



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7**

11201 Renner Boulevard
Lenexa, Kansas 66219

Mr. Paul V. Rosasco
Project Coordinator
Engineering Management Support, Inc.
25923 Gateway Drive
Golden, Colorado 80401

Re: West Lake Landfill Superfund Site, Operable Unit 2, Waste Separation Evaluation Report

Dear Mr. Rosasco:

The U.S. Environmental Protection Agency has reviewed the West Lake Landfill, Operable Unit 2 (OU-2), Waste Separation Evaluation Report, submitted on July 10, 2020 by Civil and Environmental Consultants, Inc (CEC), on behalf of the Respondent, Bridgeton Landfill, LLC. This document was developed to support the Remedial Design of the Inactive Sanitary Landfill portion of OU-2.

The EPA has coordinated its review of this document with the Missouri Department of Natural Resources (MDNR) and the U.S. Army Corps of Engineers, Kansas City District. Based upon the comments generated during the review, the EPA is disapproving the document as submitted.

During the EPA's coordinated review of the document, on August 7, 2020, the Respondent informed the EPA of their intent to change contractors for the remaining OU-2 Remedial Design activities. The approved Remedial Design Work Plan (RDWP) and associated planning documents were completed and signed by CEC. A change in contractors will require changes and resubmittal of the Quality Assurance Project Plan and Sampling and Analysis Plan for approved portions of work under the RDWP.

In accordance with the Third Amendment to the Administrative Settlement Agreement and Order on Consent, VII 94-F-0025, the Respondent shall prepare a revised Waste Separation Evaluation Report that incorporates the enclosed comments and requested changes within 30 days of receipt of this letter. If you have any questions or concerns, please contact me either by phone at (913) 551-7910 or by e-mail at schwartz.jamie@epa.gov.

Sincerely,

Jamie Schwartz
Remedial Project Manager
Site Remediation Branch
Superfund and Emergency Management Division



Enclosure

cc: Mr. Ryan Seabaugh, MDNR

EPA Comments on the West Lake Landfill Superfund Site, Operable Unit 2, Waste Separation Evaluation Report, dated July 10, 2020

1. **General.** Three borings were completed to define the separation distance between the Bridgeton Landfill and the Inactive Sanitary Landfill (ISL) and identify the nature of the materials. Due to existing site infrastructure, which should have been identified prior to proposing the boring locations, two of the three borings were moved to within the known boundary of the ISL and waste was present in these two borings. Review of boring logs for previously installed wells PZ-107-SS and PZ-205-AS also indicated the presence of waste material. Based upon these field results and review of historic boring logs, this Waste Separation Evaluation did not effectively demonstrate a complete separation of waste between the Bridgeton Landfill and the ISL. While the current site conditions noted do not appear to indicate that active migration of the subsurface reaction (SSR) from the Bridgeton Landfill to the ISL is occurring or has occurred in the past, the conclusion that there is no potential for future migration to occur should be supported with continued monitoring and analysis. EPA requests the Respondents to either conduct additional characterization to definitively demonstrate native material exists between the two landfills or develop an ongoing monitoring program to evaluate temperature profile data and assess risk of the SSR migrating from the south quarry of the Bridgeton Landfill to the ISL.
2. **General.** Throughout the Waste Separation Evaluation Report, the area between the Bridgeton Landfill and the ISL is referred to as ‘*the “separation” area*’ with the word separation inside quotation marks. It is unclear why the report consistently uses quotation marks in this manner and the document should be revised to remove the unnecessary quotation marks.
3. **Section 1.0 Introduction, Page 2.** This section quotes an EPA comment which states “*The soil borings must be appropriately spaced between portions of the Inactive Sanitary Landfill and the South Quarry of Bridgeton Landfill. The locations of the soil borings should avoid existing site infrastructure.*” Existing infrastructure identified during field activities was cited as the reason for relocating two of the three boring locations. The existing infrastructure should have been identified during the planning process in order to avoid such changes in the field. Additionally, completing borings SB2 and SB3 within the limits of the waste did not meet the objective of the boring locations being appropriately spaced between the two landfills. Also see General Comment 1 above.
4. **Section 3.1 Previous Field Investigations (Aquaterra Report), Page 6.** This section discusses a September 2010 report prepared by Aquaterra. Pertinent sections, or the entirety of the report, should be included as an appendix.
5. **Section 3.2, Field Work, Page 7.** The first paragraph on this page states that HD Sonic Drilling performed the drilling activities. EPA was not notified of the selected drilling contractor, in accordance with the Section VIII, paragraph 21 of the Third Amendment to the Administrative Settlement Agreement and Order on Consent (VII 94-F-0025) which states “...Respondent shall notify EPA in writing of the names, titles, and qualifications of the

