



HOUSATONIC REST OF RIVER MUNICIPAL COMMITTEE

October 3, 2023

Dean Tagliaferro, EPA Project Manager
GE-Pittsfield/Housatonic River Site
Boston, MA
Submitted via email to R1Housatonic@epa.gov

Re: Comments on the *Final Pre-Design Investigation Summary Report for Upland Disposal Facility Area*

Dear Mr. Tagliaferro:

The Housatonic Rest of River Municipal Committee (the Committee) respectfully submits the following comments on the *Final Pre-Design Investigation Summary Report for Upland Disposal Facility Area* (hereinafter, the UDF PDI Summary Report). The UDF PDI Summary Report builds on the Interim PDI Data Summary submitted in December 2022 and presents data and information obtained during implementation of the PDI activities through June 2023. Additional PDI activities are ongoing and are planned to be completed in late 2023. The results of those activities will be presented in an addendum to this UDF PDI Summary Report. The UDF Final Design Plan is due 60 days after EPA approval of the Final PDI Summary.

The Housatonic Rest of River Municipal Committee submitted comments on the *Upland Disposal Facility (UDF) Conceptual Design and UDF Pre-Design Investigation (PDI) Interim Data Summary* on February 13, 2023. At that time the Committee requested that Interim UDF Design Plan be developed and an independent and impartial contractor with appropriate expertise be engaged to provide a comprehensive presentation to the public at the 75% design phase (or thereabouts). This would allow an interactive review of the proposed design during a public meeting where the design is presented for discussion prior to being finalized. There are questions of particular importance to the community (such as protectiveness of UDF activities to human health, aesthetics, transportation routes, times of operation etc.) that could benefit the final design. The Committee remains concerned with advancing directly to the UDF Final Design Plan without an interim plan available for review and public comment. GE should be required to prepare and submit an Interim UDF Design Plan available for public comment and should include a responsiveness summary summarizing public questions/concerns provided during the meeting, and how GE addressed those questions/concerns in the final design.

The Committee's comments on the *Final Pre-Design Investigation Summary Report for Upland Disposal Facility Area* are enclosed as Attachment A. In addition, the Committee has contracted to conduct an independent review, which is enclosed as Attachment C.

Sincerely,
The Housatonic Rest of River Municipal Committee

Enclosure: Attachment A - Housatonic Rest of River Municipal Committee Comments on the *Final Pre-Design Investigation Summary Report for Upland Disposal Facility Area*

Enclosure: Attachment B - Technical Assistance Services for Communities Comments, September 26, 2023

Enclosure: Attachment C – TRC Technical Review of *Final Pre-Design Investigation Summary Report for Upland Disposal Facility Area*, September 21, 2023

ATTACHMENT A
HOUSATONIC REST OF RIVER MUNICIPAL COMMITTEE
Comments on the Final Pre-Design Investigation Summary Report for Upland Disposal Facility Area
GE/Housatonic River - Rest of River

The safety of the UDF is of utmost concern to the Housatonic Rest of River Municipal Committee (the Committee) and the community must have the ability to be actively engaged in review of these documents throughout the UDF design process. In addition to the technical review provided by Skeo under the Technical Assistance to Services to Communities (TASC) contract, the Committee has contracted with TRC to conduct an independent review of the *Final Pre-Design Investigation Summary Report for Upland Disposal Facility Area* (hereinafter, the UDF PDI Summary Report). This independent review can be found as Attachment C.

The Committee offers the following comments:

1. The Statement of Work describes the essential elements required for the UDF PDI Summary Report within Section 4.2.2.2 Pre-Design Investigation Summary Report. A component of the required document is an understanding of the UDF Support Areas, which have yet to be identified. The identification of the location and use of the Support Areas is essential to understand if the designed and ongoing monitoring efforts currently included in the UDF PDI Summary Report are complete and would be expected to capture the potential impacts attributable to these areas.

The absence of understanding the Support Areas location and function represents a significant gap in understanding if the ongoing monitoring is sufficient to capture all future UDF impacts.

