

Corrective Action Plan / Post-Closure Plan

Former UVRLC Property
7412 VT Route 113, Thetford, Vermont,
SMS# 2020-4971

May 7, 2025



PROJECT NO.

PREPARED FOR:

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Acknowledgements

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Title and Approval Page

Document Title

Corrective Action Plan / Post-Closure Plan: Former UVRLC Property, 7412 VT Route 113, Thetford, Vermont, SMS# 2020-4971

May 7, 2025

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By my signature, as a Vermont Registered Engineer, I hereby certify that I have reviewed this document.



Signature

5/7/2025

Date



Executive Summary

This Corrective Action Plan (CAP)/Post-Closure Plan has been prepared by Stone Environmental, Inc. (Stone) with funding provided by the Vermont Department of Environmental Conservation (VT DEC) for the former Upper Valley Regional Landfill Corporation (UVRLC) property, located at 7412 VT Route 113, Thetford, Vermont (the Site).

The Site is comprised of one 18-acre parcel, identified as parcel 01-02-57 by the Town of Thetford. A 6.6-acre closed landfill is located in the central/eastern portion of the Site. The landfill operated from 1974 to 1996, with final closure and capping occurring in 2001. The Site includes one collapsed building, identified as an abandoned storage building, and is also improved with a dirt driveway leading from VT Route 113 to the gated, cleared portion of the Site (including the former landfill). A groundwater monitoring well network, pump house (Post Mills Community Water Supply [PMCWS]), and a passive gas vent system are presently in operation at the Site. The State of Vermont (the State) is responsible for post-closure monitoring of the former landfill.

The Site is abutted to the north by the Ompompanoosuc River; to the east and southeast by vacant, cleared land, beyond which is an outlet from Lake Fairlee, to the southwest by a residence, and to the west by a residence and forested land, beyond which is VT Route 113. The Post Mills Airport is northeast of the Site on the opposite side of the Lake Fairlee outlet. The Village of Post Mills resides to the north and northwest of the Site. The former Malmquist Mills (SMS #2010-4063), manufacturers of wooden spools and other products, resides west of VT Route 113 and the Ompompanoosuc River, approximately 500 feet west of the Site.

Bi-annual (May and October) groundwater monitoring has been performed by the State since May 2002 per the UVRLC Post-Closure Plan, last revised in May of 2002. Groundwater monitoring occurred at eight monitoring wells, three of the monitoring wells are installed in the overburden and five of the monitoring wells are installed in the bedrock aquifer, plus the PMCWS bedrock well. Groundwater samples have been analyzed for chemical oxygen demand (COD), volatile organic compounds (VOCs), total sodium and chloride, and dissolved metals (arsenic, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, and zinc). In October 2018, the State began submitting groundwater samples for per- and polyfluoroalkyl substances (PFAS) analysis. VOC and metal contaminants generally did not exceed Vermont Groundwater Enforcement Standards (VGES) since 2003 in the post-closure monitoring well network except for manganese in BR-2, BR-3, and MW-101D, and intermittently at upgradient well BR-202 as well as naphthalene in MW-101D between 2020 and 2024. Additionally, PFAS concentrations have intermittently exceeded VGES in MW-101D, MW-1 and BR-2.

In December of 2020, Stone performed a Phase I Environmental Site Assessment (ESA) of the Site on behalf of Green Mountain Economic Development Corporation (GMEDC) who was performing due diligence as a *bona fide* prospective purchaser. This assessment identified the historic use of the property as an unlined solid waste landfill as a Controlled Recognized Environmental Condition (CREC). The material remaining within the perimeter of the collapsed building, including a 55-gallon drum and 5-gallon can of transmission fluid as well as evidence of dumping, primarily along the northern edge of the clearing, including a pile of at least ten

55-gallon drums, tires, scrap metal, and a partially buried and unidentifiable metal cylinder were also identified as RECs in Stone's 2020 Phase I ESA.

Stone completed a Phase II ESA on August 7, 2023, on behalf of GMEDC, including assessments of soil, groundwater, drinking water, and building materials. Three drinking water supply wells, three overburden monitoring wells and six bedrock monitoring wells were sampled for PFAS, priority pollutant metals (PP Metals), semi-volatile organic compounds (SVOCs), VOCs, polychlorinated biphenyls (PCBs), dioxins/furans, chloride, sodium, and COD. Five surficial soil samples were collected and analyzed for VOCs, total petroleum hydrocarbons (TPH), SVOCs, and PP Metals. Additionally, Stone subcontracted with KD Associates, Inc. of South Burlington, Vermont to perform a buildings material assessment.

Stone concluded that TPH contamination is present in surficial soil, localized around a pile of 55-gallon drums in the northern portion of the Site and near a 55-gallon drum located within a collapsed building on the southern portion of the Site. PFAS and 1,4-dioxane contamination is present in the overburden and bedrock aquifers at the Site above VGES and elevated levels of PFAS and/or 1,4-dioxane are present in post-closure monitoring wells located west and downgradient of the landfill disposal area.

Based on these conclusions and data collected in the Phase II ESA and by the State, corrective actions are necessary at the Site to mitigate risks posed by the presence of contaminated media (groundwater and soil). This CAP/Post-Closure Plan has been prepared in accordance with section §35-606 of the VT DEC Investigation and Remediation of Contaminated Properties Rule (IRule), Solid Waste Rule §6-1008 effective October 31, 2020 and the Procedure for Addressing Groundwater Quality Monitoring and Responses when a Groundwater Standard is Reached or Exceeded at Municipal Solid Waste Landfills, effective February 8, 1999 (the Procedure). Corrective action objectives described within this CAP are designed to mitigate the impact of hazardous materials to sensitive receptors by removing solid waste (i.e., drums and tires) contributing to surficial soil contamination, continuing long-term groundwater monitoring to confirm that the groundwater plume is stable or decreasing, and implementing institutional controls for the Site. Long-term environmental monitoring includes the sampling of eight monitoring wells and one drinking water supply well during the spring (May) and fall (October) of each year until 2032. Monitoring will be in accordance with an amended landfill Post-Closure Plan as described within this CAP with a reduced VOC and metals analyte list and the addition of PFAS and 1,4-dioxane. Removal of waste contributing to surficial soil contamination includes the disposal of the drums and tires at an approved facility in accordance with state and local requirements.

Remedial activities will commence upon final approval of this CAP and once funding is secured. Implementation of this CAP is anticipated to begin in May 2025 and will take approximately eight to nine months to complete.

Corrective Action Plan / Post-Closure Plan: Former UVRLC Property, 7412 VT Route 113, Thetford, Vermont

*Cover Photo: View of former Landfill.
Photograph taken by Stone field staff, November 23, 2020.*

Contents

Acknowledgements	ii
Title and Approval Page.....	iii
Executive Summary	iv
1. Introduction.....	8
1.1. Site Description	8
1.2. Site Background	9
1.3. Previous Environmental Investigations	10
1.3.1. Post-Closure Groundwater Monitoring (2002-2024, VT DEC).....	10
1.3.2. Phase I & II Environmental Site Assessments (2020 & 2023, Stone).....	11
1.3.3. Trend Analysis.....	12
2. Conceptual Site Model	14
2.1. Topography.....	14
2.2. Geology and Hydrogeology.....	14
2.2.1. Bedrock.....	14
2.2.2. Surficial Geology.....	14
2.2.3. Hydrology and Hydrogeology	15
2.3. Release Mechanisms.....	15
2.4. Contaminant Sources, Distribution, Fate, and Transport.....	16
2.4.1. Volatile Organic Compounds	16
2.4.2. Metals.....	16
2.4.3. Per- and Polyfluoroalkyl Substances (PFAS).....	17
2.4.4. Total Petroleum Hydrocarbon	17
2.5. Sensitive Receptor Evaluation.....	17
2.5.1. Adjoining Landowners.....	18
2.5.2. Drinking Water Supplies	19
2.5.3. Surface Water and Groundwater Source Protection Areas.....	19
2.5.4. Buildings with Basements	19
2.5.5. Wetlands.....	19
2.5.6. Sensitive Ecological Areas	19
2.5.7. Rare, Threatened, and Endangered Species	20
3. Corrective Action Plan/ Post-Closure Plan.....	21
3.1. Performance Standards & Corrective Action Objectives.....	21
3.2. Removal and Disposal of Drums and Tires	21
3.3. Long-Term Monitoring	22
3.3.1. Groundwater Monitoring	22
3.3.2. Drinking Water Monitoring.....	23

3.4. Stormwater Control and Air Monitoring	23
3.5. Quality Assurance Control Plan	23
3.6. Investigation Derived Waste Plan	24
3.7. Health and Safety.....	24
3.8. Best Management Practices for Green and Sustainable Remediation.....	24
3.9. Post-Closure Plan Maintenance and Engineering Inspection	24
3.10. Data Evaluation and Reporting	25
3.11. Institutional Control Plan	25
3.12. Schedule and Contracting	25
3.13. Cost.....	26
4. References	28
Appendix A: Figures.....	29
Appendix B: Analytical Data Tables	39
Appendix C: Insignificant Waste Management Event Approval Form.....	105
Appendix D: Health & Safety Plan	114
Appendix E: Detailed Cost Estimate	129

List of Figures

Figure 1: Location Map	30
Figure 2: Vicinity Map	31
Figure 3: Site Map – Historic Sampling Locations	32
Figure 4: Overburden Potentiometric Surface Map – November 2022	33
Figure 5: Bedrock Potentiometric Surface Map – April 2023.....	34
Figure 6: TPH Concentrations in Soil - Phase II ESA.....	35
Figure 7: PFAS Concentrations in Groundwater - Phase II ESA.....	36
Figure 8: 1,4-Dioxane Concentrations in Groundwater	37
Figure 9: Environmental Monitoring & Corrective Action Locations.....	38

List of Tables

Table 1: Manganese Concentration Trends in Groundwater	12
Table 2: PFAS Concentration Trends in Groundwater.....	13
Table 3: Sensitive Receptor Evaluation	17
Table 4: Adjoining Property Owners.....	19
Table 5: Groundwater Monitoring Sampling Plan.....	22
Table 6: Quality Assurance and Quality Control Samples	23
Table 7: Proposed Schedule	25
Table 8: Proposed Contractors	26
Table 9: CAP Cost Summary	26

1. Introduction

This Corrective Action Plan (CAP)/Post-Closure Plan has been prepared by Stone Environmental, Inc. (Stone) with funding provided by the Vermont Department of Environmental Conservation (VT DEC) for the former Upper Valley Regional Landfill Corporation (UVRCLC) property, located at 7412 VT Route 113, Thetford, Vermont (the Site; Figure 1, Appendix A). The Site houses a closed landfill that is managed by the State of Vermont (the State).

Phase I and II Environmental Site Assessments (ESAs) were completed by Stone on behalf of a prospective purchaser for the Site in 2020 and 2023, respectively. The Phase II ESA results included detections of per- and polyfluoroalkyl substances (PFAS) and 1,4-dioxane in the Site overburden and bedrock aquifers at concentrations exceeding the Vermont Groundwater Enforcement Standards (VGES). Additionally, total petroleum hydrocarbons (TPH) were identified in surficial soil in the northern and southern portions of the Site at concentrations above the residential EPA Regional Screening Limit (RSL) but below the industrial EPA RSL. Corrective actions are necessary at the Site to mitigate consumption and direct contact risks posed by the presence of contaminated media (groundwater and soil).

This CAP has been prepared in accordance with §35-606 of the VT DEC's Investigation and Remediation of Contaminated Properties Rule (IRule). The corrective actions described within this CAP include a long-term groundwater and drinking water bi-annual monitoring plan and removal of drums, metal, and other materials that are contributing to contamination of surficial soils. Long-term environmental monitoring includes the sampling of eight monitoring wells and one drinking water supply well during the spring (May) and fall (October) of each year until 2032. Groundwater monitoring will be conducted in accordance with the amended landfill Post-Closure Plan included within this CAP with a reduced volatile organic compound (VOC) and metal analyte list and the addition of PFAS and 1,4-dioxane.

This amended Post-Closure Plan has been prepared in accordance with Solid Waste Rule §6-1008 effective October 31, 2020 and the Procedure for Addressing Groundwater Quality Monitoring and Responses when a Groundwater Standard is Reached or Exceeded at Municipal Solid Waste Landfills, effective February 8, 1999 (the Procedure).

1.1. Site Description

The Site is located at 43.88043° north latitude and 72.25898° west longitude at an elevation of approximately 720 feet above mean sea level (amsl) in Thetford, Orange County, Vermont (Figure 1, Appendix A). The Site is comprised of one, 18-acre parcel, identified as parcel 01-02-57 by the Town of Thetford. The Site is abutted to the north by the Ompompanoosuc River; to the east and southeast by vacant, cleared land, beyond which is an outlet stream from Lake Fairlee; to the southwest by a residence; and to the west by a residence and forested land, beyond which is VT Route 113. The Post Mills Airport is northeast of the Site on the opposite side of the Lake Fairlee outlet stream. The Village of Post Mills resides to the north and northwest of the Site. The former Malmquist Mills (SMS #2010-4063), manufacturers of wooden spools and other products, resides

west of VT Route 113 and the Ompompanoosuc River, approximately 500 feet west of the Site. A vicinity map is provided as Figure 2 in Appendix A.

The Site includes one collapsed building, identified as an abandoned storage building in Solid Waste Management Program (SWMP) files. The building appears to have been one-story with a concrete masonry unit (CMU) foundation. The parcel is also improved with a gravel driveway in the southwestern portion of the Site leading from VT Route 113 to the gated, cleared portion of the Site (including the former landfill). A groundwater monitoring well network, pump house serving Post Mills Community Water System, and passive gas vent system are presently in operation on the property. The Site is not serviced by municipal water or sewer.

The State is responsible for post-closure monitoring of the landfill. Contact information for the VT DEC Solid Waste Management Division is:

VT DEC Waste Management & Prevention, Solid Waste Management Program
Attention: Dennis Fekert
1 National Life Drive, Davis 1
Montpelier, Vermont 05602
(802) 522-0195
dennis.fekert@vermont.gov

The property owners of the adjoining properties are included in Table 4 in Section 2.5.1.

1.2. Site Background

Prior to 1974, historical aerial photographs and reference in a warranty deed indicate that the Site was used for agriculture. A 6.6-acre landfill was first approved for development as a sanitary landfill on November 1, 1971, and began operating around May 6, 1974. Both domestic and commercial refuse was accepted by the landfill, including occasional asbestos-containing material (ACM).

In the early 1980s, VOCs were identified in nearby monitoring wells and (reportedly) one private drinking water well (Braley residence located south of the Site). A replacement water supply well for adjacent, downgradient residential properties was installed on March 16, 1988, to the southwest of the landfill on the opposite side of VT Route 113 (“Former Supply Well”, Figure 3, Appendix A). The former supply well served multiple residential properties and was in operation prior to the establishment of a community water system. On approximately September 7, 1989, the landfill ceased accepting waste for disposal due to a Consent Order entered by the UVRLC and the Vermont Environmental Board.

Following installation of the water supply well, a pump test carried out in 1990 revealed that the water supply well and a residential well, located north of the former supply well (“Demers”, Figure 3, Appendix A), were drilled into a fracture zone hydraulically connected to a contaminated well on the UVRLC property. This observation was supported by low levels of VOCs detected in the wells; specifically, 1,1-dichloroethane in the bedrock water supply well, and dichlorodifluoromethane and 1,1-dichloroethane in the Demer’s private well.

In 1996, an Administrative Order was issued to close the landfill, install additional groundwater monitoring wells, monitor groundwater, and surface water, submit a plan for a public community water system, provide bottled water to affected residences, and complete post-closure landfill inspections. By 1998, the UVRLC had not complied with the order. A settlement was reached in August 2000 between Frank L. Barker, Jr., Barker-Sargent Corporation, 14 neighboring landowners (i.e., the Braley Plaintiffs), and the State of Vermont (the State). As part of the settlement, the State assumed responsibility for closure and post-closure monitoring of

the landfill. In the spring of 2001, the landfill was properly closed, by reshaping the topography, capping with a multi-layer final cover system, and installing a passive gas vent system in alignment with the UVRLC Post-Closure Plan; the plan was updated in 2002 to reflect the improvements. A new water supply system for adjacent landowners, the Post Mills Community Water Supply (PMCWS) well and distribution lines, was also installed upgradient of the landfill in 2001 (“PMCWS”, Figure 3, Appendix A).

1.3. Previous Environmental Investigations

A summary of previous environmental investigations at the Site and in the vicinity of the Site is provided below. Previous sample locations from VT DEC and Stone’s investigations at the Site are depicted in Figure 3 (Appendix A). Analytical data from the VT DEC and Stone’s previous environmental investigations at the Site are tabulated in Appendix B. Analytical data from investigations prior to the start of post-closure monitoring in 2002 were unavailable and therefore could not be included in this CAP.

Stone reviewed the following documents relevant to previous environmental studies at the Site:

- Stone, (December 4, 2020). Phase I Environmental Site Assessment: Former UVRLC Landfill, 7412 VT Route 113, Thetford, Vermont.
- Stone, (July 16, 2021). File Review and Data Gap Analysis – Former Upper Valley Regional Landfill Corporation Property, 7412 VT Route 113, Thetford, Vermont.
- Stone, (August 7, 2023). Phase II Environmental Site Assessment: Former UVRLC Landfill, 7412 VT Route 113, Thetford, Vermont.
- Vermont Solid Waste Management Program (2002). Upper Valley Regional Landfill Post-Closure Plan.

1.3.1. Post-Closure Groundwater Monitoring (2002-2024, VT DEC)

Bi-annual (May and October) groundwater monitoring has been performed by the State since May 2002 per the UVRLC Post-Closure Plan, last revised in May of 2002. Groundwater monitoring occurred at eight monitoring wells, plus the 2001 PMCWS well; three of the monitoring wells are installed in the overburden and five of the monitoring wells are installed in the bedrock (Figure 3, Appendix A). Groundwater samples have been analyzed for chemical oxygen demand (COD), VOCs, total sodium and chloride, and dissolved metals (arsenic, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, and zinc). In October 2018, the State began submitting groundwater samples for PFAS analysis. 1,4-Dioxane was not listed as an analyte in the data provided by the VT DEC.

The summary table of laboratory analytical reports from May 2002 to November 2024 provided by VT DEC to Stone shows that contaminants of concern have generally not exceeded the VGES since 2003 in the post-closure monitoring well network except for the following:

- Manganese has been consistently detected above VGES in BR-2, BR-3, and MW-101D, and intermittently at upgradient well BR-202 (5/2002 & 11/2024).
- Lead was detected at MW-1 in November 2024 an order-of-magnitude above the VGES, where it has previously been mostly non-detect and not detected above VGES in any other monitoring wells. This is due to challenging sampling conditions that results in higher-than-normal turbidity and a change from dissolved metal to total metal analysis. Additionally, lead was detected slightly above the primary drinking water standard at the active public drinking water supply in May 2019. This was the only lead exceedance in over 20 years of biannual testing..
- Naphthalene has been intermittently detected slightly above the VGES (0.7 to 2.2 micrograms per liter [$\mu\text{g/L}$]) at MW-101D between 2020 and 2024. Reporting limits are not shown in the table provided by VT

DEC. The recent detections are assumed to be the result of lower reporting limits and not increasing concentrations. Naphthalene has not been detected in other post-closure monitoring wells except for one detection in BR-1 in May 2003.

- Benzene was detected slightly above VGES in May 2003 at MW-101D and has not been detected subsequently.
- The cumulative sum of PFOA, PFOS, PFHxS, PFHpA, and PFNA concentrations (total regulated PFAS) intermittently exceeded VGES at MW-101D and MW-1 between 2018 (when sampling started) and 2024 and slightly exceeded the VGES at BR-2 in October 2020 only.

1.3.2. Phase I & II Environmental Site Assessments (2020 & 2023, Stone)

In December 2020, Stone performed a Phase I ESA and identified the historic use of the property as an unlined solid waste landfill with a post-closure plan as a Controlled Recognized Environmental Condition (CREC). Additionally, the assessment identified two areas of the Site where residual materials were observed during the site reconnaissance as RECs:

- Material remaining within the perimeter of the collapsed building, including a 55-gallon drum and 5-gallon can of transmission fluid, and
- Evidence of dumping, primarily along the northern edge of the clearing, including a pile of at least ten 55-gallon drums, tires, scrap metal, and a partially buried and unidentifiable metal cylinder.

In August 2023, Stone performed a Phase II ESA and the results are presented on Figure 4 through 8 in Appendix A. The 2023 Phase II ESA included an assessments of soil, groundwater, drinking water, and building materials. Three current or former drinking water supply wells (the Former Supply Well, PCMWS, and the Leibon Well), three overburden monitoring wells and six bedrock monitoring wells were sampled for PFAS, priority pollutant metals (PP Metals), semi-volatile organic compounds (SVOCs), VOCs, polychlorinated biphenyls (PCBs), dioxins/furans, chloride, sodium, and COD. Five surficial soil samples were collected and analyzed for VOCs, TPH, SVOCs, and PP Metals. Additionally, Stone subcontracted with KD Associates, Inc. of South Burlington, Vermont to perform a buildings material assessment of the collapsed building.

The Phase II ESA concluded that TPH contamination is present in surficial soil in the northern and southern portions of the Site above the residential EPA RSL but below the industrial EPA RSL. The extent of soil contamination appears to be localized around a pile of 55-gallon drums in the northern portion of the Site and near a 55-gallon drum located within the collapsed building on the southern portion of the Site (Figure 6, Appendix A). Groundwater analytical results from overburden monitoring wells indicated the risk posed to groundwater by the surficial soil impacts is low.

Groundwater results additionally indicated PFAS and 1,4-dioxane contamination is present in the overburden and bedrock aquifers at the Site. Concentrations of total regulated PFAS exceeded the VGES at BR-3 (Figure 7, Appendix A) and 1,4-dioxane exceedances were noted at BR-3 and MW-101D (Figure 8, Appendix A) during the Phase II ESA; post-closure monitoring wells BR-3 and MW-101D are located west and downgradient of the landfill disposal area (Figure 3, Appendix A). Non-detectable levels of these contaminants were reported in downgradient off-Site wells (BR-4 and Former Supply Well) indicating the extent and magnitude of groundwater impacts has been adequately defined. Chloride was also detected during the Phase II ESA in the PCMWS well above the Secondary Maximum Contaminant Level (SMCL) indicating the odor and appearance of the water may be adversely affected. The Phase II ESA exceedance is the highest chloride concentration reported to date and subsequent sampling in 2023 and 2024 did not detect chloride above the SMCL; therefore, the Phase II ESA detection is considered an outlier and does not require

corrective action. Hazardous building materials were not identified during an assessment of the collapsed building located at the Site.

Based on these conclusions and data collected during the Phase II ESA, Stone recommended that the pile of drums, metal and other materials identified in the northern portion of the Site should be assessed and disposed of at an approved facility in accordance with state and local requirements. Additionally, post-closure monitoring of the well network should continue in accordance with the landfill Post-Closure Plan; however, PFAS and 1,4-dioxane should be added to the monitoring plan analyte list.

1.3.3. Trend Analysis

Stone conducted a trend analysis of the time series groundwater data from 2002 to 2024 provided by the VT DEC. Tables 1 and 2, below, present the results of a Mann-Kendall trend analysis (GSI, 2012) of manganese and total regulated PFAS for all well locations with four or more data points with detections above laboratory reporting limits and one or more data points above applicable enforcement standards (2002 to 2024). Non-detect data points were not included in the analysis. A trend analysis was not performed for other constituents of concern due to a limited data set or non-detectable values (e.g., 1,4-dioxane, lead, naphthalene). The Mann-Kendall trend analysis includes the following statistics:

- The ‘S’ Statistic: Indicates whether concentration trend vs. time is generally decreasing (negative S value) or increasing (positive S value).
- The Confidence Factor (CF): The CF value modifies the S Statistic calculation to indicate the degree of confidence in the trend result, as in ‘Decreasing’ vs. ‘Probably Decreasing’ or ‘Increasing’ vs. ‘Probably Increasing.’ Additionally, if the confidence factor is quite low, due either to considerable variability in concentrations vs. time or little change in concentrations vs. time, the CF is used to apply a preliminary ‘No Trend’ classification, pending consideration of the Coefficient of Variation (COV).
- The Coefficient of Variation (COV): The COV is used to distinguish between a ‘No Trend’ result (significant scatter in concentration trend vs. time) and a ‘Stable’ result (limited variability in concentration vs. time) for datasets with no significant increasing or decreasing trend (e.g., low CF).

As depicted in Table 1, statistically significant decreasing trends of manganese concentrations have been established at BR-2 and MW-101D. No manganese concentration trend has been established at BR-3 and BR-202. As depicted in Table 2, no trends in total regulated PFAS concentration have been established in MW-101D or MW-1. While no increasing trend is shown, given the no trend results, Stone recommends continued monitoring and reanalysis of trends to identify stable or decreasing concentrations at all compliance wells. Trends for other constituents of concern such as 1,4-dioxane should be performed once enough data points are generated to allow for Mann-Kendall analysis.

Table 1: Manganese Concentration Trends in Groundwater

Location ID	Concentration Trend	Mann-Kendall Statistic (S)	CF	COV	Frequency above VGES
BR-2	Decreasing	-208	>99.9%	0.41	30/30
BR-3	No Trend	40	77.8%	0.72	19/29
MW-101D	Decreasing	-135	99.5%	1.17	25/29
BR-202	No Trend	31	89.0%	1.95	2/30

Table 2: PFAS Concentration Trends in Groundwater

Location ID	Concentration Trend	Mann-Kendall Statistic (S)	CF	COV	Frequency above VGES
MW-101D	No Trend	3	61.4%	0.60	6/8
MW-1	No Trend	0	40.8%	1.14	2/7

2. Conceptual Site Model

The following Conceptual Site Model (CSM) provides a set of working hypotheses that describe key aspects of the Site. As with any hypothesis, the CSM may require additional testing to arrive at the desired level of confidence. The CSM includes a discussion of the physical, geologic, and hydraulic attributes of the Site and surrounding area, how chemicals were released to the environment, their transport pathways, fate mechanisms, and potential routes of exposure to ecological and human receptors. The CSM provides the context from which the site investigation is developed and a framework to make sound Site management decisions.

2.1. Topography

The Site is located at an elevation of approximately 720 feet amsl. Topography at the Site is partially shaped by historic use as a landfill and slopes steeply to the west along the western property line. To the east, topography undulates, sloping gradually eastward with a depression in the central-northwestern portion of the Site. Regionally, the areas to the northwest and south of the Site have steeper slopes and are at higher elevations, while the area to the east, which encompasses an outlet stream from Lake Fairlee, has a relatively flat topography.

2.2. Geology and Hydrogeology

2.2.1. Bedrock

According to the *Geology of the Strafford Quadrangle* (1912), published by C.H. Hitchcock, and bedrock mapping performed by GEI as part of their *Final Data Summary Report* (1990), bedrock underlying the landfill consists of dark gray phyllite schist with interbedded micaceous quartzite of the Gile Mountain Formation. Bedrock elevation underlying the landfill ranges from approximately 510 feet to 580 feet amsl. Bedrock mounds are present to the southwest of the landfill and the northeastern portion of the landfill with a saddle between the two mounds. Bedrock outcrops are visible west of the Site adjacent to the Ompompanoosuc River and monitoring well BR-4.

Fracture trace analysis conducted using aerial photography has identified up to seven linear features underlying the landfill. A pump test conducted in 1990 indicates that two drinking water wells southwest of the Site and a bedrock monitoring well (BR-3) at the corner of VT Route 113 and the landfill access road may intersect the same water-bearing fracture.

2.2.2. Surficial Geology

According to the *Surficial Geologic Map of Vermont* (1970) and the *Surficial Geology and Pleistocene History of Vermont* (1969), both published by David Stewart and Paul MacClintock, soil in the landfill area consist of glacial meltwater deposits with ablation till encountered in several locations. Soil to the west of the landfill disposal area have been reported to consist of mainly fine to medium sand and sand with gravel. Soil to the east of the landfill and adjacent to the Lake Fairlee outlet have been reported to consist of silty clay and clayey silt. The thickness of surficial deposits ranges from 0 to 15 feet near the bedrock outcrops southwest of the

landfill and up to 75 feet in the central/northwestern portion of the landfill near MW-7 and MW-8 (Figure 3, Appendix A). Soil borings advanced in the northern and southern portions of the Site as part of the Phase II ESA efforts identified medium to coarse sand to a maximum exploratory depth of 4 feet below ground surface (bgs).

2.2.3. Hydrology and Hydrogeology

The Site is located along the southwestern perimeter of the Middle Brook Sub-Watershed, part of the Upper Connecticut-Mascoma Watershed. The closest surface water body is the Ompompanoosuc River and an outlet stream from Lake Fairlee, which are surrounded by wetlands. The outlet from Lake Fairlee flows north, paralleling the eastern Site property boundary and coming within 160 feet of the boundary, before its confluence with the Ompompanoosuc River. The Ompompanoosuc River abuts the Site to the north before flowing south parallel and west of VT Route 113. Additionally, the northern tip (approximately 0.9 acres) of the Site is mapped as a Class 2 Wetland, indicating that it provides significant functions and values and is protected under the Vermont Wetland Rules. Surface runoff at the Site is expected to mimic surface topography; runoff may pond near the central-northwestern portion of the Site, or flow to the east toward the low-lying outlet from Lake Fairlee.

In fall 2022, the elevation of the water table in the overburden ranged from approximately 554 feet amsl in the east to 547 feet amsl in the west (Figure 4, Appendix A). The potentiometric surface in the bedrock in fall 2022 ranged from approximately 582 feet amsl in the northeast to 535 feet amsl in the southwest (Figure 5, Appendix A). Overburden groundwater appears to flow west/southwest from the Lake Fairlee outlet to the Ompompanoosuc River, partially due to damming of the Ompompanoosuc River near its intersection with VT Route 113. There may also be a groundwater divide in the northeastern portion of the site that results in shallow groundwater flowing east to the Lake Fairlee outlet stream in that portion of the Site. Bedrock groundwater similarly appears to flow to the west/southwest.

As noted in a 1995 report titled “Hydrogeologic Summary of the Upper Valley Regional Landfill in Post Mills, Vermont (Town of Thetford)” prepared by Caswell, Eicher and Hill, Inc., the vertical groundwater flow direction varies based on the location of adjacent overburden and bedrock wells within the flow path. Near the central/western perimeter of the landfill disposal area, groundwater flows upward from the bedrock to the overburden, whereas to the southwest of the landfill near VT Route 113 and the access road to the landfill groundwater flows downward from the overburden to the bedrock.

Hydraulic conductivity has been estimated to be 2×10^{-3} centimeters per second in one overburden well, screened in sand with silt and gravel deposits. This estimate has not been confirmed by tests elsewhere on-site.

2.3. Release Mechanisms

Prior to constructing the landfill cap in 2001, precipitation leached through the buried waste in the unlined Upper Valley Regional Landfill and infiltrated downward to the water table, contaminating the overburden aquifer. Upon reaching the water table, leachate mixed with groundwater and migrated further downward into the bedrock aquifer, traveling through more transmissible fracture zones. Over the past 20 years, groundwater monitoring has shown higher concentrations of contaminants indicative of landfill leachate, such as sodium and chloride west (downgradient) of the landfill. Elevated levels of PFAS and 1,4 dioxane are present in post-closure wells located west and downgradient of the landfill; however, non-detectable levels of these contaminants have been reported in downgradient off-site wells indicating the extent and magnitude of groundwater impacts has been adequately defined (Stone, 2023).

2.4. Contaminant Sources, Distribution, Fate, and Transport

Overburden and bedrock monitoring wells west (downgradient) of the landfill have historically had detections of contaminants attributed to the landfill, such as VOCs, metals, and inorganics (sodium and chloride). However, post-closure monitoring since 2002 has generally only shown manganese consistently exceeding the enforcement standards. Recent assessment of monitoring wells and nearby drinking water supply wells during the Phase II ESA (Stone, 2023) for other contaminants typical of unlined landfills, including PCBs and dioxin/furans did not detect these contaminants above the enforcement standards except for PFAS and 1,4-dioxane. These contaminants were not detected in downgradient off-Site wells suggesting the contamination is limited to the Site. Recent sampling of drinking water supply wells west and east of the landfill reported non-detectable levels of VOCs and all other target analytes were either non-detect or below applicable enforcement standards, apart from chloride in the PMCWS well during the 2023 Phase II ESA (exceedance of SMCL). No surface water contamination has been detected in the Ompompanoosuc River and Lake Fairlee outlet and monitoring wells near the river have not exceeded the standards. Monitoring wells and nearby drinking water supply wells were assessed in 2022/2023 for other contaminants typical of unlined landfills, including PCBs and dioxin/furans; all detections were below applicable standards.

2.4.1. Volatile Organic Compounds

Both petroleum and chlorinated VOCs have been detected in post-closure monitoring wells. Benzene, ethylbenzene, 1,2,4-trimethylbenzene (TMB), naphthalene, toluene, and xylene have been detected above laboratory reporting limits with benzene and 1,2,4-TMB detected above VGES in BR-1 in 2003 and naphthalene intermittently detected above the standard at MW-101D between 2020 and 2024. Several chlorinated VOCs have been detected above laboratory reporting limits, however, none have exceeded the current VGES. Elevated concentrations of 1,4-dioxane up to 2.6 $\mu\text{g/L}$ have been detected in on-Site overburden and bedrock monitoring wells west of the landfill. Concentrations of 1,4-dioxane detected in monitoring wells MW-101D and BR-3 in fall 2022 and spring 2023 exceeded the VGES (0.3 $\mu\text{g/L}$); however, non-detectable levels were reported for all other on-Site monitoring wells, a downgradient off-Site bedrock monitoring well (BR-4), and nearby/downgradient drinking water supply wells. There is insufficient data to conduct a trend analysis; however, the addition of 1,4-dioxane to the post-closure monitoring will allow for future analysis to confirm plume stability.

2.4.2. Metals

Elevated concentrations of manganese have been detected in monitoring wells above enforcement standards at the Site. Iron has also been detected in monitoring wells across Site; there is no VGES for iron. Iron has been detected twice in PMCWS (October 2019 and November 2024) at concentrations well below the SMCL. Elevated concentrations of manganese and iron are widespread in both overburden and bedrock monitoring wells with the highest concentrations immediately west and southwest of the landfill. Trend analysis of manganese concentrations indicates that concentrations are decreasing at MW-101D and BR-2 and have no trend at BR-202 and BR-3.

Likewise, sodium and chloride have historically exhibited elevated concentrations to the west of the landfill; however, the highest concentrations have been detected at monitoring and drinking supply wells along VT Route 113. In fall 2022, Stone sampled monitoring wells and nearby drinking water supply wells for PP Metals, sodium, and chloride. All detections were below applicable standards, except for chloride in the PMCWS well (1,200,000 $\mu\text{g/L}$), which exceeded the SMCL (250,000 $\mu\text{g/L}$). An exceedance of the SMCL indicates the odor and appearance of the water may be adversely affected. The PMCWS well is routinely sampled for chloride as part of the post-closure sampling program. The chloride concentration detected in fall 2022 is the highest reported to date and is considered an outlier based on historical results. Additionally, lead

exceeded the VGES at MW-1 (174 µg/L) in the most recent groundwater monitoring event in November 2024. Lead has not historically exceeded the standard at MW-1 or in any monitoring wells at the Site and the detection is likely an outlier due to challenging sampling conditions, which resulted in higher turbidity.

2.4.3. Per- and Polyfluoroalkyl Substances (PFAS)

Overburden and bedrock monitoring wells have been periodically sampled for PFAS since 2018. Slight exceedances of the VGES for total regulated PFAS (20 nanograms per liter [ng/L]) were reported in on-Site overburden and bedrock wells west of the landfill between 2018 and 2024 including at MW-101D, BR-2, and BR-3. Higher concentrations were detected at MW-1 in May 2022 (80.7 ng/L) and May 2023 (121.9 ng/L); however subsequent results in MW-1 in 2023 and 2024 were below the VGES. In the most recent sampling events, May and November of 2024, PFAS concentrations exceeded the VGES only in MW-101D (69.5 ng/L and 23.79 ng/L respectively); however, BR-2, BR-1, BR-201, BR-202, and MW-2 were not sampled in 2024.

In fall 2022, Stone sampled monitoring wells and nearby drinking water supply wells for PFAS. An exceedance of the VGES was reported in one on-Site bedrock monitoring well (BR-3; 31 ng/L); however, all other on-Site monitoring wells, a downgradient off-Site bedrock monitoring well (BR-4), and nearby drinking water supply wells reported either non-detectable levels of PFAS or concentrations well below applicable standards. Results from a limited resampling event conducted in spring 2023 indicated PFAS concentrations in BR-3 (5.6 ng/L) decreased to below VGES. Additionally, non-detectable levels of PFAS were reported in an inactive downgradient drinking water supply well (Former Supply Well) to the southwest.

Trend analysis of PFAS concentration at MW-1 and MW-101D, which were the only wells with sufficient data, indicated no statistical trend. The addition of PFAS to the post-closure monitoring will allow for future analysis to confirm plume stability.

2.4.4. Total Petroleum Hydrocarbon

Surficial soils in the northern and southern portions of the Site are impacted with TPH at concentrations above the residential EPA RSL but below the industrial EPA RSL. The extent of soil contamination appears to be localized around a pile of 55-gallon drums in the northern portion of the Site and near a 55-gallon drum located within a collapsed building on the southern portion of the Site. Groundwater concentrations of petroleum VOCs in overburden monitoring wells near these areas have been non-detect and below the VGES suggesting that contamination is limited to surficial soil. Removal of the drums is expected to prevent any potential future release.

2.5. Sensitive Receptor Evaluation

Contamination identified at the Site has been evaluated for its potential to adversely affect sensitive receptors. Table 3 presents the potentially affected media, potential pathways, and potential receptors.

