

US EPA ARCHIVE DOCUMENT

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**VIA EMAIL ONLY**

October 29, 2008

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1200 Pennsylvania Avenue, N.W.  
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*Attention: Docket ID No. EPA-HQ-OW-2008-0055  
Additional Information 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:

We are writing on behalf of Lake Michigan Carferry, Inc. ("LMC") as a follow-up to our October 10 and October 27 submissions regarding the referenced matter. This letter addresses two issues. First, it provides additional information regarding the appropriate Best Available Technology Economically Achievable ("BAT") for the boiler effluent (coal ash) from the coal-fired boilers that generate steam to operate the Badger, a large car ferry operating on Lake Michigan, whose coal ash boiler effluent discharge is currently covered by 40 C.F.R. §122.3(a). Additionally, we explain why inclusion of this stream in the final VGP is a necessary, essential and logical outgrowth of the proposed VGP.

Current BAT

There are no known technologies currently available that either are demonstrated in practice or shown to be economically achievable to reduce the vessel's coal ash effluent to zero. For BAT, the technology must be both available *and* economically achievable. 33 U.S.C. § 1311(b)(2)(A). Therefore, BAT is the continued bottom ash discharge plus non-numeric Best Management Practices ("BMPs"). Although BAT is not currently zero discharge, LMC is committed to the possibility of developing new technologies or processes over the next several years that could potentially become a new BAT if proven technologically feasible and economically achievable to attain zero discharge. Based on EPA precedent, the agency could

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establish a phased or rolling BAT as control technology develops over time, as we suggested in our comments.

EPA must conduct an analysis to determine the current BAT. This is an outcome neutral process that cannot favor zero discharge before the analysis has begun. Factors used to assess current BAT include (1) age of the equipment, (2) process employed, (3) engineering aspects of the application of various types of control techniques, (4) potential process changes, (5) costs of achieving the reduction, and (6) non-water quality impacts deemed appropriate by the Administrator. 33 U.S.C. § 1314(b)(2)(B). In determining what is economically achievable, EPA must also consider the impact on profitability and loss of jobs. *BP Exploration & Oil v. EPA*, 66 F.3d 784 (6th Cir. 1995) (court upheld EPA's determination that an available industry practice was not BAT due to unreasonably high costs). *Waterkeeper Alliance Inc v. EPA*, 399 F.3d 486 (2nd Cir. 2005) (EPA acted reasonably in rejecting technologies that although available would have resulted in 11% facility closures industry-wide). Our prior analysis discussed how these factors applied to the Badger, which is summarized below.

#### (1) Age of the Equipment

The ash removal system, which consists of a vacuum jet and associated intricate piping built into the vessel structure, is the original 1952 design. (October 27 submission at 4). The existing equipment cannot be modified to achieve zero discharge. Research would need to be conducted to determine if substantial and costly new equipment can be designed, tested, developed, and installed and operated in a safe and economically achievable manner to attain zero discharge.

#### (2) Various Control Techniques

No coal-fired vessel operated in the past employed technology that eliminated ash effluent discharge. Further, there are no demonstrated control technologies currently being used in the vessel industry to control ash effluent discharges. Technology transfer is not available in this case, since there is no other higher level of performance being achieved within the industry. Even assuming, *arguendo*, that an undemonstrated technology (e.g., holding coal ash onboard) is technologically available to achieve zero discharge, such technology is not economically achievable, and thus not BAT.

In the proposed VGP, EPA discussed the costs of retaining particular discharges on board and then discharging them to an appropriate facility on land when the vessel reaches a port. In our prior submission, we discussed this potential option for the coal ash such that BAT would be zero discharge based on requiring the manual removal of ash as was done during the October 12 trial. October 27 submission at 8. Under that scenario, for each round trip taken by the Badger, 3 days

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of no operation would be required to remove the ash. We previously indicated that this would result in a 54% reduction in trips and a concomitant 54% reduction in gross revenues. There is no question that this would require that the vessel be shut down and the company will be put out of business.

On reflection, however, it appears we vastly underestimated the impact of using this method to eliminate discharge of the ash. We assumed in our October 27 submission that the Badger would be out of service 2-3 days per week of operation. In fact, based on our October 12 experiment, a 2-3 day shutdown period would be needed to remove ash from 12 hours of operation (one round trip). This would essentially reduce the Badger to 1 or 2 round trips **per week**, instead of 2 **per day** – **an 86% reduction in business**. This is unquestionably a completely unviable option economically. As explained below, the Badger would be shut down.

