



The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES



Robert R. Scott, Commissioner

EMAIL ONLY

July 19, 2021

John Gay
Casella Waste Management, Inc.
1855 VT Route 100
Hyde Park, VT 05655

Subject: **Bethlehem** – North Country Environmental Services (NCES) Landfill,
581 Trudeau Road, DES Site #198704033, Project #1737

April 2021 Water Quality Monitoring Results, prepared by Sanborn, Head &
Associates, Inc. (SHA), dated June 2, 2021

**Work Plan for Supplemental Site Investigation Response to February 17,
2021 Letter**, prepared by SHA, dated March 19, 2021

Dear Mr. Gay:

The New Hampshire Department of Environmental Services (NHDES) has reviewed the above-referenced documents for the NCES Landfill, as submitted on your behalf by SHA. The April Data Transmittal was prepared to comply with the ongoing monitoring and reporting requirements of the site Groundwater Management and Release Detection Permit **GWP-198704033-B-007** (the Permit). The Work Plan was prepared to comply with those requirements outlined in NHDES' February 17, 2021 letter.

Based on our review of the above submittals, we developed the comments that follow below. Comments requiring a response from Casella and/or SHA are summarized in ***bold/italicized font***.

1. As recommended within the December 21, 2020 [November 2020 Data Transmittal](#)¹, and discussed as part of NHDES' December 15, 2020 phone call with NCES and SHA, monthly supplemental sampling of monitoring wells B-304UR and B-304DR and surface water sampling locations S-1 (Main Seep), SF-1, S-108, and S-109 was conducted to more closely track 1,4-dioxane concentrations over time. The [April 2021 Data Transmittal](#)² evaluated the results of the monitoring which indicated generally decreasing concentrations of 1,4-dioxane and did not indicate 1,4-dioxane impacts to surface water sampling locations. As discussed previously, most recently in [NHDES' February 17, 2021 letter](#)³, the increase in 1,4-dioxane concentrations at the B-304 wells, along with the lowering of the 1,4-dioxane AGQS, has caused the B-304 wells to no longer be entirely adequate to monitor the downgradient extent of the 1,4-dioxane impact.

¹ <https://www4.des.state.nh.us/IISProxy/IISProxy.dll?ContentId=4893156>

² <http://www4.des.state.nh.us/IISProxy/IISProxy.dll?ContentId=4925698>

³ <http://www4.des.state.nh.us/IISProxy/IISProxy.dll?ContentId=4902820>

2. In response to detections of 1,4-dioxane above AGQS at monitoring wells B-304UR and B-304DR NHDES required, in our February 17, 2021 letter, a Work Plan for a Supplemental Site Investigation to delineate the downgradient extent of groundwater impacts in the area of the B-304 wells. The March 19, 2021 [Work Plan for Supplemental Site Investigation](#)⁴, prepared by SHA, outlines the proposed installation of a downgradient monitoring well couplet and the redevelopment of B-304DR monitoring well. As a result of the ongoing detections of 1,4-dioxane above AGQS the tasks outlined in the Work Plan are required to be completed at this time. Installation of the well couplet and rehabilitation of B-304DR should be completed by mid-September with an initial sampling round to follow in late September (analytical requirements are discussed below). NHDES understands the drilling contractor's schedule may be a limiting factor in meeting this installation date, as such if an extension is necessary please notify NHDES. Subsurface exploration and monitoring well construction logs shall be submitted to NHDES along with an updated site plan with the monitoring wells' surveyed location. ***Please proceed with those steps outlined within the March 19, 2021 Work Plan. Documentation of the well installations and updated site plan should be submitted in conjunction with the groundwater data transmittal noted below.***

3. As discussed above, an initial sampling round from the new well couplet and the rehabilitated B-304DR are required. Based on its proximity to B-304DR, and the reoccurring 1,4-dioxane detections, B-304UR is also required to be sampled in conjunction with this sampling event. The monitoring wells shall be sampled and analyzed for specific conductance @25°C, pH, chemical oxygen demand (COD), bromide, chloride, nitrate, total Kjeldahl-nitrogen (TKN), antimony, arsenic, barium, beryllium, cadmium, chromium, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium, silver, sodium, thallium, zinc, NHDES Waste Management Division Full List of Analytes for Volatile Organics (Full List VOCs) including 1,4-dioxane (using a 0.25 ug/l reporting limit), per- and polyfluoroalkyl substances (PFAS), and static water level elevation. Consistent with previous monitoring well installations at the site the new well couplet, and the work related to the redevelopment of B-304DR, should be completed a minimum of two weeks prior to their initial sampling to allow the wells to equilibrate. For planning purposes, a second sampling round shall be completed in conjunction with the November 2021 Permit monitoring event. Future monitoring of the new well couplet and the rehabilitated B-304DR will be reevaluated following review of the results of this second round. ***Sampling of the new well couplet and the B-304 couplet should be completed as outlined above. The results of the initial sampling round shall be submitted to NHDES within 45 days of sampling, and include an evaluation of the results and any associated recommendations.***

4. The April 2021 Data Transmittal also included Assessment Monitoring results for release detection monitoring wells MW-701 and B-918M, as required by [NHDES' October 21, 2019 letter](#)⁵. The April 2021 results at B-918M indicate increased PFAS concentrations as well as an increased number of PFAS detected versus the January 2021 round. We note detected concentrations of PFAS at MW-701 and the number of PFAS detected both increased, in comparison to recent Assessment Monitoring rounds. As discussed in the Data Transmittal perfluorohexanesulfonic acid (PFHxS) and 1H,1H,2H,2H-perfluorooctanesulfonic acid, aka

⁴ <http://www4.des.state.nh.us/IISProxy/IISProxy.dll?ContentId=4910540>

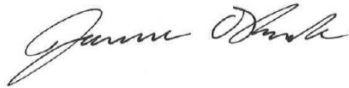
⁵ <https://www4.des.state.nh.us/IISProxy/IISProxy.dll?ContentId=4813101>

6:2 fluorotelomer sulfonic acid, (6:2 FTSA) were detected above laboratory reporting limits during the April 2021 round for the first time at MW-701. PFHxS was detected at 7.22 nanograms per liter (ng/L) and 6:2FTSA was detected at a concentration of 8.6 ng/L. **Assessment Monitoring shall continue as outlined in NHDES' October 21, 2019 letter at this time.**

5. Please note that NHDES is currently evaluating the June 18, 2021 [Initial Response Action Report](#)⁶ related to the May 2021 leachate spill and a response will be provided under separate cover.

If you have any questions with regard to our comments, please contact me directly at NHDES' Waste Management Division.

Sincerely,



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Board of Selectmen, Town of Bethlehem
Attention Health Officer, Town of Bethlehem

⁶ <http://www4.des.state.nh.us/IISProxy/IISProxy.dll?ContentId=4929489>