Table 3: Sensitive Receptor Evaluation

Affected Media	Potential Pathways	Sensitive Receptors/Potential Risk
Surface Water	Groundwater discharge	Ompompanoosuc River and Lake Fairlee outlet / Low – No contaminants of concern have been detected in surface water in the Ompompanoosuc River or Lake Fairlee outlet and recent sampling of wells adjacent to these surface waters indicate contaminants of concern are below applicable standards.
Surface Soil	Direct contact to	Site users & Future Users / Low – The landfill has been capped with a multi-layer final cover system. Elevated levels of TPH, above EPA RSL

Affected Media	Potential Pathways	Sensitive Receptors/Potential Risk
	contaminated materials	for residential use but below EPA RSL for industrial, have been detected in surficial soils near a pile of 55-gallon drums and a collapsed building at the Site. Sampling of overburden monitoring wells reported low to non-detectable petroleum VOC levels indicating the TPH in surficial soil presents a low risk to groundwater. The current and foreseeable future use (historical landfill) of the Site indicates the direct contact risk is low. Additionally, numerous restrictions have been put in place at the Site through the 2000 "Grant of Environmental Restrictions, Water and Mineral Rights, Rights of Access and Easement." Those restrictions prohibit residential use.
Subsurface Soil	Direct contact with contaminated soil Infiltration of precipitation through buried waste and impacted soil may leach contaminants to groundwater	Groundwater / Medium – The presence of the landfill cap should significantly reduce leachate migration from contaminated soils to the water table, as suggested by post-closure monitoring data. Construction Workers / Low – Soil disturbance activities within the former landfill are prohibited by the "Grant of Environmental Restrictions, Water and Mineral Rights, Right of Access and Easement."
Groundwater	Consumption of impacted groundwater from drinking water supply well. Discharge to Ompomanoosuc River, Lake Fairlee outlet stream and adjacent wetlands.	Groundwater Users / Low – Inactive private drinking water supply wells are present on adjacent properties. Drinking water supply wells have historically shown no contamination for a limited list of analytes with low levels of VOCs detected below the enforcement standards on several occasions. Recent sampling of downgradient drinking water supply wells indicates no contaminants of concern are present above primary standards; PFAS and 1,4-dioxane have been detected in on-site overburden and bedrock monitoring wells above VGES; however, non-detectable levels have been reported in all off-site wells and downgradient drinking water supply wells. The 2000 "Grant of Environmental Restrictions, Water and Mineral Rights, Rights of Access and Easement" prohibits the installation of portable wells. Potential discharge to Ompomanoosuc River, Lake Fairlee outlet, and adjacent wetlands / Low – See surface water.
Sediment	Discharge of dissolved phase contaminants to basal sediments.	Waters of the State, recreational users, benthic organisms / Low – No contaminants of concern have been detected in surface water in the Ompomanoosuc River or Lake Fairlee, however, no sediment sampling within these surface waters has been conducted. Recent sampling of wells adjacent to these surface waters indicate contaminants of concern are below applicable standards, indicating there is no current discharge of dissolved phase contaminants to sediment.

Using the VT ANR Natural Resources Atlas, a qualitative receptor analysis was completed to evaluate the occurrence of potential receptors relative to the Site.

2.5.1. Adjoining Landowners

Adjoining landowners to the Site are summarized in Table 4, below and shown on Figure 2, Appendix A. These landowners will receive notification of this CAP at the onset of the 30-day public comment period.

Table 4: Adjoining Property Owners

Address	Grand List SPAN #	Owner Name	Contact Information
7558 VT Route 113	642-202-10152	Gregory D. & Nicole D. Leibon	PO Box 7 Post Mills, VT, 05058
7386 VT Route 113	642-202-116633	Tyler A. & Amber L. Braley	PO Box 72 Post Mills, VT, 05058
7459 VT Route 113	642-202-11250	Howard E. & Chelsea L. Stone	7459 VT Route 113 Post Mills, VT, 05058
7534 VT Route 113	642-202-11193	Charles Goldensher & Tamaran Beck	PO Box 82 Post Mills, VT, 05058
7366 VT Route 113	642-202-116633	George & Linda Braley	7366 VT Route 113 Post Mills, VT, 05058
7631 VT Route 113	642-202-10827	Malmquist Wood Products Inc. & C/O Walter Malmquist	2727 Wild Hill Road Bradford, VT, 05033
7814 VT Route 113	642-202-10824	Harry C. Kinne	7814 VT Route 113 Post Mills, VT, 05058

2.5.2. Drinking Water Supplies

Twenty private water supply wells were identified within a quarter mile of the Site. A community supply well, PMCWS, that services properties adjacent to the Site is located southeast of the landfill in an apparent upgradient location. There are 39 private wells within 0.5 miles of the Site. However, drinking water supply wells have historically shown no contamination for a limited list of analytes with low levels of VOCs detected below the enforcement standards on several occasions.

2.5.3. Surface Water and Groundwater Source Protection Areas

No surface water or groundwater source protection areas were identified within 0.25 miles of the Site.

2.5.4. Buildings with Basements

There are no basements in the building located on Site; however, private properties nearby may have partial or full basements.

2.5.5. Wetlands

According to the ANR Natural Resources Atlas, there is one mapped Class II Wetland within 0.25 miles of the Site (ANR Atlas Object ID 36801). This wetland is partially on the northernmost edge of the Site and continues to the north of the Site. There are several Vermont Significant Wetlands Inventory (VSWI) mapped wetland within 0.25 miles of the Site that are not classified. However, no contaminants of concern have been detected in surface water and the risk to wetlands has been determined to be low.

2.5.6. Sensitive Ecological Areas

There is one deer wintering area located 0.10 miles south of the Site and a significant natural community of sugar maple floodplain forest adjacent to and north of the Site. There are no federally endangered bat ranges within 0.25 miles of the site. No contaminants of concern have been detected in surface waters and the surface soil contamination is localized to specific areas on the Site, therefore the risk to these sensitive ecological areas has been determined to be low.

2.5.7. Rare, Threatened, and Endangered Species

There is one rare, threatened, or endangered animal located 0.07 miles west of the Site. No contaminants of concern have been detected in surface waters and the surface soil contamination is localized to specific areas on the Site, therefore the risk to this species has been determined to be low.

3. Corrective Action Plan/ Post-Closure Plan

This section describes the recommended elements for proposed long-term environmental monitoring and corrective actions (i.e., removal and disposal of drums and tires). This CAP/Post-Closure Plan was prepared in accordance with section § 6-1008 of the Vermont Solid Waste Management Rules (SWMR) and section §35-606 of the VT DEC Investigation and Remediation of Contaminated Properties Rule (IRule).

3.1. Performance Standards & Corrective Action Objectives

Corrective action objectives described within this CAP are designed to mitigate the impact of hazardous materials to sensitive receptors by removing solid waste (i.e., drums and tires) contributing to surficial soil contamination, continuing long-term groundwater monitoring to confirm that the groundwater plume is stable or decreasing, and implementing institutional controls for the Site.

Relevant regulatory criteria for the monitoring of groundwater and drinking water include:

- Groundwater: Vermont Groundwater Enforcement Standards (VGES) published as Appendix 1 of Chapter 12 of the Vermont Environmental Protection Rules: Groundwater Protection Rule and Strategy, adopted July 6, 2019.
- Drinking Water:
 - Public water systems: Maximum Contaminant Level (MCL) and Secondary Maximum Contaminant Level (SMCL), Vermont Water Supply Rule, February 24, 2024.
 - Private drinking water: Vermont Health Advisory (VHA), Vermont Department of Health (DOH) Drinking Water Guidance, April 10, 2024.

Post-closure care completion shall be documented to the Secretary once performance standards are met in accordance with § 6-1009 of the Vermont Solid Waste Management Rules.

3.2. Removal and Disposal of Drums and Tires

Due to the possibility of future releases and on-going sources to the environment, the pile of drums, metal, tires, and other materials located on the northern portion of the Site and near the collapsed building will be removed and appropriately disposed of off-site (Figure 9, Appendix A; Removal & Disposal Locations). Inert materials such as concrete, masonry, mortar, and untreated wood can remain in place with an Insignificant Waste Management Event Approval. The approval form is attached in Appendix C.

Stone will subcontract with a licensed hazardous waste hauler for the removal of 25 Resource Conservation and Recovery Act (RCRA) drums and approximately 100 tires. Some of these items are partially buried and will require an excavator to unearth. Stone will also provide oversight during removal of the drums and tires to ensure that the performance standards and corrective action objectives of this CAP are adhered to. Drums are believed to be empty and will be disposed of as scrap metal. In the unlikely event that the drums are found to contain material, VT DEC will be notified and a CAP amendment submitted with a plan for sampling the drums and proper off-site disposal.

3.3. Long-Term Monitoring

The historic environmental monitoring requirements of the Post-Closure Plan included biannual sampling in the spring and fall starting in May of 2002 and ending in 2022. However, current Solid Waste Rules require a minimum 30-year post-closure care monitoring period. The 30-year period will conclude in 2032 if custodial care requirements are achieved. If groundwater monitoring is required past the 30-year post-closure care monitoring period, then a reduced monitoring schedule and exit strategy should be evaluated and incorporated into an amended Post-Closure Plan.

In emails dated April 19, 2024 and March 28, 2025, VT DEC approved amending the Post-Closure Plan to adjust the analytes monitored in groundwater and included in Section III.D. of the Procedure (VT DEC, 1999). The reduced sampling plan removed VOC and metal analytes that have not exceeded the VGES over the previous 10 years or more. The remaining VOC analytes include 1,4-dioxane and naphthalene and remaining metal analytes include sodium for all monitoring wells and lead and manganese for select wells.

Based on the original Post-Closure Plan and Stone's evaluation of the data that is available, the following environmental monitoring program is proposed for both groundwater and drinking water as described below. The proposed monitoring is considered part of the CAP as well as on-going monitoring requirements for the amended Post-Closure Plan.

3.3.1. Groundwater Monitoring

Eight monitoring wells, including BR-1, BR-2, BR-3, BR-201, BR-202, MW-1, MW-2, and MW-101D (Figure 9, Appendix A), will be sampled in May and October of each year. Groundwater samples will be collected using low-flow methodology in accordance with Section III.C. of the Procedure. A combination of submersible pumps (Geosub & bladder), peristaltic pumps and dedicated well pumps will be used to obtain samples from the wells. The groundwater will be sampled with high density polyethylene (HDPE) tubing. Depth to water will be measured with a water level meter, and physical and chemical field parameters (pH, specific conductance, temperature, dissolved oxygen [DO], and oxidation reduction potential [ORP]) will be measured using a calibrated multi-parameter water quality meter equipped with a flow-through cell system. Turbidity will be measured using a standalone turbidity meter. The monitoring wells will be purged until the following parameters have stabilized:

- pH \pm 0.1 unit
- Specific Conductance \pm 3%
- ORP \pm 10 mV
- DO \pm 10%, or 3 consecutive readings below 0.5 mg/L
- Temperature \pm 3%
- Turbidity \pm 10%, or three consecutive readings below 5.0 nephelometric turbidity units (NTU)

Following stabilization, the groundwater samples will be collected into pre-preserved laboratory-supplied bottles, placed in an ice-filled cooler, and transported under chain of custody protocols to an accredited environmental laboratory. Groundwater samples will be analyzed for analytes described in Table 5.

Table 5: Groundwater Monitoring Sampling Plan

Compound	Method	BR-1	BR-2	BR-3	BR-201	BR-202	MW-1	MW-2	MW-101D
COD	410.1	X	X	X	X	X	X	X	X
Total Cl	SM4500	X	X	X	X	X	X	X	X

Compound	Method	BR-1	BR-2	BR-3	BR-201	BR-202	MW-1	MW-2	MW-101D
Total Na & Mn	6020	X	X	X	X	X	X	X	X
Total Lead	6020						X		
PFAS	1633			X					X
1,4-dioxane	8260 SIM			X					X
Naphthalene	8260								X

Abbreviations: COD = chemical oxygen demand, Cl = chloride, Mn = manganese, Na = sodium, PFAS = per- and polyfluoroalkyl substances.

3.3.2. Drinking Water Monitoring

A drinking water sample will be collected from the water supply system for adjacent landowners, the PMCWS in May and October of each year (Figure 9, Appendix A). The drinking water sample will be collected from the pump house tank inlet pipe, prior to any treatment. The water will be purged for 10 minutes prior to sample collection. Drinking water samples will be collected in appropriate containers, place in an ice-filled cooler, and transported under chain of custody procedures to an accredited environmental laboratory.

Drinking water samples will be analyzed for:

- COD by EPA method 410.4,
- total chloride by SM4500,
- total sodium by EPA method 6020,
- total manganese by EPA method 6020, and
- PFAS by EPA method 537.1.

3.4. Stormwater Control and Air Monitoring

There is no stormwater discharge permit or multi-sector general permit for this facility. The landfill is designed such that runoff is shed by overland flow off the cap surface. Any damage to the cap from erosion will be repaired. There are passive landfill gas vents at the Site, which will be inspected annually and cleared of any obstructions to allow landfill gas to vent freely. Any damaged gas vents will be repaired. Explosive gas monitoring will not be conducted.

3.5. Quality Assurance Control Plan

To ensure that data produced during field and analytical efforts are of known and acceptable quality, QA/QC samples will be collected for each medium of interest. Table 6, below, presents the anticipated QA/QC samples that will be collected as part of this investigation. Field duplicates will be collected at a 5 percent (1 in 20) frequency. Field reagent blanks and equipment blanks will be prepared by the laboratory for groundwater samples for PFAS analysis. Trip blanks will be prepared by the laboratory and accompany each cooler that contains VOC and PFAS samples.

Table 6: Quality Assurance and Quality Control Samples

QC Sample	Frequency	Acceptance Criteria	Corrective Action
Field Duplicates	5% per analyte group/ matrix	Precision 30% groundwater matrices	Assess sampling precision, qualify data

QC Sample	Frequency	Acceptance Criteria	Corrective Action
Field Reagent Blanks	1 per day of groundwater sampling (PFAS only)	Accuracy/ Bias- contamination	Identify source of contamination, qualify data
Equipment Blank	1 per sampling event	Accuracy/ Bias- contamination	Identify source of contamination, qualify data
Trip Blank	1 per shipment containing VOC and PFAs samples	Accuracy/ Bias- contamination Target analytes < Quantitation Limit	Identify source of contamination during transit, qualify data

3.6. Investigation Derived Waste Plan

Investigation derived wastes (IDW) generated during the post-closure environmental monitoring will include purge water, tubing, decontamination rinsate, as well as personal protective equipment such as gloves. Solid IDW will not require specialized disposal techniques and will be disposed of as municipal waste at the conclusion of fieldwork. All purge water generated during the post-closure monitoring will be discharged to the ground surface near where it was generated. Drums and materials generated as part of removal actions will be disposed of a scrap metal and non-hazardous waste described in Section 3.2.

3.7. Health and Safety

Due to the presence of contaminated media at the Site, corrective actions should be performed using appropriate health and safety precautions. Corrective action work will require the supervision of a qualified environmental professional (QEP). Stone's health and safety plan (HASP) for Stone's investigation and supervision activities is included in Appendix D.

Waste disposal contractors selected for CAP implementation shall perform services under the auspices of their own site-specific health and safety plan, to be developed for the project. The contractors must make their own determinations as to the appropriate level of health and safety protection required for each of the disposal activities described in this CAP.

3.8. Best Management Practices for Green and Sustainable Remediation

In accordance with ASTM E2893-13, Standard Guide for Greener Cleanups, the proposed best management practices for remedial alternatives have been selected to address the core elements of energy consumption, air quality, water quality, materials and waste, and land and ecosystems. The proposed best management practices specific to Site remedial actions include:

1. Use of local staff (including subcontractors), when possible, to minimize resource consumption.
2. Design corrective actions with consideration of minimizing energy consumption.

3.9. Post-Closure Plan Maintenance and Engineering Inspection

A registered engineer or an approved QEP will perform an annual engineering inspection of the landfill every May to ensure that the integrity of the final cover system, erosion control measures, groundwater monitoring networks, and gas ventilation system are properly maintained. The results of the annual inspection will be compiled into a summary report and submitted to the Solid Waste Program within 30 days of inspection.

Additionally, the landfill will be mowed annually in May to prevent vegetation from establishing on the cap. Any additional maintenance activities will be conducted as necessary, and any damage, malfunction or sub-standard performance at the facility will be reported to the Secretary within seven days.

3.10. Data Evaluation and Reporting

Following the completion of each monitoring event, a monitoring report will be prepared to document field activities and include a summary of all analytical results obtained. Groundwater and drinking water samples will be compared to applicable enforcement standards for individual and combined regulated compounds (e.g., PFAS). The report will include updated maps, tables, concentration trends, and a conceptual site model, and will provide recommendations for future groundwater and drinking water monitoring. The report will be provided to the VT DEC within sixty (60) days from the date of sampling event.

Following removal of the drums and tires and one year of post-closure care monitoring, the Corrective Action Construction Completion Report (CACCR) will be prepared in accordance with §35-608 of the IRule and submitted to the VT DEC, Sites Management Section. The CACCR will include a description of Site activities including dates of work.

As outlined in section 3.9, the results of the annual engineering inspection will be compiled into a summary report and submitted to the Solid Waste Program within 30 days of inspection. Additionally, the VT DEC shall be notified of any renovation, damage, or malfunction causing sub-standard performance at the facility.

3.11. Institutional Control Plan

As noted in the 2002 UVRLC Post-Closure Plan and the Grant of Environmental Restrictions, Mineral Rights, Right of Access, and Easement dated April 17, 2000, land restrictions have already been established on the Site. Prohibited activities include residential or daycare use, installation of wells for potable water, construction of buildings or camps, regrading or removal of earthen material, removal of trees, grazing of domestic animals, storage or disposal of solid or hazardous waste, altering hydrogeologic conditions or natural water courses, operation of all-terrain vehicles, hunting or trapping unless specific approval is granted, and any other use which would violate Chapter 21 of the Vermont Environmental Protection Rules.

3.12. Schedule and Contracting

Stone is prepared to initiate corrective actions immediately upon approval of this CAP; however, CAP implementation will be dependent on regulatory/funding agency reviews, contractor availability and securing funding for implementation. The proposed schedule for completion of the corrective actions is provided in Table 7 below. Proposed contractors are summarized in Table 8, below.

Table 7: Proposed Schedule

Task	Responsible Party	Duration	Anticipated Completion Date
Corrective Action Plan Regulatory Review and Approval	VTDEC	2 weeks	May 2025
Public Comment Period	VTDEC	30 days	June 2025
Mowing	Contractors/Stone	1 day	May 2025
Spring Groundwater and Drinking Water Monitoring	Stone	2 days	May 2025 (annually until 2032 or custodial care is achieved)
Engineering Inspection	Stone	1 day	May 2025 (annually through 2032 or custodial care is achieved)

Task	Responsible Party	Duration	Anticipated Completion Date
Engineering Inspection Report	Stone	2 weeks	June 2025 (annually through 2032 or custodial care is achieved)
Coordinate Contractor Mobilization	Contractors/Stone	2 weeks	June/July 2025
Removal of Drums and Tires	Contractors/Stone	2 days	June/July 2025
Semi-Annual Spring Groundwater and Drinking Water Report	Stone	2 weeks	July 2025 (annually through 2032 or custodial care is achieved)
Fall Groundwater and Drinking Water Monitoring	Stone	2 days	October 2025 (annually through 2032 or custodial care is achieved)
Semi-Annual Fall Groundwater and Drinking Water Report	Stone	2 weeks	December 2025 (annually through 2032 or custodial care is achieved)
Corrective Action Construction Completion Report	Stone	2 weeks	December 2025

Table 8: Proposed Contractors

Address	Contact	Title	Phone	Email
Corrective Action Planning, Oversight, and Reporting: Stone Environmental, Inc.				
535 Stone Cutters Way Montpelier, VT 05602	Rebecca Treat	Senior Geologist	O: 802-229-4541 D: 802-229-5378	rtreat@stone-env.com
Drum and Tire Removal and Disposal: Calkins Oil & Excavating, Inc.				
1389 US Route 2 Danville, VT 05828	Dana Calkins	President	O: 802-684-3329	Info@CalkinsExcavating.com
Contract Environmental Laboratory: Eurofins Environment Testing Eastern Analytical				
51 Antrim Avenue Concord, NH 03301	Ashley Breen	Project Manager	O: 603-410-3868	EAI.CustomerService@ET.EurofinsUS.com

3.13. Cost

Stone has prepared a cost estimate for the corrective actions specified herein including a 15% contingency for the first year and a 3% inflation for years two through seven. The estimated cost to implement the corrective actions described within this CAP is approximately \$384,300 as summarized in Table 9 below. A detailed cost estimate is provided in Appendix E.

Table 9: CAP Cost Summary

Task	Professional Services	Consultant	Expenses	Total*
1 Project Management & Coordination (annual cost)	\$1,390	\$0	\$0	\$1,390
2 Monitoring of GW & DW (annual cost – 2 events)	\$13,000	\$13,240	\$5,340	\$31,580
3 Monitoring Report (annual cost – 2 events)	\$9,910	\$0	\$0	\$9,910
4 Engineering Inspection & Summary Report (annual cost)	\$2,680	\$0	\$150	\$2,830
5 Mowing of Landfill (annual cost)	\$175	\$1,100	\$0	\$1,275
6 Drum Disposal	\$2,295	\$6,300	\$150	\$8,745
7 Tire Disposal	\$2,295	\$5,360	\$150	\$7,805
8 Corrective Action Construction Completion Report (CACCR)	\$6,265	\$0	\$0	\$6,265
Annual Cost Year 1 – (Tasks 1-8) + 15% contingency				\$80,270

Task	Professional Services	Consultant	Expenses	Total*
Annual Cost Year 2 – (Tasks 1-5) + 3% inflation				\$48,400
Annual Cost Year 3 – (Tasks 1-5) + 3% inflation				\$49,860
Annual Cost Year 4 – (Tasks 1-5) + 3% inflation				\$51,350
Annual Cost Year 5 – (Tasks 1-5) + 3% inflation				\$52,890
Annual Cost Year 6 – (Tasks 1-5) + 3% inflation				\$54,480
Annual Cost Year 7 – (Tasks 1-5) + 3% inflation				\$56,110
Annual Cost Year 8 – (Tasks 1-5) + 3% inflation				\$57,790
Total Project Cost Years 1-8				\$451,150
Present Worth of Total Project Costs				\$373,020

*Notes: *Costs have been rounded up to the nearest \$10.*

4. References

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Appendix A: Figures

Figure 1: Location Map

Figure 2: Vicinity Map

Figure 3: Site Map – Historic Sampling Locations

Figure 4: Overburden Potentiometric Surface Map – November 2022

Figure 5: Bedrock Potentiometric Surface Map – April 2023

Figure 6: TPH Concentrations in Soil - Phase II ESA

Figure 7: PFAS Concentrations in Groundwater - Phase II ESA

Figure 8: 1,4-Dioxane Concentrations in Groundwater

Figure 9: Environmental Monitoring & Corrective Action Locations



LEGEND

Site Boundary

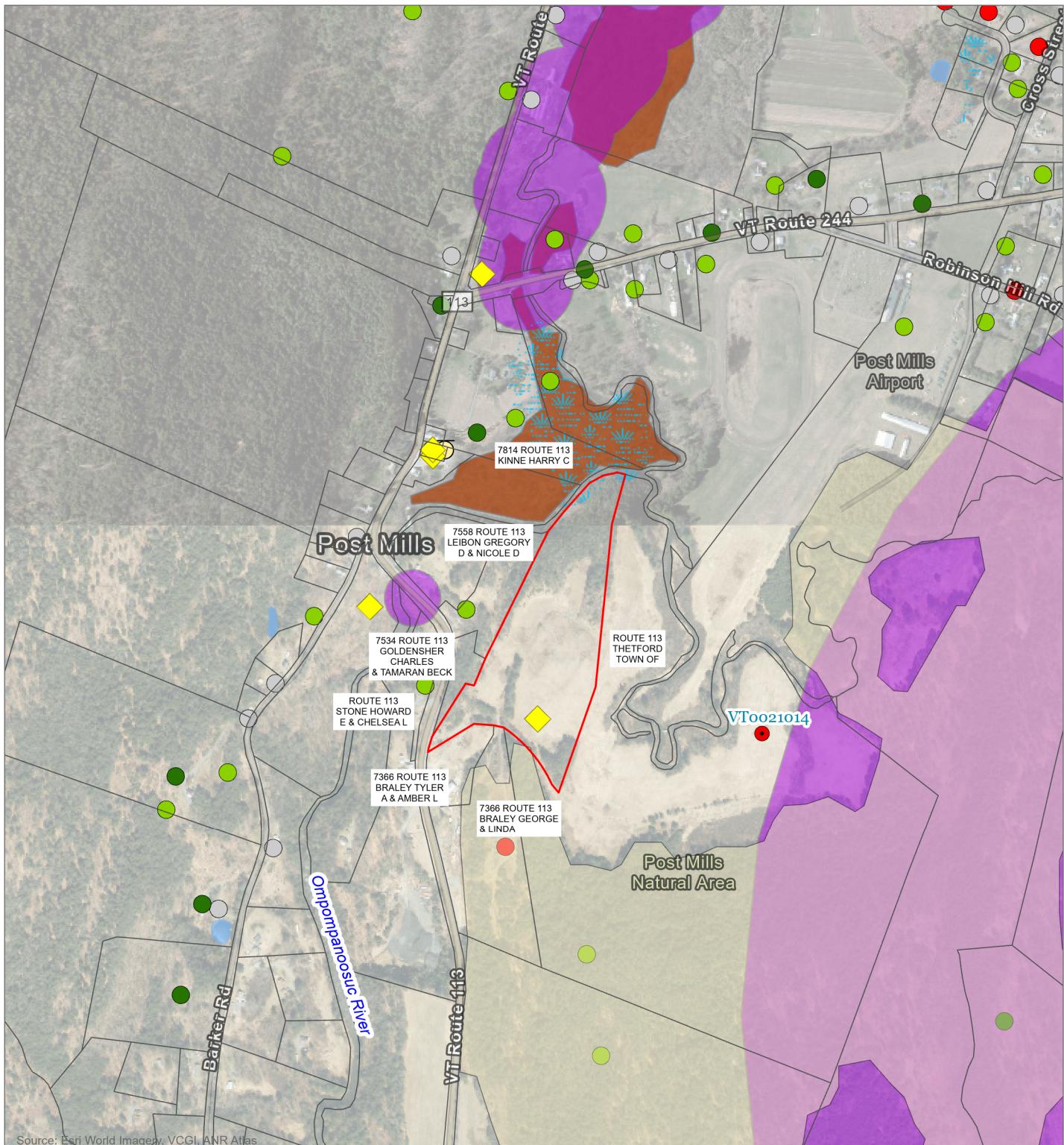


Figure 1: Location Map

7412 VT Route 113
Thetford, VT

Upper Valley Regional Landfill
Corporation

 STONE ENVIRONMENTAL



LEGEND

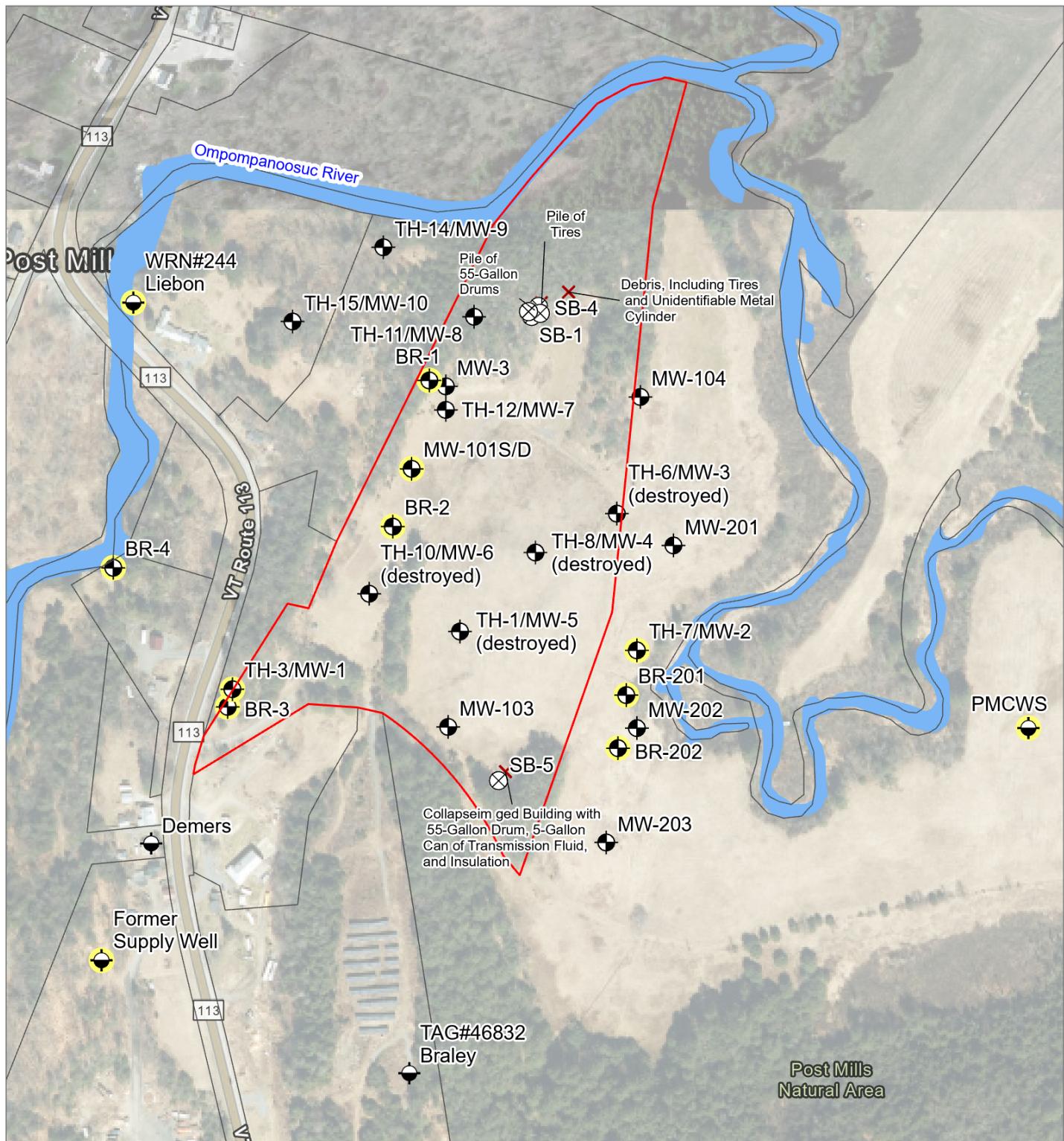
- Site Boundary
- Parcel Boundary
- Class II Wetlands
- RTE Species
- Significant Natural Community
- Deer Wintering Areas
- GPS Location
- screen digitized
- E911 Address
- Unknown



Figure 2: Vicinity Map

7412 VT Route 113
Thetford, VT

Upper Valley Regional Landfill Corporation



LEGEND

-  Site Boundary
-  Parcel Boundary
-  Rivers
-  Points of Interest
-  Monitoring Well
-  Monitoring Well, Post Closure Network
-  Soil Boring, Phase II ESA
-  Drinking Water
-  Drinking Water, Post Closure Network

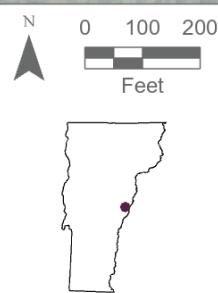
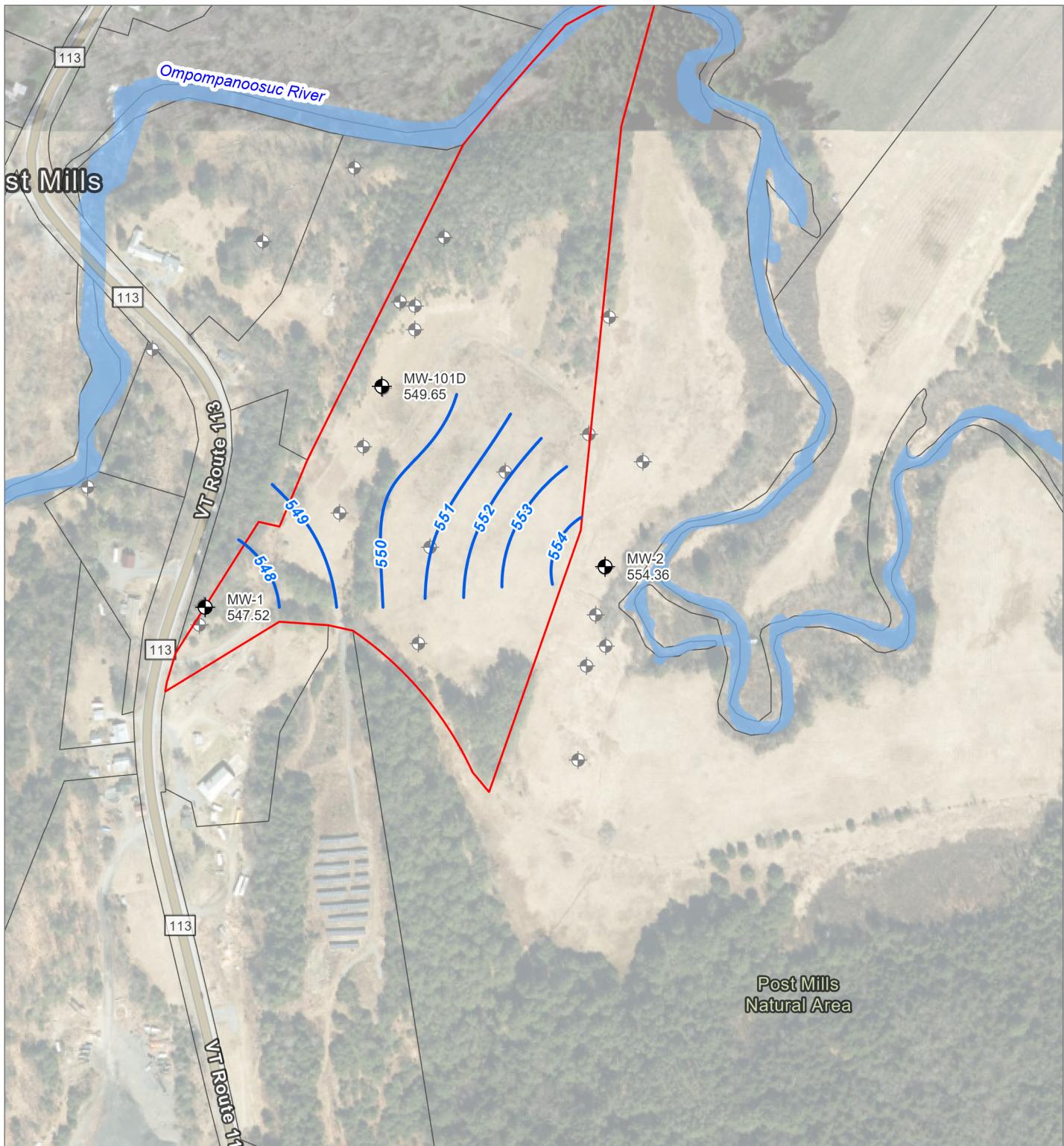


Figure 3: Site Map - Historic Sampling Locations

7412 VT Route 113
Thetford, VT

Upper Valley Regional Landfill Corporation



LEGEND

- Site Boundary
- Parcel Boundary
- Groundwater Contour (1')
- Overburden Well

Notes:
 Groundwater elevations in ft above mean sea level
 Relative casing elevations were obtained from a 1995 report titled "Hydrogeologic Summary of the Upper Valley Regional Landfill in Post Mills, Vermont (Town of Thetford)" prepared by Caswell, Eicher and Hill, Inc.