principal personnel, including contractors, subcontractors, consultants, and laboratories, to be used in carrying out the work.” The Respondent shall ensure notification in accordance with the ASAOC for all future contractors or subcontractors selected to perform site work.

6. Section 3.2, Field Work, Page 8.

- a. The second paragraph in this section states continuous columns of waste were not identified, and also states “...*waste materials observed were potentially from waste placement near the limits of waste (i.e. wind-blown waste, limited waste quantities mistakenly pushed outside of limits, etc.)*.” The photographs included as Appendix A appear to show relatively continuous columns of waste material, particularly in BH-2; however, it is difficult to determine if the photos show the full length of the core within the interval containing waste. Additionally, the boring logs do not identify this discontinuity. These statements are presumptive and do not adequately describe what was observed in the field. This section should be revised to remove these statements and more clearly describe the waste distribution.
- b. The third paragraph states that water levels were observed but were most likely as a result of drilling fluids. Water levels in some previous borings at this site were performed using methods that did not introduce water but showed similar water elevations and others showed lower water elevations. Therefore, the introduction of water during the drilling process doesn't necessary explain these water elevations, particularly with very similar levels 48 hours after drilling was completed. Revise this section to include a discussion on the quantity of drilling fluid introduced into each boring during the drilling process and additional information to support this assumption, otherwise this statement should be removed from the section.

7. Section 4 Review of Historical Photographs, Page 9. This section states that historical photographs and aerial imagery were reviewed and “*CEC could not identify any discernable waste placement in the “separation” area between the South Quarry Portion of the Bridgeton Landfill and the ISL.*” There is no discussion that details how this review was completed, and there is no supporting documentation provided such as site photographs or aerial photography. This section should be revised to include a discussion of how the evaluation was conducted, and an appendix should be added that includes all site photographs and all aerial photography evaluated. To support the review of the aerial photography, borings BH-1, BH-2, and BH-3 should be plotted on the aerials along with other site features, such as wells PZ-107-SS and PZ-205-AS, to demonstrate the statement included in this section.

8. Section 5.0, Potential Migration of Elevated Temperatures, Page 11. The second bullet on this page states “*Based upon historical tracking and review of the Bridgeton Landfill settlement (a distinct feature of the reaction) the reaction into the “separation” area did not occur when conditions were the most conducive (when the reaction was nearest the “separation” area)*”. To support this statement, provide a figure that illustrates the limits of settlement attributable to the SSR near the separation area.

9. Section 6.0 Conclusions, Page 12.

- a. The second bullet states the location of waste is not conducive for migration of the SSR. A cross-section illustrating this conclusion should be included as part of this report.
- b. The fourth bullet states “...*lithology of the “separation” area represents conditions which would be unsuitable for heat gain and therefore would not be conducive for sustaining or advancing a reaction.*” This section should be revised to clarify if the apparent lithology used for this conclusion is that of BH-1, as it was the only location which was drilled in the area between the landfills.
- c. The last bullet states “...*CEC believes there is no potential for the current or any future SSR to migrate through the “separation” area between the South Quarry and ISL.*” As previously stated, EPA agrees that the current site conditions noted do not appear to indicate active or past migration of the SSR from the Bridgeton Landfill to the ISL, but the conclusion that there is no potential for future migration to occur should be supported with continued monitoring and analysis. This conclusion should be revised accordingly.

10. Figure 1.

- a. There is a call-out note pointing to the waste in boring BH-2, indicating mixed waste was observed from 4 to 26 feet; however, the text and boring log indicate the mixed waste extends from 11 to 26 feet. Review the text and this figure and revise for consistency.
- b. This figure illustrates the delineation of the Bridgeton Landfill and the ISL; however, there are no existing wells located on this figure to review the boundaries shown. Revise this figure to include all well locations.