2. The 2022 EPA conditional approval letter for the PDI Work Plan identifies outstanding items to be addressed as part of continued UDF monitoring and design efforts. Outstanding items included the need for GE to discuss with EPA if the deep borings advanced to at least 910 feet indicate the presence of any potential confining or restrictive layers and if there is a need for additional deep borings to better understand the geological setting beneath the UDF. As per information provided in the UDF PDI Summary Report, on pdf page 25, the restrictive or confining layer of underlying marble bedrock occurs at depths ranging from 909.5 feet at MW-2022-3 to about 957.5 feet at MW-2022-1. However, the conceptual location of the bedrock layer is shown to be at elevations greater than 957.5 feet (refer to Figure 7, pdf page 301). In addition, the document does not describe whether the other encountered subsurface geologic layers (silt, clay – shown in Figures 7 and 8, pdf pages 301 and 302) would be expected to be restrictive or confining layers.

It is important to thoroughly understand the presence or absence of confining or restrictive layers in the subsurface. GE should provide additional detail and consistency with regard to clarifying the presence of any potential confining or restrictive layers.

3. Based on the limited geotechnical data provided, it cannot be confirmed that a demonstration has been made that the design will provide long-term stability and protectiveness of the environment and human health. We do recognize that the reports are part of a pre-design investigation and that detailed

geotechnical analyses (slope stability, settlement, etc.) are forthcoming and will be provided as the design progresses.

Detailed geotechnical analyses should be provided as part of an interim conceptual design plan and made available for review before proceeding to final design.

4. Section 3.5 of the UDF PDI Summary Report documents the installation of six piezometers and eleven monitoring wells to support the proposed water level monitoring and groundwater sampling.

A shallow and deeper monitoring well arrangement at the MW 2022-1 location is recommended rather than replacing MW 2022-1 with a single monitoring well, as proposed in the document. This would allow for ongoing monitoring of groundwater elevations and the resultant vertical component of groundwater flow. Additional short-term (baseline) and long-term monitoring wells may also be needed depending on the plans for and location(s) of the UDF Support Area(s), which have not been provided yet, including any locations for the performance of sediment management or dewatering on the Property.

5. The statements at the end of Section 3.6.2 regarding the proposed design separation of the UDF baseliner system and the estimated seasonally high groundwater elevations within the UDF Consolidation Area seem premature given the limited information on the proposed design elevations presented in the UDF Conceptual Design Plan.

EPA should require GE to provide adequate elevation details for the baseliner system in an Interim UDF Design Report to verify compliance with this important Performance Standard.

6. The UDF PDI Summary Report indicates that the adjacent property retains active mining operations. The document states “westerly ponds (contained within the Eurovia property) remain in active use as part of the gravel pit operation ongoing...” (pdf page 20) and “greenish color of the pond water, which reflects the suspended silts and clays consistent with the use of the pond for settling as part of that operation” (footnote five, pdf page 21). It is not clear if GE intends to manage the overlapping ponds (fill in certain ponds for the construction of the consolidation area) or if GE will work cooperatively with the landowner to maintain the ponds for gravel operations.

The status of the adjacent quarry could be accurately and consistently depicted throughout the document (whether it is currently in use or not). Potential conflicts to future quarry use or closure (such as the use of pond surface water levels as an indirect measure of groundwater levels) should be acknowledged and discussed to ensure that future potential changes in the mining operation do not affect the validity of the UDF groundwater monitoring network.

7. The measured groundwater elevations and the modeled groundwater elevations using the Frimpter Method yield levels routinely greater than the permit performance standard threshold of 950 feet above mean sea level. This is allowable as per the permit standards that state “if the seasonally high groundwater elevation is determined to be higher than 950 feet above mean sea level, the maximum elevation of the landfill consolidation area may be increased by the number of feet that is the difference between the seasonally high groundwater elevation and 950 feet above mean sea level in order for the UDF to have a maximum capacity of 1.3 million cubic yards” (pdf pages 59 – 60 of the Revised Final Permit). The difference between the seasonally high groundwater elevation and 950 feet (referred to

as difference values) varies by monitoring well/piezometer location. Estimated difference values occur from a minimum of 3.9 feet above mean sea level (MW-2022-4S) to a maximum of 27.85 feet above mean sea level (MW-2022-1S). These results reveal a very dynamic groundwater system, which highlight several questions and concerns as follows:

