

# NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Materials Management, Region 8  
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July 19, 2018

Bethany Acquisto, Ph.D.  
Senior Scientist/Group Manager  
Daigler Engineering, P.C.  
2620 Grand Island Boulevard  
Grand Island, NY 14072  
**Via email to: [bethany@jadenvegr.com](mailto:bethany@jadenvegr.com)**

Re: Engineering Report  
Leachate Management and Pond Remediation Plan  
Lockwood Ash Disposal Site  
Revised May 2018

Dear Dr. Acquisto,

The New York State Department of Environmental Conservation (the Department) has reviewed the above-referenced Engineering Report, which you submitted to this office on behalf of Lockwood Hills LLC on May 15, 2018. Based on our review and discussions during a meeting held on June 19, 2018, the Department offers the following observations regarding the proposed Constructed Wetlands Treatment System (CWTS) approach, which includes major obstacles and additional technical comments. The major obstacles listed below currently prevent the CWTS proposal from being acceptable to the Department for eventual inclusion in a modified SPDES permit. The additional technical comments are issues that will need to be addressed if the major obstacles are resolved and the CWTS approach is still proposed.

## **Major Obstacles**

- Associated SPDES effluent limits are currently being evaluated by Central Office Division of Water staff. Potentially, boron treatment will be needed. None is provided by the design proposed.
- Should other SPDES effluent limits change substantially in the water quality analysis (such as arsenic or selenium), the proposed design could be determined to be insufficient.
- Methods to prevent freezing conditions are not addressed for the cascade aerators and the sedimentation basin, which are the primary components performing the iron reduction. As currently submitted, this design will face these conditions, and not be effective at treatment.

### **Additional Technical Comments**

- The engineering report does not provide a sufficiently detailed design of the components. For instance, the drawings for the cascade aerators lack detail and the calculations for system sizing are not provided.
- The proposal does not explain how the system will operate under major storm events including consideration for such events coinciding with cell construction.
- General maintenance protocols need to be detailed for all components of the proposed design. For instance, the sediment pond clean-out protocols need to be detailed and a schedule provided, with triggers set for performing those protocols, so the Department can evaluate its adequacy.
- Trouble shooting for winter weather as well as access for maintenance need to be addressed.
- For the free water surface wetlands component, short-circuiting preventers need to be detailed and used; maintenance and emergency access needs to be detailed.
- The document does not explain the duration of time it will take for vegetation to adequately establish and thus, for the system to become completely functional.
- The document does not contemplate the eventuality that the system does not perform as expected and consequently does not account for an emergency contingency plan.
- There are no considerations for long-term care and maintenance through the landfill post-closure and custodial care periods.
- The document does not explain any special considerations when selecting a construction firm. A CWTS requires expertise not only during its design phase but also during the construction and operation and maintenance of the system.

Prior to further consideration, the proposed Engineering Report revised May 2018 needs to be modified to address the above comments and resubmitted to this office. Due the anticipated timeframes associated with plan revision, final design, approval, bidding, construction, and operation of the proposed CWTS, the Department is not confident that such a system will be in place and fully operational by the deadline of November 1, 2019 as required under the Consent Order (as revised July 10, 2017). No further extensions to this deadline will be granted due to timeframes required of one treatment method over another. As such, plans must be provided for an alternate and more expedient/readily-implementable treatment method (such as the use of holding tank(s) and hauling to a permitted POTW) that will be operational and in use no later than November 1, 2019 and will continue to be used until any other method (including but not limited to a CWTS) is approved for inclusion in a modified SPDES permit and fully operational. Such an alternate system would also provide a backup treatment method in the event that other treatment methods are not functional for any period in the future.

Bethany Acquisto, Ph.D.  
July 19, 2018  
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Should you have any questions regarding this letter, please contact the undersigned.

Sincerely,

A handwritten signature in blue ink that reads "Gregory B. MacLean". The signature is written in a cursive style with a large, stylized 'G' and 'M'.

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