

November 13, 2020

Rich Walton
Westmoreland Sanitary Landfill, LLC
111 Connor Lane
Belle Vernon, PA 15012-4519

Re: Westmoreland Sanitary Landfill
Plan Approval Application 65-00767C
Additional Information Deficiency Response

Dear Rich Walton:

As a follow up to the Additional Information response dated August 31, 2020, from Civil Design Solutions, Inc., and a response, dated September 23, 2020, from Perma-Fix Environmental Services, Inc. (Perma-Fix) on behalf of Westmoreland Sanitary Landfill (“WSL”) this letter is to inform WSL that the Department of Environmental Protection (“Department”) has yet to receive fully adequate response for the following information requested by the Department in the July 2, 2020, letter (Deficiency Letter):

- The Deficiency Letter asked the applicant to provide: “The state of the radionuclide emissions: particulate, gaseous, or other (please specify) and estimates of emissions for each state.” This information was not provided in the responses. Please provide this information as requested. The response should also include the bases for the conclusions.
- In the response letter, dated September 23, 2020, from Perma-Fix, emission rates from the evaporator were provided for total Radium in pCi/L of air. In the Deficiency Letter, the Department asked that radiological parameters to be broken apart to Radium 226 and Radium 228. This information was not provided in the responses. Please provide this information as requested.
- The September 23, 2020, response provided a list of assumptions used to calculate the maximum total radium emitted through the evaporation process. Please provide the bases for the assumption that 99% of the radium goes into the sludge and 1% is evaporated. Include any applicable supporting documentation. This is particularly important given the fact that the data provided seems to indicate that radium is not removed with the solids in the treatment system (see comment below) and therefore would remain in the water column going to the evaporator.
- The Deficiency Letter stated that “the calculated radiological parameter concentration level at the outlet of the evaporator stack should be compared to the United States Nuclear Regulatory Commission’s limits and “less than unity” rule specified Standards for Protection Against Radiation, 10 CFR 20, Appendix B and submitted to the Department for review.” This

information was not provided in the responses. Please provide this information as requested utilizing the worst-case analytical results from the WSL leachate samples. Include any supporting information for the calculations. Additionally, provide a correlation to determine the radionuclide content of the leachate that would result in the exceedance of unity.

- The results from the bench scale test provided in #5 of WSL's August 31, 2020, response were not consistent with the guarantee by Pentair of 99.97% reduction in TSS and 99.9% reduction in hydrocarbons. The test showed a hydrocarbon reduction of 99.4% and TSS reduction of 94.4%. Provide more information that demonstrates that the applicant can achieve the manufacturer's guarantee reductions in practice. Include any applicable supporting documentation.
- The Deficiency Letter asked the applicant to: "Please provide any data that shows a statistical correlation between both TDS and TSS removal and the removal of radiological parameters through the treatment system." WSL's August 31, 2020 response stated: As demonstrated by the Summary of Analytical Results table presented in Attachment D, the influent samples included Gross alpha in the range of -3.72 +/- 71.38pCi/L to 14.8 +/- 20.6 pCi/L, Gross Beta 353 +/- 67.1 pCi/L to 377 +/- 140 pCi/L, Radium-226 2.28 +/- 1.32 pCi/L to 3.39 +/- 1.41 pCi/L and Radium 228 3.99 +/- 2.06 pCi/L to 4.09 +/- 1.89 pCi/L. The effluent samples showed some values higher than the influent and some values lower than the effluent. Overall, there was no clear reduction or increase in radiological concentrations when comparing the effluent leachate samples to the influent leachate samples." Provide a detailed explanation supporting WSL's conclusion that "there is no clear reduction or increase in radiological concentrations".
- The Deficiency Letter asked the applicant to: "Provide a proposal which demonstrates: (a) that the air emissions from the evaporator will be equipped with reasonable and adequate facilities to monitor and record the emissions of radionuclide air contaminants (either appropriately sensitive radiation detectors or periodic analysis of the particulate matter collected during periodic air emissions source testing) and operating conditions which may affect the emissions of radionuclide air contaminants; (b) that the records of radionuclide air contaminants are being and will continue to be maintained; and (c) that the records of radionuclide air contaminants will be submitted to the Department at specified intervals or upon request." WSL's August 31, 2020, letter did not adequately address how the applicant will monitor and record emissions of radionuclide air contaminants from the evaporator. While the Department agrees that WSL should continue to monitor pre-treatment leachate for radiological pollutants after installation of the evaporator and HRT system, the Department does not agree that evaluating emissions monitoring systems should be deferred until after installation and startup of the evaporator. Pursuant to 25 Pa. Code § 127.12(a)(3) this evaluation must be done during the plan approval application process and prior to installation and startup of the evaporator. Please provide an updated emissions monitoring analysis and proposal that includes real time monitoring of radionuclide emissions. The analysis should be conducted as a top down analysis of monitoring options considering technical feasibility and monitoring effectiveness. Specify monitoring equipment and monitoring equipment location(s) and include manufacturers specifications for the equipment. Additionally, the response did not adequately address recordkeeping and did not provide "operating conditions which may affect the emissions of radionuclide air contaminants". Please provide an adequate response.

- The September 11, 2020, proposal from Lemos Labs, LLC, to conduct compliance stack testing on the leachate evaporation system did not include all of the testing requirements of the plan approval, including testing for PM10 (filterable and condensable), PM2.5 (filterable and condensable), and VOC. Although not currently part of the plan approval, testing for applicable radionuclides should also be considered. All testing protocols must be approved by the Department's Source Testing Section prior to conducting stack testing.
- Additionally, the Deficiency Letter stated "Depending on the results of the testing described above, the Department may require a Best Available Technology ("BAT") analysis that addresses radionuclide emissions. 25 Pa. Code §127.1 and §127.12(a)(2) and §127.12(a)(4) and §127.12(a)(5). If required, the BAT analysis would include a ranking of the available control options for the evaporator and associated equipment in descending order of control effectiveness, the evaluation of removal of a greater percentage of suspended solids and radionuclides from the raw leachate prior to evaporation, and an evaluation of the technical feasibility of the available control options." Note that the BAT analysis may be required by the Department depending on the responses to the deficiencies identified in this letter.

Please provide the above requested information within sixty (60) days from the receipt of this letter. The response should be in both hard copy and electronically and sent to my attention at the email address shown below. As discussed, this letter is not a final action of the Department; final action on the pending applications will depend on, among other things, the data contained in the response to this request.

Sincerely,



Ronald A. Schwartz, P.E., BCEE
Regional Director
Southwest Regional Office

CC: AQ File: 65-767C