

May 14, 2021

Project No. 21464216

**Erik Booth, P.E.**

Grand Haven Board of Light and Power  
1700 Eaton Drive  
Grand Haven, MI 49417

## **FUTURE SITE USE REQUIREMENTS FOR THE PROPOSED HARBOR ISLAND REDEVELOPMENT PLANS, FORMER J.B. SIMS GENERATING STATION PROPERTY**

Dear Mr. Booth:

Golder Associates Inc. (Golder) has prepared this letter to describe anticipated conditions of the site and potential use restriction following completion of ongoing mitigation activities at Grand Haven Board of Light and Power's (GHBLP) former J.B. Sims Generating Station (JBS) property. It is our understanding the site is being prepared for potential redevelopment that will include a proposed combined heat and power facility (to serve as an electrical peaking resource and heat to the downtown snowmelt system), an operations and technology center, incorporation of a local community solar garden, and space for emerging technologies such as battery storage. Additionally, we understand that a portion of the property will be redeveloped as an expansion to linear park for increased public use. Redevelopment of the property will allow GHBLP to provide heat and power by implementing proven, advanced technologies that improve reliability, rate stabilization, and environmental sustainability.

### **SUMMARY OF IMPACTED AREAS**

There are three categories of coal combustion residuals (CCRs) and coal impact on site and a former city dump that have ongoing and anticipated mitigation activities. Mitigation is being completed under the regulatory oversight of the Michigan Department of Environment, Great Lakes and Energy (EGLE) and the United States Environmental Protection Agency (EPA). More specifically, the three areas are:

- 1) **CCR Surface Impoundments** – Closure of the CCR impoundments is ongoing with closure of the Unit 3 Impoundments (pending closure acceptance) and the closure of the inactive Units 1&2 Impoundment to be completed in the future. Closure of Unit 3 Impoundment was completed by removal of CCRs down to the existing clay liner. Sampling and analysis of the remaining soil is ongoing as are negotiation of final closure criteria with EGLE and EPA. Closure measures for the inactive Units 1&2 Impoundment are being evaluated and are subject to approval by EPA and EGLE. It is anticipated that the inactive units Impoundment may be closed in place by construction of a permanent cover system, or it may be closed by removal. Groundwater monitoring is ongoing and is expected to continue for many years in the vicinity of the surface impoundments after redevelopment.

Development (solar garden construction) of the Unit 3 Impoundment area can proceed upon regulatory acceptance of the Unit 3 closure, no matter if it is accepted as currently closed or if any additional work, like

removal of the existing clay liner, is required. Inactive Unit 1&2 Impoundment closure is more complicated and will require more time as the final closure action and timing is being developed with the EGLE and EPA. However, future development is anticipated to be available with appropriate engineering controls and regulatory approval.

- 2) **CCR Materials Historically Beneficially Reused as Fill** – CCR material present below and in the vicinity of the former generating facility and suspected to be below the electrical substations resulted from the materials being beneficially reused as construction fill prior to development in these areas. Additionally, portions of the area were used as a public waste dump which we understand ceased operations over 50 years ago. Use of CCR as fill and construction over historic municipal waste is consistent with the standard of practice at the time before the current regulatory regimes were adopted. CCR materials under the foundation of the former generating facility were removed to the extent feasible during the demolition of the facility. GHBLP hired Golder to provide guidance and oversee removal of the CCR material under the foundation of the former coal plant. In general, CCR removal progressed until soil, groundwater, or a mixture of ash and trash from the historic waste disposal was encountered. Excavation ceased when materials were reached that would provide an appropriate subbase for future development. Therefore, limited amounts of residual mixed CCR and waste material remain in these areas as well as in areas away from the plant. The excavated areas had a visual separation marker installed and were backfilled with clean sand following CCR removal. Development of the proposed combined heat and power facility may continue in this area if due care restrictions described in the following paragraphs are followed.
- 3) **Closure of Coal Pile Area** – Coal remaining in the former coal yard following closure of the generating facility has been removed. The underlying soil has some coal impact remaining that is to be removed. It is anticipated that soils in the coal yard will only have minimal amounts of coal following removal and will achieve EGLE requirements for clean closure once removal is completed. As such, this area is not anticipated to impact future development for increased public use.

## FUTURE USE CONSIDERATIONS

Some potential future uses of the property may be prohibited by the CCR materials or underlying historical waste remaining on site as described by the previous paragraphs, however redevelopment as proposed is possible. Due care should be exercised during and following any proposed development. Due care considerations, based on what is currently known about the site and proposed development, may include:

1. Restrict the movement of potentially impacted material on site to prevent the spread of impact. Testing of the materials to assess impact should be completed if it is necessary to complete excavate and grading in potential impacted areas. Excavated impacted materials will be appropriately managed, disposed of, or consolidated in accordance with applicable regulations.
2. Work methods to protect site workers from any impacted materials identified may be required.
3. Future development must consider any cover system constructed over the impoundments and be completed in a manner that does not diminish the cover system's effectiveness. This may require regulatory review prior to complete the proposed development.
4. Periodic groundwater monitoring is anticipated to continue for many years, and the monitoring system should be protected during developments. Groundwater use at the site may also be restricted.

5. Development of a due care plan that reflects restrictions, if any, and that may reflect additional restrictions that might be imposed related to placement of wells or residential uses.
6. EGLE may require a restrictive covenant be developed to codify appropriate due care requirements for other future uses.

The due care requirements discussed in the letter are those resulting from known impacted materials based on Golder's understanding of current available studies at the site. These considerations are based upon the regulatory requirements of Part 115 (Solid Waste Management) and Part 201 (Environmental Response) of the Michigan Natural Resource and Environmental Protection Act (PA 451 of 1994 as amended), and of the EPA CCR rule (40 Code of Federal Regulations [CFR] 257 Subpart D; published in 80 FR 21302-21501, April 17, 2015). Additionally, regulatory requirements beyond those listed and wetland, floodplain, soil erosion sediment control, discharge permits, or construction methods for the proposed developments may be required.

Golder has prepared this letter at the request of the GHBLP for the purpose identified by the subject of this letter. Use of the information contained in this letter by anyone other than GHBLP is not permissible without the prior written authorization to do so from Golder. Golder is not responsible for independent conclusions, opinions, or recommendations made by others or otherwise based on the findings presented in this letter.

## CONCLUSION

The proposed master plan for the JBS property is not prevented by the CCR materials, underlying historical waste remaining on site described or past coal storage at the site. Development (solar garden construction) of the Unit 3 Impoundment area can proceed upon regulatory acceptance of the Unit 3 closure. Inactive Unit 1&2 Impoundment is anticipated to be closed in the future and future development is anticipated to be available with appropriate engineering controls and regulatory approval. Development of the proposed combined heat and power facility may continue in former Unit 3 building area if due care restrictions are followed. Finally, we anticipate that the coal yard will achieve EGLE requirements for clean closure once removal is completed thereby allowing future development for increased public use.

Golder appreciates the opportunity to present this evaluation to GHBLP. Please feel free to contact the undersigned with any questions or concerns you may have.

Sincerely,

**Golder Associates Inc.**



Blaine Litteral, P.E.  
Practice Leader



Tiffany Johnson, P.E.  
Principal

BL/TJ

CC: Paul Cederquist, GHBLP  
Arthur Siegal, Jaffe Law

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