- It is important to know the conservative elevation for the bottom of the UDF that will contain the waste within the performance standard requirement of 20 acres at a level of 15 feet above the highest groundwater elevation. It is also important to understand how this conservative elevation will affect the maximum elevation (defined as 1,099 feet to be adjusted based on the estimated elevated groundwater level – described in the permit on pdf pages 59-60, 5.a.(2)(b)) that will be required to accommodate this design.
- The highest groundwater levels occur in the northeast area of the GE parcel, which is considered upgradient and would capture background or groundwater conditions unaffected by UDF influences. Creation of a landfill feature may cause the groundwater flow pathway (from the northeast to the southwest) to diverge, thereby creating new/affected groundwater pathways. It is important to be sure that the planned monitoring well field will capture these potentially new groundwater pathways.

GE should be required to determine whether the dynamic groundwater levels will affect the usable amount of UDF area available that will meet UDF performance standard requirements, and if the groundwater monitoring design network will be able to identify effects of the UDF on groundwater flow pathways (which may in turn, influence the monitoring well field design).

8. The document states that wells MW-2022 1S and 1D were found to be of limited use and will be replaced. However, these wells yielded the highest levels of groundwater and co-occur within an area with the highest bedrock levels. In addition, PFAS results for groundwater samples were detected at levels greater than the Method 1 groundwater standards used to determine potential environmental effects resulting from contaminated groundwater discharging to surface water. Furthermore, the area where these wells occur is upgradient of the consolidated area of the UDF; therefore, the water quality provides a measure of pre-UDF disturbance. All of these conditions exemplify the importance of maintaining monitoring wells in this location. If GE plans to install a replacement well or wells, this effort should be accomplished in the very near future to continue to capture upgradient groundwater quality conditions. In addition, if GE plans to install a new well to replace MW-2022 1S and 1D, it is recommended that the soils be characterized (similar to the monitoring wells soils analysis performed during the PDI) to include PFAS analysis to assist with the delineation of possible PFAS contamination.

The replacement well for wells MW-2022-1S and 1D should be installed in the near future to capture a continuum of groundwater quality characterization. Soils from installation of the new well should be tested for PFAS in addition to the standard suite of soil quality chemical analysis.

9. The UDF PDI Summary Report captures one year of groundwater elevation monitoring including one month of temporal overlap (June). Comparison of the measured groundwater levels between June 2022 and June 2023 show a decrease in groundwater levels for all wells measured. The results highlight the importance of continued monitoring to capture additional, seasonal/annual trends in the groundwater level data. The report, states that the final groundwater sampling event to test for environmental

quality is scheduled for fall 2023. It is unclear if groundwater level monitoring will continue. While the amount of information captured to date represents a robust dataset from which to draw conclusions regarding trends, this divergence of data in one year demonstrates the need to continue monitoring. The report indicates that additional field activities are ongoing but does not mention if these include continued groundwater level monitoring. In addition, text provided on pdf page 30 states “the monitoring wells may remain in service for continued monitoring” indicating that it is unknown how future monitoring will be accomplished.

GE should clarify whether groundwater level monitoring will be collected in fall 2023 and if it will continue during and after the UDF construction to capture year-to-year trends.

10. Figures 7 and 8 depict the geological cross section profiles for transects A – A’ and B – B’ that traverse the GE parcel. Results shown in Figure 7 depict a bedrock marble layer with a surface elevation of about 960 feet to 965 feet above mean sea level. The groundwater levels within this area also range in the highest measured levels across the GE parcel and are likely in relation to this geological feature. The bedrock feature and elevated groundwater levels may pose issues for the design of the UDF in regard to being able to achieve the UDF performance standards.

GE and EPA should clarify whether bedrock and groundwater levels in the eastern area of the proposed consolidation area will pose concerns for the UDF design.