### (3) Engineering Aspects

The ash removal system (described in detail in the answer to Question 2 in the October 27 Response to the EPA's § 308 of the Clean Water Act Information Request), consists of a vacuum jet and associated piping is the original 1952 design. The existing ash removal equipment is an integrated system that cannot currently be redesigned or modified to achieve zero discharge while the vessel is operating. This could include a complete redesign of the boiler, vacuum system, economizers, and collectors. Substantial and costly new equipment would have to be researched, designed, developed, and installed to achieve zero discharge. This could take 3-4 years. Just as EPA has recognized with all vessels, even assuming the technology could be developed, onboard space is extremely limited. Weight distribution and bulkhead integrity issues are critical to vessel safety, and therefore the technology may not be safe and feasible.

### (4) Potential Process Changes

There are no other technologies currently available that could be transferred to the Badger to achieve zero discharge. In our prior submission (October 10 submission at p. 13; October 27 submission at p. 6-8, 9-10; 308 Submission, Attachment B and Photos 4, 7, 9, and 10) we outlined in detail one hypothetical system that might work to achieve zero discharge if it can be designed and installed. This is described above and in our prior submission and it theoretical.

### (5) Costs

The costs of achieving zero discharge through the only known method – manually discharging ash by shutting down 2-3 days for every 12 hours of operation – is untenable, and the

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effects this would be devastating.<sup>1</sup> LMC could not economically bear these costs, which would result in a decision to shut down the vessel. This option would result in the direct loss of almost 300 jobs supported by the vessel's operations and a potential loss of over 1,000 jobs that, according to some studies are indirectly supported by the Badger's operations. Shutting down the Badger would wipe out the entire coal-fired car ferry industry in the U.S. This option would also result in significant economic impacts to the town of Ludington, Michigan and Manitowoc, Wisconsin, due to the tourism and ferry services provided by the Badger, which is estimated by some to reach \$40 million annually.

#### (6) Non-water Quality Impacts

As we explained in our prior submission, there are significant safety concerns regarding vessel stability with the onboard storage of the coal ash. (October 27 submission at 7). Redistribution of weight of the coal ash could potentially result in instability. Moreover, installation of new equipment must first receive Coast Guard and American Bureau of Shipping authorization. Finally, as a form of public and commercial transportation, the Badger provides ferry services to thousands of cars and trucks each year and saves an estimated 1.1 million gallons of gasoline and diesel fuel.

In sum, the costs of obtaining zero discharge immediately render a zero discharge BAT economically infeasible and unachievable at this time. Although BAT is not currently zero discharge, the possibility exists for BAT to be developed over the next several years that could potentially achieve zero discharge. LMC is committed to trying to do this as explained in our prior submission. Based on EPA precedent, the agency could establish a phased or rolling BAT as control technology develops over time, as we have suggested in our prior comments.

#### Inclusion of this discharge stream in the VGP is a direct and logical outgrowth of the proposal

Including the boiler effluent in the form of coal ash discharged from large car ferries is a necessary and logical outgrowth of the proposed VGP. Here, EPA proposed the VGP to cover "those discharges incidental to the normal operation of a vessel covered by the exclusion in 40 CFR 122.3(a) prior to any vacatur of that exclusion." VGP Fact Sheet at 26. Thus the agency gave clear notice to the public that any vessel previously covered by the exemption would be covered by the VGP. The Badger, like thousands of other unidentified vessels, logically falls

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<sup>1</sup> These costs are apart from the massive costs for boiler repair that are likely to be incurred by the thermoshock to the boiler system that occurs when the boilers are shut down and restarted repeatedly. They are designed for continuous operation.

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within this more specific category. More specifically, the agency identified large car ferries as being covered if they were previously exempt. The Badger falls within this category as well.

Recognizing that it was under significant time constraints and lacked extensive information about commercial vessel discharge streams (VGP Fact Sheet at 26), the agency sought to identify generically the kinds of discharge streams it thought should be covered by the VGP. It initially listed 28 potential discharge streams but was careful to note how each vessel is unique and its respective discharges unique. VGP Fact Sheet at 48. The EPA also made it very clear that it was not necessarily limiting the types of streams that would be considered for inclusion in the VGP to the 28 that it generally described.<sup>2</sup> The agency noted that it was **“specifically requesting public comment on the appropriateness of covering these effluent streams or discharge types in this permit, and [was] seeking input on any additional streams or discharge types that should be considered for coverage.”** VGP Fact Sheet at 28. (emphasis added).

In sum, the agency made it very clear to the public that (a) discharge streams that were previously covered by the exemption would be covered in the VGP; (b) large car ferries like the Badger were intended to be covered; (c) discharge streams from boilers generating steam that were covered by the exemption would be covered by the VGP; and (d) the agency was considering modifying or expanding that list based on public comment. The boiler effluent (coal ash) discharge from the Badger meets all of these criteria. Including it in the final VGP is, therefore, both a necessary and logical outgrowth of this proposal, and it is both reasonable and logical that the EPA include or modify the discharge streams proposed for coverage under the VGP, in the final VGP based on additional public input.