Source: ESRI World Topography, VCGI, ANR Atlas
 Path: O:\PROJ-20\EAR\20-096_VT Route 113 Thetford\GIS\20-096 7412 VT Route 113\20-096 7412 VT Route 113.aprx Saved: 3/6/2025 by sveilleux

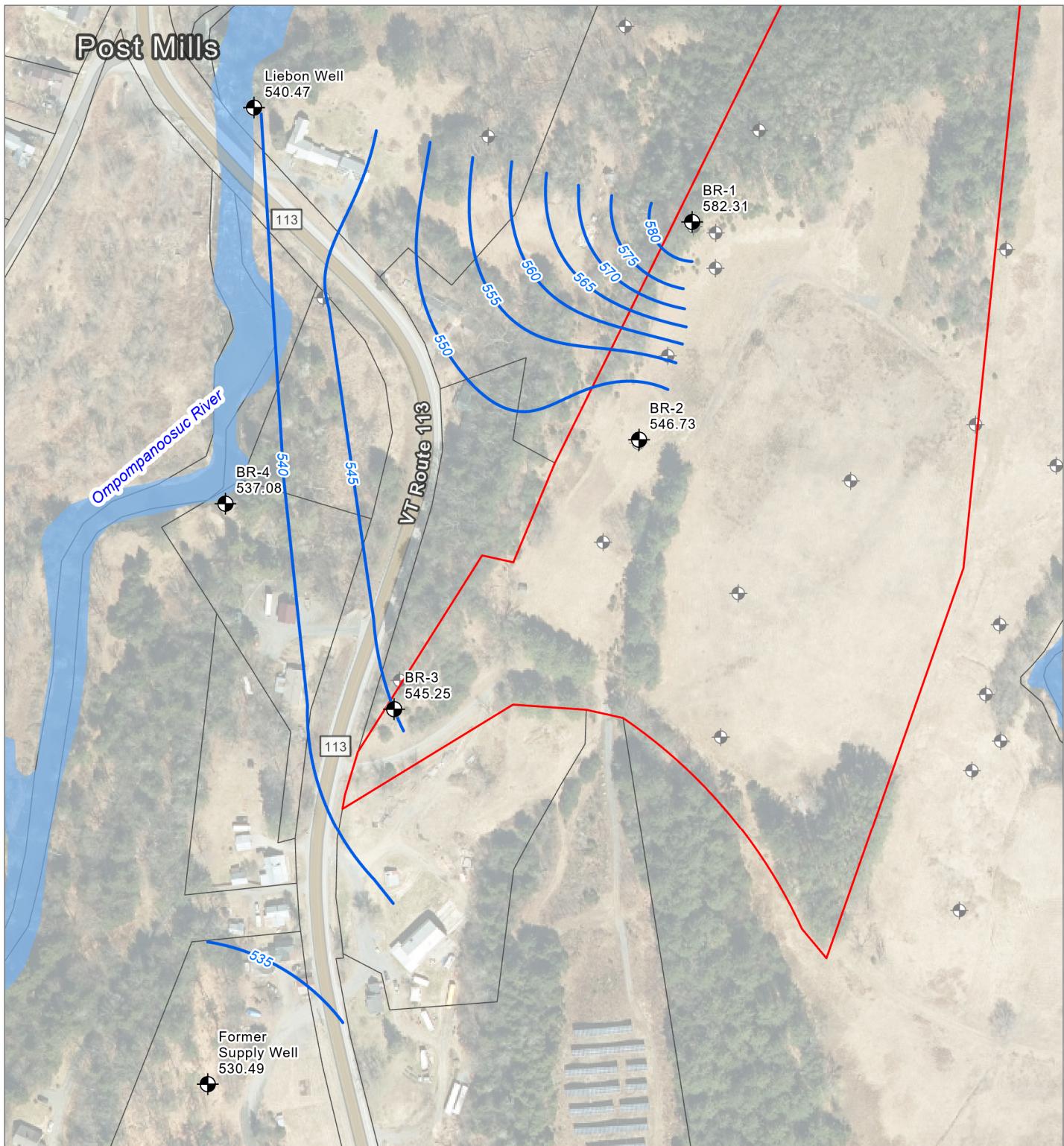


Figure 4: Overburden Potentiometric Surface Map - November 2022

7412 VT Route 113
 Thetford, VT

Upper Valley Regional Landfill Corporation

 STONE ENVIRONMENTAL



LEGEND

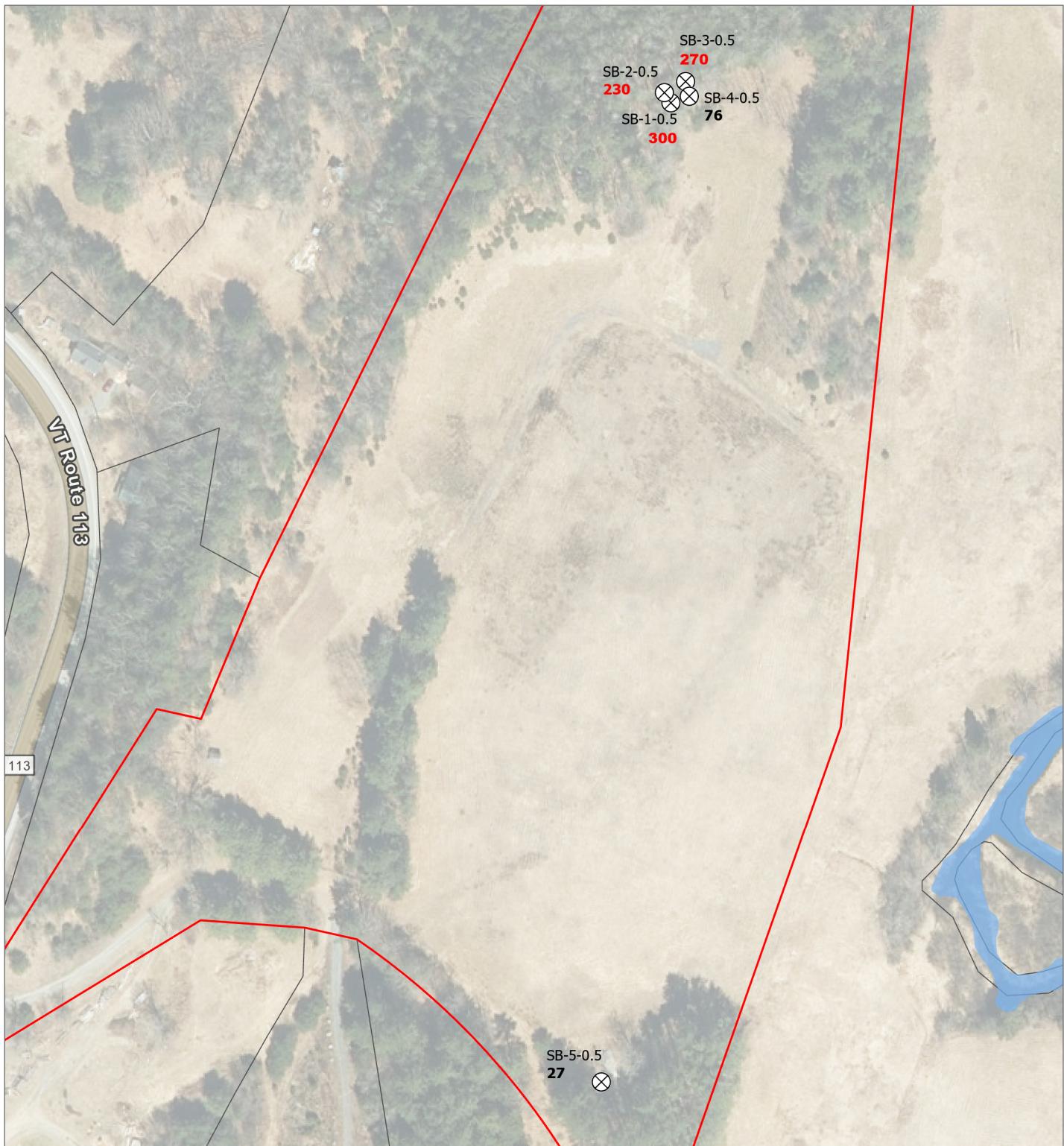
- Site Boundary
- Parcel Boundary
- Groundwater Contour (5')
- Bedrock Well



Figure 5: Bedrock Potentiometric Surface Map - April 2023

7412 VT Route 113
Thetford, VT

Upper Valley Regional Landfill Corporation



LEGEND

- Site Boundary
- Parcel Boundary
- River
- Soil Boring

Notes:
 Units in mg/kg
 Bold indicates a detection
Red and Bold indicates an exceedance of the
 Residential EPA Regional Screening Level (RSL)
 Residential EPA RSL: 96 mg/kg
 Industrial EPA RSL: 440 mg/kg

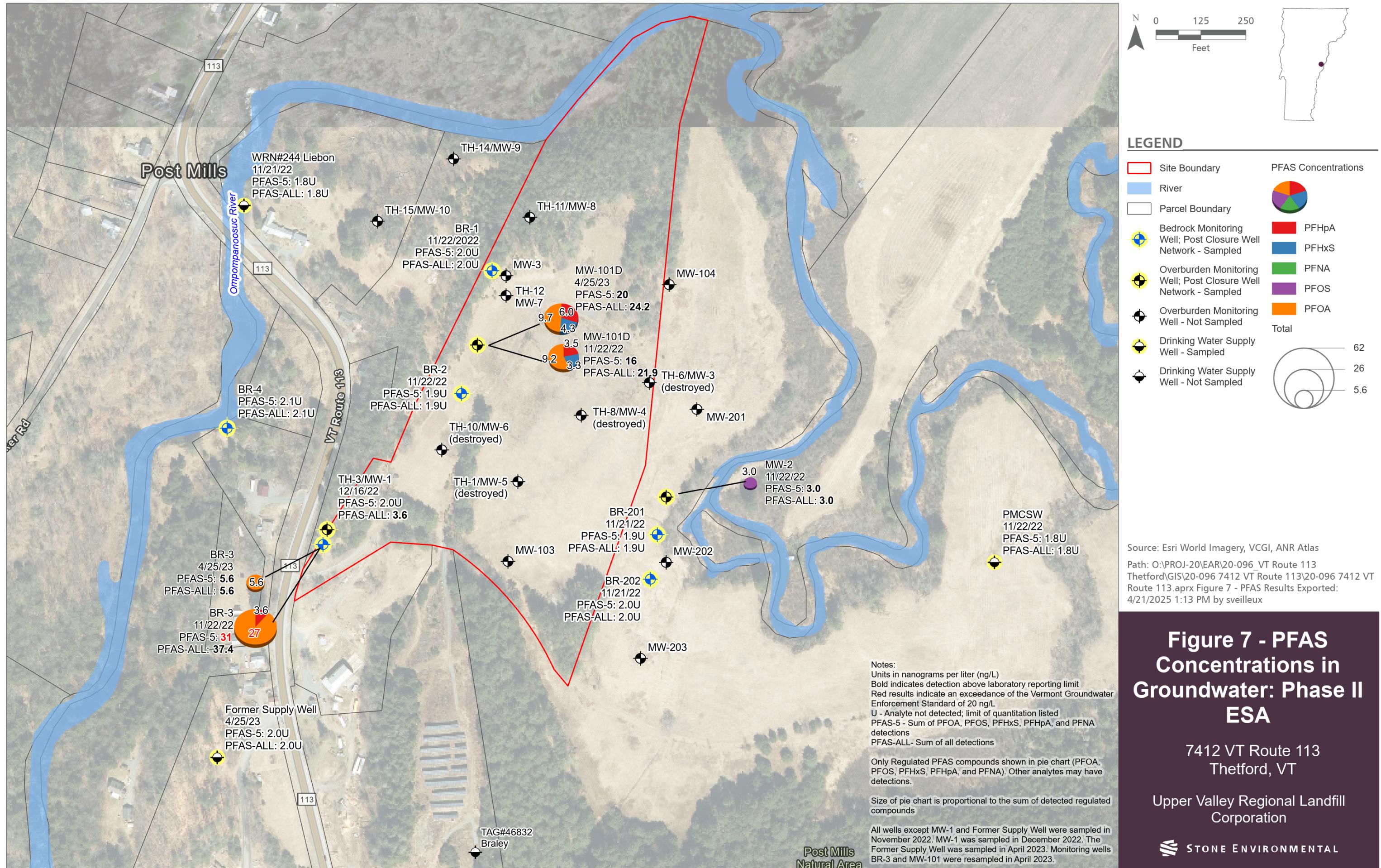


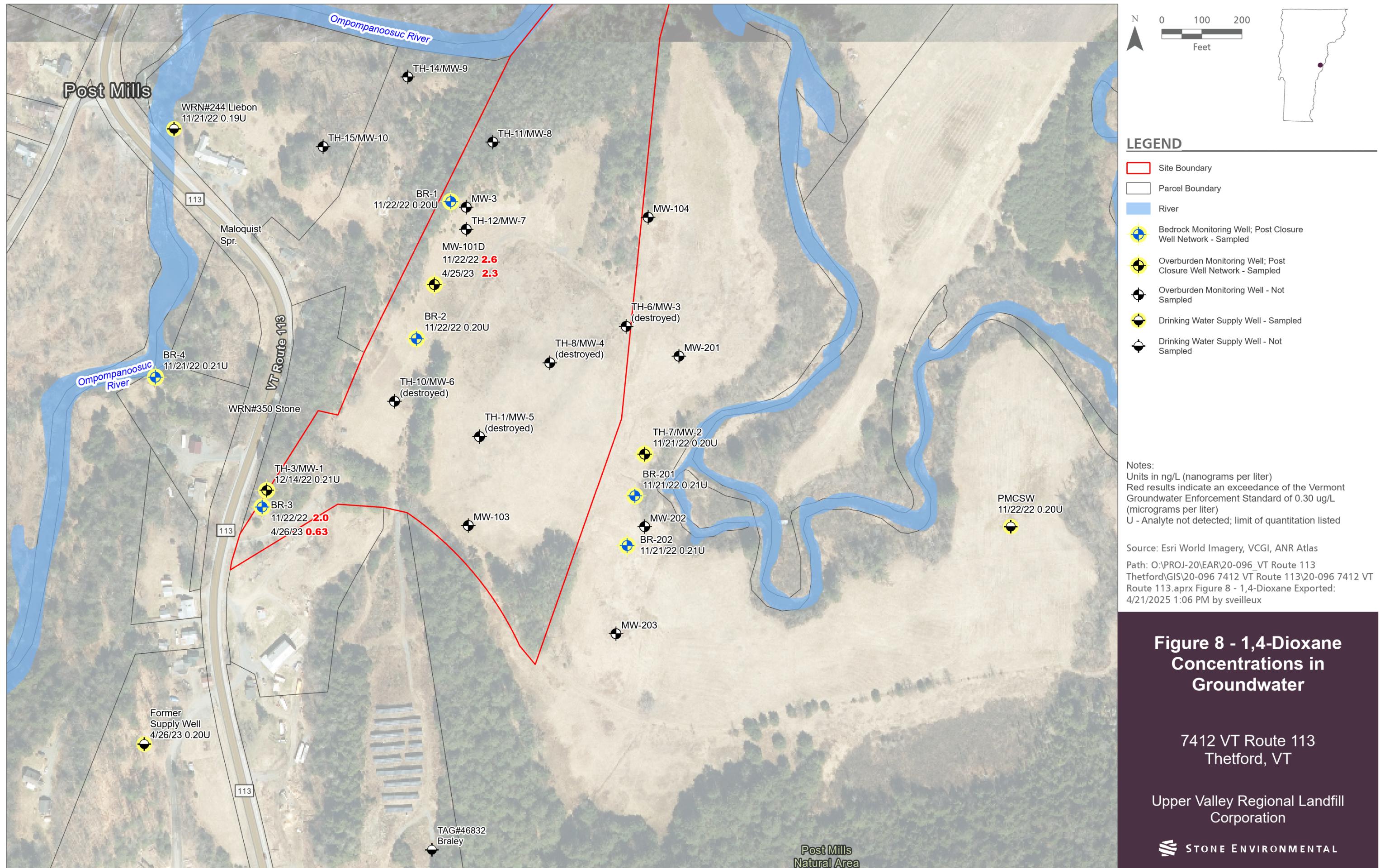
Figure 6 - TPH Concentrations in Soil: Phase II ESA

7412 VT Route 113
 Thetford, VT

Upper Valley Regional Landfill
 Corporation

 STONE ENVIRONMENTAL





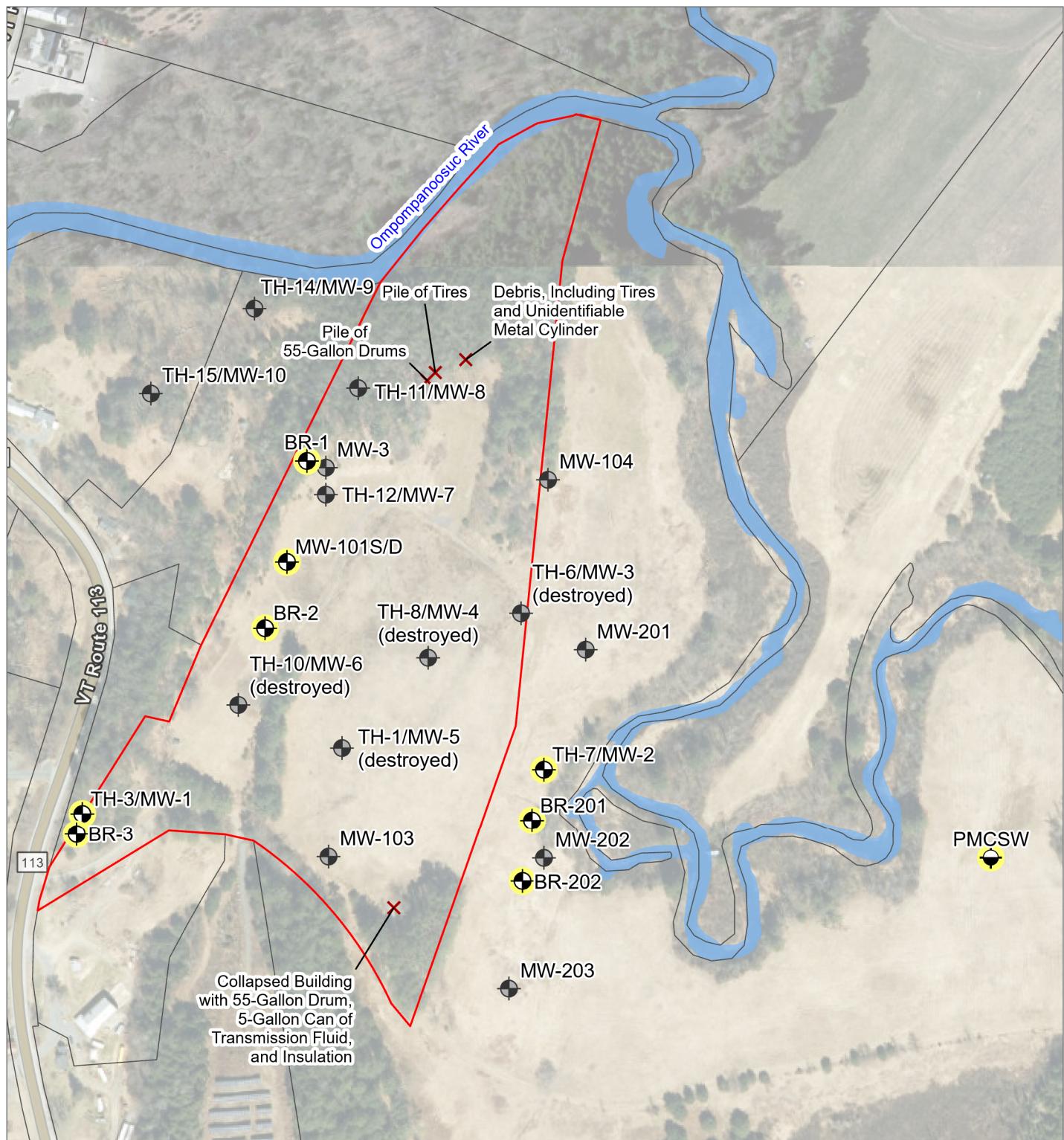


Figure 9: Environmental Monitoring & Corrective Action Locations

7412 VT Route 113
Thetford, VT

Upper Valley Regional Landfill Corporation

 STONE ENVIRONMENTAL

Appendix B: Analytical Data Tables

Table B-1
Metal Concentrations in Groundwater

Sample ID Sample Date	VGES (µg/L)	MW-1 12/14/2022	BR-1		BR-2		BR-2-FD		BR-201		RPD	
			Q	11/22/2022	Q	11/22/2022	Q	11/22/2022	Q	11/21/2022		
			NE	NA	4100		2200		5800			
Sodium	7440-23-5	NE	NA		4100		2200		2200		0%	
Antimony	7440-36-0	6	1 U		1 U		1 U		1 U		-	
Arsenic	7440-38-2	10	0.8 U		0.8 U		0.8 U		0.8 U		-	
Beryllium	7440-41-7	4	0.4 U		0.4 U		0.4 U		0.4 U		-	
Cadmium	7440-43-9	5	0.2 U		0.2 U		0.2 U		0.2 U		-	
Chromium	7440-47-3	100	1 U		2.3		1.4		1.2		15%	
Copper	7440-50-8	1300	1 U		1 U		2.5		3.7		39%	
Lead	7439-92-1	15	0.5 U		0.5 U		0.5 U		0.5 U		-	
Nickel	7440-02-0	100	5 U		5 U		5 U		5 U		-	
Selenium	7782-49-2	50	5 U		5 U		5 U		5 U		-	
Silver	7440-22-4	NE	0.2 U		0.2 U		0.2 U		0.2 U		-	
Thallium	7440-28-0	2	0.2 U		0.2 U		0.2 U		0.2 U		-	
Zinc	7440-66-6	NE	10 U		10 U		10 U		10 U		-	
Mercury	7439-97-6	2	0.1 U		0.1 U		0.1 U		0.1 U		-	
Sample ID Sample Date	VGES (µg/L)	BR-202 11/21/2022	BR-3		BR-4		MW-101D		MW-2			
			Q	11/22/2022	Q	11/21/2022	Q	11/22/2022	Q	11/21/2022		
			NE	3500		82000		29000		12000		2200
Sodium	7440-23-5	NE	1 U		1.5		0.8 U		0.8 U		3.4	0.8 U
Antimony	7440-36-0	6	1 U		1 U		1 U		1 U		1 U	-
Arsenic	7440-38-2	10	0.2 U		0.2 U		0.2 U		0.2 U		0.2 U	-
Beryllium	7440-41-7	4	0.4 U		0.4 U		0.4 U		0.4 U		0.4 U	-
Cadmium	7440-43-9	5	0.2 U		0.2 U		0.2 U		0.2 U		0.2 U	-
Chromium	7440-47-3	100	3.8		1.1		4.6		4.1		5.1	-
Copper	7440-50-8	1300	7.2		37		1.9		43		1 U	-
Lead	7439-92-1	15	0.5 U		1		0.88		0.5 U		0.5 U	-
Nickel	7440-02-0	100	5 U		5 U		5 U		18		5 U	-
Selenium	7782-49-2	50	5 U		5 U		5 U		5 U		5 U	-
Silver	7440-22-4	NE	0.2 U		0.2 U		0.2 U		0.2 U		0.2 U	-
Thallium	7440-28-0	2	0.2 U		0.2 U		0.2 U		0.2 U		0.2 U	-
Zinc	7440-66-6	NE	10 U		10 U		10 U		10 U		62	-
Mercury	7439-97-6	2	0.1 U		0.1 U		0.1 U		0.1 U		0.1 U	-

Key:

VGES - Vermont Groundwater Enforcement Standard, July 2019

µg/L - micrograms per liter (parts per billion)

Bold results indicate detections of the analyte

NE - screening level not established

Q - laboratory result qualifier

U - Analyte not detected; limit of quantitation listed

NA - Not analyzed

RPD - Relative Percent Difference

Table B-2
Metal Concentrations in Private Drinking Water

Sample ID		VGES/VHA	Leibon Well	
Sample Date	CAS#	($\mu\text{g}/\text{L}$)	11/21/2022	Q
Sodium	7440-23-5	NE	19000	
Antimony	7440-36-0	6	1	U
Arsenic	7440-38-2	10	0.8	U
Beryllium	7440-41-7	4	0.4	U
Cadmium	7440-43-9	5	0.2	U
Chromium	7440-47-3	100	3.8	
Copper	7440-50-8	1300	9	
Lead	7439-92-1	15	2.3	
Nickel	7440-02-0	100	5	U
Selenium	7782-49-2	50	5	U
Silver	7440-22-4	NE	0.2	U
Thallium	7440-28-0	2	0.2	U
Zinc	7440-66-6	NE	10	U
Mercury	7439-97-6	2	0.1	U

Key:

VGES - Vermont Groundwater Enforcement Standard - Groundwater Protection Rule and Strategy, July 2019

VHA - Vermont Health Advisory - Vermont DOH Drinking Water Guidance, April 10, 2024

$\mu\text{g}/\text{L}$ - micrograms per liter (parts per billion)

Bold results indicate detections of the analyte

NE - screening level not established

Q - laboratory result qualifier

U - Analyte not detected; limit of quantitation listed

Table B-3
Metal Concentrations in Public Water Supply

Sample ID Sample Date	CAS#	MCL/SMCL ($\mu\text{g/L}$)	PMCWS Well	
			11/22/2022	Q
Sodium	7440-23-5	250000	5300	
Antimony	7440-36-0	6	1	U
Arsenic	7440-38-2	10	4.1	
Beryllium	7440-41-7	4	0.4	U
Cadmium	7440-43-9	5	0.2	U
Chromium	7440-47-3	100	1.3	
Copper	7440-50-8	1300	1	U
Lead	7439-92-1	15	0.5	U
Nickel	7440-02-0	100	5	U
Selenium	7782-49-2	50	5	U
Silver	7440-22-4	100	0.2	U
Thallium	7440-28-0	2	0.2	U
Zinc	7440-66-6	5000	10	U
Mercury	7439-97-6	2	0.1	U

Key:

MCL - Maximum Contaminant Level - Vermont Water Supply Rule, February 24, 2024

SMCL - Secondary Maximum Contaminant Level - Vermont Water Supply Rule, February 24, 2024

$\mu\text{g/L}$ - micrograms per liter (parts per billion)

Bold results indicate detections of the analyte

NE - screening level not established

Q - laboratory result qualifier

U - Analyte not detected; limit of quantitation listed

Table B-4
PFAS Concentrations in Groundwater

SampleID	VGES	MW-1	BR-1		BR-2		BR-2-FD		BR-201		BR-202		RPD		
Sample Date	CAS#		12/14/2022	Q	11/22/2022	Q	11/22/2022	Q	11/22/2022	Q	11/21/2022	Q			
		(ng/L)											%		
11Cl-PF3OUdS (F53B Major)	763051-92-9	NE	2.0	U	2.0	U	1.9	U	1.9	U	1.9	U	2.0	U	-
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	NE	2.0	U	2.0	U	1.9	U	1.9	U	1.9	U	2.0	U	-
9Cl-PF3ONS (F53B Minor)	756426-58-1	NE	2.0	U	2.0	U	1.9	U	1.9	U	1.9	U	2.0	U	-
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	NE	2.0	U	2.0	U	1.9	U	1.9	U	1.9	U	2.0	U	-
N-EtFOSAA (NETFOSAA)	2991-50-6	NE	3.6		2.0	U	1.9	U	1.9	U	1.9	U	2.0	U	-
N-MeFOSAA (NMeFOSAA)	2355-31-9	NE	2.0	U	2.0	U	1.9	U	1.9	U	1.9	U	2.0	U	-
Perfluorobutanesulfonic acid (PFBS)	375-73-5	NE	2.0	U	2.0	U	1.9	U	1.9	U	1.9	U	2.0	U	-
Perfluorodecanoic acid (PFDA)	335-76-2	NE	2.0	U	2.0	U	1.9	U	1.9	U	1.9	U	2.0	U	-
Perfluorododecanoic acid (PFDoA)	307-55-1	NE	2.0	U	2.0	U	1.9	U	1.9	U	1.9	U	2.0	U	-
Perfluoroheptanoic acid (PFHxA)	375-85-9	20	2.0	U	2.0	U	1.9	U	1.9	U	1.9	U	2.0	U	-
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	20	2.0	U	2.0	U	1.9	U	1.9	U	1.9	U	2.0	U	-
Perfluorohexanoic acid (PFHxA)	307-24-4	NE	2.0	U	2.0	U	1.9	U	1.9	U	1.9	U	2.0	U	-
Perfluorononanoic acid (PFNA)	375-95-1	20	2.0	U	2.0	U	1.9	U	1.9	U	1.9	U	2.0	U	-
Perfluoroctanesulfonic acid (PFOS)	1763-23-1	20	2.0	U	2.0	U	1.9	U	1.9	U	1.9	U	2.0	U	-
Perfluoroctanoic acid (PFOA)	335-67-1	20	2.0	U	2.0	U	1.9	U	1.9	U	1.9	U	2.0	U	-
Perfluorotetradecanoic acid (PFTA)	376-06-7	NE	2.0	U	2.0	U	1.9	U	1.9	U	1.9	U	2.0	U	-
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	NE	2.0	U	2.0	U	1.9	U	1.9	U	1.9	U	2.0	U	-
Perfluoroundecanoic acid (PFUnA)	2058-94-8	NE	2.0	U	2.0	U	1.9	U	1.9	U	1.9	U	2.0	U	-
Total Regulated PFAS			20	2.0	U	2.0	U	1.9	U	1.9	U	1.9	U	2.0	-
Sample ID	VGES	BR-3		BR-4		MW-101D			MW-101D-FD			RPD			
Sample Date	CAS#		11/22/2022	Q	4/25/2023	Q	11/21/2022	Q	11/22/2022	Q	4/25/2023	Q			
		(ng/L)											%		
11Cl-PF3OUdS (F53B Major)	763051-92-9	NE	2.1	U	1.9	U	2.1	U	2.1	U	2.0	U	2.0	U	-
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	NE	2.1	U	1.9	U	2.1	U	2.1	U	2.0	U	2.0	U	-
9Cl-PF3ONS (F53B Minor)	756426-58-1	NE	2.1	U	1.9	U	2.1	U	2.1	U	2.0	U	2.0	U	-
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	NE	2.1	U	1.9	U	2.1	U	2.1	U	2.0	U	2.0	U	-
N-EtFOSAA (NETFOSAA)	2991-50-6	NE	2.1	U	1.9	U	2.1	U	2.1	U	2.0	U	2.0	U	-
N-MeFOSAA (NMeFOSAA)	2355-31-9	NE	2.1	U	1.9	U	2.1	U	2.1	U	2.0	U	2.0	U	-
Perfluorobutanesulfonic acid (PFBS)	375-73-5	NE	2.1	U	1.9	U	2.1	U	2.1	U	2.0	U	2.0	U	-
Perfluorodecanoic acid (PFDA)	335-76-2	NE	2.1	U	1.9	U	2.1	U	2.1	U	2.0	U	2.0	U	-
Perfluorododecanoic acid (PFDoA)	307-55-1	NE	2.1	U	1.9	U	2.1	U	2.1	U	2.0	U	2.0	U	-
Perfluoroheptanoic acid (PFHxA)	375-85-9	20	3.6		1.9	U	2.1	U	3.5		4.9		6.0	20%	
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	20	2.1	U	1.9	U	2.1	U	3.3		4.5		4.3	5%	
Perfluorohexanoic acid (PFHxA)	307-24-4	NE	6.8		1.9	U	2.1	U	5.9		4.8		4.3	11%	
Perfluorononanoic acid (PFNA)	375-95-1	20	2.1	U	1.9	U	2.1	U	2.1		2.0		2.0	-	
Perfluoroctanesulfonic acid (PFOS)	1763-23-1	20	2.1	U	1.9	U	2.1	U	2.1		2.0		2.0	-	
Perfluoroctanoic acid (PFOA)	335-67-1	20	27		5.6		2.1	U	9.2		10		9.7	3%	
Perfluorotetradecanoic acid (PFTA)	376-06-7	NE	2.1	U	1.9	U	2.1	U	2.1		2.0		2.0	-	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	NE	2.1	U	1.9	U	2.1	U	2.1		2.0		2.0	-	
Perfluoroundecanoic acid (PFUnA)	2058-94-8	NE	2.1	U	1.9	U	2.1	U	2.1		2.0		2.0	-	
Total Regulated PFAS		20	31		5.6		2.1	U	16.0		19		20	3%	

Table B-4
PFAS Concentrations in Groundwater

Sample ID	Sample Date	VGES	MW-2	Trip Blank			EB-112222	EB-042523	FRB-112122	FRB-042523	
				11/21/2022	Q	11/21/2022	Q	4/25/2023	Q	11/22/2022	Q
			(ng/L)								
11CI-PF3OUdS (F53B Major)	763051-92-9	NE	1.9 U	1.9 U		1.9 U	2 U	2.1 U		2.0 U	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	NE	1.9 U	1.9 U		1.9 U	2 U	2.1 U		2.0 U	2.0 U
9CI-PF3ONS (F53B Minor)	756426-58-1	NE	1.9 U	1.9 U		1.9 U	2 U	2.1 U		2.0 U	2.0 U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	NE	1.9 U	1.9 U		1.9 U	2 U	2.1 U		2.0 U	2.0 U
N-EtFOSAA (NetFOSAA)	2991-50-6	NE	1.9 U	1.9 U		1.9 U	2 U	2.1 U		2.0 U	2.0 U
N-MeFOSAA (NMeFOSAA)	2355-31-9	NE	1.9 U	1.9 U		1.9 U	2 U	2.1 U		2.0 U	2.0 U
Perfluorobutanesulfonic acid (PFBS)	375-73-5	NE	1.9 U	1.9 U		1.9 U	2 U	2.1 U		2.0 U	2.0 U
Perfluorodecanoic acid (PFDA)	335-76-2	NE	1.9 U	1.9 U		1.9 U	2 U	2.1 U		2.0 U	2.0 U
Perfluorododecanoic acid (PFDoA)	307-55-1	NE	1.9 U	1.9 U		1.9 U	2 U	2.1 U		2.0 U	2.0 U
Perfluoroheptanoic acid (PFHxA)	375-85-9	20	1.9 U	1.9 U		1.9 U	2 U	2.1 U		2.0 U	2.0 U
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	20	1.9 U	1.9 U		1.9 U	2 U	2.1 U		2.0 U	2.0 U
Perfluorohexanoic acid (PFHxA)	307-24-4	NE	1.9 U	1.9 U		1.9 U	2 U	2.1 U		2.0 U	2.0 U
Perfluorononanoic acid (PFNA)	375-95-1	20	1.9 U	1.9 U		1.9 U	2 U	2.1 U		2.0 U	2.0 U
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	20	3.0	1.9 U		1.9 U	2 U	2.1 U		2.0 U	2.0 U
Perfluorooctanoic acid (PFOA)	335-67-1	20	1.9 U	1.9 U		1.9 U	2 U	2.1 U		2.0 U	2.0 U
Perfluorotetradecanoic acid (PFTA)	376-06-7	NE	1.9 U	1.9 U		1.9 U	2 U	2.1 U		2.0 U	2.0 U
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	NE	1.9 U	1.9 U		1.9 U	2 U	2.1 U		2.0 U	2.0 U
Perfluoroundecanoic acid (PFUnA)	2058-94-8	NE	1.9 U	1.9 U		1.9 U	2 U	2.1 U		2.0 U	2.0 U
Total Regulated PFAS			20	3.0		1.9 U	1.9 U	2 U	2.1 U	2.0 U	2.0 U

Key:

Total Regulated PFAS - Cumulative sum of PFOA, PFOS, PFHxS, PFHpA, and PFNA

VGES - Vermont Groundwater Enforcement Standard, July 2019

ng/L - nanograms per liter (parts per trillion)

Bold results indicate detections of the analyte

Shaded results indicate an exceedance of the enforcement standard

NE - screening level not established

Q - laboratory result qualifier

U - Analyte not detected; limit of quantitation listed

RPD - Relative Percent Difference

Table B-5
PFAS Concentrations in Private Drinking Water

SampleID		VGES/VHA	Leibon Well	
Sample Date	CAS#		11/21/2022	Q
		(ng/L)		
11Cl-PF3OUdS (F53B Major)	763051-92-9	NE	1.8	U
4,8-Dioxa-3H-perfluororononanoic acid (ADONA)	919005-14-4	NE	1.8	U
9Cl-PF3ONS (F53B Minor)	756426-58-1	NE	1.8	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	NE	1.8	U
N-EtFOSAA (NEtFOSAA)	2991-50-6	NE	1.8	U
N-MeFOSAA (NMeFOSAA)	2355-31-9	NE	1.8	U
Perfluorobutanesulfonic acid (PFBS)	375-73-5	NE	1.8	U
Perfluorodecanoic acid (PFDA)	335-76-2	NE	1.8	U
Perfluorododecanoic acid (PFDoA)	307-55-1	NE	1.8	U
Perfluoroheptanoic acid (PFHpA)	375-85-9	20	1.8	U
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	20	1.8	U
Perfluorohexanoic acid (PFHxA)	307-24-4	NE	1.8	U
Perfluorononanoic acid (PFNA)	375-95-1	20	1.8	U
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	20	1.8	U
Perfluorooctanoic acid (PFOA)	335-67-1	20	1.8	U
Perfluorotetradecanoic acid (PFTA)	376-06-7	NE	1.8	U
Perfluorotridecanoic acid (PFTDA)	72629-94-8	NE	1.8	U
Perfluoroundecanoic acid (PFUna)	2058-94-8	NE	1.8	U
Total Regulated PFAS		20	1.8	U

Key:

Total Regulated PFAS - Cumulative sum of PFOA, PFOS, PFHxS, PFHpA, and PFNA

VGES - Vermont Groundwater Enforcement Standard, July 2019

VHA - Vermont Health Advisory - Vermont DOH Drinking Water Guidance, April 10, 2024

ng/L - nanograms per liter (parts per trillion)

NE - screening level not established

Q - laboratory result qualifier

U - Analyte not detected; limit of quantitation listed

Table B-6
PFAS Concentrations in Public Water Supply

Sample ID Sample Date	CAS#	MCL (ng/L)	PMCWS WELL	FORMER SUPPLY WELL		
			11/22/2022	Q	4/25/2023	Q
11Cl-PF3OUdS (F53B Major)	763051-92-9	NE	1.8	U	2.0	U
4,8-Dioxa-3H-perfluororononanoic acid (ADONA)	919005-14-4	NE	1.8	U	2.0	U
9Cl-PF3ONS (F53B Minor)	756426-58-1	NE	1.8	U	2.0	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	NE	1.8	U	2.0	U
N-EtFOSAA (NEtFOSAA)	2991-50-6	NE	1.8	U	2.0	U
N-MeFOSAA (NMeFOSAA)	2355-31-9	NE	1.8	U	2.0	U
Perfluorobutanesulfonic acid (PFBS)	375-73-5	NE	1.8	U	2.0	U
Perfluorodecanoic acid (PFDA)	335-76-2	NE	1.8	U	2.0	U
Perfluorododecanoic acid (PFDoA)	307-55-1	NE	1.8	U	2.0	U
Perfluoroheptanoic acid (PFHpA)	375-85-9	20	1.8	U	2.0	U
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	20	1.8	U	2.0	U
Perfluorohexanoic acid (PFHxA)	307-24-4	NE	1.8	U	2.0	U
Perfluorononanoic acid (PFNA)	375-95-1	20	1.8	U	2.0	U
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	20	1.8	U	2.0	U
Perfluorooctanoic acid (PFOA)	335-67-1	20	1.8	U	2.0	U
Perfluorotetradecanoic acid (PFTA)	376-06-7	NE	1.8	U	2.0	U
Perfluorotridecanoic acid (PFTDA)	72629-94-8	NE	1.8	U	2.0	U
Perfluoroundecanoic acid (PFUna)	2058-94-8	NE	1.8	U	2.0	U
Total Regulated PFAS		20	1.8	U	2.0	U

Key:

Total Regulated PFAS - Cumulative sum of PFOA, PFOS, PFHxS, PFHpA, and PFNA

MCL - Maximum Contaminant Level - Vermont Water Supply Rule, February 24, 2024

ng/L - nanograms per liter (parts per trillion)

NE - screening level not established

Q - laboratory result qualifier

U - Analyte not detected; limit of quantitation listed

Table B-7
PCB Concentrations in Groundwater

SampleID Sample Date	VGES CAS# (μ g/L)	MW-1		MW-2		BR-1		BR-2		BR-2-FD		RPD %	
		12/14/2022	Q	11/21/2022	Q	11/22/2022	Q	11/22/2022	Q	11/22/2022	Q		
Aroclor-1016	12674-11-2	0.5	0.21	U	0.21	U	0.2	U	0.2	U	0.21	U	-
Aroclor-1221	11104-28-2	0.5	0.21	U	0.21	U	0.2	U	0.2	U	0.21	U	-
Aroclor-1232	11141-16-5	0.5	0.21	U	0.21	U	0.2	U	0.2	U	0.21	U	-
Aroclor-1242	53469-21-9	0.5	0.21	U	0.21	U	0.2	U	0.2	U	0.21	U	-
Aroclor-1248	12672-29-6	0.5	0.21	U	0.21	U	0.2	U	0.2	U	0.21	U	-
Aroclor-1254	11097-69-1	0.5	0.21	U	0.21	U	0.2	U	0.2	U	0.21	U	-
Aroclor-1260	11096-82-5	0.5	0.21	U	0.21	U	0.2	U	0.2	U	0.21	U	-
Aroclor-1262	37324-23-5	0.5	0.21	U	0.21	U	0.2	U	0.2	U	0.21	U	-
Aroclor-1268	11100-14-4	0.5	0.21	U	0.21	U	0.2	U	0.2	U	0.21	U	-
Total PCBs	1336-36-3	0.5	0.21	U	0.21	U	0.2	U	0.2	U	0.21	U	-
Sample ID Sample Date	VGES CAS# (μ g/L)	BR-3		BR-4		MW-101D		BR-201		BR-202			
		11/22/2022	Q	11/21/2022	Q	11/22/2022	Q	11/21/2022	Q	11/21/2022	Q		
Aroclor-1016	12674-11-2	0.5	0.21	U	0.2	U	0.2	U	0.21	U	0.2	U	
Aroclor-1221	11104-28-2	0.5	0.21	U	0.2	U	0.2	U	0.21	U	0.2	U	
Aroclor-1232	11141-16-5	0.5	0.21	U	0.2	U	0.2	U	0.21	U	0.2	U	
Aroclor-1242	53469-21-9	0.5	0.21	U	0.2	U	0.2	U	0.21	U	0.2	U	
Aroclor-1248	12672-29-6	0.5	0.21	U	0.2	U	0.2	U	0.21	U	0.2	U	
Aroclor-1254	11097-69-1	0.5	0.21	U	0.2	U	0.2	U	0.21	U	0.2	U	
Aroclor-1260	11096-82-5	0.5	0.21	U	0.2	U	0.2	U	0.21	U	0.2	U	
Aroclor-1262	37324-23-5	0.5	0.21	U	0.2	U	0.2	U	0.21	U	0.2	U	
Aroclor-1268	11100-14-4	0.5	0.21	U	0.2	U	0.2	U	0.21	U	0.2	U	
Total PCBs	1336-36-3	0.5	0.21	U	0.2	U	0.2	U	0.21	U	0.2	U	

Key:

VGES - Vermont Groundwater Enforcement Standard, July 2019

μ g/L - micrograms per liter (parts per billion)