11. Figures 9 through 21, on pdf pages 303 through 315, depict measured groundwater elevations by sampling effort (June 2022 through June 2023). Several observations were noted for these figures as follows:

- The boundary of the consolidation area (bold dashed line) needs to be added as a feature to the legend.
- The figures show that the upgradient or the highest groundwater levels occur to the north/northeast. It is important to continue to characterize upgradient/background groundwater quality through the duration of UDF use and post-closure. There appears to be spatial gaps in this upgradient area that may benefit from additional monitoring wells. Specifically, this includes two areas: 1) there are no monitoring wells between MW-2022-1S/1D and MW-2022-7, and 2) between MW-2022-7 and MW-84-1. There are two piezometers (PZ-2022-8 and PZ-2022-7) in this area; however, as stated in the document, on pdf page 30, “prior to UDF construction, the piezometers will be abandoned in place.” In addition, the Support Areas may be placed in this area and should be monitored closely as there is the potential for spills of contaminated materials. *Additional monitoring wells in these two areas should be considered.*
- It is also important to recognize that wells MW-2022-1S and 1D, PZ-2022-8, PZ-2022-7 and MW-84-1 are valuable for future upgradient monitoring of the consolidation area and the potential support areas that have yet to be defined. The document, on pdf page 30, states that MW-2022-1S and 1D are to be replaced. Well MW-84-1 is associated with the Lee Landfill; therefore it is unknown if GE has access to or intends to use this well in the future. *The continued use of these wells for monitoring should be acknowledged.*
- The pond that overlaps the GE parcel and the adjacent quarry area (located between MW-2022-3 and MW-2022-4 and is sampled for surface water levels at site MP-1, shown in Figure 6 pdf page

300) demonstrates to be a groundwater sink (an area where groundwater is moving toward) as shown in the repeated groundwater contours for each map. This indicates that this pond may be a useful surface water quality monitoring feature for PCB analysis in the future after the UDF is in use. *The use of the pond's surface water for future PCB monitoring should be considered.*

- The figures were developed with the use of modeling to infer groundwater level contours. It seems that this same method could shade or outline the area within each map that meets UDF construction performance standards in order to visualize the amount of area available for UDF construction. *The revision of these figures to incorporate a modeled UDF consolidation area footprint based on performance standard compliance should be considered.*

Based on these findings, EPA should require additional deeper monitoring wells to establish well couplets at the MW 2022-3 location and the MW 2022-6 location. A downgradient well couplet is already present at the MW 2022-4 location. This would provide a more robust downgradient monitoring well network that could account for the occasional, slight downward vertical gradient exhibited by the manual monitoring data.

10. Table 7A-1, on pdf pages 189 to 196, provides a summary of the groundwater environmental quality testing results. The analytical testing is robust and includes suites of chemicals of interest to the community including dioxins and PFAS. Dioxins are detected in the surface soil fraction of soils gathered during the PDI (Table 4A, pdf pages 53-167). These concentrations are likely typical of industrial soils. Dioxins were generally not detected in groundwater; however, continued monitoring of groundwater for these chemical constituents would help understand if these chemicals are migrating from the soil to the groundwater. Continued monitoring of these same suites of chemicals (dioxins and PFAS) is extremely valuable to the community and would assist in understanding soil-to-groundwater relationships in the UDF area.

The groundwater monitoring should continue to include the suites of analysis listed in Table 7A-1 (particularly in reference to the dioxins and PFAS chemicals).

11. The Committee previously commented on the discrepancies noted between chemical analysis results shown in the comparative GE and EPA Quality Testing Split Results. The purpose of collecting split samples is to verify the accuracy and precision of sample collection and analysis. To date the results provided within GE documents have summarized these results in general narrative terms. The use of split analysis of sampled media will be of particular value and importance when the UDF becomes active. The issues shown in the incomparability between the split sample analysis should be acknowledged and addressed prior to UDF monitoring when waste materials management procedures are in place.

The discrepancies in the GE and EPA split sample analysis must be addressed prior to UDF monitoring when the UDF is active.

12. The UDF PDI Summary Report states that to the extent that mitigation for the loss of resource areas is required, mitigation options will be addressed in the UDF Final Design Plan, along with any additional data collection necessary for such mitigation. Possible mitigation areas should be identified during this period of ongoing monitoring since the information would capture seasonal considerations that

influence important mitigation area features such as stormwater pathways, species occurrence and migration patterns and other possible habitat characteristics (vegetation diversity and density).

GE should proactively incorporate mitigation planning and incorporate seasonal monitoring for future mitigation area considerations as part of the continued field efforts to be accomplished until (and perhaps beyond) the production of the Final UDF Design Plan.

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