		YOUR #	OUR #
Truck/Com Car	Origination			13751

ITEM NUMBER	DESCRIPTION	ORDERED / UNIT MEASURE	UNIT PRICE / ITEM DISCOUNT	EXTENDED PRICE
	DELIVERY OF TRUCKS TO LUDINGTON TO BE SCHEDULED BY JIM ANDERSON.			
150-5306-800	AMONATE SMOKELESS COAL	CBI	CBI	CBI
	CBI			

6/17

FOR DELIVERY TO LUDINGTON
STARTING AROUND MAY 10TH, 2003

SUBTOTAL / TAX	CBI
NET TO PAY	$ CBI

LMCF00060

4

LMCF00061

LAKE MICHIGAN CARFERRY SERVICE
701 MARITIME DRIVE
P.O. Box 708
LUDINGTON, MICHIGAN 49431
(231) 843-1904
FAX (231) 843-4558

purchase order

Date: 03/05/03 P.O. No.: 2003/00267
Page No.: 01

VENDOR:
GENERAL CHEMICAL INDUST. PROD.
90 EAST HALSEY ROAD
PARSIPPANY, NJ 07054

(000) 000-0000 Ext. 0000
(000) 000-0000 Ext. 0000

SHIP TO:
Lake Michigan Carferry Service
701 Maritime Drive
P.O. Box 708
Ludington MI 49431

IP VIA	FOB		YOUR #	OUR #	
Truck/Com Car	Origination			3235	

DESCRIPTION / ITEM NUMBER	ORDERED / UNIT MEASURE	UNIT PRICE / ITEM DISCOUNT	EXTENDED PRICE
150-5306-800 SCREENED COAL 150-5306-800 UNSCREENED COAL	CBI	CBI	CBI

DELIVERY OF COAL TO BE
SCHEDULED BY JIM ANDERSON.

SUBTOTAL TAX	CBI
NET TO PAY	CBI

LMCF00062

5

CONFIDENTIAL BUSINESS INFORMATION

BATES NO. LMCF00064 – LMCF00087

E