Q - laboratory result qualifier

U - Analyte not detected; limit of quantitation listed

RPD - Relative Percent Difference

Table B-8
PCB Concentrations in Private Drinking Water

Sample ID		VGES/VHA	Leibon Well	
Sample Date	CAS#		11/21/2022	Q
		(µg/L)		
Aroclor-1016	12674-11-2	0.5	0.19	U
Aroclor-1221	11104-28-2	0.5	0.19	U
Aroclor-1232	11141-16-5	0.5	0.19	U
Aroclor-1242	53469-21-9	0.5	0.19	U
Aroclor-1248	12672-29-6	0.5	0.19	U
Aroclor-1254	11097-69-1	0.5	0.19	U
Aroclor-1260	11096-82-5	0.5	0.19	U
Aroclor-1262	37324-23-5	0.5	0.19	U
Aroclor-1268	11100-14-4	0.5	0.19	U
Total PCBs	1336-36-3	0.5	0.19	U

Key:

VGES - Vermont Groundwater Enforcement Standard, July 2019

VHA - Vermont Health Advisory - Vermont DOH Drinking Water Guidance, April 10, 2024

µg/L - micrograms per liter (parts per billion)

Q - laboratory result qualifier

U - Analyte not detected; limit of quantitation listed

Table B-9
PCB Concentrations in Public Water Supply

Sample ID Sample Date	CAS#	MCL	PMCWS Well	Q
		(µg/L)	11/22/2022	
Aroclor-1016	12674-11-2	0.5	0.2	U
Aroclor-1221	11104-28-2	0.5	0.2	U
Aroclor-1232	11141-16-5	0.5	0.2	U
Aroclor-1242	53469-21-9	0.5	0.2	U
Aroclor-1248	12672-29-6	0.5	0.2	U
Aroclor-1254	11097-69-1	0.5	0.2	U
Aroclor-1260	11096-82-5	0.5	0.2	U
Aroclor-1262	37324-23-5	0.5	0.2	U
Aroclor-1268	11100-14-4	0.5	0.2	U
Total PCBs	1336-36-3	0.5	0.2	U

Key:

MCL - Maximum Contaminant Level - Vermont Water Supply Rule, February 24, 2024

µg/L - micrograms per liter (parts per billion)

Q - laboratory result qualifier

U - Analyte not detected; limit of quantitation listed

Table B-10
sVOC Concentrations in Groundwater

SampleID Sample Date	VGES (μ g/L)	BR-1 11/22/2022	BR-2		BR-2-FD		BR-201		BR-202		RPD %	
			Q	11/22/2022	Q	11/22/2022	Q	11/21/2022	Q	11/21/2022		
1,2,4,5-Tetrachlorobenzene	95-94-3	NE	10	U	10	U	10	U	10	U	10	-
1,2,4-Trichlorobenzene	120-82-1	70	5	U	5	U	5.1	U	5.1	U	5.1	-
1,2-Dichlorobenzene	95-50-1	600	5	U	5	U	5.1	U	5.1	U	5.1	-
1,2-Diphenylhydrazine/Azobenzene	122-66-7	NE	10	U	10	U	10	U	10	U	10	-
1,3-Dichlorobenzene	541-73-1	600	5	U	5	U	5.1	U	5.1	U	5.1	-
1,4-Dichlorobenzene	106-46-7	75	5	U	5	U	5.1	U	5.1	U	5.1	-
1,4-Dioxane	123-91-1	0.3	0.2	U	0.2	U	0.2	U	0.21	U	0.21	-
1-Methylnaphthalene	90-12-0	NE	5	U	5	U	5.1	U	5.1	U	5.1	-
2,4,5-Trichlorophenol	95-95-4	NE	10	U	10	U	10	U	10	U	10	-
2,4,6-Trichlorophenol	88-06-2	NE	10	U	10	U	10	U	10	U	10	-
2,4-Dichlorophenol	120-83-2	NE	10	U	10	U	10	U	10	U	10	-
2,4-Dimethylphenol	105-67-9	NE	10	U	10	U	10	U	10	U	10	-
2,4-Dinitrophenol	51-28-5	NE	10	U	10	U	10	U	10	U	10	-
2,4-Dinitrotoluene	121-14-2	NE	10	U	10	U	10	U	10	U	10	-
2,6-Dinitrotoluene	606-20-2	NE	10	U	10	U	10	U	10	U	10	-
2-Chloronaphthalene	91-58-7	NE	10	U	10	U	10	U	10	U	10	-
2-Chlorophenol	95-57-8	NE	10	U	10	U	10	U	10	U	10	-
2-Methylnaphthalene	91-57-6	NE	5	U	5	U	5.1	U	5.1	U	5.1	-
2-Methylphenol	95-48-7	NE	10	U	10	U	10	U	10	U	10	-
2-Nitroaniline	88-74-4	NE	10	U	10	U	10	U	10	U	10	-
2-Nitrophenol	88-75-5	NE	10	U	10	U	10	U	10	U	10	-
3,3-Dichlorobenzidine	91-94-1	NE	10	U	10	U	10	U	10	U	10	-
3/4-Methylphenol	108-39-4/106-44-5	NE	10	U	10	U	10	U	10	U	10	-
3-Nitroaniline	99-09-2	NE	10	U	10	U	10	U	10	U	10	-
4,6-Dinitro-2-methylphenol	534-52-1	NE	10	U	10	U	10	U	10	U	10	-
4-Bromophenylphenylether	101-55-3	NE	10	U	10	U	10	U	10	U	10	-
4-Chloro-3-methylphenol	59-50-7	NE	10	U	10	U	10	U	10	U	10	-
4-Chloroaniline	106-47-8	NE	10	U	10	U	10	U	10	U	10	-
4-Chlorophenylphenylether	7005-72-3	NE	10	U	10	U	10	U	10	U	10	-
4-Nitroaniline	100-01-6	NE	10	U	10	U	10	U	10	U	10	-
4-Nitrophenol	100-02-7	NE	10	U	10	U	10	U	10	U	10	-
Acenaphthene	83-32-9	NE	5	U	5	U	5.1	U	5.1	U	5.1	-
Acenaphthylene	208-96-8	NE	5	U	5	U	5.1	U	5.1	U	5.1	-
Acetophenone	98-86-2	NE	10	U	10	U	10	U	10	U	10	-
Aniline	62-53-3	NE	5	U	5	U	5.1	U	5.1	U	5.1	-
Anthracene	120-12-7	343	5	U	5	U	5.1	U	5.1	U	5.1	-
Benzidine	92-87-5	NE	20	U	20	U	20	U	20	U	20	-
Benzo(a)anthracene	56-55-3	NE	5	U	5	U	5.1	U	5.1	U	5.1	-

Table B-10
sVOC Concentrations in Groundwater

SampleID	Sample Date	VGES	BR-1		BR-2		BR-2-FD		BR-201		BR-202		RPD
			CAS#	(µg/L)	11/22/2022	Q	11/22/2022	Q	11/22/2022	Q	11/21/2022	Q	
Benzo(a)pyrene	50-32-8	0.2		0.57 U*		0.57 U*		0.57 U*		0.58 U*		0.57 U*	-
Benzo(b)fluoranthene	205-99-2	NE		5 U		5 U		5.1 U		5.1 U		5.1 U	-
Benzo(g,h,i)perylene	191-24-2	NE		5 U		5 U		5.1 U		5.1 U		5.1 U	-
Benzo(k)fluoranthene	207-08-9	NE		5 U		5 U		5.1 U		5.1 U		5.1 U	-
Benzoic Acid	65-85-0	NE		10 U		10 U		10 U		10 U		10 U	-
Bis(2-chloroethoxy)methane	111-91-1	NE		10 U		10 U		10 U		10 U		10 U	-
Bis(2-chloroethyl)ether	111-44-4	NE		10 U		10 U		10 U		10 U		10 U	-
Bis(2-chloroisopropyl)ether	108-60-1	46		10 U		10 U		10 U		10 U		10 U	-
Bis(2-Ethylhexyl)phthalate	117-81-7	6		0.84 U*		0.84 U*		0.85 U*		0.86 U*		0.85 U*	-
Butylbenzylphthalate	85-68-7	NE		10 U		10 U		10 U		10 U		10 U	-
Carbazole	86-74-8	NE		10 U		10 U		10 U		10 U		10 U	-
Chrysene	218-01-9	NE		5 U		5 U		5.1 U		5.1 U		5.1 U	-
Dibenz(a,h)anthracene	53-70-3	NE		5 U		5 U		5.1 U		5.1 U		5.1 U	-
Dibenzofuran	132-64-9	NE		5 U		5 U		5.1 U		5.1 U		5.1 U	-
Diethylphthalate	84-66-2	NE		10 U		10 U		10 U		10 U		10 U	-
Dimethylphthalate	131-11-3	NE		10 U		10 U		10 U		10 U		10 U	-
Di-n-butylphthalate	84-74-2	NE		10 U		10 U		10 U		10 U		10 U	-
Di-n-octylphthalate	117-84-0	NE		10 U		10 U		10 U		10 U		10 U	-
Fluoranthene	206-44-0	46		5 U		5 U		5.1 U		5.1 U		5.1 U	-
Fluorene	86-73-7	46		5 U		5 U		5.1 U		5.1 U		5.1 U	-
Hexachlorobenzene	118-74-1	1		0.51 U*		0.51 U*		0.51 U*		0.52 U*		0.51 U*	-
Hexachlorobutadiene	87-68-3	NE		10 U		10 U		10 U		10 U		10 U	-
Hexachlorocyclopentadiene	77-47-4	NE		10 U		10 U		10 U		10 U		10 U	-
Hexachloroethane	67-72-1	NE		10 U		10 U		10 U		10 U		10 U	-
Indeno(1,2,3-cd)pyrene	193-39-5	NE		5 U		5 U		5.1 U		5.1 U		5.1 U	-
Isophorone	78-59-1	NE		10 U		10 U		10 U		10 U		10 U	-
Naphthalene	91-20-3	0.5		0.62 U*		0.61 U*		0.62 U*		0.63 U*		0.62 U*	-
Nitrobenzene	98-95-3	NE		10 U		10 U		10 U		10 U		10 U	-
N-Nitrosodimethylamine	62-75-9	NE		10 U		10 U		10 U		10 U		10 U	-
N-Nitrosodi-n-propylamine	621-64-7	NE		10 U		10 U		10 U		10 U		10 U	-
N-Nitrosodiphenylamine/Diphenylamine	86-30-6	NE		10 U		10 U		10 U		10 U		10 U	-
Pentachloronitrobenzene	82-68-8	NE		10 U		10 U		10 U		10 U		10 U	-
Pentachlorophenol	87-86-5	1		3.5 U*		3.5 U*		3.5 U*		3.6 U*		3.5 U*	-
Phenanthrene	85-01-8	NE		5 U		5 U		5.1 U		5.1 U		5.1 U	-
Phenol	108-95-2	NE		10 U		10 U		10 U		10 U		10 U	-
Pyrene	129-00-0	NE		5 U		5 U		5.1 U		5.1 U		5.1 U	-
Pyridine	110-86-1	NE		5 U		5 U		5.1 U		5.1 U		5.1 U	-

Table B-10
sVOC Concentrations in Groundwater

Sample ID Sample Date	VGES (µg/L)	MW-1 12/14/2022	MW-2			MW-101D			MW-101D-FD 4/25/2023	RPD Q
			Q	11/21/2022	Q	11/22/2022	Q	4/25/2023		
1,2,4,5-Tetrachlorobenzene	95-94-3	NE	11	U	10	U	10	U	NS	NS
1,2,4-Trichlorobenzene	120-82-1	70	5.4	U	5.1	U	5	U	NS	NS
1,2-Dichlorobenzene	95-50-1	600	5.4	U	5.1	U	5	U	NS	NS
1,2-Diphenylhydrazine/Azobenzene	122-66-7	NE	11	U	10	U	10	U	NS	NS
1,3-Dichlorobenzene	541-73-1	600	5.4	U	5.1	U	5	U	NS	NS
1,4-Dichlorobenzene	106-46-7	75	5.4	U	5.1	U	5	U	NS	NS
1,4-Dioxane	123-91-1	0.3	0.21	U	0.2	U	2.6		2.3	2.3
1-Methylnaphthalene	90-12-0	NE	5.4	U	5.1	U	5	U	NS	NS
2,4,5-Trichlorophenol	95-95-4	NE	11	U	10	U	10	U	NS	NS
2,4,6-Trichlorophenol	88-06-2	NE	11	U	10	U	10	U	NS	NS
2,4-Dichlorophenol	120-83-2	NE	11	U	10	U	10	U	NS	NS
2,4-Dimethylphenol	105-67-9	NE	11	U	10	U	10	U	NS	NS
2,4-Dinitrophenol	51-28-5	NE	11	U	10	U	10	U	NS	NS
2,4-Dinitrotoluene	121-14-2	NE	11	U	10	U	10	U	NS	NS
2,6-Dinitrotoluene	606-20-2	NE	11	U	10	U	10	U	NS	NS
2-Chloronaphthalene	91-58-7	NE	11	U	10	U	10	U	NS	NS
2-Chlorophenol	95-57-8	NE	11	U	10	U	10	U	NS	NS
2-Methylnaphthalene	91-57-6	NE	5.4	U	5.1	U	5	U	NS	NS
2-Methylphenol	95-48-7	NE	11	U	10	U	10	U	NS	NS
2-Nitroaniline	88-74-4	NE	11	U	10	U	10	U	NS	NS
2-Nitrophenol	88-75-5	NE	11	U	10	U	10	U	NS	NS
3,3-Dichlorobenzidine	91-94-1	NE	11	U	10	U	10	U	NS	NS
3/4-Methylphenol	108-39-4/106-44-5	NE	11	U	10	U	10	U	NS	NS
3-Nitroaniline	99-09-2	NE	11	U	10	U	10	U	NS	NS
4,6-Dinitro-2-methylphenol	534-52-1	NE	11	U	10	U	10	U	NS	NS
4-Bromophenylphenylether	101-55-3	NE	11	U	10	U	10	U	NS	NS
4-Chloro-3-methylphenol	59-50-7	NE	11	U	10	U	10	U	NS	NS
4-Chloroaniline	106-47-8	NE	11	U	10	U	10	U	NS	NS
4-Chlorophenylphenylether	7005-72-3	NE	11	U	10	U	10	U	NS	NS
4-Nitroaniline	100-01-6	NE	11	U	10	U	10	U	NS	NS
4-Nitrophenol	100-02-7	NE	11	U	10	U	10	U	NS	NS
Acenaphthene	83-32-9	NE	5.4	U	5.1	U	5	U	NS	NS
Acenaphthylene	208-96-8	NE	5.4	U	5.1	U	5	U	NS	NS
Acetophenone	98-86-2	NE	11	U	10	U	10	U	NS	NS
Aniline	62-53-3	NE	5.4	U	5.1	U	5	U	NS	NS
Anthracene	120-12-7	343	5.4	U	5.1	U	5	U	NS	NS
Benzidine	92-87-5	NE	22	U	20	U	20	U	NS	NS
Benzo(a)anthracene	56-55-3	NE	5.4	U	5.1	U	5	U	NS	NS

Table B-10
sVOC Concentrations in Groundwater

Sample ID Sample Date	VGES (μ g/L)	MW-1 12/14/2022	MW-2		MW-101D			MW-101D-FD 4/25/2023	RPD 4/25/2023	
			Q	11/21/2022	Q	11/22/2022	Q			
Benzo(a)pyrene	50-32-8	0.2	0.61	U*	0.57	U*	0.57	U*	NS	NS
Benzo(b)fluoranthene	205-99-2	NE	5.4	U	5.1	U	5	U	NS	NS
Benzo(g,h,i)perylene	191-24-2	NE	5.4	U	5.1	U	5	U	NS	NS
Benzo(k)fluoranthene	207-08-9	NE	5.4	U	5.1	U	5	U	NS	NS
Benzoic Acid	65-85-0	NE	11	U	10	U	10	U	NS	NS
Bis(2-chloroethoxy)methane	111-91-1	NE	11	U	10	U	10	U	NS	NS
Bis(2-chloroethyl)ether	111-44-4	NE	11	U	10	U	10	U	NS	NS
Bis(2-chloroisopropyl)ether	108-60-1	46	11	U	10	U	10	U	NS	NS
Bis(2-Ethylhexyl)phthalate	117-81-7	6	0.9	U*	0.85	U*	0.84	U*	NS	NS
Butylbenzylphthalate	85-68-7	NE	11	U	10	U	10	U	NS	NS
Carbazole	86-74-8	NE	11	U	10	U	10	U	NS	NS
Chrysene	218-01-9	NE	5.4	U	5.1	U	5	U	NS	NS
Dibenz(a,h)anthracene	53-70-3	NE	5.4	U	5.1	U	5	U	NS	NS
Dibenzofuran	132-64-9	NE	5.4	U	5.1	U	5	U	NS	NS
Diethylphthalate	84-66-2	NE	11	U	10	U	10	U	NS	NS
Dimethylphthalate	131-11-3	NE	11	U	10	U	10	U	NS	NS
Di-n-butylphthalate	84-74-2	NE	11	U	10	U	10	U	NS	NS
Di-n-octylphthalate	117-84-0	NE	11	U	10	U	10	U	NS	NS
Fluoranthene	206-44-0	46	5.4	U	5.1	U	5	U	NS	NS
Fluorene	86-73-7	46	5.4	U	5.1	U	5	U	NS	NS
Hexachlorobenzene	118-74-1	1	0.54	U*	0.51	U*	0.51	U*	NS	NS
Hexachlorobutadiene	87-68-3	NE	11	U	10	U	10	U	NS	NS
Hexachlorocyclopentadiene	77-47-4	NE	11	U	10	U	10	U	NS	NS
Hexachloroethane	67-72-1	NE	11	U	10	U	10	U	NS	NS
Indeno(1,2,3-cd)pyrene	193-39-5	NE	5.4	U	5.1	U	5	U	NS	NS
Isophorone	78-59-1	NE	11	U	10	U	10	U	NS	NS
Naphthalene	91-20-3	0.5	0.66	U*	0.62	U*	0.62	U*	NS	NS
Nitrobenzene	98-95-3	NE	11	U	10	U	10	U	NS	NS
N-Nitrosodimethylamine	62-75-9	NE	11	U	10	U	10	U	NS	NS
N-Nitrosodi-n-propylamine	621-64-7	NE	11	U	10	U	10	U	NS	NS
N-Nitrosodiphenylamine/Diphenylamine	86-30-6	NE	11	U	10	U	10	U	NS	NS
Pentachloronitrobenzene	82-68-8	NE	11	U	10	U	10	U	NS	NS
Pentachlorophenol	87-86-5	1	3.8	U*	3.5	U*	3.5	U*	NS	NS
Phenanthrene	85-01-8	NE	5.4	U	5.1	U	5	U	NS	NS
Phenol	108-95-2	NE	11	U	10	U	10	U	NS	NS
Pyrene	129-00-0	NE	5.4	U	5.1	U	5	U	NS	NS
Pyridine	110-86-1	NE	5.4	U	5.1	U	5	U	NS	NS

Table B-10
sVOC Concentrations in Groundwater

Sample ID Sample Date	VGES (μ g/L)	BR-3 11/22/2022	BR-3		BR-4	
			Q	4/26/2023	Q	11/21/2022
1,2,4,5-Tetrachlorobenzene	95-94-3	NE	10 U	NS		10 U
1,2,4-Trichlorobenzene	120-82-1	70	5 U	NS		5.1 U
1,2-Dichlorobenzene	95-50-1	600	5 U	NS		5.1 U
1,2-Diphenylhydrazine/Azobenzene	122-66-7	NE	10 U	NS		10 U
1,3-Dichlorobenzene	541-73-1	600	5 U	NS		5.1 U
1,4-Dichlorobenzene	106-46-7	75	5 U	NS		5.1 U
1,4-Dioxane	123-91-1	0.3	2.0	0.63		0.21 U
1-Methylnaphthalene	90-12-0	NE	5 U	NS		5.1 U
2,4,5-Trichlorophenol	95-95-4	NE	10 U	NS		10 U
2,4,6-Trichlorophenol	88-06-2	NE	10 U	NS		10 U
2,4-Dichlorophenol	120-83-2	NE	10 U	NS		10 U
2,4-Dimethylphenol	105-67-9	NE	10 U	NS		10 U
2,4-Dinitrophenol	51-28-5	NE	10 U	NS		10 U
2,4-Dinitrotoluene	121-14-2	NE	10 U	NS		10 U
2,6-Dinitrotoluene	606-20-2	NE	10 U	NS		10 U
2-Chloronaphthalene	91-58-7	NE	10 U	NS		10 U
2-Chlorophenol	95-57-8	NE	10 U	NS		10 U
2-Methylnaphthalene	91-57-6	NE	5 U	NS		5.1 U
2-Methylphenol	95-48-7	NE	10 U	NS		10 U
2-Nitroaniline	88-74-4	NE	10 U	NS		10 U
2-Nitrophenol	88-75-5	NE	10 U	NS		10 U
3,3-Dichlorobenzidine	91-94-1	NE	10 U	NS		10 U
3/4-Methylphenol	108-39-4/106-44-5	NE	10 U	NS		10 U
3-Nitroaniline	99-09-2	NE	10 U	NS		10 U
4,6-Dinitro-2-methylphenol	534-52-1	NE	10 U	NS		10 U
4-Bromophenylphenylether	101-55-3	NE	10 U	NS		10 U
4-Chloro-3-methylphenol	59-50-7	NE	10 U	NS		10 U
4-Chloroaniline	106-47-8	NE	10 U	NS		10 U
4-Chlorophenylphenylether	7005-72-3	NE	10 U	NS		10 U
4-Nitroaniline	100-01-6	NE	10 U	NS		10 U
4-Nitrophenol	100-02-7	NE	10 U	NS		10 U
Acenaphthene	83-32-9	NE	5 U	NS		5.1 U
Acenaphthylene	208-96-8	NE	5 U	NS		5.1 U
Acetophenone	98-86-2	NE	10 U	NS		10 U
Aniline	62-53-3	NE	5 U	NS		5.1 U
Anthracene	120-12-7	343	5 U	NS		5.1 U
Benzidine	92-87-5	NE	20 U	NS		20 U
Benzo(a)anthracene	56-55-3	NE	5 U	NS		5.1 U

Table B-10
sVOC Concentrations in Groundwater

Sample ID Sample Date	VGES ($\mu\text{g/L}$)	BR-3			BR-4		
		11/22/2022	Q	4/26/2023	11/21/2022	Q	
Benzo(a)pyrene	50-32-8	0.2	0.57	U*	NS	0.57	U*
Benzo(b)fluoranthene	205-99-2	NE	5	U	NS	5.1	U
Benzo(g,h,i)perylene	191-24-2	NE	5	U	NS	5.1	U
Benzo(k)fluoranthene	207-08-9	NE	5	U	NS	5.1	U
Benzoic Acid	65-85-0	NE	10	U	NS	10	U
Bis(2-chloroethoxy)methane	111-91-1	NE	10	U	NS	10	U
Bis(2-chloroethyl)ether	111-44-4	NE	10	U	NS	10	U
Bis(2-chloroisopropyl)ether	108-60-1	46	10	U	NS	10	U
Bis(2-Ethylhexyl)phthalate	117-81-7	6	0.84	U*	NS	0.85	U*
Butylbenzylphthalate	85-68-7	NE	10	U	NS	10	U
Carbazole	86-74-8	NE	10	U	NS	10	U
Chrysene	218-01-9	NE	5	U	NS	5.1	U
Dibenz(a,h)anthracene	53-70-3	NE	5	U	NS	5.1	U
Dibenzofuran	132-64-9	NE	5	U	NS	5.1	U
Diethylphthalate	84-66-2	NE	10	U	NS	10	U
Dimethylphthalate	131-11-3	NE	10	U	NS	10	U
Di-n-butylphthalate	84-74-2	NE	10	U	NS	10	U
Di-n-octylphthalate	117-84-0	NE	10	U	NS	10	U
Fluoranthene	206-44-0	46	5	U	NS	5.1	U
Fluorene	86-73-7	46	5	U	NS	5.1	U
Hexachlorobenzene	118-74-1	1	0.51	U*	NS	0.51	U*
Hexachlorobutadiene	87-68-3	NE	10	U	NS	10	U
Hexachlorocyclopentadiene	77-47-4	NE	10	U	NS	10	U
Hexachloroethane	67-72-1	NE	10	U	NS	10	U
Indeno(1,2,3-cd)pyrene	193-39-5	NE	5	U	NS	5.1	U
Isophorone	78-59-1	NE	10	U	NS	10	U
Naphthalene	91-20-3	0.5	0.61	U*	NS	0.62	U*
Nitrobenzene	98-95-3	NE	10	U	NS	10	U
N-Nitrosodimethylamine	62-75-9	NE	10	U	NS	10	U
N-Nitrosodi-n-propylamine	621-64-7	NE	10	U	NS	10	U
N-Nitrosodiphenylamine/Diphenylamine	86-30-6	NE	10	U	NS	10	U
Pentachloronitrobenzene	82-68-8	NE	10	U	NS	10	U
Pentachlorophenol	87-86-5	1	3.5	U*	NS	3.5	U*
Phenanthrene	85-01-8	NE	5	U	NS	5.1	U
Phenol	108-95-2	NE	10	U	NS	10	U
Pyrene	129-00-0	NE	5	U	NS	5.1	U
Pyridine	110-86-1	NE	5	U	NS	5.1	U

Key:

VGES - Vermont Groundwater Enforcement Standard, July 2019

$\mu\text{g/L}$ - micrograms per liter (parts per billion)

Bold results indicate detections of the analyte

Shaded results indicate an exceedance of the enforcement standard

NE - screening level not established

Q - laboratory result qualifier

U - Analyte not detected; limit of quantitation listed

* - Analyte reported to the method detection limit.

NS - Sample not analyzed for compound

Table B-11
SVOC Concentrations in Private Drinking Water

Sample ID		VGES/VHA	Leibon Well	
Sample Date	CAS#		11/21/2022	Q
		(µg/L)		
1,2,4,5-Tetrachlorobenzene	95-94-3	NE	9.7	U
1,2,4-Trichlorobenzene	120-82-1	70	4.8	U
1,2-Dichlorobenzene	95-50-1	600	4.8	U
1,2-Diphenylhydrazine/Azobenzene	122-66-7	NE	9.7	U
1,3-Dichlorobenzene	541-73-1	600	4.8	U
1,4-Dichlorobenzene	106-46-7	75	4.8	U
1,4-Dioxane	123-91-1	0.3	0.19	U
1-Methylnaphthalene	90-12-0	NE	4.8	U
2,4,5-Trichlorophenol	95-95-4	NE	9.7	U
2,4,6-Trichlorophenol	88-06-2	NE	9.7	U
2,4-Dichlorophenol	120-83-2	NE	9.7	U
2,4-Dimethylphenol	105-67-9	NE	9.7	U
2,4-Dinitrophenol	51-28-5	NE	9.7	U
2,4-Dinitrotoluene	121-14-2	NE	9.7	U
2,6-Dinitrotoluene	606-20-2	NE	9.7	U
2-Chloronaphthalene	91-58-7	NE	9.7	U
2-Chlorophenol	95-57-8	NE	9.7	U
2-Methylnaphthalene	91-57-6	NE	4.8	U
2-Methylphenol	95-48-7	NE	9.7	U
2-Nitroaniline	88-74-4	NE	9.7	U
2-Nitrophenol	88-75-5	NE	9.7	U
3,3-Dichlorobenzidine	91-94-1	NE	9.7	U
3/4-Methylphenol	108-39-4/106-4	NE	9.7	U
3-Nitroaniline	99-09-2	NE	9.7	U
4,6-Dinitro-2-methylphenol	534-52-1	NE	9.7	U
4-Bromophenylphenylether	101-55-3	NE	9.7	U
4-Chloro-3-methylphenol	59-50-7	NE	9.7	U
4-Chloroaniline	106-47-8	NE	9.7	U
4-Chlorophenylphenylether	7005-72-3	NE	9.7	U
4-Nitroaniline	100-01-6	NE	9.7	U
4-Nitrophenol	100-02-7	NE	9.7	U
Acenaphthene	83-32-9	NE	4.8	U
Acenaphthylene	208-96-8	NE	4.8	U
Acetophenone	98-86-2	NE	9.7	U
Aniline	62-53-3	NE	4.8	U
Anthracene	120-12-7	343	4.8	U
Benzidine	92-87-5	NE	19	U
Benzo(a)anthracene	56-55-3	NE	4.8	U
Benzo(a)pyrene	50-32-8	0.2	0.55	U*
Benzo(b)fluoranthene	205-99-2	NE	4.8	U
Benzo(g,h,i)perylene	191-24-2	NE	4.8	U
Benzo(k)fluoranthene	207-08-9	NE	4.8	U
Benzoic Acid	65-85-0	NE	9.7	U
Bis(2-chloroethoxy)methane	111-91-1	NE	9.7	U
Bis(2-chloroethyl)ether	111-44-4	NE	9.7	U
Bis(2-chloroisopropyl)ether	108-60-1	46	9.7	U

Table B-11
SVOC Concentrations in Private Drinking Water

Sample ID		VGES/VHA	Leibon Well	
Sample Date	CAS#		11/21/2022	Q
		(μ g/L)		
Bis(2-Ethylhexyl)phthalate	117-81-7	6	0.81	U*
Butylbenzylphthalate	85-68-7	NE	9.7	U
Carbazole	86-74-8	NE	9.7	U
Chrysene	218-01-9	NE	4.8	U
Dibenz(a,h)anthracene	53-70-3	NE	4.8	U
Dibenzofuran	132-64-9	NE	4.8	U
Diethylphthalate	84-66-2	NE	9.7	U
Dimethylphthalate	131-11-3	NE	9.7	U
Di-n-butylphthalate	84-74-2	NE	9.7	U
Di-n-octylphthalate	117-84-0	NE	9.7	U
Fluoranthene	206-44-0	46	4.8	U
Fluorene	86-73-7	46	4.8	U
Hexachlorobenzene	118-74-1	1	0.49	U*
Hexachlorobutadiene	87-68-3	NE	9.7	U
Hexachlorocyclopentadiene	77-47-4	NE	9.7	U
Hexachloroethane	67-72-1	NE	9.7	U
Indeno(1,2,3-cd)pyrene	193-39-5	NE	4.8	U
Isophorone	78-59-1	NE	9.7	U
Naphthalene	91-20-3	0.5	0.59	U*
Nitrobenzene	98-95-3	NE	9.7	U
N-Nitrosodimethylamine	62-75-9	NE	9.7	U
N-Nitrosodi-n-propylamine	621-64-7	NE	9.7	U
N-Nitrosodiphenylamine/Diphenylamine	86-30-6	NE	9.7	U
Pentachloronitrobenzene	82-68-8	NE	9.7	U
Pentachlorophenol	87-86-5	1	3.4	U*
Phenanthrene	85-01-8	NE	4.8	U
Phenol	108-95-2	NE	9.7	U
Pyrene	129-00-0	NE	4.8	U
Pyridine	110-86-1	NE	4.8	U

Key:

VGES - Vermont Groundwater Enforcement Standard, July 2019

VHA - Vermont Health Advisory - Vermont DOH Drinking Water Guidance, April 10, 2024

μ g/L - micrograms per liter (parts per billion)

Shaded results indicate an exceedance of the enforcement standard

NE - screening level not established

Q - laboratory result qualifier

U - Analyte not detected; limit of quantitation listed

* - Analyte reported to the method detection limit.

Table B-12
sVOC Concentrations in Public Water Supply

Sample ID Sample Date	CAS#	MCL (μ g/L)	PMCWS Well 11/22/2022	FORMER SUPPLY WELL		
				Q	4/26/2023	Q
1,2,4,5-Tetrachlorobenzene	95-94-3	NE	10 U		NS	
1,2,4-Trichlorobenzene	120-82-1	70	5 U		NS	
1,2-Dichlorobenzene	95-50-1	600	5 U		NS	
1,2-Diphenylhydrazine/Azobenzene	122-66-7	NE	10 U		NS	
1,3-Dichlorobenzene	541-73-1	600	5 U		NS	
1,4-Dichlorobenzene	106-46-7	75	5 U		NS	
1,4-Dioxane	123-91-1	0.3	0.2 U		0.2 U	
1-Methylnaphthalene	90-12-0	NE	5 U		NS	
2,4,5-Trichlorophenol	95-95-4	NE	10 U		NS	
2,4,6-Trichlorophenol	88-06-2	NE	10 U		NS	
2,4-Dichlorophenol	120-83-2	NE	10 U		NS	
2,4-Dimethylphenol	105-67-9	NE	10 U		NS	
2,4-Dinitrophenol	51-28-5	NE	10 U		NS	
2,4-Dinitrotoluene	121-14-2	NE	10 U		NS	
2,6-Dinitrotoluene	606-20-2	NE	10 U		NS	
2-Chloronaphthalene	91-58-7	NE	10 U		NS	
2-Chlorophenol	95-57-8	NE	10 U		NS	
2-Methylnaphthalene	91-57-6	NE	5 U		NS	
2-Methylphenol	95-48-7	NE	10 U		NS	
2-Nitroaniline	88-74-4	NE	10 U		NS	
2-Nitrophenol	88-75-5	NE	10 U		NS	
3,3-Dichlorobenzidine	91-94-1	NE	10 U		NS	
3/4-Methylphenol	108-39-4/106-4	NE	10 U		NS	
3-Nitroaniline	99-09-2	NE	10 U		NS	
4,6-Dinitro-2-methylphenol	534-52-1	NE	10 U		NS	
4-Bromophenylphenylether	101-55-3	NE	10 U		NS	
4-Chloro-3-methylphenol	59-50-7	NE	10 U		NS	
4-Chloroaniline	106-47-8	NE	10 U		NS	
4-Chlorophenylphenylether	7005-72-3	NE	10 U		NS	
4-Nitroaniline	100-01-6	NE	10 U		NS	
4-Nitrophenol	100-02-7	NE	10 U		NS	
Acenaphthene	83-32-9	NE	5 U		NS	
Acenaphthylene	208-96-8	NE	5 U		NS	
Acetophenone	98-86-2	NE	10 U		NS	
Aniline	62-53-3	NE	5 U		NS	
Anthracene	120-12-7	343	5 U		NS	
Benzidine	92-87-5	NE	20 U		NS	
Benzo(a)anthracene	56-55-3	NE	5 U		NS	
Benzo(a)pyrene	50-32-8	0.2	0.57 U*		NS	

Table B-12
sVOC Concentrations in Public Water Supply

Sample ID Sample Date	CAS#	MCL (μ g/L)	PMCWS Well 11/22/2022	FORMER SUPPLY WELL		
				Q	4/26/2023	Q
Benzo(b)fluoranthene	205-99-2	NE	5	U		NS
Benzo(g,h,i)perylene	191-24-2	NE	5	U		NS
Benzo(k)fluoranthene	207-08-9	NE	5	U		NS
Benzoic Acid	65-85-0	NE	10	U		NS
Bis(2-chloroethoxy)methane	111-91-1	NE	10	U		NS
Bis(2-chloroethyl)ether	111-44-4	NE	10	U		NS
Bis(2-chloroisopropyl)ether	108-60-1	46	10	U		NS
Bis(2-Ethylhexyl)phthalate	117-81-7	6	0.84	U*		NS
Butylbenzylphthalate	85-68-7	NE	10	U		NS
Carbazole	86-74-8	NE	10	U		NS
Chrysene	218-01-9	NE	5	U		NS
Dibenz(a,h)anthracene	53-70-3	NE	5	U		NS
Dibenzofuran	132-64-9	NE	5	U		NS
Diethylphthalate	84-66-2	NE	10	U		NS
Dimethylphthalate	131-11-3	NE	10	U		NS
Di-n-butylphthalate	84-74-2	NE	10	U		NS
Di-n-octylphthalate	117-84-0	NE	10	U		NS
Fluoranthene	206-44-0	46	5	U		NS
Fluorene	86-73-7	46	5	U		NS
Hexachlorobenzene	118-74-1	1	0.51	U*		NS
Hexachlorobutadiene	87-68-3	NE	10	U		NS
Hexachlorocyclopentadiene	77-47-4	NE	10	U		NS
Hexachloroethane	67-72-1	NE	10	U		NS
Indeno(1,2,3-cd)pyrene	193-39-5	NE	5	U		NS
Isophorone	78-59-1	NE	10	U		NS
Naphthalene	91-20-3	0.5	0.61	U*		NS
Nitrobenzene	98-95-3	NE	10	U		NS
N-Nitrosodimethylamine	62-75-9	NE	10	U		NS
N-Nitrosodi-n-propylamine	621-64-7	NE	10	U		NS
N-Nitrosodiphenylamine/Diphenylamine	86-30-6	NE	10	U		NS
Pentachloronitrobenzene	82-68-8	NE	10	U		NS
Pentachlorophenol	87-86-5	1	3.5	U*		NS
Phenanthrene	85-01-8	NE	5	U		NS
Phenol	108-95-2	NE	10	U		NS
Pyrene	129-00-0	NE	5	U		NS
Pyridine	110-86-1	NE	5	U		NS

Key:

MCL - Maximum Contaminant Level - Vermont Water Supply Rule, February 24, 2024

μ g/L - micrograms per liter (parts per billion)

Shaded results indicate an exceedance of the enforcement standard

NE - screening level not established

NS - Sample not analyzed for compound

Q - laboratory result qualifier

U - Analyte not detected; limit of quantitation listed

* - Analyte reported to the method detection limit.

