



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1 – NEW ENGLAND
5 POST OFFICE SQUARE – SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

Via Electronic Mail

March 10, 2021

Mr. Peter Britz, Environmental Planner
City of Portsmouth Planning Department
1 Junkins Avenue
Portsmouth, NH 03801

RE: Coakley Landfill Superfund Site – Request for Replicate Sampling

Dear Mr. Britz:

The United States Environmental Protection Agency (EPA) is in receipt of the January 19, 2021 letter conveying the *Fall 2020 Private Water Supply Well Sampling Results* prepared by CES, Inc. on behalf of the Coakley Landfill Group (CLG). That letter was sent to those property owners whose water supply wells were sampled in 2020 and provides the analytical results for 1,4-dioxane and per- and polyfluoroalkyl substances (PFAS) from samples collected in the spring and fall of 2020. With these analytical results, the CLG has now provided EPA with the analytical results from semi-annual groundwater, surface water, leachate seep and private water supply well sampling conducted in fall 2019, and spring and fall 2020.

As directed by EPA in its August 15, 2019 response to the CLG's *Draft 2018 Annual Summary Report*, the CLG expanded the list of PFAS compounds to be analyzed during semi-annual monitoring of all media to include 26 compounds. The CLG's contract labs began analyzing and reporting this expanded list beginning with the fall 2019 monitoring round. Based on conversations between EPA and the CLG, EPA understands that Vista Analytical Laboratory ("Vista") provided the analysis for the expanded list of PFAS compounds for samples collected in spring and fall 2020, and that Alpha Analytical Laboratory ("Alpha") performed the analysis for the fall 2019 monitoring round. One of the new compounds included in the expanded analysis and reporting for fall 2019, and spring and fall 2020 was perfluorooctanesulfonamide (PFOSA). As you know, PFOSA is not one of the four PFAS compounds for which New Hampshire has set a standard, and there is currently no federal regulatory standard or health advisory.

A review of the groundwater, surface water, leachate seep and private well sampling results for PFOSA shows significant difference in detection of the compound between the fall 2019 and the

spring and fall 2020 monitoring rounds, and between groundwater and private well samples. The fall 2019 results for groundwater, surface water, leachate seep and private wells, included only 3, 1, 1 and 5 detections of PFOSA, respectively, with all results being reported as estimated (J qualifier) and quantified at less than 10 ng/L. The samples analyzed by Vista in the spring and fall of 2020 reported numerous detections of PFOSA in all media, including detections in all (24) private wells sampled at concentrations substantially higher than those limited detections reported by Alpha.

Because different labs were used by the CLG for analysis of the fall 2019 and the spring and fall 2020 samples, and there being significantly different analytical results for PFOSA between the two labs, EPA is requesting that the CLG investigate and compare the analytical procedures of the two labs and confirm the historic results. Specifically, EPA requests that as part of the spring 2021 semi-annual monitoring event, the CLG collect replicate samples from select groundwater monitoring and private well locations and have those samples analyzed by three analytical labs, including Alpha and Vista, for the 26 PFAS compounds previously reported by Alpha and Vista. Having the replicate samples analyzed by at least three different labs will allow for comparison between Alpha and Vista, and against the results from a third independent lab. Samples shall be collected from at least six groundwater monitoring and six private well locations for the replicate sampling and analysis program.

The CLG shall have each laboratory use the same analytical method to ensure that the results will be directly comparable. The PFAS analysis shall be performed by liquid chromatography with tandem mass spectrometry (LC-MS/MS) using isotope dilution following the protocols of the United States Department of Defense and Department of Energy Consolidated Quality Systems Manual for Environmental Laboratories (DoD/DOE QSM 5.3). <https://www.env.nm.gov/wp-content/uploads/2020/11/DOD-DOE-Quality-Systems-Manual-Version-5.3-FINAL.pdf>

In addition, the CLG shall continue to investigate and compare the analytical procedures that were used by Alpha and Vista during the fall 2019, and the spring and fall 2020 sampling rounds to determine if lab procedures impacted the analytical results and reporting for each lab. The CLG shall also review the procedures implemented to collect and transport these samples to identify any variations that could have contributed to the large variability in results.

Within 20 days of receipt of this letter, the CLG shall submit a Scope of Work that details the replicate sampling and analysis to be conducted during the spring 2021 semi-annual sampling event. The Scope of Work shall detail the groundwater monitoring and private wells to be sampled and the labs that will be used for the analysis of the samples for PFAS compounds. The Scope of Work shall also outline the measures that the CLG is taking to investigate and compare the analytical procedures that were used by Alpha and Vista during the fall 2019, and the spring and fall 2020 sampling rounds.

If you have any questions or comments regarding this letter, you can contact me at (617) 918-1882 or Hull.Richard@epa.gov.

Sincerely,

Richard W. Hull

Richard W. Hull, Remedial Project Manager
New Hampshire and Rhode Island Superfund Program

cc: Andrew Hoffman, NHDES
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