



GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

GRAND RAPIDS DISTRICT OFFICE



LIESL EICHLER CLARK
DIRECTOR

January 27, 2021

Mr. Dave Walters
Grand Haven Board of Light and Power
1700 Eaton Drive
Grand Haven, Michigan 49417

Dear Mr. Walters:

SUBJECT: Closure Certification Denial, Grand Haven Board of Light and Power (GHBLP), JB Sims Generating Station, Unit 3 Impoundments - CCR Removal Documentation Report, Ottawa County

Staff of the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Materials Management Division (MMD) have reviewed your Unit 3 Impoundments - CCR Removal Documentation Report, dated December 11, 2020. The purpose of the technical review is to evaluate compliance with the requirements for coal ash impoundments contained in Part 115, Solid Waste Management, Michigan Compiled Laws 324.11501 et seq. of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended and administrative rules (Part 115). The Certification is denied for the following reasons:

First, MCL 324.11519b(9) specifies that the closure by removal is not complete until the owner or operator certifies compliance with the requirements of 40 CFR 257.102(c). Grand Haven Board of Light and Power (GHBLP) has not provided EGLE with a certification of completion of the requirements of 40 CFR 257.102(c).

Second, EGLE cannot determine whether the operation of the unit has affected the underlying soils and groundwater because GHBLP has not installed a groundwater monitoring system that represents the quality of background groundwater that has not been affected by leakage from a unit and represents the quality of groundwater hydraulically downgradient at the solid waste boundary. MCL 324.11519a(1)(h) requires GHBLP to implement a groundwater monitoring system which complies with Rule 299.4906.

GHBLP proposed utilizing a colorimetric test to document that coal ash was removed from the clay liner. For the following reasons EGLE does not agree that a single colorimetric sample (sample u3E-CS-03) is sufficient to document removal and decontamination of coal ash from the unit. GHBLP previously collected six samples of the liner but only utilized one sample to represent the entire liner. Although GHBLP demonstrated a relationship between colorimetric values and mixtures of coal ash in one of the six samples (sample u3E-CS-03), GHBLP has not provided information that demonstrates that the one sample's colorimetric properties would accurately represent all liner areas. In addition, the history of the site has been to augment the existing clay liner after some pond cleanout operations. No documentation on the properties or source of these additional clays has been provided.

The microscopy methodology provided did not include any preprocessing of the material to ensure that characteristic properties of bottom ash could be properly identified. In the photographs provided, fine grained materials covered all coarser grained materials making it

difficult to determine if the grains were coal ash or other material. The samples need to be prepared in a way so that coal ash can be identified through microscopic investigation.

Next, under MCL 324.11519b(9), closure by removal of a coal ash impoundment requires either certification of closure under 40 CFR 257.102(c) or certification "that testing confirms that constituent concentrations remaining in the coal ash impoundment or landfill unit and any concentrations of soil or groundwater affected by releases therefrom do not exceed the lesser of the applicable standards adopted by the department pursuant to section 20120a or the groundwater protection standards established pursuant to 40 CFR 257.95(h) and the department accepts the certification or if the constituent concentrations do exceed those standards, the department has approved a remedy consistent with R 299.4444 and R 299.4445 of the Part 115 rules.". Thus, in order to leave the clay liner in place, GHBLP must demonstrate that the clay liner left in place is not impacted by coal ash or coal ash releases. All samples collected from the clay liner exceed relevant Part 201 soil criteria indicating coal ash or coal ash leachate has impacted the liner. EGLE has previously provided the relevant criteria established pursuant to MCL 324.20120a(3). GHBLP provided information that indicated Selenium concentrations exceed Part 201 Groundwater Surfacewater Interface Protection (GSIP) criteria and Statewide Default Background values at all sample locations. Additionally, Lithium concentrations exceed Part 201 Non-Residential Water Protection Criteria and Statewide Default Background Levels at all sample locations. Several other constituents were also above respective criteria at individual points. As stated above, GHBLP's provided data indicates the liner is impacted by releases from the CCR unit, and in order to meet closure requirements under Part 115, the impacted liner areas must be decontaminated.

GHBLP provided a strategy for documenting the depth of coal ash contamination to the liner but did not provide a strategy for documenting the horizontal extents of contamination above background or respective Part 201 soil criteria. GHBLP must provide documentation demonstrating that contaminated areas of the liner have been decontaminated both horizontally and vertically. There is no documentation that the extent of impacted soils has been delineated. In order to achieve closure, GHBLP must provide this documentation and perform any additional work needed to document that both the horizontal and vertical extent of contamination has been removed.

GHBLP additionally has not demonstrated that it addressed all areas impacted by the impoundments. Specifically, the grid area investigated did not contain all areas that are adjacent to the Unit 3 impoundments utilized for ash storage and placement from the Unit 3 impoundment area. GHBLP staff should have conducted an appropriate inquiry and documented all areas where ash was stored/spilled prior to disposal when the units were in operation and routinely mechanically cleaned. In December 2020, EGLE provided to GHBLP photographic documentation from a 2014 EPA report of coal ash stored/spilled outside the gridded boundaries, which provides GHBLP with a limited snapshot of waste outside the grid area GHBLP has investigated. These areas identified in the 2014 EPA report and any additional impacted areas will need to be included for documentation of removal and decontamination.

While not noted as part of coal ash removal and impacted clay liner removal, several of the close-up photographs of grid points show large amounts of cracking and lack of a monolithic clay liner in the Unit 3 impoundments. This lack of a monolithic clay liner and the lack of construction documentation standards to ensure appropriate construction to install a monolithic

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clay liner indicates that the liner may have not prevented releases to the underlying soils/waste and to the groundwater below the unit.

Pursuant to MCL 324.11502(17), GHBLP was required to either submit closure certification to be reviewed and approved by EGLE by December 28, 2020 or be licensed by December 28, 2020. Since GHBLP did not submit an acceptable certification that met the December 28, 2020 deadline, Unit 3 was required to be licensed on December 28, 2020. GHBLP never submitted a license application for Unit 3 and thus, does not have an operating license for Unit 3 in violation of MCL 324.11512(2). Unit 3 is therefore considered an open dump. MCL 324.11502(17).

This letter details the state law requirements under Part 115 with which GHBLP must comply for Unit 3. Compliance with state law does not obviate the obligation that GHBLP comply with federal law, including the United States Environmental Protection Agency's coal combustion residuals program and its closure requirements.

If you have any questions, please contact me at via email at unseldt@michigan.gov or by telephone at 616-490-8097.

Sincerely,



Timothy J. Unseld, Environmental Engineer
Grand Rapids District Office
Materials Management Division

cc: Mr. Eric Booth, GHBLP
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