Table B-13
VOC Concentrations in Groundwater

SampleID	VGES	MW-1	BR-1	BR-2	BR-2-FD	BR-201	BR-202	RPD					
Sample Date	CAS#	(μ g/L)	12/14/2022	Q	11/22/2022	Q	11/22/2022	Q	11/21/2022	Q	11/21/2022	Q	%
1,1,1,2-Tetrachloroethane	630-20-6	70	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
1,1,1-Trichloroethane	71-55-6	200	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
1,1,2,2-Tetrachloroethane	79-34-5	NE	0.5 U	0.5 U	-								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	76-13-1	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
1,1,2-Trichloroethane	79-00-5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
1,1-Dichloroethane	75-34-3	70	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
1,1-Dichloroethylene	75-35-4	7	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
1,1-Dichloropropene	563-58-6	NE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	-
1,2,3-Trichlorobenzene	87-61-6	0.9	0.3 U*	0.3 U*	-								
1,2,3-Trichloropropane	96-18-4	0.02	0.28 U*	0.28 U*	-								
1,2,4-Trichlorobenzene	120-82-1	70	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
1,2,4-Trimethylbenzene	95-63-6	23	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	0.8 U*	0.8 U*	-								
1,2-Dibromoethane (EDB)	106-93-4	0.05	0.17 U*	0.17 U*	-								
1,2-Dichlorobenzene	95-50-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
1,2-Dichloroethane	107-06-2	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
1,2-Dichloropropane	78-87-5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
1,3,5-Trichlorobenzene	108-70-3	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
1,3,5-Trimethylbenzene	108-67-8	23	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
1,3-Dichlorobenzene	541-73-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
1,3-Dichloropropane	142-28-9	NE	0.5 U	0.5 U	-								
1,4-Dichlorobenzene	106-46-7	75	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
1,4-Dioxane	123-91-1	0.3	21 U*	21 U*	-								
2,2-Dichloropropane	594-20-7	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
2-Butanone (MEK)	78-93-3	511	20 U	20 U	-								
2-Chlorotoluene	95-49-8	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
2-Hexanone (MBK)	591-78-6	NE	10 U	10 U	-								
4-Chlorotoluene	106-43-4	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
4-Methyl-2-pentanone (MIBK)	108-10-1	NE	10 U	10 U	-								
Acetone	67-64-1	950	50 U	50 U	50 U	50 U	50 U	50 U	50 U	2.8 J	50 U	50 U	-
Acrylonitrile	107-13-1	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	-
Benzene	71-43-2	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
Bromobenzene	108-86-1	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
Bromochloromethane	74-97-5	8	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
Bromodichloromethane	75-27-4	NE	0.5 U	0.5 U	-								
Bromoform	75-25-2	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
Bromomethane	74-83-9	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	-
Carbon Disulfide	75-15-0	NE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	-
Carbon Tetrachloride	56-23-5	5	0.16 U*	0.16 U*	-								
Chlorobenzene	108-90-7	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
Chlorodibromomethane	124-48-1	NE	0.5 U	0.5 U	-								
Chloroethane	75-00-3	NE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	-
Chloroform	67-66-3	NE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	-
Chloromethane	74-87-3	NE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	-
cis-1,2-Dichloroethylene	156-59-2	70	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
cis-1,3-Dichloropropene	10061-01-5	NE	0.5 U	0.5 U	-								
Dibromomethane	74-95-3	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
Dichlorodifluoromethane (Freon 12)	75-71-8	NE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	-
Diethyl Ether	60-29-7	NE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	-
Diisopropyl Ether (DIPE)	108-20-3	NE	0.5 U	0.5 U	-								
Ethylbenzene	100-41-4	700	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-

Table B-13
VOC Concentrations in Groundwater

SampleID	VGES	MW-1	BR-1	BR-2	BR-2-FD	BR-201	BR-202	RPD				
Sample Date	CAS#	12/14/2022	Q	11/22/2022	Q	11/22/2022	Q	11/21/2022	Q	11/21/2022	Q	%
		(μ g/L)										
Hexachlorobutadiene	87-68-3	NE	0.6 U	0.6 U	0.6 U	-						
Isopropylbenzene (Cumene)	98-82-8	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
m+p Xylene	108383/106423	NE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	-
Methyl Acetate	79-20-9	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
Methyl Cyclohexane	108-87-2	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
Methyl tert-Butyl Ether (MTBE)	1634-04-4	11	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
Methylene Chloride	75-09-2	5	0.23 U*	0.23 U*	0.23 U*	-						
Naphthalene	91-20-3	0.5	0.24 U*	0.24 U*	0.24 U*	-						
n-Butylbenzene	104-51-8	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
n-Propylbenzene	103-65-1	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
o-Xylene	95-47-6	10000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
p-Isopropyltoluene (p-Cymene)	99-87-6	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
sec-Butylbenzene	135-98-8	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
Styrene	100-42-5	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
tert-Amyl Methyl Ether (TAME)	994-05-8	NE	0.5 U	0.5 U	0.5 U	-						
tert-Butyl Alcohol (TBA)	75-65-0	NE	20 U	20 U	20 U	-						
tert-Butyl Ethyl Ether (TBEE)	637-92-3	NE	0.5 U	0.5 U	0.5 U	-						
tert-Butylbenzene	98-06-6	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
Tetrachloroethylene	127-18-4	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
Tetrahydrofuran	109-99-9	NE	10 U	10 U	10 U	-						
Toluene	108-88-3	1000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
Total Trimethylbenzene	25551-13-7	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
Total Xylene	1330-20-7	10000	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	-
trans-1,2-Dichloroethylene	156-60-5	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
trans-1,3-Dichloropropene	10061-02-6	NE	0.5 U	0.5 U	0.5 U	-						
trans-1,4-Dichloro-2-butene	110-57-6	NE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	-
Trichloroethylene	79-01-6	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-
Trichlorofluoromethane (Freon 11)	75-69-4	NE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	-
Vinyl Chloride	75-01-4	2	0.21 U*	0.21 U*	0.21 U*	-						

Table B-13
VOC Concentrations in Groundwater

Sample ID	VGES	BR-3	BR-4	MW-101D	MW-2	Trip Blank	Trip Blank							
Sample Date	CAS#	(μ g/L)	11/22/2022	Q	11/21/2022	Q	11/22/2022	Q	11/21/2022	Q	11/23/2022	Q	12/14/2022	Q
1,1,1,2-Tetrachloroethane	630-20-6	70	1 U		1 U		1 U		1 U		1 U		1 U	
1,1,1-Trichloroethane	71-55-6	200	1 U		1 U		1 U		1 U		1 U		1 U	
1,1,2,2-Tetrachloroethane	79-34-5	NE	0.5 U		0.5 U		0.5 U		0.5 U		0.5 U		0.5 U	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	76-13-1	NE	1 U		1 U		1 U		1 U		1 U		1 U	
1,1,2-Trichloroethane	79-00-5	5	1 U		1 U		1 U		1 U		1 U		1 U	
1,1-Dichloroethane	75-34-3	70	0.23 J		1 U		1.6		1 U		1 U		1 U	
1,1-Dichloroethylene	75-35-4	7	1 U		1 U		1 U		1 U		1 U		1 U	
1,1-Dichloropropene	563-58-6	NE	2 U		2 U		2 U		2 U		2 U		2 U	
1,2,3-Trichlorobenzene	87-61-6	0.9	0.3 U*		0.3 U*		0.3 U*		0.3 U*		0.3 U*		0.3 U*	
1,2,3-Trichloropropane	96-18-4	0.02	0.28 U*		0.28 U*		0.28 U*		0.28 U*		0.28 U*		0.28 U*	
1,2,4-Trichlorobenzene	120-82-1	70	1 U		1 U		1 U		1 U		1 U		1 U	
1,2,4-Trimethylbenzene	95-63-6	23	1 U		1 U		1 U		1 U		1 U		1 U	
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	0.8 U*		0.8 U*		0.8 U*		0.8 U*		0.8 U*		0.8 U*	
1,2-Dibromoethane (EDB)	106-93-4	0.05	0.17 U*		0.17 U*		0.17 U*		0.17 U*		0.17 U*		0.17 U*	
1,2-Dichlorobenzene	95-50-1	600	1 U		1 U		0.25 J		1 U		1 U		1 U	
1,2-Dichloroethane	107-06-2	5	1 U		1 U		1 U		1 U		1 U		1 U	
1,2-Dichloropropane	78-87-5	5	1 U		1 U		1 U		1 U		1 U		1 U	
1,3,5-Trichlorobenzene	108-70-3	NE	1 U		1 U		1 U		1 U		1 U		1 U	
1,3,5-Trimethylbenzene	108-67-8	23	1 U		1 U		1 U		1 U		1 U		1 U	
1,3-Dichlorobenzene	541-73-1	600	1 U		1 U		1 U		1 U		1 U		1 U	
1,3-Dichloropropane	142-28-9	NE	0.5 U		0.5 U		0.5 U		0.5 U		0.5 U		0.5 U	
1,4-Dichlorobenzene	106-46-7	75	0.49 J		1 U		2.9		1 U		1 U		1 U	
1,4-Dioxane	123-91-1	0.3	21 U*		21 U*		21 U*		21 U*		21 U*		21 U*	
2,2-Dichloropropane	594-20-7	NE	1 U		1 U		1 U		1 U		1 U		1 U	
2-Butanone (MEK)	78-93-3	511	20 U		20 U		20 U		20 U		20 U		20 U	
2-Chlorotoluene	95-49-8	100	1 U		1 U		1 U		1 U		1 U		1 U	
2-Hexanone (MBK)	591-78-6	NE	10 U		10 U		10 U		10 U		10 U		10 U	
4-Chlorotoluene	106-43-4	100	1 U		1 U		1 U		1 U		1 U		1 U	
4-Methyl-2-pentanone (MIBK)	108-10-1	NE	10 U		10 U		10 U		10 U		10 U		10 U	
Acetone	67-64-1	950	2.7 J		50 U		50 U		50 U		50 U		50 U	
Acrylonitrile	107-13-1	NE	5 U		5 U		5 U		5 U		5 U		5 U	
Benzene	71-43-2	5	0.21 J		1 U		1		1 U		1 U		1 U	
Bromobenzene	108-86-1	NE	1 U		1 U		1 U		1 U		1 U		1 U	
Bromochloromethane	74-97-5	8	1 U		1 U		1 U		1 U		1 U		1 U	
Bromodichloromethane	75-27-4	NE	0.5 U		0.5 U		0.5 U		0.5 U		0.5 U		0.5 U	
Bromoform	75-25-2	NE	1 U		1 U		1 U		1 U		1 U		1 U	
Bromomethane	74-83-9	5	2 U		2 U		2 U		2 U		2 U		2 U	
Carbon Disulfide	75-15-0	NE	5 U		5 U		5 U		5 U		5 U		5 U	
Carbon Tetrachloride	56-23-5	5	0.16 U*		0.16 U*		0.16 U*		0.16 U*		0.16 U*		0.16 U*	
Chlorobenzene	108-90-7	100	0.27 J		1 U		1.7		1 U		1 U		1 U	
Chlorodibromomethane	124-48-1	NE	0.5 U		0.5 U		0.5 U		0.5 U		0.5 U		0.5 U	
Chloroethane	75-00-3	NE	2 U		2 U		2 U		2 U		2 U		2 U	
Chloroform	67-66-3	NE	2 U		2 U		2 U		2 U		2 U		2 U	
Chloromethane	74-87-3	NE	2 U		2 U		2 U		2 U		2 U		2 U	
cis-1,2-Dichloroethylene	156-59-2	70	1 U		1 U		1 U		1 U		1 U		1 U	
cis-1,3-Dichloropropene	10061-01-5	NE	0.5 U		0.5 U		0.5 U		0.5 U		0.5 U		0.5 U	
Dibromomethane	74-95-3	NE	1 U		1 U		1 U		1 U		1 U		1 U	
Dichlorodifluoromethane (Freon 12)	75-71-8	NE	2 U		2 U		0.25 J		2 U		2 U		2 U	
Diethyl Ether	60-29-7	NE	3.8		2 U		18		2 U		2 U		2 U	
Diisopropyl Ether (DIPE)	108-20-3	NE	0.5 U		0.5 U		0.5 U		0.5 U		0.5 U		0.5 U	
Ethylbenzene	100-41-4	700	1 U		1 U		1 U		1 U		1 U		1 U	
Hexachlorobutadiene	87-68-3	NE	0.6 U		0.6 U		0.6 U		0.6 U		0.6 U		0.6 U	
Isopropylbenzene (Cumene)	98-82-8	NE	1 U		1 U		0.18 J		1 U		1 U		1 U	

Table B-13
VOC Concentrations in Groundwater

Sample ID	VGES	BR-3	BR-4	MW-101D	MW-2	Trip Blank	Trip Blank						
Sample Date	CAS#	11/22/2022	Q	11/21/2022	Q	11/22/2022	Q	11/21/2022	Q	11/23/2022	Q	12/14/2022	Q
		(µg/L)											
m+p Xylene	108383/106423	NE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Methyl Acetate	79-20-9	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl Cyclohexane	108-87-2	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-Butyl Ether (MTBE)	1634-04-4	11	0.27 J	1 U	1.5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methylene Chloride	75-09-2	5	0.23 U*	0.23 U*	0.23 U*	0.23 U*	0.23 U*	0.23 U*	0.23 U*	0.23 U*	0.23 U*	0.23 U*	0.23 U*
Naphthalene	91-20-3	0.5	0.24 U*	0.24 U*	0.32 J	0.24 U*	0.24 U*	0.24 U*	0.24 U*	0.24 U*	0.24 U*	0.24 U*	0.24 U*
n-Butylbenzene	104-51-8	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
n-Propylbenzene	103-65-1	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
o-Xylene	95-47-6	10000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
p-Isopropyltoluene (p-Cymene)	99-87-6	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
sec-Butylbenzene	135-98-8	NE	1 U	1 U	0.23 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	100-42-5	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
tert-Amyl Methyl Ether (TAME)	994-05-8	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
tert-Butyl Alcohol (TBA)	75-65-0	NE	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
tert-Butyl Ethyl Ether (TBEE)	637-92-3	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
tert-Butylbenzene	98-06-6	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethylene	127-18-4	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrahydrofuran	109-99-9	NE	1.4 J	3.7 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	108-88-3	1000	0.46 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Trimethylbenzene	25551-13-7	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Xylene	1330-20-7	10000	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
trans-1,2-Dichloroethylene	156-60-5	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	NE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,4-Dichloro-2-butene	110-57-6	NE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Trichloroethylene	79-01-6	5	1 U	0.21 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichlorofluoromethane (Freon 11)	75-69-4	NE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Vinyl Chloride	75-01-4	2	0.21 U*	0.21 U*	0.21 U*	0.21 U*	0.21 U*	0.21 U*	0.21 U*	0.21 U*	0.21 U*	0.21 U*	0.21 U*

Key:
VGES - Vermont Groundwater Enforcement Standard, July 2019
µg/L - micrograms per liter (parts per billion)
Bold results indicate detections of the analyte
Shaded results indicate an exceedance of the enforcement standard
NE - screening level not established
Q - laboratory result qualifier
U - Analyte not detected; limit of quantitation listed
* - Analyte reported to the method detection limit.

RPD - Relative Percent Difference
J - Analyte was detected between the method detection limit and the quantitation limit. Value provided is estimated

Table B-14
VOC Concentrations in Private Drinking Water

Sample ID Sample Date	CAS#	VGES/VHA	Leibon Well	
			11/21/2022	Q
			(µg/L)	
1,1,1,2-Tetrachloroethane	630-20-6	70	1	U
1,1,1-Trichloroethane	71-55-6	200	1	U
1,1,2,2-Tetrachloroethane	79-34-5	NE	0.5	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	76-13-1	NE	1	U
1,1,2-Trichloroethane	79-00-5	5	1	U
1,1-Dichloroethane	75-34-3	70	1	U
1,1-Dichloroethylene	75-35-4	7	1	U
1,1-Dichloropropene	563-58-6	NE	2	U
1,2,3-Trichlorobenzene	87-61-6	0.9	0.3	U*
1,2,3-Trichloropropane	96-18-4	0.02	0.28	U*
1,2,4-Trichlorobenzene	120-82-1	70	1	U
1,2,4-Trimethylbenzene	95-63-6	23	1	U
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	0.8	U*
1,2-Dibromoethane (EDB)	106-93-4	0.05	0.17	U*
1,2-Dichlorobenzene	95-50-1	600	1	U
1,2-Dichloroethane	107-06-2	5	1	U
1,2-Dichloropropane	78-87-5	5	1	U
1,3,5-Trichlorobenzene	108-70-3	NE	1	U
1,3,5-Trimethylbenzene	108-67-8	23	1	U
1,3-Dichlorobenzene	541-73-1	600	1	U
1,3-Dichloropropane	142-28-9	NE	0.5	U
1,4-Dichlorobenzene	106-46-7	75	1	U
1,4-Dioxane	123-91-1	0.3	21	U*
2,2-Dichloropropane	594-20-7	NE	1	U
2-Butanone (MEK)	78-93-3	511	20	U
2-Chlorotoluene	95-49-8	100	1	U
2-Hexanone (MBK)	591-78-6	NE	10	U
4-Chlorotoluene	106-43-4	100	1	U
4-Methyl-2-pentanone (MIBK)	108-10-1	NE	10	U
Acetone	67-64-1	950	50	U
Acrylonitrile	107-13-1	NE	5	U
Benzene	71-43-2	5	1	U
Bromobenzene	108-86-1	NE	1	U
Bromochloromethane	74-97-5	8	1	U
Bromodichloromethane	75-27-4	NE	0.5	U
Bromoform	75-25-2	NE	1	U
Bromomethane	74-83-9	5	2	U
Carbon Disulfide	75-15-0	NE	5	U
Carbon Tetrachloride	56-23-5	5	0.16	U*
Chlorobenzene	108-90-7	100	1	U
Chlorodibromomethane	124-48-1	NE	0.5	U
Chloroethane	75-00-3	NE	2	U
Chloroform	67-66-3	NE	2	U

Table B-14
VOC Concentrations in Private Drinking Water

Sample ID Sample Date	CAS#	VGES/VHA	Leibon Well		Q
			11/21/2022	(μ g/L)	
Dibromomethane	74-95-3	NE		1	U
Dichlorodifluoromethane (Freon 12)	75-71-8	NE		2	U
Diethyl Ether	60-29-7	NE		2	U
Diisopropyl Ether (DIPE)	108-20-3	NE		0.5	U
Ethylbenzene	100-41-4	700		1	U
Hexachlorobutadiene	87-68-3	NE		0.6	U
Isopropylbenzene (Cumene)	98-82-8	NE		1	U
m+p Xylene	108383/106423	NE		2	U
Methyl Acetate	79-20-9	NE		1	U
Methyl Cyclohexane	108-87-2	NE		1	U
Methyl tert-Butyl Ether (MTBE)	1634-04-4	11		1	U
Methylene Chloride	75-09-2	5		0.23	U*
Naphthalene	91-20-3	0.5		0.24	U*
n-Butylbenzene	104-51-8	NE		1	U
n-Propylbenzene	103-65-1	NE		1	U
o-Xylene	95-47-6	10000		1	U
p-Isopropyltoluene (p-Cymene)	99-87-6	NE		1	U
sec-Butylbenzene	135-98-8	NE		1	U
Styrene	100-42-5	100		1	U
tert-Amyl Methyl Ether (TAME)	994-05-8	NE		0.5	U
tert-Butyl Alcohol (TBA)	75-65-0	NE		20	U
tert-Butyl Ethyl Ether (TBEE)	637-92-3	NE		0.5	U
tert-Butylbenzene	98-06-6	NE		1	U
Tetrachloroethylene	127-18-4	5		1	U
Tetrahydrofuran	109-99-9	NE		10	U
Toluene	108-88-3	1000		1	U
Total Trimethylbenzene	25551-13-7	NE		1	U
Total Xylene	1330-20-7	10000		2	U
trans-1,2-Dichloroethylene	156-60-5	100		1	U
trans-1,3-Dichloropropene	10061-02-6	NE		0.5	U
trans-1,4-Dichloro-2-butene	110-57-6	NE		2	U
Trichloroethylene	79-01-6	5		1	U
Trichlorofluoromethane (Freon 11)	75-69-4	NE		2	U
Vinyl Chloride	75-01-4	2		0.21	U*

Key:

VGES - Vermont Groundwater Enforcement Standard, July 2019

VHA - Vermont Health Advisory - Vermont DOH Drinking Water Guidance, April 10, 2024

μ g/L - micrograms per liter (parts per billion)

Shaded results indicate an exceedance of the enforcement standard

NE - screening level not established

Q - laboratory result qualifier

U - Analyte not detected; limit of quantitation listed

* - Analyte reported to the method detection limit.

Table B-15
VOC Concentrations in Public Water Supply

Sample ID Sample Date	CAS#	MCL	PMCWS Well	Q
		(μ g/L)	11/22/2022	
1,1,1,2-Tetrachloroethane	630-20-6	70	1	U
1,1,1-Trichloroethane	71-55-6	200	1	U
1,1,2,2-Tetrachloroethane	79-34-5	NE	0.5	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	76-13-1	NE	1	U
1,1,2-Trichloroethane	79-00-5	5	1	U
1,1-Dichloroethane	75-34-3	70	1	U
1,1-Dichloroethylene	75-35-4	7	1	U
1,1-Dichloropropene	563-58-6	NE	2	U
1,2,3-Trichlorobenzene	87-61-6	0.9	0.3	U*
1,2,3-Trichloropropane	96-18-4	0.02	0.28	U*
1,2,4-Trichlorobenzene	120-82-1	70	1	U
1,2,4-Trimethylbenzene	95-63-6	23	1	U
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	0.8	U*
1,2-Dibromoethane (EDB)	106-93-4	0.05	0.17	U*
1,2-Dichlorobenzene	95-50-1	600	1	U
1,2-Dichloroethane	107-06-2	5	1	U
1,2-Dichloropropane	78-87-5	5	1	U
1,3,5-Trichlorobenzene	108-70-3	NE	1	U
1,3,5-Trimethylbenzene	108-67-8	23	1	U
1,3-Dichlorobenzene	541-73-1	600	1	U
1,3-Dichloropropane	142-28-9	NE	0.5	U
1,4-Dichlorobenzene	106-46-7	75	1	U
1,4-Dioxane	123-91-1	0.3	21	U*
2,2-Dichloropropane	594-20-7	NE	1	U
2-Butanone (MEK)	78-93-3	511	20	U
2-Chlorotoluene	95-49-8	100	1	U
2-Hexanone (MBK)	591-78-6	NE	10	U
4-Chlorotoluene	106-43-4	100	1	U
4-Methyl-2-pentanone (MIBK)	108-10-1	NE	10	U
Acetone	67-64-1	950	50	U
Acrylonitrile	107-13-1	NE	5	U
Benzene	71-43-2	5	1	U
Bromobenzene	108-86-1	NE	1	U
Bromochloromethane	74-97-5	8	1	U
Bromodichloromethane	75-27-4	NE	0.5	U
Bromoform	75-25-2	NE	1	U
Bromomethane	74-83-9	5	2	U
Carbon Disulfide	75-15-0	NE	5	U
Carbon Tetrachloride	56-23-5	5	0.16	U*
Chlorobenzene	108-90-7	100	1	U
Chlorodibromomethane	124-48-1	NE	0.5	U
Chloroethane	75-00-3	NE	2	U
Chloroform	67-66-3	NE	2	U
Chloromethane	74-87-3	NE	2	U
cis-1,2-Dichloroethylene	156-59-2	70	1	U
cis-1,3-Dichloropropene	10061-01-5	NE	0.5	U

Table B-15
VOC Concentrations in Public Water Supply

Sample ID Sample Date	CAS#	MCL	PMCWS Well	Q
		(μ g/L)	11/22/2022	
Dibromomethane	74-95-3	NE	1	U
Dichlorodifluoromethane (Freon 12)	75-71-8	NE	2	U
Diethyl Ether	60-29-7	NE	2	U
Diisopropyl Ether (DIPE)	108-20-3	NE	0.5	U
Ethylbenzene	100-41-4	700	1	U
Hexachlorobutadiene	87-68-3	NE	0.6	U
Isopropylbenzene (Cumene)	98-82-8	NE	1	U
m+p Xylene	108383/106423	NE	2	U
Methyl Acetate	79-20-9	NE	1	U
Methyl Cyclohexane	108-87-2	NE	1	U
Methyl tert-Butyl Ether (MTBE)	1634-04-4	11	1	U
Methylene Chloride	75-09-2	5	0.23	U*
Naphthalene	91-20-3	0.5	0.24	U*
n-Butylbenzene	104-51-8	NE	1	U
n-Propylbenzene	103-65-1	NE	1	U
o-Xylene	95-47-6	10000	1	U
p-Isopropyltoluene (p-Cymene)	99-87-6	NE	1	U
sec-Butylbenzene	135-98-8	NE	1	U
Styrene	100-42-5	100	1	U
tert-Amyl Methyl Ether (TAME)	994-05-8	NE	0.5	U
tert-Butyl Alcohol (TBA)	75-65-0	NE	20	U
tert-Butyl Ethyl Ether (TBEE)	637-92-3	NE	0.5	U
tert-Butylbenzene	98-06-6	NE	1	U
Tetrachloroethylene	127-18-4	5	1	U
Tetrahydrofuran	109-99-9	NE	10	U
Toluene	108-88-3	1000	1	U
Total Trimethylbenzene	25551-13-7	NE	1	U
Total Xylene	1330-20-7	10000	2	U
trans-1,2-Dichloroethylene	156-60-5	100	1	U
trans-1,3-Dichloropropene	10061-02-6	NE	0.5	U
trans-1,4-Dichloro-2-butene	110-57-6	NE	2	U
Trichloroethylene	79-01-6	5	1	U
Trichlorofluoromethane (Freon 11)	75-69-4	NE	2	U
Vinyl Chloride	75-01-4	2	0.21	U*

Key:

MCL - Maximum Contaminant Level - Vermont Water Supply Rule, February 24, 2024

μ g/L - micrograms per liter (parts per billion)

NE - screening level not established

Shaded results indicate an exceedance of the enforcement standard

Q - laboratory result qualifier

U - Analyte not detected; limit of quantitation listed

* - Analyte reported to the method detection limit.

Table B-16
Groundwater Wet Chemistry

SampleID		VGES	MW-1		BR-1		BR-2		BR-2-FD		BR-201		RPD
Sample Date	CAS#		12/14/2022	Q	11/22/2022	Q	11/22/2022	Q	11/22/2022	Q	11/21/2022	Q	%
		(µg/L)											
Chloride	16887-00-6	NE	3700		1200		1000	U	1000	U	1000	U	-
Chemical Oxygen Demand	COD	NE	15000	U	15000	U	15000	U	15000	U	15000	U	-

Sample ID		VGES	BR-202		BR-3		BR-4		MW-101D		MW-2		
Sample Date	CAS#		11/21/2022	Q	11/22/2022	Q	11/21/2022	Q	11/22/2022	Q	11/21/2022	Q	
		(µg/L)											
Chloride	16887-00-6	NE	1000	U	350000		2500		11000		1000	U	
Chemical Oxygen Demand	COD	NE	15000	U	15000	U	15000	U	15000	U	15000	U	

Key:

VGES - Vermont Groundwater Enforcement Standard, July 2019

µg/L - micrograms per liter (parts per billion)

Bold results indicate detections of the analyte

NE - screening level not established

Q - laboratory result qualifier

U - Analyte not detected; limit of quantitation listed

RPD - Relative Percent Difference

Table B-17
Private Drinking Water Wet Chemistry

Sample ID		VGES/VHA	Leibon Well	
Sample Date	CAS#		11/21/2022	Q
		(µg/L)		
Chloride	16887-00-6	NE	43000	
Chemical Oxygen Demand	COD	NE	15000	U

Key:

VGES - Vermont Groundwater Enforcement Standard, July 2019

VHA - Vermont Health Advisory - Vermont DOH Drinking Water Guidance, April 10, 2024

µg/L - micrograms per liter (parts per billion)

Bold results indicate detections of the analyte

NE - screening level not established

Q - laboratory result qualifier

U - Analyte not detected; limit of quantitation listed

Table B-18
Public Water Supply Wet Chemistry

Sample ID		SMCL	PMCWS Well	
Sample Date	CAS#		11/22/2022	Q
		(µg/L)		
Chloride	16887-00-6	250000	1200000	
Chemical Oxygen Demand	COD	NE	15000	U

Key:

SMCL - Secondary Maximum Contaminant Level - Vermont Water Supply Rule, February 24, 2024

µg/L - micrograms per liter (parts per billion)

Bold results indicate detections of the analyte

Shaded results indicate an exceedance of the enforcement standard

NE - screening level not established

Q - laboratory result qualifier

U - Analyte not detected; limit of quantitation listed

Table B-19
Dioxins/Furans Concentrations in Groundwater

SampleID Sample Date	CAS#	VGES (μ g/L)	MW-1		BR-1		MW-101D		MW-101D-FD		BR-2		RPD %
			12/14/2022	Q	4/25/2023	Q	4/25/2023	Q	4/25/2023	Q	4/25/2023	Q	
1,2,3,4,6,7,8-HpCDD	35822-46-9	NE	3.0E-06	U	0.0000043	U	0.0000044	U	0.0000043	U	0.0000044	U	-
1,2,3,4,6,7,8-HpCDF	67562-39-4	NE	1.6E-06	U	0.0000043	U	0.0000045	U	0.0000043	U	0.0000044	U	-
1,2,3,4,7,8,9-HpCDF	55673-89-7	NE	4.9E-06	U	0.0000043	U	0.0000044	U	0.0000043	U	0.0000048	UA	-
1,2,3,4,7,8-HxCDD	39227-28-6	NE	2.4E-06	JB	0.0000036	U	0.0000037	U	0.0000036	U	0.0000037	U	-
1,2,3,4,7,8-HxCDF	70648-26-9	NE	7.4E-07	U	0.000005	U	0.0000052	U	0.000005	U	0.0000051	U	-
1,2,3,6,7,8-HxCDD	57653-85-7	NE	1.3E-06	U	0.0000045	U	0.0000047	U	0.0000045	U	0.0000046	U	-
1,2,3,6,7,8-HxCDF	57117-44-9	NE	8.0E-07	U	0.0000044	U	0.0000046	U	0.0000044	U	0.0000045	U	-
1,2,3,7,8,9-HxCDD	19408-74-3	NE	1.1E-06	U	0.0000055	U	0.0000057	U	0.0000055	U	0.0000055	U	-
1,2,3,7,8,9-HxCDF	72918-21-9	NE	3.2E-06	U	0.0000046	U	0.0000048	U	0.0000046	U	0.0000047	U	-
1,2,3,7,8-PeCDD	40321-76-4	NE	1.3E-06	U	0.0000021	U	0.0000022	U	0.0000021	U	0.0000021	U	-
1,2,3,7,8-PeCDF	57117-41-6	NE	1.1E-06	U	0.0000025	U	0.0000026	U	0.0000025	U	0.0000025	U	-
2,3,4,6,7,8-HxCDF	60851-34-5	NE	1.0E-06	U	0.0000043	U	0.0000045	U	0.0000043	U	0.0000044	U	-
2,3,4,7,8-PeCDF	57117-31-4	NE	6.8E-07	U	0.0000019	U	0.0000019	U	0.0000019	U	0.0000023	J	-
2,3,7,8-TCDD	1746-01-6	0.00003	1.7E-06	U	0.0000022	U	0.0000023	U	0.0000022	U	0.0000022	U	-
2,3,7,8-TCDF	51207-31-9	NE	1.2E-06	U	0.000002	U	0.0000021	U	0.000002	U	0.0000021	U	-
OCDD	3268-87-9	NE	1.0E-05	U	0.000011	U	0.000012	U	0.000011	U	0.000011	U	-
OCDF	39001-02-0	NE	8.3E-06	U	0.00001	U	0.000011	U	0.00001	U	0.00001	U	-
Total HpCDD	37871-00-4	NE	3.0E-06	U	0.0000043	U	0.0000044	U	0.0000043	U	0.0000044	U	-
Total HpCDF	38998-75-3	NE	1.60E-06	U	0.0000043	U	0.0000044	U	0.0000043	U	0.0000044	U	-
Total HxCDD	34465-46-8	NE	2.4E-06	JB	0.0000036	U	0.0000037	U	0.0000036	U	0.0000037	U	-
Total HxCDF	55684-94-1	NE	7.4E-07	U	0.0000043	U	0.0000045	U	0.0000043	U	0.0000044	U	-
Total PeCDD	36088-22-9	NE	1.3E-06	U	0.0000021	U	0.0000022	U	0.0000021	U	0.0000021	U	-
Total PeCDF	30402-15-4	NE	6.8E-07	U	0.0000019	U	0.0000019	U	0.0000019	U	0.0000023	J	-
Total TCDD	41903-57-5	NE	1.7E-06	U	0.0000022	U	0.0000023	U	0.0000022	U	0.0000022	U	-
Total TCDF	30402-14-3	NE	1.2E-06	U	0.000002	U	0.0000021	U	0.000002	U	0.0000021	U	-

Table B-19
Dioxins/Furans Concentrations in Groundwater

Sample ID Sample Date	VGES CAS#	(µg/L)	BR-202	BR-201	MW-2	BR-4	BR-3			
			4/25/2023	Q	4/25/2023	Q	4/25/2023	Q	4/26/2023	Q
1,2,3,4,6,7,8-HpCDD	35822-46-9	NE	0.0000044	U	0.0000044	U	0.0000044	U	0.0000043	U
1,2,3,4,6,7,8-HpCDF	67562-39-4	NE	0.0000044	U	0.0000044	U	0.0000044	U	0.0000044	U
1,2,3,4,7,8,9-HpCDF	55673-89-7	NE	0.0000043	U	0.0000044	U	0.0000044	U	0.0000043	U
1,2,3,4,7,8-HxCDD	39227-28-6	NE	0.0000037	U	0.0000037	U	0.0000037	U	0.0000036	U
1,2,3,4,7,8-HxCDF	70648-26-9	NE	0.0000051	U	0.0000051	U	0.0000051	U	0.0000051	U
1,2,3,6,7,8-HxCDD	57653-85-7	NE	0.0000046	U	0.0000046	U	0.0000046	U	0.0000046	U
1,2,3,6,7,8-HxCDF	57117-44-9	NE	0.0000045	U	0.0000045	U	0.0000045	U	0.0000045	U
1,2,3,7,8,9-HxCDD	19408-74-3	NE	0.0000055	U	0.0000056	U	0.0000056	U	0.0000055	U
1,2,3,7,8,9-HxCDF	72918-21-9	NE	0.0000047	U	0.0000047	U	0.0000047	U	0.0000047	U
1,2,3,7,8-PeCDD	40321-76-4	NE	0.0000021	U	0.0000021	U	0.0000021	U	0.0000021	U
1,2,3,7,8-PeCDF	57117-41-6	NE	0.0000026	U	0.0000026	U	0.0000026	U	0.0000025	U
2,3,4,6,7,8-HxCDF	60851-34-5	NE	0.0000044	U	0.0000044	U	0.0000044	U	0.0000043	U
2,3,4,7,8-PeCDF	57117-31-4	NE	0.0000019	U	0.000002	J	0.0000019	U	0.0000019	U
2,3,7,8-TCDD	1746-01-6	0.00003	0.0000022	U	0.0000023	U	0.0000023	U	0.0000022	U
2,3,7,8-TCDF	51207-31-9	NE	0.0000021	U	0.0000021	U	0.0000021	U	0.0000021	U
OCDD	3268-87-9	NE	0.000011	U	0.000011	U	0.000011	U	0.000011	U
OCDF	39001-02-0	NE	0.00001	U	0.000011	U	0.000011	U	0.00001	U
Total HpCDD	37871-00-4	NE	0.0000044	U	0.0000044	U	0.0000044	U	0.0000043	U
Total HpCDF	38998-75-3	NE	0.0000043	U	0.0000044	U	0.0000044	U	0.0000043	U
Total HxCDD	34465-46-8	NE	0.0000037	U	0.0000037	U	0.0000037	U	0.0000036	U
Total HxCDF	55684-94-1	NE	0.0000044	U	0.0000044	U	0.0000044	U	0.0000043	U
Total PeCDD	36088-22-9	NE	0.0000021	U	0.0000021	U	0.0000021	U	0.0000021	U
Total PeCDF	30402-15-4	NE	0.0000019	U	0.000002	J	0.0000019	U	0.0000019	U
Total TCDD	41903-57-5	NE	0.0000022	U	0.0000023	U	0.0000023	U	0.0000022	U
Total TCDF	30402-14-3	NE	0.0000021	U	0.0000027	J	0.0000021	U	0.0000021	U

Key:

VGES - Vermont Groundwater Enforcement Standard, July 2019

µg/L - micrograms per liter (parts per billion)

Bold results indicate detections of the analyte

NE - screening level not established

Q - laboratory result qualifier

U - Analyte not detected; limit of quantitation listed

J - Analyte was detected between the method detection limit and the quantitation limit. Value provided is estimated

B - Less than 10x higher than method blank level

A - Reporting Limit based on signal to noise (EDL)

RPD - Relative Percent Difference

Table B-20
Dioxins/Furans Concentrations in Private Drinking Water

SampleID Sample Date	CAS#	VGES (μ g/L)	LIEBON WELL	
			4/25/2023	Q
1,2,3,4,6,7,8-HxCDD	35822-46-9	NE	0.0000044	U
1,2,3,4,6,7,8-HxCDF	67562-39-4	NE	0.0000044	U
1,2,3,4,7,8,9-HxCDF	55673-89-7	NE	0.0000044	U
1,2,3,4,7,8-HxCDD	39227-28-6	NE	0.0000037	U
1,2,3,4,7,8-HxCDF	70648-26-9	NE	0.0000052	U
1,2,3,6,7,8-HxCDD	57653-85-7	NE	0.0000046	U
1,2,3,6,7,8-HxCDF	57117-44-9	NE	0.0000045	U
1,2,3,7,8,9-HxCDD	19408-74-3	NE	0.0000056	U
1,2,3,7,8,9-HxCDF	72918-21-9	NE	0.0000048	U
1,2,3,7,8-PeCDD	40321-76-4	NE	0.0000021	U
1,2,3,7,8-PeCDF	57117-41-6	NE	0.0000026	U
2,3,4,6,7,8-HxCDF	60851-34-5	NE	0.0000044	U
2,3,4,7,8-PeCDF	57117-31-4	NE	0.0000019	U
2,3,7,8-TCDD	1746-01-6	0.00003	0.0000023	U
2,3,7,8-TCDF	51207-31-9	NE	0.0000021	U
OCDD	3268-87-9	NE	0.000011	U
OCDF	39001-02-0	NE	0.000011	U
Total HpCDD	37871-00-4	NE	0.0000044	U
Total HpCDF	38998-75-3	NE	0.0000044	U
Total HxCDD	34465-46-8	NE	0.0000037	U
Total HxCDF	55684-94-1	NE	0.0000044	U
Total PeCDD	36088-22-9	NE	0.0000021	U
Total PeCDF	30402-15-4	NE	0.0000019	U
Total TCDD	41903-57-5	NE	0.0000023	U
Total TCDF	30402-14-3	NE	0.0000021	U

Key:

VGES - Vermont Groundwater Enforcement Standard, July 2019

μ g/L - micrograms per liter (parts per billion)

NE - screening level not established

Q - laboratory result qualifier

U - Analyte not detected; limit of quantitation listed

Table B-21
Dioxins/Furans Concentrations in Public Water Supply

Sample ID Sample Date	CAS#	MCL ($\mu\text{g}/\text{L}$)	PMCWS		FORMER SUPPLY WELL	
			4/25/2023	Q	4/26/2023	Q
1,2,3,4,6,7,8-HpCDD	35822-46-9	NE	0.0000045	U	0.0000043	U
1,2,3,4,6,7,8-HpCDF	67562-39-4	NE	0.0000045	U	0.0000044	U
1,2,3,4,7,8,9-HpCDF	55673-89-7	NE	0.0000044	U	0.0000043	U
1,2,3,4,7,8-HxCDD	39227-28-6	NE	0.0000038	U	0.0000036	U
1,2,3,4,7,8-HxCDF	70648-26-9	NE	0.0000052	U	0.0000051	U
1,2,3,6,7,8-HxCDD	57653-85-7	NE	0.0000047	U	0.0000045	U
1,2,3,6,7,8-HxCDF	57117-44-9	NE	0.0000046	U	0.0000044	U
1,2,3,7,8,9-HxCDD	19408-74-3	NE	0.0000057	U	0.0000055	U
1,2,3,7,8,9-HxCDF	72918-21-9	NE	0.0000048	U	0.0000047	U
1,2,3,7,8-PeCDD	40321-76-4	NE	0.0000022	U	0.0000021	U
1,2,3,7,8-PeCDF	57117-41-6	NE	0.0000026	U	0.0000025	U
2,3,4,6,7,8-HxCDF	60851-34-5	NE	0.0000045	U	0.0000043	U
2,3,4,7,8-PeCDF	57117-31-4	NE	0.0000019	U	0.0000019	U
2,3,7,8-TCDD	1746-01-6	0.00003	0.0000023	U	0.0000022	U
2,3,7,8-TCDF	51207-31-9	NE	0.0000021	U	0.000002	U
OCDD	3268-87-9	NE	0.000012	U	0.000011	U
OCDF	39001-02-0	NE	0.000011	U	0.00001	U
Total HpCDD	37871-00-4	NE	0.0000045	U	0.0000043	U
Total HpCDF	38998-75-3	NE	0.0000044	U	0.0000043	U
Total HxCDD	34465-46-8	NE	0.0000038	U	0.0000036	U
Total HxCDF	55684-94-1	NE	0.0000045	U	0.0000043	U
Total PeCDD	36088-22-9	NE	0.0000022	U	0.0000021	U
Total PeCDF	30402-15-4	NE	0.0000019	U	0.0000019	U
Total TCDD	41903-57-5	NE	0.0000023	U	0.0000022	U
Total TCDF	30402-14-3	NE	0.0000021	U	0.000002	U