“[N]otice requirements do not require that the final rule be an exact replication of the proposed rule.” *Assoc. of Battery Recyclers, Inc. v. EPA*, 208 F.3d 1047, 1058 (D.C. Cir. 2000). Such inflexibility would require the agency to engage in an endless loop of proposals and comments, without ever finalizing the rule.<sup>3</sup> *Id.*, see also *South Terminal Corp. v. EPA*, 504 F.2d 646, 659 (1st Cir. 1974) (“Parties have no right to insist that a rule remain frozen in its vestigial form. ... A contrary rule would lead to the absurdity that in rule-making under the APA the agency can learn from the comments on its proposals only at the peril of starting a new procedural round of commentary”). Rather, so long as the final rule is a “logical outgrowth” of the proposed

<sup>2</sup> As we described in our October 10, 2008 submission, there are significant similarities between boiler blowdown generically described by the agency and the effluent in the form of coal ash discharged from a coal-fired steam boiler powering a car ferry such as the Badger.

<sup>3</sup> While the EPA has noted that the VGP is a permit and not a ‘rule’ we understand that the agency believes that for purposes of this particular discussion, the principles of administrative law are the same.



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rule, notice is adequate. *Assoc. of Battery Recyclers*, 208 F.3d at 1058. Put another way, if the proposed rule alerted the public that certain interests were at stake, such that it provided an opportunity to comment on those interests, the agency may appropriately take those comments into account when formulating the final rule. *South Terminal Corp.*, 504 F.2d at 659. *But see, National Resource Defense Council v. EPA*, 279 F.3d 1180 (9th Cir. 2002) (flexible standard set forth in final general permit was never published for comment in proposed permit.) Here, by contrast, the potential standards for coverage of vessel discharges are readily apparent from the face of the proposal.

The EPA also made it clear to the public in the VGP proposal that, based on the information before it, the appropriate effluent limits to apply to most of these streams were non-numeric, and were based on Best Professional Judgment in the form of BMPs. The agency noted that it reserved the right to alter that view based on information developed in the future, when the judicial order that imposed severe time constraints, was no longer at issue. VGP Fact Sheet at 48. It also clarified that management (**not** prohibition) of the discharge was the appropriate standard to apply for those types of discharges involving significant quantities of materials that could not be stored on board. VGP Fact Sheet at 49 (“it is not possible to prohibit these discharge categories under all circumstances”); *id.* at 57 (“EPA also recognizes that onshore disposal [of bilgewater] is not always a feasible alternative for larger vessels”); *id.* at 68 (describing BMPs for Boiler/Economizer Blowdown, noting that “achievable for these vessels to only discharge boiler blowdown further than 3 nm from shore”); *id.* at 74 (describing BMPs for Seawater Cooling Overboard Discharge, noting that the EPA has not prohibited the discharge of the heated seawater **because it is infeasible with existing vessel design to prohibit their discharge**”(emphasis added). This was primarily based on its conclusion that BAT was not the elimination of the discharge for technological and economic reasons. The boiler effluent (coal ash) for a large coal-fired steam boiler powering a car ferry meets all of these criteria.

Accordingly, there is no question that in all respects the boiler effluent in the form of coal ash that is discharged from a large car ferry powered by steam that is generated by boilers that use coal as fuel, is well within the scope of what was being considered by the agency in this permit development process. The same is true with respect to the effluent limits being considered. The agency said it was considering modifying or adding streams, and that is exactly what is being requested here.<sup>4</sup>

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<sup>4</sup> Even if the agency felt more public notice was needed, it is well within its discretion under these circumstances to include the stream in the VGP and offer the public post-issuance opportunity for additional notice and comment. *Levesque v. Block*, 723 F.2d 175, 188 (1st Cir. 1983) (“[c]ourts have, however, at times taken account of the quality of an agency's response to post-promulgation

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

Respectfully submitted,



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SS/Badger

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comments in determining whether to uphold a rule. When the response suggests that the agency has been open-minded, the presumption against a late comment period can be overcome and a rule upheld." ; *see also* *U.S. Steel Corp. v. EPA*, 605 F.2d 283, 291 (7th Cir. 1979) ("Given that the agency was clearly willing to consider, fully and objectively, all comments in the post-promulgation period, there is no reason to believe that its consideration of the comments would have been any different if completed before the effective date."). EPA has in the past considered comments after the promulgation of the final rule. *Id.* at 291.