Key:

MCL - Maximum Contaminant Level - Vermont Water Supply Rule, February 24, 2024

$\mu\text{g}/\text{L}$ - micrograms per liter (parts per billion)

NE - screening level not established

Q - laboratory result qualifier

U - Analyte not detected; limit of quantitation listed

Table B-22
Metal Concentrations in Soil

Sample ID Sample Date	CAS#	VSS - Resident	VSS - Non- resident	Residential RSL	Industrial RSL	SB-1-0.5 9/14/2022	SB-2-0.5 9/14/2022	SB-3-0.5 9/14/2022	SB-3-0.5-FD 9/14/2022	SB-4-0.5 9/14/2022	SB-5-0.5 9/14/2022	RPD
		(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	Q	Q	Q	Q	Q	Q	Q
Antimony	7440-36-0	29	319	31	470	1.7 U	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	-
Arsenic	7440-38-2	NE	NE	0.68	3	3.5 U	3.8 U	3.8 U	3.8 U	3.5 U	3.5 U	-
Beryllium	7440-41-7	35	289	160	2300	0.4	0.38	0.51	0.52	0.67	0.29	2%
Cadmium	7440-43-9	6.9	87	71	100	0.35 U	0.38 U	0.38 U	0.38 U	0.35 U	0.35 U	-
Chromium	7440-47-3	NE	NE	NE	NE	10	9.7	11	11	29	18	-
Copper	7440-50-8	10407	139231	3100	47000	5.9	6.7	5.7	5.6	14	13	2%
Lead	7439-92-1	NE	NE	200	800	15	8.3	8.9	9.5	7.7	4	7%
Nickel	7440-02-0	940	9707	1400	17000	6.9	6.6	7.7	8	20	15	4%
Selenium	7782-49-2	366	4900	390	5800	3.5 U	3.8 U	3.8 U	3.8 U	3.5 U	3.5 U	-
Silver	7440-22-4	237	2483	390	5800	0.35 U	0.38 U	0.38 U	0.38 U	0.35 U	0.35 U	-
Thallium	7440-28-0	0.73	9.8	0.78	12	1.7 U	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	-
Zinc	7440-66-6	21986	294150	23000	350000	20	19	37	39	29	160	5%
Mercury	7439-97-6	3.1	3.1	11	46	0.035	0.046	0.048	0.051	0.031	0.027 U	6%

Key:

VSS - Vermont Soil Standards from Investigation and Remediation of Contaminated Properties Rule, February 2024

RSL - US Environmental Protection Agency, Regional Screening Levels for Residential and Industrial settings, November 2024

Q - laboratory result qualifier

mg/kg - milligrams per kilogram (parts per million)

Bold results indicate detections of the analyte

Italicized results indicate and exceedance of the non-residential enforcement standard(s)

NE - screening level not established

U - Analyte not detected; limit of quantitation listed

RPD- Relative Percent Difference

Table B-23
sVOC Concentrations in Soil

Sample ID	Sample Date	VSS - Resident		VSS - Non-resident		Residential RSL	Industrial RSL	SB-1-0.5		SB-2-0.5		SB-3-0.5		SB-3-0.5-FD		SB-4-0.5		SB-5-0.5		RPD	
								9/14/2022	Q	9/14/2022	Q	9/14/2022	Q	9/14/2022	Q	9/14/2022	Q	9/14/2022	Q		
CAS#	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)																%
1,2,4,5-Tetrachlorobenzene	95-94-3	NE	NE	23	350	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
1,2,4-Trichlorobenzene	120-82-1	NE	NE	24	110	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
1,2-Dichlorobenzene	95-50-1	NE	NE	1800	9300	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
1,2-Diphenylhydrazine/Azobenzene	122-66-7	NE	NE	0.68	2.9	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
1,3-Dichlorobenzene	541-73-1	NE	NE	NE	NE	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
1,4-Dichlorobenzene	106-46-7	NE	NE	2.6	11	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
1-Methylnaphthalene	90-12-0	NE	NE	18	73	0.19	U	0.2	U	0.19	U	0.2	U	0.19	U	0.18	U	0.18	U	-	
2,4,5-Trichlorophenol	95-95-4	NE	NE	6300	82000	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
2,4,6-Trichlorophenol	88-06-2	NE	NE	49	210	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
2,4-Dichlorophenol	120-83-2	NE	NE	190	2500	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
2,4-Dimethylphenol	105-67-9	NE	NE	1300	16000	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
2,4-Dinitrophenol	51-28-5	NE	NE	130	1600	0.74	U	0.78	U	0.75	U	0.76	U	0.73	U	0.71	U	0.71	U	-	
2,4-Dinitrotoluene	121-14-2	NE	NE	1.7	7.4	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
2,6-Dinitrotoluene	606-20-2	NE	NE	0.36	1.5	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
2-Chloronaphthalene	91-58-7	NE	NE	4800	60000	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
2-Chlorophenol	95-57-8	NE	NE	390	5800	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
2-Methylnaphthalene	91-57-6	NE	NE	240	3000	0.19	U	0.2	U	0.19	U	0.2	U	0.19	U	0.18	U	0.18	U	-	
2-Methylphenol	95-48-7	NE	NE	3200	41000	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
2-Nitroaniline	88-74-4	NE	NE	630	8000	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
2-Nitrophenol	88-75-5	NE	NE	NE	NE	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
3,3-Dichlorobenzidine	91-94-1	NE	NE	1.2	5.1	0.19	U	0.2	U	0.19	U	0.2	U	0.19	U	0.18	U	0.18	U	-	
3/4-Methylphenol	108-39-4/106-4	NE	NE	NE	NE	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
3-Nitroaniline	99-09-2	NE	NE	NE	NE	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
4,6-Dinitro-2-methylphenol	534-52-1	NE	NE	5.1	66	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
4-Bromophenylether	101-55-3	NE	NE	NE	NE	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
4-Chloro-3-methylphenol	59-50-7	NE	NE	6300	82000	0.74	U	0.78	U	0.75	U	0.76	U	0.73	U	0.71	U	0.71	U	-	
4-Chloroaniline	106-47-8	NE	NE	2.7	11	0.74	U	0.78	U	0.75	U	0.76	U	0.73	U	0.71	U	0.71	U	-	
4-Chlorophenylether	7005-72-3	NE	NE	NE	NE	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
4-Nitroaniline	100-01-6	NE	NE	27	110	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
4-Nitrophenol	100-02-7	NE	NE	NE	NE	0.74	U	0.78	U	0.75	U	0.76	U	0.73	U	0.71	U	0.71	U	-	
Acenaphthene	83-32-9	NE	NE	3600	45000	0.19	U	0.2	U	0.19	U	0.2	U	0.19	U	0.18	U	0.18	U	-	
Acenaphthylene	208-96-8	NE	NE	NE	NE	0.19	U	0.2	U	0.19	U	0.2	U	0.19	U	0.18	U	0.18	U	-	
Acetophenone	98-86-2	NE	NE	7800	120000	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
Aniline	62-53-3	NE	NE	95	400	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
Anthracene	120-12-7	NE	NE	18000	230000	0.19	U	0.2	U	0.19	U	0.2	U	0.19	U	0.18	U	0.18	U	-	
B(a)P-TEQ	50-32-8	0.07	1.54	0.11	2.1	0.22	U	0.231	U	0.22	U	0.231	U	0.22	U	0.208	U	0.208	U	-	
Benzidine	92-87-5	NE	NE	0.00053	0.01	0.74	U	0.78	U	0.75	U	0.76	U	0.73	U	0.71	U	0.71	U	-	
Benz(a)anthracene	56-55-3	NE	NE	1.1	21	0.19	U	0.2	U	0.19	U	0.2	U	0.19	U	0.18	U	0.18	U	-	
Benz(a)pyrene	50-32-8	0.07	1.54	0.11	2.1	0.19	U	0.2	U	0.19	U	0.2	U	0.19	U	0.18	U	0.18	U	-	
Benz(b)fluoranthene	205-99-2	NE	NE	1.1	21	0.19	U	0.2	U	0.19	U	0.2	U	0.19	U	0.18	U	0.18	U	-	
Benz(g,h,i)perylene	191-24-2	NE	NE	NE	NE	0.19	U	0.2	U	0.19	U	0.2	U	0.19	U	0.18	U	0.18	U	-	
Benz(k)fluoranthene	207-08-9	NE	NE	11	210	0.19	U	0.2	U	0.19	U	0.2	U	0.19	U	0.18	U	0.18	U	-	
Benzoic Acid	65-85-0	NE	NE	250000	3300000	1.1	U	1.2	U	1.1	U	1.2	U	1.1	U	1.1	U	1.1	U	-	
Bis(2-chloroethoxy)methane	111-91-1	NE	NE	190	2500	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
Bis(2-chloroethyl)ether	111-44-4	NE	NE	0.23	1	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
Bis(2-chloroisopropyl)ether	108-60-1	2804	36274	3100	47000	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
Bis(2-Ethylhexyl)phthalate	117-81-7	20	120	39	160	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
Butylbenzylphthalate	85-68-7	NE	NE	290	1200	0.38	U	0.4	U	0.39	U	0.39	U	0.37	U	0.36	U	0.36	U	-	
Carbazole	86-74-8	NE	NE	NE	NE	0.19	U	0.2	U	0.19	U	0.2	U	0.19	U	0.18	U	0.18	U	-	
Chrysene	218-01-9	NE	NE	110	2100	0.19	U	0.2	U	0.19	U	0.2	U	0.19	U	0.18	U	0.18	U	-	
Dibenz(a,h)anthracene	53-70-3	NE	NE	0.11	2.1	0.19	U	0.2	U	0.19	U	0.2	U	0.19	U	0.18	U	0.18	U	-	

Table B-23
sVOC Concentrations in Soil

Sample ID Sample Date	CAS#	VSS - Resident	VSS - Non- resident	Residential RSL (mg/Kg)	Industrial RSL (mg/Kg)	SB-1-0.5 9/14/2022	SB-2-0.5 9/14/2022	SB-3-0.5 9/14/2022	SB-3-0.5-FD 9/14/2022	SB-4-0.5 9/14/2022	SB-5-0.5 9/14/2022	RPD %
		9/14/2022	Q			9/14/2022	Q	9/14/2022	Q	9/14/2022	Q	
Dibenzofuran	132-64-9	NE	NE	73	1000	0.38 U	0.4 U	0.39 U	0.39 U	0.37 U	0.36 U	-
Diethylphthalate	84-66-2	NE	NE	51000	660000	0.38 U	0.4 U	0.39 U	0.39 U	0.37 U	0.36 U	-
Dimethylphthalate	131-11-3	NE	NE	NE	NE	0.38 U	0.4 U	0.39 U	0.39 U	0.37 U	0.36 U	-
Di-n-butylphthalate	84-74-2	NE	NE	6300	82000	0.38 U	0.4 U	0.39 U	0.39 U	0.37 U	0.36 U	-
Di-n-octylphthalate	117-84-0	NE	NE	630	8200	0.38 U	0.4 U	0.39 U	0.39 U	0.37 U	0.36 U	-
Fluoranthene	206-44-0	2301	26371	2400	30000	0.19 U	0.2 U	0.19 U	0.2 U	0.19 U	0.18 U	-
Fluorene	86-73-7	2301	26371	2400	30000	0.19 U	0.2 U	0.19 U	0.2 U	0.19 U	0.18 U	-
Hexachlorobenzene	118-74-1	0.13	0.69	0.21	0.96	0.38 U	0.4 U	0.39 U	0.39 U	0.37 U	0.36 U	-
Hexachlorobutadiene	87-68-3	NE	NE	1.2	5.3	0.38 U	0.4 U	0.39 U	0.39 U	0.37 U	0.36 U	-
Hexachlorocyclopentadiene	77-47-4	NE	NE	1.8	7.5	0.38 U	0.4 U	0.39 U	0.39 U	0.37 U	0.36 U	-
Hexachloroethane	67-72-1	NE	NE	1.8	8	0.38 U	0.4 U	0.39 U	0.39 U	0.37 U	0.36 U	-
Indeno(1,2,3-cd)pyrene	193-39-5	NE	NE	1.1	21	0.19 U	0.2 U	0.19 U	0.2 U	0.19 U	0.18 U	-
Isophorone	78-59-1	NE	NE	570	2400	0.38 U	0.4 U	0.39 U	0.39 U	0.37 U	0.36 U	-
Naphthalene	91-20-3	1.2	7.2	2	8.6	0.19 U	0.2 U	0.19 U	0.2 U	0.19 U	0.18 U	-
Nitrobenzene	98-95-3	NE	NE	5.1	22	0.38 U	0.4 U	0.39 U	0.39 U	0.37 U	0.36 U	-
N-Nitrosodimethylamine	62-75-9	NE	NE	0.002	0.034	0.38 U	0.4 U	0.39 U	0.39 U	0.37 U	0.36 U	-
N-Nitrosodi-n-propylamine	621-64-7	NE	NE	0.078	0.33	0.38 U	0.4 U	0.39 U	0.39 U	0.37 U	0.36 U	-
N-Nitrosodiphenylamine/Diphenylamine	86-30-6	NE	NE	110	470	0.38 U	0.4 U	0.39 U	0.39 U	0.37 U	0.36 U	-
Pentachloronitrobenzene	82-68-8	NE	NE	2.7	13	0.38 U	0.4 U	0.39 U	0.39 U	0.37 U	0.36 U	-
Pentachlorophenol	87-86-5	0.48	2.9	1	4	0.38 U	0.4 U	0.39 U	0.39 U	0.37 U	0.36 U	-
Phenanthrene	85-01-8	NE	NE	NE	NE	0.19 U	0.2 U	0.19 U	0.2 U	0.19 U	0.18 U	-
Phenol	108-95-2	NE	NE	19000	250000	0.38 U	0.4 U	0.39 U	0.39 U	0.37 U	0.36 U	-
Pyrene	129-00-0	NE	NE	1800	23000	0.19 U	0.2 U	0.19 U	0.2 U	0.19 U	0.18 U	-
Pyridine	110-86-1	NE	NE	78	1200	0.38 U	0.4 U	0.39 U	0.39 U	0.37 U	0.36 U	-

Key:

VSS - Vermont Soil Standards from Investigation and Remediation of Contaminated Properties Rule, February 2024

RSL - US Environmental Protection Agency, Regional Screening Levels for Residential and Industrial settings, November 2024

mg/kg - milligrams per kilogram (parts per million)

NE - screening level not established

RPD - Relative percent difference

U - Analyte not detected; limit of quantitation listed

Q - laboratory result qualifier

Table B-24
TPH Concentrations in Soil

Sample ID	EPA Residential RSL*	EPA Industrial RSL*	SB-1-0.5	SB-2-0.5	SB-3-0.5	SB-3-0.5-FD	SB-4-0.5	SB-5-0.5	RPD
Sample Date			9/14/2022	Q	9/14/2022	Q	9/14/2022	Q	
	(mg/Kg)	(mg/Kg)							
TPH (C9-C36)	96 to 2.3E+05	440 to 3.5E+06	300	230	270	260	76	27	4%

Key:

RSL - US Environmental Protection Agency, Regional Screening Levels for Residential and Industrial settings, November 2024

mg/kg - milligrams per kilogram (parts per million)

Bold results indicate detections of the analyte

Shaded results indicate an exceedance of the residential enforcement standard

RPD - Relative Percent Difference

*EPA RSLs are provided as a range for aliphatic medium carbon to aliphatic high carbon TPH

Q - laboratory result qualifier

Table B-25
VOC Concentrations in Soil

Sample ID Sample Date	CAS#	VSS - Resident (mg/Kg)	VSS - Non-resident (mg/Kg)	Residential RSL (mg/Kg)	Industrial RSL (mg/Kg)	SB-1-0.5		SB-2-0.5		SB-3-0.5		SB-3-0.5-FD		SB-4-0.5		RPD
						9/14/2022	Q	9/14/2022	Q	9/14/2022	Q	9/14/2022	Q	9/14/2022	Q	
1,1,1,2-Tetrachloroethane	630-20-6	1.3	8	2	8.8	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
1,1,1-Trichloroethane	71-55-6	NE	NE	8100	36000	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
1,1,2,2-Tetrachloroethane	79-34-5	NE	NE	0.6	2.7	0.00094	U	0.00095	U	0.0014	U	0.0011	U	0.001	U	-
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	76-13-1	NE	NE	6700	28000	0.0094	U	0.0095	U	0.014	U	0.011	U	0.01	U	-
1,1,2-Trichloroethane	79-00-5	NE	NE	1.1	5	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
1,1-Dichloroethane	75-34-3	2.1	13	3.6	16	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
1,1-Dichloroethylene	75-35-4	NE	NE	230	1000	0.0038	U	0.0038	U	0.0057	U	0.0044	U	0.0041	U	-
1,1-Dichloropropene	563-58-6	NE	NE	NE	NE	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
1,2,3-Trichlorobenzene	87-61-6	NE	NE	63	930	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
1,2,3-Trichloropropane	96-18-4	0.00311	0.07	0.0051	0.11	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
1,2,4-Trichlorobenzene	120-82-1	NE	NE	24	110	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
1,2,4-Trimethylbenzene	95-63-6	144	177	300	1800	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.01	0.06	0.0053	0.064	0.0038	U	0.0038	U	0.0057	U	0.0044	U	0.0041	U	-
1,2-Dibromoethane (EDB)	106-93-4	0.02	0.14	0.036	0.16	0.00094	U	0.00095	U	0.0014	U	0.0011	U	0.001	U	-
1,2-Dichlorobenzene	95-50-1	NE	NE	1800	9300	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
1,2-Dichloroethane	107-06-2	0.29	1.7	0.46	2	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
1,2-Dichloropropane	78-87-5	1.5	9.1	2.5	11	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
1,3,5-Trichlorobenzene	108-70-3	NE	NE	NE	NE	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
1,3,5-Trimethylbenzene	108-67-8	144	177	270	1500	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
1,3-Dichlorobenzene	541-73-1	NE	NE	NE	NE	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
1,3-Dichloropropane	142-28-9	NE	NE	1600	23000	0.00094	U	0.00095	U	0.0014	U	0.0011	U	0.001	U	-
1,4-Dichlorobenzene	106-46-7	NE	NE	2.6	11	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
1,4-Dioxane	123-91-1	2.8	17	5.3	24	0.094	U	0.095	U	0.14	U	0.11	U	0.1	U	-
2,2-Dichloropropane	594-20-7	NE	NE	NE	NE	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
2-Butanone (MEK)	78-93-3	16952	26991	27000	190000	0.038	U	0.038	U	0.057	U	0.044	U	0.041	U	-
2-Chlorotoluene	95-49-8	NE	NE	1600	23000	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
2-Hexanone (MBK)	591-78-6	NE	NE	200	1300	0.019	U	0.019	U	0.029	U	0.022	U	0.02	U	-
4-Chlorotoluene	106-43-4	NE	NE	1600	23000	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
4-Methyl-2-pentanone (MIBK)	108-10-1	NE	NE	33000	140000	0.019	U	0.019	U	0.029	U	0.022	U	0.02	U	-
Acetone	67-64-1	63079	816169	70000	1100000	0.025	J	0.031	J	0.084	J	0.061	J	0.046	J	32%
Acrylonitrile	107-13-1	NE	NE	0.25	1.1	0.0056	U	0.0057	U	0.0086	U	0.0065	U	0.0061	U	-
Benzene	71-43-2	0.7	4.2	1.2	5.1	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
Bromobenzene	108-86-1	NE	NE	290	1800	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
Bromochloromethane	74-97-5	193	597	150	630	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
Bromodichloromethane	75-27-4	NE	NE	0.29	1.3	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
Bromoform	75-25-2	NE	NE	19	86	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
Bromomethane	74-83-9	NE	NE	6.8	30	0.0094	U	0.0095	U	0.014	U	0.011	U	0.01	U	-
Carbon Disulfide	75-15-0	608	661	770	3500	0.0094	U	0.0095	U	0.014	U	0.011	U	0.01	U	-
Carbon Tetrachloride	56-23-5	0.37	2.2	0.65	2.9	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
Chlorobenzene	108-90-7	267	676	280	1300	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
Chlorodibromomethane	124-48-1	NE	NE	8.3	39	0.00094	U	0.00095	U	0.0014	U	0.0011	U	0.001	U	-
Chloroethane	75-00-3	NE	NE	14000	57000	0.019	U	0.019	U	0.029	U	0.022	U	0.02	U	-
Chloroform	67-66-3	NE	NE	0.32	1.4	0.0038	U	0.0038	U	0.0057	U	0.0044	U	0.0041	U	-
Chloromethane	74-87-3	NE	NE	110	460	0.0094	U	0.0095	U	0.014	U	0.011	U	0.01	U	-
cis-1,2-Dichloroethylene	156-59-2	140	1814	160	2300	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-
cis-1,3-Dichloropropene	10061-01-5	NE	NE	NE	NE	0.0094	U	0.0095	U	0.0014	U	0.0011	U	0.001	U	-
Dibromomethane	74-95-3	NE	NE	24	99	0.0019	U	0.0019	U	0.0029	U	0.0022	U	0.002	U	-

Table B-25
VOC Concentrations in Soil

Sample ID Sample Date	VSS - Resident	VSS - Non-resident	Residential RSL	Industrial RSL	SB-1-0.5		SB-2-0.5		SB-3-0.5		SB-3-0.5-FD		SB-4-0.5		RPD
					9/14/2022	Q	9/14/2022	Q	9/14/2022	Q	9/14/2022	Q	9/14/2022	Q	
Dichlorodifluoromethane (Freon 12)	75-71-8	NE	NE	87	370	0.019 U	0.019 U	0.029 U	0.022 U	0.02 U	0.02 U	0.022 U	0.022 U	0.02 U	-
Diethyl Ether	60-29-7	NE	NE	16000	230000	0.019 U	0.019 U	0.029 U	0.022 U	0.02 U	0.02 U	0.022 U	0.022 U	0.02 U	-
Diisopropyl Ether (DIPE)	108-20-3	NE	NE	2200	9400	0.00094 U	0.00095 U	0.0014 U	0.0011 U	0.001 U	0.001 U	0.0022 U	0.0022 U	0.002 U	-
Ethylbenzene	100-41-4	3.7	22	5.8	25	0.0019 U	0.0019 U	0.0029 U	0.0022 U	0.002 U	0.002 U	0.0022 U	0.0022 U	0.002 U	-
Hexachlorobutadiene	87-68-3	NE	NE	1.2	5.3	0.0019 U	0.0019 U	0.0029 U	0.0022 U	0.002 U	0.002 U	0.0022 U	0.0022 U	0.002 U	-
Isopropylbenzene (Cumene)	98-82-8	256	264	1900	9900	0.0019 U	0.0019 U	0.0029 U	0.0022 U	0.002 U	0.002 U	0.0022 U	0.0022 U	0.002 U	-
m+p Xylene	108383/106423	NE	NE	NE	NE	0.0038 U	0.0038 U	0.0057 U	0.0044 U	0.0041 U	0.0041 U	0.0044 U	0.0044 U	0.0041 U	-
Methyl Acetate	79-20-9	NE	NE	78000	1200000	0.0019 U	0.0019 U	0.0029 U	0.0022 U	0.002 U	0.002 U	0.0022 U	0.0022 U	0.002 U	-
Methyl Cyclohexane	108-87-2	NE	NE	NE	NE	0.0019 U	0.0019 U	0.0029 U	0.0022 U	0.002 U	0.002 U	0.0022 U	0.0022 U	0.002 U	-
Methyl tert-Butyl Ether (MTBE)	1634-04-4	27	165	1900	9900	0.0038 U	0.0038 U	0.0057 U	0.0044 U	0.0041 U	0.0041 U	0.0044 U	0.0044 U	0.0041 U	-
Methylene Chloride	75-09-2	NE	NE	57	1000	0.019 U	0.019 U	0.029 U	0.022 U	0.02 U	0.02 U	0.022 U	0.022 U	0.02 U	-
Naphthalene	91-20-3	1.2	7.2	2	8.6	0.0038 U	0.0038 U	0.0057 U	0.0044 U	0.0041 U	0.0041 U	0.0044 U	0.0044 U	0.0041 U	-
n-Butylbenzene	104-51-8	3504	45343	3900	58000	0.0019 U	0.0019 U	0.0029 U	0.0022 U	0.002 U	0.002 U	0.0022 U	0.0022 U	0.002 U	-
n-Propylbenzene	103-65-1	253	261	3800	24000	0.0019 U	0.0019 U	0.0029 U	0.0022 U	0.002 U	0.002 U	0.0022 U	0.0022 U	0.002 U	-
o-Xylene	95-47-6	NE	NE	650	2800	0.0019 U	0.0019 U	0.0029 U	0.0022 U	0.002 U	0.002 U	0.0022 U	0.0022 U	0.002 U	-
p-Isopropyltoluene (p-Cymene)	99-87-6	NE	NE	NE	NE	0.0019 U	0.0019 U	0.0029 U	0.0022 U	0.002 U	0.002 U	0.0022 U	0.0022 U	0.002 U	-
sec-Butylbenzene	135-98-8	7009	102200	7800	120000	0.0019 U	0.0019 U	0.0029 U	0.0022 U	0.002 U	0.002 U	0.0022 U	0.0022 U	0.002 U	-
Styrene	100-42-5	NE	NE	6000	35000	0.0019 U	0.0019 U	0.0029 U	0.0022 U	0.002 U	0.002 U	0.0022 U	0.0022 U	0.002 U	-
tert-Amyl Methyl Ether (TAME)	994-05-8	NE	NE	NE	NE	0.00094 U	0.00095 U	0.0014 U	0.0011 U	0.001 U	0.001 U	0.0014 U	0.0011 U	0.001 U	-
tert-Butyl Alcohol (TBA)	75-65-0	NE	NE	NE	NE	0.094 U	0.095 U	0.14 U	0.11 U	0.1 U	0.1 U	0.14 U	0.11 U	0.1 U	-
tert-Butyl Ethyl Ether (TBEE)	637-92-3	NE	NE	NE	NE	0.00094 U	0.00095 U	0.0014 U	0.0011 U	0.001 U	0.001 U	0.0014 U	0.0011 U	0.001 U	-
tert-Butylbenzene	98-06-6	7009	102200	7800	120000	0.0019 U	0.0019 U	0.0029 U	0.0022 U	0.002 U	0.002 U	0.0022 U	0.0022 U	0.002 U	-
Tetrachloroethylene	127-18-4	2.4	14	24	100	0.0019 U	0.0019 U	0.0029 U	0.0022 U	0.002 U	0.002 U	0.0022 U	0.0022 U	0.002 U	-
Tetrahydrofuran	109-99-9	NE	NE	18000	94000	0.0094 U	0.0095 U	0.014 U	0.011 U	0.01 U	0.01 U	0.014 U	0.011 U	0.01 U	-
Toluene	108-88-3	706	798	4900	47000	0.0019 U	0.0019 U	0.0029 U	0.0022 U	0.002 U	0.002 U	0.0022 U	0.0022 U	0.002 U	-
Total Trimethylbenzene	25551-13-7	NE	NE	NE	NE	0.0019 U	0.0019 U	0.0029 U	0.0022 U	0.002 U	0.002 U	0.0022 U	0.0022 U	0.002 U	-
Total Xylene	1330-20-7	252	257	580	2500	0.0038 U	0.0038 U	0.0057 U	0.0044 U	0.0041 U	0.0041 U	0.0044 U	0.0044 U	0.0041 U	-
trans-1,2-Dichloroethylene	156-60-5	108	296	70	300	0.0019 U	0.0019 U	0.0029 U	0.0022 U	0.002 U	0.002 U	0.0022 U	0.0022 U	0.002 U	-
trans-1,3-Dichloropropene	10061-02-6	NE	NE	NE	NE	0.00094 U	0.00095 U	0.0014 U	0.0011 U	0.001 U	0.001 U	0.0014 U	0.0011 U	0.001 U	-
trans-1,4-Dichloro-2-butene	110-57-6	NE	NE	0.0074	0.032	0.0038 U	0.0038 U	0.0057 U	0.0044 U	0.0041 U	0.0041 U	0.0044 U	0.0044 U	0.0041 U	-
Trichloroethylene	79-01-6	1.9	6.5	0.94	6	0.0019 U	0.0019 U	0.0029 U	0.0022 U	0.002 U	0.002 U	0.0022 U	0.0022 U	0.002 U	-
Trichlorofluoromethane (Freon 11)	75-69-4	NE	NE	23000	350000	0.0094 U	0.0095 U	0.014 U	0.011 U	0.01 U	0.01 U	0.014 U	0.011 U	0.01 U	-
Vinyl Chloride	75-01-4	0.1	0.59	0.059	1.7	0.0094 U	0.0095 U	0.014 U	0.011 U	0.01 U	0.01 U	0.014 U	0.011 U	0.01 U	-

Table B-25
VOC Concentrations in Soil

Sample ID Sample Date	CAS#	VSS - Resident (mg/Kg)	VSS - Non-resident (mg/Kg)	Residential RSL (mg/Kg)	Industrial RSL (mg/Kg)	SB-5-0.5 9/14/2022	Trip Blank 9/14/2022	Q
1,1,1,2-Tetrachloroethane	630-20-6	1.3	8	2	8.8	0.0016 U	0.002 U	
1,1,1-Trichloroethane	71-55-6	NE	NE	8100	36000	0.0016 U	0.002 U	
1,1,2,2-Tetrachloroethane	79-34-5	NE	NE	0.6	2.7	0.00079 U	0.001 U	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	76-13-1	NE	NE	6700	28000	0.0079 U	0.01 U	
1,1,2-Trichloroethane	79-00-5	NE	NE	1.1	5	0.0016 U	0.002 U	
1,1-Dichloroethane	75-34-3	2.1	13	3.6	16	0.0016 U	0.002 U	
1,1-Dichloroethylene	75-35-4	NE	NE	230	1000	0.0032 U	0.004 U	
1,1-Dichloropropene	563-58-6	NE	NE	NE	NE	0.0016 U	0.002 U	
1,2,3-Trichlorobenzene	87-61-6	NE	NE	63	930	0.0016 U	0.002 U	
1,2,3-Trichloropropane	96-18-4	0.00311	0.07	0.0051	0.11	0.0016 U	0.002 U	
1,2,4-Trichlorobenzene	120-82-1	NE	NE	24	110	0.0016 U	0.002 U	
1,2,4-Trimethylbenzene	95-63-6	144	177	300	1800	0.0016 U	0.002 U	
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.01	0.06	0.0053	0.064	0.0032 U	0.004 U	
1,2-Dibromoethane (EDB)	106-93-4	0.02	0.14	0.036	0.16	0.00079 U	0.001 U	
1,2-Dichlorobenzene	95-50-1	NE	NE	1800	9300	0.0016 U	0.002 U	
1,2-Dichloroethane	107-06-2	0.29	1.7	0.46	2	0.0016 U	0.002 U	
1,2-Dichloropropane	78-87-5	1.5	9.1	2.5	11	0.0016 U	0.002 U	
1,3,5-Trichlorobenzene	108-70-3	NE	NE	NE	NE	0.0016 U	0.002 U	
1,3,5-Trimethylbenzene	108-67-8	144	177	270	1500	0.0016 U	0.002 U	
1,3-Dichlorobenzene	541-73-1	NE	NE	NE	NE	0.0016 U	0.002 U	
1,3-Dichloropropane	142-28-9	NE	NE	1600	23000	0.00079 U	0.001 U	
1,4-Dichlorobenzene	106-46-7	NE	NE	2.6	11	0.0016 U	0.002 U	
1,4-Dioxane	123-91-1	2.8	17	5.3	24	0.079 U	0.1 U	
2,2-Dichloropropane	594-20-7	NE	NE	NE	NE	0.0016 U	0.002 U	
2-Butanone (MEK)	78-93-3	16952	26991	27000	190000	0.032 U	0.04 U	
2-Chlorotoluene	95-49-8	NE	NE	1600	23000	0.0016 U	0.002 U	
2-Hexanone (MBK)	591-78-6	NE	NE	200	1300	0.016 U	0.02 U	
4-Chlorotoluene	106-43-4	NE	NE	1600	23000	0.0016 U	0.002 U	
4-Methyl-2-pentanone (MIBK)	108-10-1	NE	NE	33000	140000	0.016 U	0.02 U	
Acetone	67-64-1	63079	816169	70000	1100000	0.012 J	0.1 U	
Acrylonitrile	107-13-1	NE	NE	0.25	1.1	0.0047 U	0.006 U	
Benzene	71-43-2	0.7	4.2	1.2	5.1	0.0016 U	0.002 U	
Bromobenzene	108-86-1	NE	NE	290	1800	0.0016 U	0.002 U	
Bromochloromethane	74-97-5	193	597	150	630	0.0016 U	0.002 U	
Bromodichloromethane	75-27-4	NE	NE	0.29	1.3	0.0016 U	0.002 U	
Bromoform	75-25-2	NE	NE	19	86	0.0016 U	0.002 U	
Bromomethane	74-83-9	NE	NE	6.8	30	0.0079 U	0.01 U	
Carbon Disulfide	75-15-0	608	661	770	3500	0.0079 U	0.01 U	
Carbon Tetrachloride	56-23-5	0.37	2.2	0.65	2.9	0.0016 U	0.002 U	
Chlorobenzene	108-90-7	267	676	280	1300	0.0016 U	0.002 U	
Chlorodibromomethane	124-48-1	NE	NE	8.3	39	0.00079 U	0.001 U	
Chloroethane	75-00-3	NE	NE	14000	57000	0.016 U	0.02 U	
Chloroform	67-66-3	NE	NE	0.32	1.4	0.0032 U	0.004 U	
Chloromethane	74-87-3	NE	NE	110	460	0.0079 U	0.01 U	

Table B-25
VOC Concentrations in Soil

Sample ID	Sample Date	CAS#	VSS - Resident (mg/Kg)	VSS - Non-resident (mg/Kg)	Residential RSL (mg/Kg)	Industrial RSL (mg/Kg)	SB-5-0.5		Trip Blank	
							9/14/2022	Q	9/14/2022	Q
cis-1,2-Dichloroethylene		156-59-2	140	1814	160	2300	0.0016	U	0.002	U
cis-1,3-Dichloropropene		10061-01-5	NE	NE	NE	NE	0.00079	U	0.001	U
Dibromomethane		74-95-3	NE	NE	24	99	0.0016	U	0.002	U
Dichlorodifluoromethane (Freon 12)		75-71-8	NE	NE	87	370	0.016	U	0.02	U
Diethyl Ether		60-29-7	NE	NE	16000	230000	0.016	U	0.02	U
Diisopropyl Ether (DIPE)		108-20-3	NE	NE	2200	9400	0.00079	U	0.001	U
Ethylbenzene		100-41-4	3.7	22	5.8	25	0.0016	U	0.002	U
Hexachlorobutadiene		87-68-3	NE	NE	1.2	5.3	0.0016	U	0.002	U
Isopropylbenzene (Cumene)		98-82-8	256	264	1900	9900	0.0016	U	0.002	U
m+p Xylene		108383/106423	NE	NE	NE	NE	0.0032	U	0.004	U
Methyl Acetate		79-20-9	NE	NE	78000	1200000	0.0016	U	0.002	U
Methyl Cyclohexane		108-87-2	NE	NE	NE	NE	0.0016	U	0.002	U
Methyl tert-Butyl Ether (MTBE)		1634-04-4	27	165	1900	9900	0.0032	U	0.004	U
Methylene Chloride		75-09-2	NE	NE	57	1000	0.016	U	0.02	U
Naphthalene		91-20-3	1.2	7.2	2	8.6	0.0032	U	0.004	U
n-Butylbenzene		104-51-8	3504	45343	3900	58000	0.0016	U	0.002	U
n-Propylbenzene		103-65-1	253	261	3800	24000	0.0016	U	0.002	U
o-Xylene		95-47-6	NE	NE	650	2800	0.0016	U	0.002	U
p-Isopropyltoluene (p-Cymene)		99-87-6	NE	NE	NE	NE	0.0016	U	0.002	U
sec-Butylbenzene		135-98-8	7009	102200	7800	120000	0.0016	U	0.002	U
Styrene		100-42-5	NE	NE	6000	35000	0.0016	U	0.002	U
tert-Amyl Methyl Ether (TAME)		994-05-8	NE	NE	NE	NE	0.00079	U	0.001	U
tert-Butyl Alcohol (TBA)		75-65-0	NE	NE	NE	NE	0.079	U	0.1	U
tert-Butyl Ethyl Ether (TBEE)		637-92-3	NE	NE	NE	NE	0.00079	U	0.001	U
tert-Butylbenzene		98-06-6	7009	102200	7800	120000	0.0016	U	0.002	U
Tetrachloroethylene		127-18-4	2.4	14	24	100	0.0016	U	0.002	U
Tetrahydrofuran		109-99-9	NE	NE	18000	94000	0.0079	U	0.01	U
Toluene		108-88-3	706	798	4900	47000	0.0016	U	0.002	U
Total Trimethylbenzene		25551-13-7	NE	NE	NE	NE	0.0016	U	0.002	U
Total Xylene		1330-20-7	252	257	580	2500	0.0032	U	0.004	U
trans-1,2-Dichloroethylene		156-60-5	108	296	70	300	0.0016	U	0.002	U
trans-1,3-Dichloropropene		10061-02-6	NE	NE	NE	NE	0.00079	U	0.001	U
trans-1,4-Dichloro-2-butene		110-57-6	NE	NE	0.0074	0.032	0.0032	U	0.004	U
Trichloroethylene		79-01-6	1.9	6.5	0.94	6	0.0016	U	0.002	U
Trichlorofluoromethane (Freon 11)		75-69-4	NE	NE	23000	350000	0.0079	U	0.01	U
Vinyl Chloride		75-01-4	0.1	0.59	0.059	1.7	0.0079	U	0.01	U

Key:

VSS - Vermont Soil Standards from Investigation and Remediation of Contaminated Properties Rule, February 2024

RSL - US Environmental Protection Agency, Regional Screening Levels for Residential and Industrial settings, November 2024

mg/kg - milligrams per kilogram (parts per million)

Bold results indicate detections of the analyte

NE - screening level not established

Q - laboratory result qualifier

U - Analyte not detected; limit of quantitation listed

J - Analyte was detected between the method detection limit and the quantitation limit. Value provided is estimated

RPD - Relatice percent difference

Table B-26
Soil Physical Properties

Sample ID	VSS - Resident	VSS - Non-resident	SB-1-0.5		SB-2-0.5		SB-3-0.5		SB-3-0.5-FD		SB-4-0.5		SB-5-0.5		RPD
Sample Date			9/14/2022	Q	9/14/2022	Q	9/14/2022	Q	9/14/2022	Q	9/14/2022	Q	9/14/2022	Q	%
% Solids	%	%													
	NE	NE	89.4		84.8		88.1		86.7		90.9		93.3		2%

VSS - Vermont Soil Standards from Investigation and Remediation of Contaminated Properties Rule, February 2024

RPD - Relative Percent Difference

Bold results indicate detections of the analyte

NE - screening level not established

Q - laboratory result qualifier

Table B-27: Metal Concentrations in Groundwater: MW-1

NOTES:

Enforcement Standard - Vermont Groundwater Enforcement Standard, July 2019

Groundwater samples collected by Vermont Department of Environmental Conservation as part of post-closure plan unless indicated otherwise. Data reproduced as provided to Stone.

µg/L - micrograms per liter (parts per billion)

mg/L - milligrams per liter (parts per million)

1 - Oct-22 results not provided, due to contaminated rinse water

NE - no established groundwater enforcement standard

NS - Not sampled

NS - Not sampled

Bold results indicate detections of the analyte

Shading denotes exceedance in Enforcement Standard

* - Sampling event completed by Stone

< - Analyte not detected above laboratory reporting limit

January 12, 1945

Table B- 28: VOC Concentrations in Groundwater: **MW-1**

VOC	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes	1,1-Dichloro-ethane	1,4-Dichloro-benzene	1,2-Dichloro-ethene	1,3,5-Trimethyl-benzene	1,2,4-Trimethyl-benzene	Diethyl Ether	Isopropyl-benzene	Isopropyl-benzene	p-Naphthalene	Acetone
Enforcement Standard (ug/L)	11	5	1000	700	10000	70	75	70/100²	23	23	NE	NE	NE	0.5	950
Nov-24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND
May-24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND
Oct-23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND
May-23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND
Dec-22*															
	Sampled by Stone as part of Phase II ESA, see Table B-13 for results														
Oct-22	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹
May-22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND
Oct-21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May-21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May-20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.8
May-19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Oct-18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
May-18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
May-17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Oct-16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
May-16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Oct-15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
May-15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Oct-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
May-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Oct-13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Jul-13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Oct-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
May-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
May-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
Oct-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
May-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
Oct-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
May-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	NS
Oct-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Jun-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Oct-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
May-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	NS
May-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS

NOTES:

Enforcement Standard - Vermont Groundwater Enforcement Standard, July 2019

Groundwater samples collected by Vermont Department of Environmental Conservation as part of post-closure plan unless indicated otherwise. Data reproduced as provided to Stone.

µg/L - micrograms per liter (parts per billion)

1 - Oct-22 results not provided, due to contaminated rinse water

2 - Different enforcement

NE - no established

NE - No established groundwater enforcement standard
NS - Not sampled

NS - Not sampled
NA - Not analyzed

Table B-29: Metal Concentrations in Groundwater: MW-2

Metal	As (ug/L)	Ba (ug/L)	Cd (ug/L)	Cr (ug/L)	Cu (ug/L)	Fe (ug/L)	Pb (ug/L)	Mn (ug/L)	Hg (ug/L)	Ni (ug/L)	Zn (ug/L)	Na (mg/L)	Cl (mg/L)	COD (mg/L)
Enforcement Standard	10	2000	5	100	1300	NE	15	300	2	100	NE	NE	NE	NE
Nov-24	< 1	22	< 2	NS	< 20	1200	3.8	33	NS	< 5	NS	5.4	< 2.5	18
May-24	NA	0.99	10											
Oct-23	<1	27	<0.5	NS	3.4	1000	2.4	28	NS	<5	NS	1.4	<2	24
May-23	<1	42.1	<1	<1	<5	<50	<1	<5	NS	1.2	54.1	0.96	<2	<15
Nov-22*														
Oct-22	NA ¹													
May-22	<1	49.4	<1	<1	<5	<50	<1	<5	NS	1.8	71.1	1.21	<2	<15
Oct-21	<1	22.3	<1	<1	NS	<50	<1	9	NS	1.7	66.8	1.80	2.2	20.5
May-21	<1	45	<1	<1	NS	277	<1	6	NS	1.8	69.2	1.19	<2	16.9
Oct-20	<1	NS	<1	<1	NS	<50	<1	<5	NS	4	63.3	1.22	<2	15
May-20	<1	NS	<1	<1	NS	<50	<1	<5	NS	2	78.8	1.42	2.2	<15
Oct-19	<1	NS	<1	<1	<5	<50	<1	<5	NS	<1	27.95	NS	<2	<15
May-19	NS	<2	<15											
Oct-18	<1	NS	<1	<5	<10	<50	<1	5	NS	<5	<50	0.80	<2	15.7
May-18	<1	NS	<1	<5	<10	<50	<1	14	NS	<5	62	1	<2	<15
Oct-17	NS													
May-17	NS													
Oct-16	<1	NS	<1	<5	<10	<50	<1	<5	<0.2	NS	43.53	0.70	<2	<15
May-16	<1	NS	<1	<5	<10	<50	<1	<5	<0.2	NS	62.34	1.09	<2	<15
Oct-15	<1	NS	<1	<5	<10	<50	<1	11	<0.2	NS	74.13	1.41	<2	<15
May-15	<1	NS	<1	<5	<10	<50	<1	<5	NS	NS	77.6	1.13	<2	<15
Oct-14	<1	NS	<1	<5	<10	<50	<1	<5	NS	NS	<50	1.33	<2	<15
May-14	<1	NS	<1	<5	<10	<50	<1	<5	NS	<5	98.61	1.34	<2	<15
Oct-13	<1	NS	<1	<5	<10	<50	<1	<5	NS	<5	<50	1.39	<2	<15
Jul-13	<5	NS	<0.5	<2	<50	<50	<1	<20	NS	<50	<50	1.60	<1	<5
Oct-12	<1	NS	<2	<5	<20	<20	<1	<20	NS	<5	31	1.50	<2.5	18
May-12	<1	NS	<2	<5	<20	<20	<1	<20	NS	<5	240.0	3.90	<2.5	<10
Oct-06	<1	NS	<1	<5	<10	<50	<1	<5	NS	<5	98.2	4.05	<2	<15
May-06	<1	NS	<1	<5	<10	<50	<5	<5	NS	<5	99.7	3.01	<2	<15
Oct-05	<1	NS	<3	<3	<3	<3	<3	<3	<.2	<3	96.2	3.51	<2	<10
May-05	<1	NS	<3	<3	<3	<3	<3	<3	<.2	<3	156.0	4.20	<2	<10
Oct-04	<1	NS	<1	<5	<10	<50	<5	<5	<.2	<5	68.2	2.63	<2	<10
Jun-04	<1	NS	<1	<5	<10	NS	<5	31.5	<.2	<5	<10	4.21	<2	<10
Oct-03	<5	NS	<1	<10	<10	645	<5	<50	<.2	<10	<25	4.51	<2	<10
May-03	<5	NS	<1	<10	<10	<100	<5	<50	<.2	<10	<25	4.49	<2	<10
Oct-02	<5	NS	<1	<5	<12.5	<100	<5	<50	<.2	<12.5	<25	4.89	<2	<10
May-02	<5	NS	<1	<5	<12.5	278	<5	<50	<.2	<12.5	<25	2.57	<2	<10

NOTES:

Enforcement Standard - Vermont Groundwater Enforcement Standard, July 2019

Groundwater samples collected by Vermont Department of Environmental Conservation as part of post-closure plan unless indicated otherwise. Data reproduced as provided to Stone.

µg/L - micrograms per liter (parts per billion)

mg/L - milligrams per liter (parts per million)

1 - Oct-22 results not provided, due to contaminated rinse water

NE - no established groundwater enforcement standard

NS - Not sampled

NA - Not analyzed

Bold results indicate detections of the analyte

Shading denotes exceedance in Enforcement Standard

* - Sampling event completed by Stone

< - Analyte not detected above laboratory reporting limits; limit of quantitation shown

Table B- 30: VOC Concentrations in Groundwater: MW-2

VOC	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes	1,1-Dichloro-ethane	1,4-Dichloro-benzene	1,2-Dichloro-ethene	1,3,5-Trimethyl-benzene	1,2,4-Trimethyl-benzene	Diethyl Ether	Isopropyl-benzene	Isopropyl-benzene	Naphthalene	Acetone	ETBE
Enforcement Standard (ug/L)	11	5	1000	700	10000	70	75	70/100 ²	23	23	NE	NE	NE	0.5	950	NE
Nov-24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	ND
May-24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	ND
Oct-23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	ND
May-23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	ND
Nov-22*	Sampled by Stone as part of Phase II ESA, see Table B-13 for results															
Oct-22	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹
May-22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	NS
Oct-21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
May-21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Oct-20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	NS
May-20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	2.3
Oct-19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	NS
May-19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	20	NS
Oct-18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	NS
May-18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	NS
Oct-17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
May-17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Oct-16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	NS
May-16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	NS
Oct-15	ND	ND	1.7	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	NS
May-15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	NS
Oct-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	NS
May-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	NS
Oct-13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	NS
Jul-13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	NS
Oct-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	NS
May-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	NS
Oct-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	NS
May-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	NS
Oct-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	NS
May-05	ND	ND	11	3.4	19.3	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS	NS
Oct-04	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS	NS
Jun-04	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS	NS
Oct-03	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS	NS
May-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Oct-02	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS	NS
May-02	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS	NS

NOTES:

Enforcement Standard - Vermont Groundwater Enforcement Standard, July 2019

Groundwater samples collected by Vermont Department of Environmental Conservation as part of post-closure plan unless indicated otherwise. Data reproduced as provided to Stone.

ug/L - micrograms per liter (parts per billion)

1 - Oct-22 results not provided, due to contaminated rinse water

2 - Different enforcement standard for cis [70] /trans[100]-1,2-dichloroethene in updated Vermont Groundwater Protection Rule

NE - no established groundwater enforcement standard

NS - Not sampled

NA - Not analyzed

ND - Analyte not detected above laboratory reporting limits

Bold results indicate detections of the analyte

* - Sampling event completed by Stone

Table B-31: Metal Concentrations in Groundwater: BR-1

Metal Enforcement Standard	As (ug/L)	Ba (ug/L)	Cd (ug/L)	Cr (ug/L)	Cu (ug/L)	Fe (ug/L)	Pb (ug/L)	Mn (ug/L)	Hg (ug/L)	Ni (ug/L)	Zn (ug/L)	Na (mg/L)	Cl (mg/L)	COD (mg/L)
Nov-24	< 1	< 20	< 2	NS	< 20	6400	< 1	140	NS	< 5	NS	5.1	< 2.5	< 10
May-24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.4	< 10
Oct-23	<1	<20	<0.5	NS	<2	5000	<1	110	NS	<5	NS	4	<2	<20
May-23	<1	4.7	<1	<1	<5	<50	<1	85.9	NS	<1	<10	4.63	<2	<15
Nov-22*				Sampled by Stone as part of Phase II ESA, see Tables B-1 and B-16 for results										
Oct-22	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹
May-22	<1	5.6	<1	<1	<5	1,510.0	<1	66.6	NS	<1	<10	3.88	<2	<15
Oct-21	<1	5.9	<1	<1	<5	71.6	<1	105.0	NS	<1	<10	4.77	<2	<15
May-21	<1	4	<1	<1	<5	<50	<1	78.8	NS	<1	<10	4.88	<2	<15
Oct-20	<1	NS	<1	<1	NS	<50	<1	39.2	NS	<1	<10	4.04	<2	<15
May-20	<1	NS	<1	<1	<5	<50	<1	82.0	NS	<1	<10	4.17	<2	<15
Oct-19	<1	NS	<1	<1	<5	<50	<1	46.5	NS	<1	<10	NS	<2	<15
May-19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<2	<15
Oct-18	<1	NS	<1	<5	<10	<50	<1	37.0	NS	<5	<50	4.91	<2	<15
May-18	<1	NS	<1	<5	<10	<50	<1	170.0	NS	<5	<50	6.43	<2	<15
Oct-17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
May-17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Oct-16	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
May-16	<1	NS	<1	<5	<10	734.0	<1	129.7	<0.2	NS	<50	6.41	<2	<15
Oct-15	<1	NS	<1	<5	<10	734.0	<1	93.9	<0.2	NS	<50	6.96	<2	<15
May-15	<1	NS	<1	<5	<10	<50	<1	35.3	NS	NS	<50	5.98	<2	<15
Oct-14	<1	NS	<1	<5	<10	<50	<1	57.5	NS	NS	<50	6.64	<2	<15
May-14	<1	NS	<1	<5	<10	464.2	1.01	111.9	NS	NS	<50	6.27	<2	<15
Oct-13	<1	NS	<1	<5	<10	192.0	<1	49.0	NS	<5	<50	5.80	<2	<15
Jul-13	<5	NS	<0.5	<2	<50	240.0	<1	30.0	NS	<50	NS	6.40	1	<5
Oct-12	<1	NS	<2	<5	<20	84.0	<1	43.0	NS	<5	<20	5.40	<2.5	<10
May-12	<1	NS	<2	<5	<20	87.0	<1	37.0	NS	<5	<20	5.80	<2.5	12
Oct-06	<1	NS	<1	<5	<10	<50	<1	16.7	NS	<5	<10	6.04	<2	<15
May-06	<1	NS	<1	<5	<10	<50	<5	13.1	NS	<5	<10	6.02	<2	<15
Oct-05	<1	NS	<3	<3	<3	33.5	<3	10.4	<2	<3	<10	5.95	<2	<10
May-05	<1	NS	<3	<3	<3	42.7	<3	21.9	<2	<3	24.6	6.13	<2	<10
Oct-04	<1	NS	<1	<5	<10	64.6	<5	15.7	<2	<5	<10	6.10	<2	<10
Jun-04	<1	NS	<1	<5	<10	NS	<5	18.6	<2	<5	<10	5.84	<2	<10
Oct-03	<5	NS	<1	<10	<10	685	<5	<50	<2	<10	<25	6.21	1.7	<10
May-03	<5	NS	<1	<10	<10	105	<5	<50	<2	<10	<25	4.84	<2	<10
Oct-02	<5	NS	<1	<5	<12.5	<100	<5	<50	<2	<12.5	<25	6.34	<2	<10
May-02	<5	NS	<1	<5	<12.5	<100	<5	<50	<2	<12.5	<25	5.89	<2	<10

NOTES:

Enforcement Standard - Vermont Groundwater Enforcement Standard, July 2019

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µg/L - micrograms per liter (parts per billion)

mg/L - milligrams per liter (parts per million)

1 - Oct-22 results not provided, due to contaminated rinse water

NE - no established groundwater enforcement standard

NS - Not sampled

NA - Not analyzed

Bold results indicate detections of the analyte

* - Sampling event completed by Stone

< - Analyte not detected above laboratory reporting limits; limit of quantitation shown

Table B-32: VOC Concentrations in Groundwater: BR-1

VOC	MTBE	Benzene	Toluene	Ethyl- benzene		1,1- Dichloro- ethane	1,4- Dichloro- benzene	1,2 - Dichloro- ethene	1,3,5- Trimethyl- benzene	1,2,4- Trimethyl- benzene	Diethyl Ether	Isopropyl- benzene	Isopropyl- benzene	p- Naphthale
				5	1000	700	10000	70	75	70/100 ²	23	23	NE	0.5
Enforcement Standard (ug/L)	11	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nov-24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May-24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May-23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nov-22*														
	Sampled by Stone as part of Phase II ESA, see Table B-1 for results													
Oct-22	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹
May-22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May-21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May-20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May-19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May-18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
May-17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Oct-16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May-16	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Oct-15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May-15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Jul-13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May-05	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS
Oct-04	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS
Jun-04	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS
Oct-03	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS
May-03	5.3	7.2	ND	21.4	40	ND	3.1	2	2.5	7.7	57.7	2.8	1.5	6.4
Oct-02	ND	1	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS
May-02	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS

NOTES:

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ug/L - micrograms per liter (parts per billion)

1 - Oct-22 results not provided, due to contaminated rinse water

2 - Different enforcement standard for cis [70] /trans[100]-1,2-dichloroethene in updated Vermont Groundwater Protection Rule

NE - no established groundwater enforcement standard

NS - Not sampled

NA - Not analyzed

ND - Analyte not detected above laboratory reporting limits

Bold results indicate detections of the analyte

Shading denotes exceedance in Enforcement Standard

* - Sampling event completed by Stone

Table B- 33: Metal Concentrations in Groundwater: **BR-2**

Metal Enforcement Standard	As (ug/L)	Ba (ug/L)	Cd (ug/L)	Cr (ug/L)	Cu (ug/L)	Fe (ug/L)	Pb (ug/L)	Mn (ug/L)	Hg (ug/L)	Ni (ug/L)	Zn (ug/L)	Na (mg/L)	Cl (mg/L)	COD (mg/L)
Nov-24	< 1	21	< 2	NS	< 20	1100	< 1	1700	NS	10.6	NS	2.2	< 2.5	< 10
May-24	NA	NA	NA	NA	1.5	< 10								
Oct-23	<1	20	< 0.5	NS	3.4	2900	1.2	460	NS	< 5	NS	1.6	2.3	< 20
May-23	<1	17	<1	<5	3	<1	410	NS	1.7	<10	2.29	<2	< 15	
Nov-22*									Sampled by Stone as part of Phase II ESA, see Tables B-1 and B-16 for results					
Oct-22	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹								
May-22	1.5	33.5	<1	6.3	<5	3,250	1.5	1,580	NS	7.2	<10	2.64	<2	< 15
Oct-21	<1	27.8	<1	6.3	<5	<50	1.6	1,160	NS	3.5	<10	1.92	<2	< 15
May-21	<1	28.6	<1	6.3	<5	102	<1	1,270	NS	3.7	<10	1.81	<2	< 15
Oct-20	<1	NS	<1	<1	NS	<50	<1	1,240	NS	3.4	<10	1.7	2.8	< 15
May-20	<1	NS	<1	<1	NS	<50	<1	2,080	NS	6.3	<10	2.16	<2	< 15
Oct-19	<1	NS	<1	<1	<5	<50	<1	937	NS	2.34	<10	NS	2.45	< 15
May-19	NS	NS	NS	NS	<2	< 15								
Oct-18	<1	NS	<1	<5	<10	<50	<1	2,111	NS	<5	<50	2.32	<2	< 15
May-18	<1	NS	<1	<5	<10	<50	<1	2,335	NS	<5	<50	2.89	<2	< 15
Oct-17	NS	NS	NS	NS	NS	NS								
May-17	NS	NS	NS	NS	NS	NS								
Oct-16	NS	NS	NS	NS	NS	NS								
May-16	<1	NS	<1	<5	<10	<50	<1	3,360	<0.2	5.88	<50	1.83	<2	< 15
Oct-15	<1	NS	<1	<5	<10	<50	<1	3,267	<0.2	NS	<50	1.9	<2	< 15
May-15	<1	NS	<1	<5	<10	<50	<1	3,944	NS	NS	<50	1.9	<2	< 15
Oct-14	<1	NS	<1	<5	<10	<50	<1	2,062	NS	NS	<50	2.47	<2	< 15
May-14	<1	NS	<1	6.09	<10	<50	<1	2,963	NS	NS	<50	2.04	<2	< 15
Oct-13	<1	NS	<1	<5	<10	51	<1	3,095	NS	8.3	<50	2.2	<2	< 15
Jul-13	<5	NS	<0.5	<2	<50	<50	<1	3,300	NS	<50	NS	2.2	1	< 5
Oct-12	<1	NS	<2	<5	<20	<20	<1	2,220	NS	<5	<20	3	<2.5	16
May-12	<1	NS	<2	<5	<25	270	<1	1,800	NS	<5	<20	3.3	<2.5	16
Oct-06	<1	NS	<1	<5	<10	<50	<1	2,660	NS	7.16	<10	2.34	<2	< 15
May-06	<1	NS	<1	<5	<10	<50	<5	2,490	NS	9.01	16.9	2.43	<2	< 15
Oct-05	<1	NS	<3	<3	<3	<3	<3	3,240	<.2	8.74	<10	2.65	<2	< 10
May-05	<1	NS	<3	<3	<3	<3	<3	3,420	<.2	9.35	<10	2.82	<2	< 10
Oct-04	<1	NS	<1	<5	<10	<50	<5	3,300	<.2	11.4	14.3	2.74	2.4	< 10
Jun-04	<1	NS	<1	<5	<10	NS	<5	3,040	<.2	9.7	<10	2.66	2.66	< 10
Oct-03	<5	NS	<1	<10	<10	4,390	<5	3,430	<.2	10.7	<25	3.24	3	< 10
May-03	<5	NS	<1	<10	<10	572	<5	3,780	<.2	10.9	<25	3.6	2.7	< 10
Oct-02	<5	NS	<1	<5	<12.5	<100	<5	2,840	<.2	<12.5	54	3.75	<2	< 10
May-02	<5	NS	<1	<5	<12.5	3,500	<5	1,950	<.2	<12.5	<25	4.57	<2	< 10

NOTES:

Enforcement Standard - Vermont Groundwater Enforcement Standard, July 2019

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µg/L - micrograms per liter (parts per billion)

mg/L - milligrams per liter (parts per million)

1 - Oct-22 results not provided, due to contaminated rinse water

NE - no established groundwater enforcement standard

NS - Not sampled

NA - Not analyzed

Bold results indicate detections of the analyte

Shading denotes exceedance in Enforcement Standard

* - Sampling event completed by Stone

< - Analyte not detected above laboratory reporting limits; limit of quantitation shown

Table B-34: VOC Concentrations in Groundwater: BR-2

VOC	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes	1,1-Dichloro-ethane	1,4-Dichloro-benzene	1,2-Dichloro-ethene	1,3,5-Trimethyl-benzene	1,2,4-Trimethyl-benzene	Diethyl Ether	Isopropyl-benzene	Isopropyl-benzene	p-Naphthalene	Acetone
Enforcement Standard (ug/L)	11	5	1000	700	10000	70	75	70/100 ²	23	23	NE	NE	NE	0.5	950
Nov-24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND
May-24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND
Oct-23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND
May-23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND
Nov-22*						Sampled by Stone as part of Phase II ESA, see Table B-13 for results									
Oct-22	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹					
May-22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND
Oct-21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND
May-21	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	12.5
Oct-20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
May-20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
Oct-19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
May-19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
Oct-18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
May-18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
Oct-17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
May-17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Oct-16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
May-16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
Oct-15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
May-15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
Oct-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
May-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
Oct-13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
Jul-13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
Oct-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
May-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	NS
May-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	NS
Oct-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	NS
May-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	NS
Oct-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	NS
May-05	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
Oct-04	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS
Oct-03	ND	ND	ND	ND	ND	1	ND	NS	3	NS	NS	NS	NS	NS	NS
May-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Oct-02	ND	1	ND	ND	ND	ND	4	NS	ND	NS	NS	NS	NS	NS	NS
May-02	ND	1	ND	ND	ND	ND	5	NS	ND	NS	NS	NS	NS	NS	NS

NOTES:

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µg/L - micrograms per liter (parts per billion)

1 - Oct-22 results not provided, due to contaminated rinse water

2 - Different enforcement standard for cis [70] /trans[100]-1,2-dichloroethene in updated Vermont Groundwater Protection Rule

NE - no established groundwater enforcement standard

NS - Not sampled

NA - Not analyzed

ND - Analyte not detected above laboratory reporting limits

Bold results indicate detections of the analyte

* - Sampling event completed by Stone

Table B- 35: Metal Concentrations in Groundwater: BR-3

Metal Enforcement Standard	As (ug/L)	Ba (ug/L)	Cd (ug/L)	Cr (ug/L)	Cu (ug/L)	Fe (ug/L)	Pb (ug/L)	Mn (ug/L)	Hg (ug/L)	Ni (ug/L)	Zn (ug/L)	Na (mg/L)	Cl (mg/L)	COD (mg/L)
Nov-24	< 1	87	< 2	NS	< 20	2.2	< 1	520	NS	< 5	NS	170	740	48
May-24	NA	NA	NA	NA	720	88								
Oct-23	<1	71	<0.5	NS	<2	660	<1	460	NS	5.3	NS	180	770	<20
May-23	<1	67.3	<1	<1	<25	<250	<5	294	NS	<5	<50	173	706	<15
Nov-22*									Sampled by Stone as part of Phase II ESA, see Tables B-1 and B-16 for results					
Oct-22	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹								
May-22	<1	58.6	<1	<1	5	125.00	<1	250	NS	4.20	<10	165	787	<15
Oct-21	<1	59.2	<1	<1	<5	266.00	<1	307	NS	4.80	<10	147	716	<15
May-21	<1	63.7	<1	<1	<5	348.00	<1	312	NS	4.50	<10	171	721	<15
Oct-20	<1	NS	<1	<1	NS	<50	<1	337	NS	4.00	<10	156	676	<15
May-20	<1	NS	<1	<1	NS	101.00	<1	261	NS	5.90	<10	130	644	15.4
Oct-19	<1	NS	<1	<1	<5	155.00	<1	237	NS	6.77	NS	NS	625	<15
May-19	NS	NS	NS	NS	592	<15								
Oct-18	<1	NS	<1	<5	<10	504	<1	329	NS	13.0	<50	139.0	580	62.2
May-18	<1	NS	<1	<5	<10	271	<1	1,577	NS	13.0	<50	79.3	255	81.3
Oct-17	NS	NS	NS	NS	NS	NS								
May-17		NS												
Oct-16		NS												
May-16	<1	NS	<1	<5	<10	480	<1		<0.2	NS	<50	81.2	310	39.19
Oct-15	<1	NS	<1	<5	<10	17,500	<1	1,307	<0.2	NS	<50	57.4	180.9	50.12
May-15	<1	NS	<1	<5	<10	<50	<1	1,005	NS	NS	<50	66.0	192.7	<15
Oct-14	<1	NS	<1	<5	<10	139	<1	546	NS	NS	<50	82.3	318	31.72
May-14	<1	NS	<1	<5	<10	4,923	<1	585	NS	NS	<50	80.6	347.5	37.24
Oct-13	<1	NS	<1	<5	<10	9,817	<1	771	NS	<5	<50	68.4	320	55.8
Jul-13	<5	NS	<0.5	<2	<50	12,000	<1	820	NS	<50	NS	81.0	410	120
Oct-12	<1	NS	<2	<5	<20	220	<1	580	NS	<5	35	78.0	290	88
May-12	<1	NS	<2	<5	<20	<20	<1	220	NS	<5	<20	82.0	300	58
Oct-06	<1	NS	<1	<5	<10	1,450	<1	421	NS	<5	<10	69.9	269	23.9
May-06	<1	NS	<1	<5	<10	1,330	<5	342	NS	<5	<10	65.2	285	19
Oct-05	<1	NS	<3	<3	<3	595	<3	283	<2	<3	<10	65.0	279	18.4
May-05	<1	NS	<3	<3	<3	35,700	<3	1,230	<2	13.0	<10	85.7	288	15.2
Oct-04	<1	NS	<1	<5	<10	448	<5	258	<2	<5	<10	62.4	269	21.3
Jun-04	<1	NS	<1	<5	<10	NS	<5	286	<2	<10	<10	62.5	287	18.4
Oct-03	<5	NS	<1	<10	<10	694	<5	159	<2	<10	<25	67.8	269	17.0
May-03	<5	NS	<1	<10	<10	780	<5	374	<2	<10	<25	65.2	234	14.0
Oct-02	<5	NS	<1	<5	<12.5	<100	<5	<50	<2	<12.5	<25	64.3	242	15.8
May-02	<5	NS	<1	<5	<12.5	296	<5	195	<2	<12.5	<25	64.4	240	13.1

NOTES:

Enforcement Standard - Vermont Groundwater Enforcement Standard, §

Groundwater samples collected by Vermont Department of Environmental Conservation as part of post-closure plan unless indicated otherwise. Data reproduced as provided to Stone.

µg/L - micrograms per liter (parts per billion)

mg/L - milligrams per liter (parts per million)

1 - Oct-22 results not provided, due to contaminated rinse water

NE - no established groundwater enforcement

NS - Not sampled

NS - Not sampled

Bold results indicate detections of the analyte

Shading denotes exceedance in Enforcement

* - Sampling event

< - Analyte not detected

4. Analyte not detected above laboratory reporting limit

Table B- 36: VOC Concentrations in Groundwater: BR-3

VOC	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes	1,1-Dichloro-ethane	1,4-Dichloro-benzene	1,2-Dichloro-ethene	1,3,5-Trimethyl-benzene	1,2,4-Trimethyl-benzene	Diethyl Ether	Isopropyl-benzene	p-Isopropyl-benzene	Naphthalene	Tetra-hydr-furan	Acetone
Enforcement Standard (ug/L)	11	5	1000	700	10000	70	75	70/100 ²	23	23	NE	NE	NE	0.5	NE	950
Nov-24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May-24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May-23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nov-22*						Sampled by Stone as part of Phase II ESA, see Table B-13 for results										
Oct-22	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹					
May-22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May-21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May-20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May-19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May-18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.5	ND	ND	ND	ND	ND
Oct-17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
May-17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Oct-16	ND	ND	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	13
May-16	ND	ND	1.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
Oct-15	ND	ND	ND	ND	ND	1.2	ND	ND	ND	ND	13.2	ND	NS	ND	NS	ND
May-15	ND	ND	ND	ND	ND	1.2	ND	ND	ND	ND	11.8	ND	NS	ND	NS	ND
Oct-14	ND	ND	1.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND
May-14	ND	ND	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND
Oct-13	ND	ND	1.28	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND
Jul-13	ND	ND	ND	2.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
Oct-12	ND	ND	ND	1.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	25.8
May-12	ND	ND	2	ND	ND	ND	ND	ND	ND	ND	6.1	ND	NS	ND	37.6	ND
May-08	ND	ND	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May-06	ND	ND	6.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-05	ND	ND	11.5	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND
May-05	1.4	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS	ND
Oct-04	ND	ND	14	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS	ND
Jun-04	ND	ND	14.5	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS	ND
Oct-03	ND	ND	13	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS	ND
May-03	ND	ND	12.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-02	ND	ND	15	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS	ND	ND
May-02	ND	ND	19	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS	ND	ND

NOTES:

Enforcement Standard - Vermont Groundwater Enforcement Standard, July 2019

Groundwater samples collected by Vermont Department of Environmental Conservation as part of post-closure plan unless indicated otherwise. Data reproduced as provided to Stone.

µg/L - micrograms per liter (parts per billion)

1 - Oct-22 results not provided, due to contaminated rinse water

2 - Different enforcement standard for cis [70]/trans[100]-1,2-dichloroethene in updated Vermont Groundwater Protection Rule

NE - no established groundwater enforcement standard

NS - Not sampled

NA - Not analyzed

ND - Analyte not detected above laboratory reporting limits

Bold results indicate detections of the analyte

* - Sampling event completed by Stone

Table B- 37: Metal Concentrations in Groundwater: MW-101D

Metal	As (ug/L)	Ba (ug/L)	Cd (ug/L)	Cr (ug/L)	Cu (ug/L)	Fe (ug/L)	Pb (ug/L)	Mn (ug/L)	Hg (ug/L)	Ni (ug/L)	Zn (ug/L)	Na (mg/L)	Cl (mg/L)	COD (mg/L)	
Enforcement Standard	10	2000	5	100	1300	NE	15	300	2	100	NE	NE	NE	NE	
Nov-24	5.6	400	< 2	NS	< 20	48	< 1	890	NS	33.6	NS	14	5.7	18	
May-24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	23	46	
Oct-23	5.7	450	<0.5	NS	4	55000	1.4	590	NS	33.5	NS	21	7	29	
May-23	3.00	366	<1	<1	<5	30,300	<1	453	NS	27.1	11.8	20.7	17.6	46.6	
Nov-22*						Sampled by Stone as part of Phase II ESA, see Tables B-1 and B-16 for results									
Oct-22	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹						
May-22	4.90	406	<1	<1	<5	42,200	<1	715	NS	21.8	<10	3.78	5.2	71.4	
Oct-21	1.5	323	<1	<1	<5	18,000	<1	433	NS	36.4	14	16.9	28.8	62.9	
May-21	2.70	347	<1	<1	<5	38,800	<1	590	NS	14.7	<10	5.89	5	23.2	
Oct-20	<1	NS	<1	<1	NS	619	<1	292	NS	27	18.1	23.8	22.2	40.2	
May-20	1.7	NS	<1	<1	NS	28,600	<1	792	NS	19.9	54.9	8.98	10.9	109	
Oct-19	<1	NS	<1	<1	<5	972.00	<1	381	NS	68.17	<10	NS	15.4	31.97	
May-19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<15	83.44	
Oct-18	1	NS	<1	<5	<10	35,042	<1	676	NS	40	<50	23	25	34.9	
May-18	1	NS	<1	<5	<10	20,035	<1	1,509	NS	31	<50	5.79	3	62.2	
Oct-17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
May-17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Oct-16	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
May-16	2.08	NS	<1	<5	<10	49,740	<1	1,676	<0.2	27	<50	14.83	12.8	12.8	
Oct-15	3.15	NS	<1	<5	<10	74,260	<1	2,148	<0.2	ND	<50	7	4.83	<15	
May-15	<1	NS	<1	<5	<10	16,980	<1	2,413	NS	NS	<50	7.14	3.84	<15	
Oct-14	<1	NS	<1	<5	<10	16,550	<1	1,116	NS	NS	<50	9.7	8.04	48.6	
May-14	2.04	NS	<1	<5	<10	36,260	<1	884	NS	NS	<50	6.45	5.55	24.5	
Oct-13	3.90	NS	<1	<5	<10	58,890	<1	3,330	NS	17.6	<50	7.7	15.2	24	
Jul-13	<5	NS	<0.5	<2	<50	12,000	<1	820	NS	<50	NS	4	25	<5	
Oct-12	4.00	NS	<2	<5	<20	59,000	<1	3,400	NS	10	<20	10	6.5	18	
May-12	3.00	NS	<2	<5	<36	55,000	<1	1,400	NS	12	<20	7.9	7.3	28	
Oct-06	3.25	NS	<1	6.26	<10	56,800	<1	6,410	NS	15.1	<10	14.2	15.5	26.1	
May-06	2.96	NS	<1	9.91	<10	52,800	<5	6,090	NS	18.2	15.9	24.2	23.0	18.7	
Oct-05	2.86	NS	<3	<3	<3	44,300	<3	5,640	<.2	16.5	<10	41.6	43.4	24.5	
May-05	2.90	NS	<3	<3	<3	31,500	<3	8,860	<.2	9.05	<10	13.7	17.9	21.9	
Oct-04	1.4	NS	<1	5.9	<10	32,400	<5	8,490	<.2	16.3	13.3	15.9	20.6	27	
Jun-04	<2	NS	<1	5.5	<10	NS	<5	9,130	<.2	18.9	<10	17.3	16.6	15.4	
Oct-03	7.5	NS	<1	<10	<10	33,500	<5	235	<.2	19.1	<25	15.9	70	85	
May-03	7.5	NS	<1	<10	<10	72,600	<5	238	<.2	56.8	<25	130	112	92	
Oct-02	10.5	NS	<1	<5	<12.5	54,200	<5	176	<.2	63.2	<25	126	90.6	399	
May-02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	

NOTES:

Enforcement Standard - Vermont Groundwater Enforcement Standard, July 2019

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µg/L - micrograms per liter (parts per billion)

mg/L - milligrams per liter (parts per million)

1 - Oct-22 results not provided, due to contaminated rinse water

NE - no established groundwater enforcement standard

NS - Not sampled

NA - Not analyzed

Bold results indicate detections of the analyte

Shading denotes exceedance in Enforcement Standard

* - Sampling event completed by Stone

< - Analyte not detected above laboratory reporting limits; limit of quantitation shown

Table B- 38: VOC Concentrations in Groundwater: MW-101D

VOC	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes	1,1-Dichloro-ethane	Dichloro-ethene	Dichloro-benzene	Trimethyl-benzene	1,2,4-Triethyl-ether	Isopropyl-benzene	p-Isopropyl-benzene	Naphthalene	Carbon tetrachloride	Chlorobenzene	Dibromo-chloro-methane	2-Hexanone	Tetrahydrofuran	Acetone	1,2-dichloropropane		
Enforcement Standard (ug/L)	11	5	1000	700	10000	70	75	70/100 ²	23	23	NE	NE	NE	0.5	5	100	NE	NE	NE	950	5	
Nov-24	ND	1.2	ND	ND	ND	1.3	2.5	ND	ND	13.5	ND	ND	ND	ND	1.3	ND	ND	ND	ND	ND	ND	
May-24	ND	1.6	ND	ND	ND	ND	3.8	ND	ND	15.7	ND	ND	1.1	ND	ND	ND	ND	ND	ND	ND	ND	
Oct-23	2.9	0.8	ND	ND	ND	1.8	2.5	ND	ND	23	ND	ND	ND	ND	1.3	ND	ND	16.1	ND	ND	ND	
May-23	2.5	0.9	ND	ND	ND	1.2	2.2	ND	ND	23.6	ND	ND	0.7	ND	ND	ND	ND	ND	ND	ND	ND	
Nov-22*																						
Oct-22	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹							
May-22	ND	0.8	ND	ND	ND	1.4	2.6	ND	ND	11.9	ND	ND	ND	ND	1.7	ND	ND	ND	ND	16.7	ND	
Oct-21	3.3	1.9	ND	2.4	ND	1.1	4.4	ND	ND	1	26.5	ND	ND	2.2	ND	ND	ND	ND	ND	27.4	11.8	ND
May-21	ND	0.9	ND	ND	ND	ND	2.3	ND	ND	16.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Oct-20	4.3	2.8	ND	ND	ND	ND	4.3	ND	ND	37	ND	ND	ND	1.2	ND	ND	ND	ND	ND	16.1	ND	ND
May-20	2.2	1	ND	ND	ND	1.9	2.3	ND	ND	18.2	ND	ND	ND	ND	1.5	ND	ND	ND	ND	ND	ND	ND
Oct-19	5.3	1.5	2	ND	ND	2.3	ND	ND	ND	44.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.5	ND
May-19	ND	0.9	ND	ND	ND	1.7	2.1	ND	ND	22.6	ND	ND	ND	ND	1.1	ND	ND	ND	ND	20.4	ND	ND
Oct-18	5.6	1.7	ND	1.3	ND	1.7	4.3	ND	ND	44.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	22	ND	ND
May-18	ND	0.6	ND	ND	ND	3	1.8	ND	ND	12.4	ND	ND	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND
Oct-17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
May-17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Oct-16	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
May-16	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Oct-15	4.4	2.6	ND	1.9	ND	3.3	4	ND	ND	40.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May-15	3.4	1.4	2.4	1.2	ND	3.9	3.2	ND	ND	31.9	ND	ND	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND
Oct-14	ND	ND	ND	ND	ND	4.0	1.6	ND	ND	19.2	ND	ND	ND	ND	1.7	ND	ND	ND	ND	ND	ND	ND
May-14	ND	ND	ND	ND	ND	3.8	2.8	ND	ND	18.3	ND	ND	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND
Oct-13	ND	ND	386	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Jul-13	ND	1.1	ND	ND	ND	3.9	2.18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-12	5.3	1.3	ND	ND	ND	3.9	2.18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May-12	ND	ND	ND	ND	ND	2.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-06	3.4	ND	ND	ND	ND	5.0	1.9	ND	ND	ND	ND	ND	ND	ND	1.9	ND	ND	ND	ND	ND	ND	ND
May-06	ND	1.6	ND	9.1	4.3	NS	1.9	ND	ND	7.8	1.2	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-05	26.2	ND	ND	ND	ND	11.4	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May-05	24.4	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct-04	18.7	3.6	ND	4.6	3.4	5.7	ND	ND	ND	NS	ND	ND	ND	ND	1.3	ND	5.7	ND	ND	ND	ND	ND
Jun-04	11.0	ND	ND	ND	ND	10.0	NS	ND	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	NS	NS	NS
Oct-03	20.0	1.2	ND	ND	ND	17.0	NS	ND	NS	NS	NS	NS	NS	NS	NS	ND	2.4	ND	NS	NS	NS	NS
May-03	29.6	1.2	ND	ND	ND	14.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.0	ND	ND	NS	NS	NS
Oct-02	4	1	ND	4.0	8.0	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	NS	NS	NS
May-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES:

Enforcement Standard - Vermont Groundwater Enforcement Standard, July 2019

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µg/L - micrograms per liter (parts per billion)

1 - Oct-22 results not provided, due to contaminated rinse water

2 - Different enforcement standard for cis [70] /trans[100]-1,2-dichloroethene in updated Vermont Groundwater Protection Rule

NE - no established groundwater enforcement standard

NS - Not sampled

NA - Not analyzed

ND - Analyte not detected above laboratory reporting limits

Bold results indicate detections of the analyte

Shading denotes exceedance in Enforcement Standard

* - Sampling event completed by Stone

Table B- 39: Metal Concentrations in Groundwater: **BR-202**

Metal	As (ug/L)	Ba (ug/L)	Cd (ug/L)	Cr (ug/L)	Cu (ug/L)	Fe (ug/L)	Pb (ug/L)	Mn (ug/L)	Hg (ug/L)	Ni (ug/L)	Zn (ug/L)	Na (mg/L)	Cl (mg/L)	COD (mg/L)
Enforcement Standard	10	2000	5	100	1300	NE	15	300	2	100	NE	NE	NE	NE
Nov-24	5.8	< 20	< 2	NS	< 20	78	3.2	670	NS	7	NS	4.1	< 2.5	< 10
May-24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.88	< 10
Oct-23	4	<20	<0.5	NS	<2	20000	<1	300	NS	<5	NS	3.8	<2	<20
May-23	<1	1.1	<1	<5	<50	<1	<5	NS	<1	<10	3.66	<2	<15	
Nov-22*				Sampled by Stone as part of Phase II ESA, see Tables B-1 and B-16 for results										
Oct-22	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹
May-22	<1	5.6	<1	<1	<5	447.00	<1	12.60	NS	<1	<10	3.24	<2	<15
Oct-21	<1	<1	<1	<1	<5	<50	<1	10.00	NS	<1	<10	3.85	<2	<15
May-21	<1	<1	<1	<1	<5	<50	<1	<5	NS	<1	<10	3.67	<2	<15
Oct-20	<1	NS	<1	<1	NS	<50	<1	21.80	NS	<1	<10	3.6	<2	<15
May-20	<1	NS	<1	<1	NS	73.6	<1	7.70	NS	<1	85.5	6.69	<2	88
Oct-19	<1	NS	<1	<1	<5	55.77	<1	<10	NS	<1	<10	NS	<2	<15
May-19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<2	<15
Oct-18	<1	NS	<1	<5	<10	<50	<1	16.00	NS	<5	<50	3.89	<2	<15
May-18	<1	NS	<1	<5	<10	<50	<1	<5	NS	<5	<50	3.89	<2	<15
Oct-17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
May-17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Oct-16	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
May-16	<1	NS	<1	<5	<10	<50	<1	5.52	<0.2	NS	<50	4.08	<2	<15
Oct-15	<1	NS	<1	<5	<10	<50	<1	13.00	<0.2	NS	<50	10.66	<2	<15
May-15	<1	NS	<1	<5	<10	<50	<1	5.40	NS	NS	<50	3.96	<2	<15
Oct-14	<1	NS	<1	<5	<10	<50	<1	5.40	NS	NS	<50	4	<2	<15
May-14	<1	NS	<1	<5	<10	<50	<1	<5	NS	NS	<50	3.8	<2	<15
Oct-13	<1	NS	<1	<5	<10	<50	<1	<5	NS	NS	<50	4.1	<2	<15
Jul-13	<5	NS	<0.5	<2	<50	<50	<1	<20	NS	<50	NS	3.9	<1	<5
Oct-12	<1	NS	<2	<5	<20	22.0	<1	40.00	NS	<5	<20	6.8	<2.5	<10
May-12	<1	NS	<2	<5	<20	7900.0	<1	100.00	NS	<5	<20	3.8	<2.5	10
Oct-06	<1	NS	<1	<5	<10	74.0	<1	<5	NS	<5	<10	3.73	<2	<15
May-06	<1	NS	<1	<5	<50	<5	<5	<5	NS	<5	<10	4.00	<2	<15
Oct-05	<1	NS	<3	<3	<3	20.9	<3	8.77	<2	<3	<10	4.99	<2	<10
May-05	<1	NS	<3	<3	<3	34.4	<3	3.24	<2	<3	<10	4.23	<2	<10
Oct-04	<1	NS	<1	<5	<10	120	<5	8.5	<2	<5.0	<10	4.58	<2	<10
Jun-04	<1	NS	<1	<5	<10	NS	<5	<5	<2	<5	<10	1.72	<2	<10
Oct-03	<5	NS	<1	<10	<10	231	<5	<50	<2	<10	<25	2.39	<2	<10
May-03	<5	NS	<1	<10	<10	<100	<5	<50	<2	<10	<25	2.39	<2	<10
Oct-02	<5	NS	<1	<5	<12.5	<100	<5	<50	<2	<12.5	<25	1.75	<2	23.3
May-02	<5	NS	<1	8.8	12.7	5,960	<5	408	<2	12.5	<25	1.58	<2	<10

NOTES:

Until May 2004, sample results reported from BR-202 were actually from overburden well MW-202.

Enforcement Standard - Vermont Groundwater Enforcement Standard, July 2019

Groundwater samples collected by Vermont Department of Environmental Conservation as part of post-closure plan unless indicated otherwise. Data reproduced as provided to Stone.

µg/L - micrograms per liter (parts per billion)

mg/L - milligrams per liter (parts per million)

1 - Oct-22 results not provided, due to contaminated rinse water

NE - no established groundwater enforcement standard

NE - No established

NS - Not sampled

Bold results indicate detections of the analyte

Bold results indicate detections of the analyte
Shading denotes exceedance in Enforcement Standard

* - Sampling event completed by Stone

≤ - Analyte not detected above laboratory limit

< - Analyte not detected above laboratory

Table B-40: VOC Concentrations in Groundwater: BR-202

VOC	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes	1,1-Dichloroethane	1,4-Dichlorobenzene	1,2-Dichloroethene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene	Diethyl Ether	Isopropylbenzene	p-Isopropylbenzene	Naphthalene	
Enforcement Standard (ug/L)	11	5	1000	700	10000	70	75	70/100 ²	23	23	NE	NE	NE	0.5	
Nov-24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
May-24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
Oct-23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
May-23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
Nov-22*						Sampled by Stone as part of Phase II ESA, see Table B-13 for results									
Oct-22	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹						
May-22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
Oct-21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
May-21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
Oct-20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
May-20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
Oct-19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
May-19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
Oct-18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
May-18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
Oct-17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
May-17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Oct-16	ND	ND	3.4	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
May-16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
Oct-15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
May-15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
Oct-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
May-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
Oct-13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
Jul-13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
Oct-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
May-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
Oct-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
May-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
Oct-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	
May-05	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS	
Oct-04	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS	
Jun-04	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS	
Oct-03	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS	
May-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Oct-02	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS	
May-02	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS	

NOTES:

Until May 2004, sample results reported from BR-202 were actually from overburden well MW-202.

Enforcement Standard - Vermont Groundwater Enforcement Standard, July 2019

Groundwater samples collected by Vermont Department of Environmental Conservation as part of post-closure plan unless indicated otherwise. Data reproduced as provided to Stone.

ug/L - micrograms per liter (parts per billion)

1 - Oct-22 results not provided, due to contaminated rinse water

2 - Different enforcement standard for cis [70] /trans[100]-1,2-dichloroethene in updated Vermont Groundwater Protection Rule

NE - no established groundwater enforcement standard

NS - Not sampled

NA - Not analyzed

ND - Analyte not detected above laboratory reporting limits

Bold results indicate detections of the analyte

* - Sampling event completed by Stone

Table B- 41: Metal Concentrations in Groundwater: **BR-201**

Metal Enforcement Standard	As (ug/L)	Ba (ug/L)	Cd (ug/L)	Cr (ug/L)	Cu (ug/L)	Fe (ug/L)	Pb (ug/L)	Mn (ug/L)	Hg (ug/L)	Ni (ug/L)	Zn (ug/L)	Na (mg/L)	Cl (mg/L)	OD (mg/L)
Nov-24	<1	< 20	< 2	NS	< 20	6600	< 1	130	NS	< 5	NS	6	< 2.5	< 10
May-24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.3	17
Oct-23	<1	<20	<0.5	NS	2.9	3800	<1	110	NS	<5	NS	3.8	<2	<20
May-23	<1	4.2	<1	<1	<5	<50	<1	69.6	NS	<1	<10	5.8	<2	<15
Nov-22*				Sampled by Stone as part of Phase II ESA, see Tables B-1 and B-16 for results										
Oct-22	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹
May-22	<1	11.8	<1	<1	7.3	24400	<1	206.0	NS	5.3	<10	4.8	<2	<15
Oct-21	<1	2.8	<1	<1	<5	<50	<1	44.1	NS	<1	<10	5.9	<2	<15
May-21	<1	2.1	<1	<1	<5	<50	<1	52.6	NS	<1	<10	5.9	<2	<15
Oct-20	<1	NS	<1	<1	NS	<50	<1	41.1	NS	<1	<10	6.0	2	21.2
May-20	<1	NS	<1	<1	NS	<50	<1	63.0	NS	<1	<10	6.1	<2	<15
Oct-19	<1	NS	<1	<1	<5	<50	<1	51.62	NS	<1	<10	NS	<2	<15
May-19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<2	<15
Oct-18	<1	NS	<1	<5	<10	<50	<1	41.0	NS	<5	<50	7.3	<2	<15
May-18	<1	NS	<1	<5	<10	<50	<1	11.0	NS	<5	<50	10.2	<2	<15
Oct-17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
May-17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Oct-16	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
May-16	<1	NS	<1	<5	<10	<50	<1	6.4	<0.2	<5	<50	10.0	<2	<15
Oct-15	<1	NS	<1	<5	<10	673	<1	43.0	<0.2	NS	<50	4.0	<2	<15
May-15	<1	NS	<1	<5	<10	<50	<1	7.1	NS	<50	9.7	<2	<15	
Oct-14	<1	NS	<1	<5	<10	<50	<1	10.2	NS	<50	9.8	<2	<15	
May-14	<1	NS	<1	<5	<10	<50	<1	7.9	NS	<50	9.4	2.2	<15	
Oct-13	<1	NS	<1	<5	<10	231	<1	33.0	NS	<5	<50	9.1	<2	<15
Jul-13	<5	NS	<0.5	<2	<50	140	<1	30.0	NS	<50	NS	9.7	1	<5
Oct-12	<1	NS	<2	<5	<20	46	<1	<20	NS	<5	<20	13.0	<2.5	<10
May-12	<1	NS	<2	<5	<20	740	<1	<20	NS	<5	<20	9.1	<2.5	10
Oct-06	<1	NS	<1	<5	<10	107	<1	10.6	NS	<5	<10	10.5	<2	<15
May-06	<1	NS	<1	<5	<10	55.2	<5	13.9	NS	72.1	<10	10.5	<2	<15
Oct-05	<1	NS	<3	<3	<3	95.0	<3	10.3	<.2	<3	<10	10.7	<2	<10
May-05	<1	NS	<3	<3	<3	25.9	<3	13.4	<.2	<3	<10	11.0	<2	<10
Oct-04	<1	NS	<1	<5	<10	1,240	<5	15.3	<.2	<5	<10	11.0	<2	<10
Jun-04	<1	NS	<1	<5	<10	NS	<5	11	<.2	<5	<10	2.95	<2	<10
Oct-03	<5	NS	<1	<10	<10	577	<5	<50	<.2	<10	<25	3.13	<2	<10
May-03	<5	NS	<1	<10	<10	<100	<5	<50	<.2	<10	<25	2.18	<2	<10
Oct-02	<5	NS	<1	<5	<12.5	<100	<5	<50	<.2	<12.5	<25	1.77	<2	25.8
May-02	<5	NS	<1	<5	<12.5	<100	<5	<50	<.2	<12.5	<25	1.76	<2	<10

NOTES:

Until May 2004, sample results reported from BR-201 were actually from overburden well MW-201.

Enforcement Standard - Vermont Groundwater Enforcement Standard, July 2019

Groundwater samples collected by Vermont Department of Environmental Conservation as part of post-closure plan unless indicated otherwise. Data reproduced as provided to Stone.

µg/L - micrograms per liter (parts per billion)

mg/L - milligrams per liter (parts per million)

1 - Oct-22 results not provided, due to contaminated rinse water

NE - no established groundwater enforcement standard

NS - Not sampled

NC - Not sampled

NA = Not analyzed

Table B-42: VOC Concentrations in Groundwater: BR-201

VOC	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes	1,1-Dichloro-ethane	1,4-Dichloro-benzene	1,2-Dichloro-ethene	1,3,5-Trimethyl-benzene	1,2,4-Trimethyl-benzene	Diethyl Ether	Isopropyl-benzene	p-Isopropyl-benzene	Naphthalene	ETBE	
Nov-24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	ND
May-24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	ND
Oct-23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	ND
May-23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND	ND
Nov-22*																
Oct-22	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹					
May-22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
Oct-21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
May-21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.3
Oct-20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS
May-20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS
Oct-19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS
May-19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS
Oct-18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS
May-18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS
Oct-17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
May-17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Oct-16	ND	ND	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS
May-16	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Oct-15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS
May-15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS
Oct-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS
May-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS
Oct-13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS
Jul-13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS
Oct-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS
May-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS
Oct-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS
May-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS
Oct-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS
May-05	ND	ND	4.8	1.7	9.1	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS	NS
Oct-04	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS	NS
Jun-04	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS	NS
Oct-03	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS	NS
May-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Oct-02	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS	NS
May-02	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	NS	NS	NS

Sampled by Stone as part of Phase II ESA, see Table B-13 for results

NOTES:

Until May 2004, sample results reported from BR-201 were actually from overburden well MW-201

Enforcement Standard - Vermont Groundwater Enforcement Standard, July 2019

Groundwater samples collected by Vermont Department of Environmental Conservation as part of post-closure plan unless indicated otherwise. Data reproduced as provided to Stone.

µg/L - micrograms per liter (parts per billion)

1 - Oct-22 results not provided, due to contaminated rinse water

2 - Different enforcement standard for cis [70]-trans[100]-1,2-dichloroethene in updated Vermont Groundwater Protection Rule

NE - no established groundwater enforcement standard

NS - Not sampled

NA - Not analyzed

ND - Analyte not detected above laboratory reporting limits

Bold results indicate detections of the analyte

* - Sampling event completed by Stone

Table B-43 : Metal Concentrations in Public Water Supply Well (PMCWS)

Metal	As (ug/L)	Ba (ug/L)	Cd (ug/L)	Cr (ug/L)	Cu (ug/L)	Fe (ug/L)	Pb (ug/L)	Mn (ug/L)	Hg (ug/L)	Ni (ug/L)	Zn (ug/L)	Na (mg/L)	Cl (mg/L)	COD (mg/L)
MCL/SMCL	10	200	5	100	1300	300	15	50 ^s	2	100	5000 ^s	250 ^s	250 ^s	NE
Nov-24	4.1	< 20	< 2	NS	< 20	33	< 1	< 10	NS	< 5	NS	5.9	< 2.5	< 10
May-24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	24	< 10
Oct-23	4.2	<20	<0.5	NS	<2	<20	<1	<10	NS	<5	NS	6.1	2.2	<20
May-23	4.4	2.5	<1	<1	<5	<50	<1	<5	NS	<1	<10	6.04	<2	<15
Nov-22*				Sampled by Stone as part of Phase II ESA, see Tables B-3 and B-18 for results										
Oct-22	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹
May-22	4.8	2	<1	<1	<5	<50	<1	<5	NS	<1	<10	5.94	<2	<15
Oct-21	4.3	3	<1	<1	<5	<50	<1	<5	NS	<1	<10	6.1	<2	<15
May-21	4.2	5.2	<1	<1	48.2	<50	4.2	<5	NS	1.6	45.2	5.14	<2	<15
Oct-20	3.9	NS	<1	<1	NS	<50	<1	<5	NS	1.8	<10	5.47	<2	<15
May-20	4.8	NS	<1	<1	NS	<50	<1	<5	NS	2	78.8	6.5	<2	<15
Oct-19	4.44	NS	<1	<1	<5	57.3	<1	<5	NS	<1	<10	NS	<2	<15
May-19	4.15	NS	<1	<5	227.3	<50	20.29	<5	NS	2.72	153.97	NS	<2	<15
Oct-18	4	NS	<1	<5	15	<50	1	<5	NS	<5	<50	5.31	<2	<15
May-18	4	NS	<1	<5	29	<50	3	<5	NS	<5	<50	6.22	<2	<15
Oct-17	3.47	NS	<1	<5	31.61	<50	12.63	<5	NS	<5	57.06	4.77	<2	<15
Oct-16	3.71	NS	<1	<5	<10	<50	<1	<5	NS	<5	<50	5.29	<2	<15
May-16	4.53	NS	<1	<5	<10	<50	<1	<5	<0.2	NS	<50	6.58	<2	<15
Oct-15	4.22	NS	<1	<5	<10	<50	<1	<5	<0.2	NS	<50	6.22	<2	<15
May-15	4.11	NS	<1	<5	<10	<50	<1	<5	NS	NS	<50	5.7	<2	<15
Oct-14	4	NS	<1	<5	<10	<50	<1	<5	NS	NS	<50	6.3	<2	<15
May-14	4.3	NS	<1	<5	<10	<50	<1	<5	NS	NS	<50	6.18	<2	<15
Oct-13	4.5	NS	<1	<5	<10	<50	<1	<5	NS	<5	<50	5.8	<2	<15
Jul-13	<5	NS	<0.5	<2	<50	<50	<1	<20	NS	<50	NA	6.4	1	<5
Oct-12	6	NS	<2	<5	<20	<20	<1	<20	NS	<5	52	6.6	<2.5	<10
May-12	4	NS	<2	<5	<20	<20	<1	<20	NS	<5	29	6.7	3.1	<10
May-08	3.47	NS	<1	<5	<10	<50	1	<5	NS	<5	<50	6.27	<2	<15
Oct-07	2.21	NS	NS	<6	<11	<51	<2	<6	<6	<6	<51	4.64	<2	<15
May-07	2.43	NS	<1	<5	<10	<50	<1	<5	<5	<5	<50	4.59	<2	<15
Oct-06	2.31	NS	<1	<5	<10	<50	1.08	<5	NS	<5	10.7	4.43	<2	<15

NOTES:

MCL - Maximum Contaminant Level - Vermont Water Supply Rule, February 24, 2024

s - SMCL - Secondary Maximum Contaminant Level - Vermont Water Supply Rule, February 24, 2024

Groundwater samples collected by Vermont Department of Environmental Conservation as part of post-closure plan unless indicated otherwise. Data reproduced as provided to Stone.

µg/L - micrograms per liter (parts per billion)

mg/L - milligrams per liter (parts per million)

1 - Oct-22 results not provided, due to contaminated rinse water

NE - no established groundwater enforcement standard

NS - Not sampled

NA - Not analyzed

Bold results indicate detections of the analyte

Shading denotes exceedance in Enforcement Standard

* - Sampling event completed by Stone

< - Analyte not detected above laboratory reporting limits; limit of quantitation shown

Table B-44 : VOC Concentrations in Public Water Supply Well (PMCWS)

VOC	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	1,1-Dichloroethane	1,4-Dichlorobenzene	1,2-Dichloroethene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene	Diethyl Ether	Isopropylbenzene	p-Isopropylbenzene	Naphthalene	Acetone
MCL (ug/L)	N/A	5	1000	700	10000	70	75	70/100 ²	23	23	NE	NE	NE	0.5	NE
Nov-24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND
May-24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND
Oct-23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND
May-23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND
Nov-22*						Sampled by Stone as part of Phase II ESA, see Table B-15 for results									
Oct-22	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹	NA ¹					
May-22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND
Oct-21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND
May-21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND
Oct-20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND
May-20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND
Oct-19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND
Jun-19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	ND
May-19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	15.2
Oct-18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
May-18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
Oct-17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
Oct-16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
May-16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
Oct-15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
May-15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
Oct-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
May-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
Oct-13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
Jul-13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
Oct-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
May-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
May-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
Oct-07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
May-07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS
Oct-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	ND	NS

NOTES:

MCL - Maximum Contaminant Level - Vermont Water Supply Rule, February 24, 2024

Groundwater samples collected by Vermont Department of Environmental Conservation as part of post-closure plan unless indicated otherwise. Data reproduced as provided to Stone.

ug/L - micrograms per liter (parts per billion)

1 - Oct-22 results not provided, due to contaminated rinse water

2 - Different enforcement standard for cis [70] /trans[100]-1,2-dichloroethene in updated Vermont Water Supply Rule

NE - no established groundwater enforcement standard

NS - Not sampled

NA - Not analyzed

ND - Analyte not detected above laboratory reporting limits

Bold results indicate detections of the analyte

* - Sampling event completed by Stone

Table B-45: Total Regulated PFAS Concentrations in Groundwater

Location	Oct-18	Oct-19	Oct-20	Oct-21	May-22	Nov-22*	23-May	Oct-23	May-24	Nov-24
MW 101D	21	NS	ND	39.77	16.5		33.91	NS	69.5	23.79
BR 3	NS	6.7	5.85	6.14	4.63	Sampling event completed by Stone, see table B-4 for results	5.36	NS	4.1	2.93
BR 2	NS	NS	20.07	ND	ND		ND	NS	NS	NS
BR 1	NS	NS	ND	NS	ND		ND	NS	NS	NS
BR 201	NS	NS	ND	NS	ND		ND	NS	NS	NS
BR 202	NS	NS	ND	NS	ND		1.98	NS	NS	NS
MW 1	NS	NS	5.67	NS	80.7		121.9	15	6.98	ND
MW 2	NS	NS	ND	NS	4.83		6.08	NS	NS	NS

NOTES:

All concentrations are reported in nanograms per liter (ng/L, parts per trillion)

Total Regulated PFAS - Cumulative sum of PFOA, PFOS, PFHxS, PFHpA, and PFNA

Groundwater samples collected by Vermont Department of Environmental Conservation as part of post-closure plan unless indicated otherwise. Data reproduced as provided to Stone.

NS - Not sampled

ND - Analyte not detected above laboratory reporting limits

Bold results indicate detections of the analyte

Shaded cells indicate an exceedence of the Vermont Groundwater Enforcement Standard, July 2019 for total regulated PFAS of 20 ng/L

* - Sampling event completed by Stone

Table B-46
Manganese in Groundwater Trend Analysis

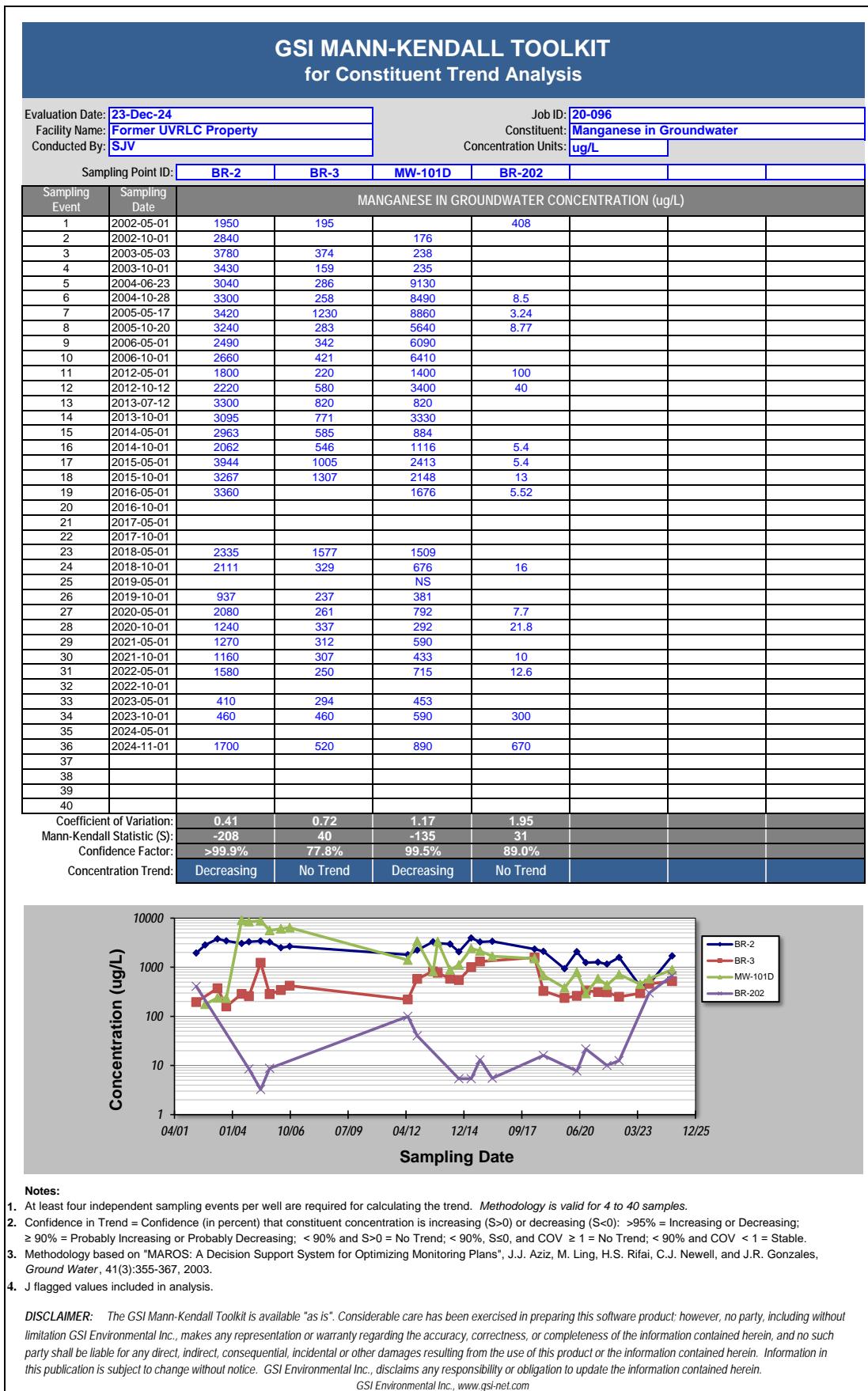


Table B-47
PFAS in Groundwater Trend Analysis

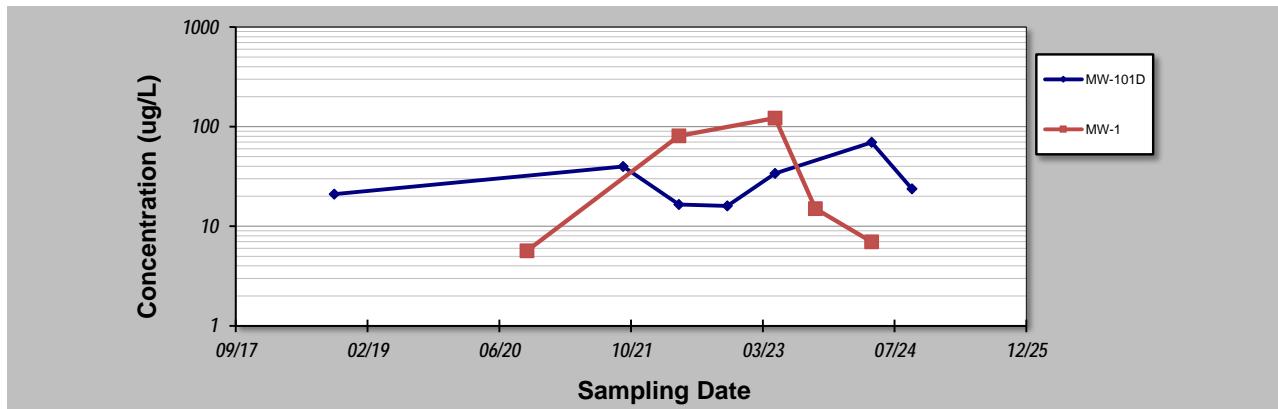
GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: **23-Dec-24**
Facility Name: **Former UVRLC Property**
Conducted By: **SJV**

Job ID: **20-096**
Constituent: **PFAS in Groundwater**
Concentration Units: **ug/L**

Sampling Point ID: **MW-101D** **MW-1**

Sampling Event	Sampling Date	PFAS IN GROUNDWATER CONCENTRATION (ug/L)									
1	Oct-18	21									
2	Oct-19										
3	Oct-20		5.67								
4	Oct-21	39.77									
5	May-22	16.5	80.7								
6	Nov-22	16									
7	May-23	33.91	121.9								
8	Oct-23		15								
9	May-24	69.5	6.98								
10	Oct-24	23.79									
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
Coefficient of Variation:	0.60	1.14									
Mann-Kendall Statistic (S):	3	0									
Confidence Factor:	61.4%	40.8%									
Concentration Trend:	No Trend	No Trend									



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S>0$) or decreasing ($S<0$): $>95\% =$ Increasing or Decreasing; $\geq 90\% =$ Probably Increasing or Probably Decreasing; $< 90\%$ and $S>0 =$ No Trend; $< 90\%$, $S\leq 0$, and $COV \geq 1 =$ No Trend; $< 90\%$ and $COV < 1 =$ Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.
- J flagged values included in analysis.

DISCLAIMER: The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.

GSI Environmental Inc., www.gsi-net.com

Appendix C: Insignificant Waste Management Event Approval Form



Agency of Natural Resources

Waste Management & Pollution Prevention Division

One National Life Drive, Davis 1 Bldg., Montpelier, VT 05620-3704

Contact Info: dennis.fekert@state.vt.us

Application Forms and Guidance Documents: <http://www.anr.state.vt.us/dec/wastediv/solid/permit.htm>

INSIGNIFICANT WASTE MANAGEMENT EVENT APPROVAL (IWMEA)

GUIDANCE DOCUMENT & APPLICATION FORM

Disposal Events

Revised April 2013

Introduction

If properly sited and managed, the short term disposal of certain types of wastes may be determined by the Secretary of the Agency of Natural Resources (Agency) to constitute an Insignificant Waste Management Event Approval (IWMEA) under the definition found in Section 6-301(c) of the Solid Waste Management Rules (Rules). Under an IWMEA, an exemption to the Rules requiring conventional landfill disposal may be granted.

This document has been prepared for those individuals, facilities, contractors, and businesses who desire to obtain approval from the Solid Waste Management Program (Program) of the Agency for disposal events that involve appropriate materials and siting and that will occur over a relatively short period of time, generally six months duration or less. An IWMEA will not be issued if the site was previously approved for a disposal event. In the event an applicant wants to continue to use the same site for disposal, an applicant should apply for a Categorical Disposal Certification under the provisions and requirements of Section 6-309 of the Rules (forms and guidance are located at the web address listed above).

Determinations of qualifications for an IWMEA are premised not in terms of volumes, but are based upon a finding that disposal activity and waste materials will not result in a threat to public safety, public health, or the environment, or create a nuisance. Therefore, disposal of certain waste types determined to be inert may be considered for an IWMEA regardless of the volumes of waste involved.

The limitations, siting standards, and operational requirements for an IWMEA was developed from the Rules, which are promulgated under the authority of 10 V.S.A. Section 6603. Violations of the conditions of the IWMEA are enforced as violations of applicable statutes and Rules and may involve substantial penalties.

Under 3 V.S.A. §2822 (i), municipalities are exempt from solid waste facility application fees. An application submitted by a private sector entity or individual must include an application fee. The amount of the application fee is \$100.00.

At least 30 days **prior** to the start of the disposal event, applicants need to submit a completed application form along with the necessary attachments and \$100.00 fee. It is recommended that a careful review of this document and a thorough check of the application and attachments be performed. The completeness of the application will have a direct bearing upon how quickly an application can be reviewed for issuance or denial.

We recommend that you contact the Permit Specialist assigned to the Region where the project is located. The Permit Specialist will identify other state permits you may need to obtain **prior** to starting your project. Please see the attached map to identify your local Regional Office.

Eligible Solid Wastes

The following solid wastes are eligible for disposal under an IWMEA.

1. stumps, brush, or untreated wood;
2. bituminous concrete;
3. rinsed, non-recycled glass;
4. concrete, masonry, mortar, porcelain, pottery, tile and clay pipe;
5. street sweepings; and
6. other solid wastes that will not result in a threat to the public health and safety or to the environment and will not create a nuisance.

Prohibited Areas, Isolation Distances, and Other Siting Restrictions

Prohibited Areas

Applications for a disposal event must include information (preferably a written statement from the applicable Agency Divisions and/or Programs) that demonstrates the disposal site is not located in any of the following prohibited areas:

1. within Class I and II Ground Water Areas;
2. within the source isolation zone of a public water supply or within 200 feet of the source, whichever is greater;
3. within 200 feet of the source of a private water supply;
4. within a watershed for Class A waters;
5. within Class I or Class II wetlands or their associated buffer zones as defined in the Vermont Wetland Rules, unless a Conditional Use Determination has been issued by the Agency;
6. within Class III wetlands as defined in the Vermont Wetland Rules unless a Water Quality Certification pursuant to 40 CFR Part 401 has been issued or waived by the Agency; and
7. within the floodway or within the 100 year flood plain.

Check the websites listed below to find the appropriate contact program/person:

Contact the Drinking Water & Groundwater Protection Division for Nos. 1, 2, and 3:

<http://www.vermontdrinkingwater.org/>

Contact the Watershed Management Division for Nos. 4, 5, 6, and 7: <http://www.vtwaterquality.org/>

Isolation Distances

The following isolation distances apply to the disposal of eligible solid wastes in non-prohibited areas. However, the Secretary may require greater isolation distances as may be necessary to protect public health and safety or the environment.

- Distance from the outer perimeter of the area within which solid waste is stored, treated, or disposed (waste management boundary) to adjoining property lines – 50 feet. This distance may be less than 50 feet if the adjoining property owner(s) provide written consent to a lesser distance. The agreed upon distance must be included in the written consent.
- Minimum distance from the waste management boundary to public roads – 50 feet.
- Minimum distance from the waste management boundary to Class B waters – 100 feet.

Other Requirements

1. If a disposal site is proposed within a Source Protection Area (SPA) of a public water supply, the location of the disposal site and the delineated source protection area must be included on the site location map. Contact the Drinking Water & Groundwater Protection Division to determine whether the proposed disposal site is located within a source protection area and what if any restrictions apply.
2. Maximum slope of disposal site final cover, 3:1

Other Permits

We recommend that you contact the Permit Specialist assigned to the Region where the project is located. The permit specialist will identify other state permits you may need to obtain prior to starting the disposal event. Please see the attached Regional Office Map.

Enforcement of Violations

Violations of an IWMEA may be subject to enforcement. The persons receiving an IWMEA are obligated to ensure that only the wastes listed in the application are disposed of and that conditions of the IWMEA are complied with.



Agency of Natural Resources

Waste Management & Pollution Prevention Division

One National Life Drive, Davis 1 Bldg., Montpelier, VT 05620-3704

Contact Info: dennis.fekert@state.vt.us

Application Forms and Guidance Documents: <http://www.anr.state.vt.us/dec/wastediv/solid/permit.htm>

IWMEA APPLICATION FORM FOR DISPOSAL EVENTS
Revised April 2013

Applicant, Landowner, Site and Contact Person Information

1. Applicant

Name (print): _____

Address: _____

Telephone number: _____

Email Address: _____

2. Landowner

Name (print): _____

Address: _____

Telephone Number: _____

Email Address: _____

3. Disposal Site Location

Address: _____

4. Contractor

Name (print): _____

Address: _____

Telephone Number: _____

Email Address: _____

Waste Description and Project Duration

1. Waste Source: identify the source or project from which the solid waste is generated

(Note: the solid waste must be from a single source or project)

2. Waste Type(s) and Volume

Type

Volume (cubic yards)

3. Disposal Event Duration: Starting Date: _____ Ending Date: _____

Attachments

- A. A description of how the disposal site will be managed to control dust, noise, litter, spills, emissions and discharges such that the disposal site will not result in a threat to the public health and safety or to the environment, and will not create a nuisance. The description should include how access to the disposal site by unauthorized persons will be controlled.
- B. Information that demonstrates that the disposal site is not located in any prohibited area.
- C. A site plan (minimum size 8 1/2" X 11" - may be hand drawn) showing the layout of the site where disposal will occur and the waste management boundary. The site plan must show the location and distance to property lines, public roads, waters, public and private drinking water supply wells, wetlands, and any source protection area.
- D. A map which shows the location of the proposed site. The map may be from a Vermont Atlas and Gazetteer or a state highway map or a USGS topographical map or copy thereof.
- E. Written approval from the landowner if this form is not signed by the landowner
- F. Other pertinent information that may be helpful in reviewing the application.
- G. Fee - Check in the amount of \$100.00 made payable to "*Treasurer, State of Vermont*".

Applicant Signature: _____

Landowner Signature: _____

(Landowner, your signature constitutes approval to use this site for this disposal event)

Contractor Signature: _____

R E G I O N A L O F F I C E S

DEPARTMENT OF ENVIRONMENTAL CONSERVATION (DEC) DISTRICT ENVIRONMENTAL COMMISSIONS (ACT 250)

DISTRICTS 1, 8, & 9

450 Asa Bloomer State Office Bldg.
Merchants Row
Rutland, VT 05701-5903

DEC Permit Specialist.....786-5907
DEC Regional Engineer786-5900
Act 250 (Dist #1 & 8)786-5920
Act 250 (Dist #9)879-5614
DEC River Management.....786-5906

DISTRICTS 2 & 3

100 Mineral St, Ste #303
Springfield, VT 05156

DEC Permit Specialist.....885-8850
DEC Regional Engineer885-8855
Act 250 (Dist #2, 3, & 3A)885-8855
DEC River Management.....786-5906
DEC Wetlands476-2678

DISTRICTS 4 & 6

111 West Street
Essex Junction, VT 05452

DEC Permit Specialist.....879-5676
DEC Reg. Engineer (Dist #4 & 6)879-5656
DEC Reg. Engineer (Dist #9)786-5900
Act 250 (Dist #4, 6, & 9)879-5614
DEC River Management.....879-5631
DEC Wetlands (Dist #4).....879-2396
DEC Wetlands (Dist #6).....241-3754

DISTRICTS 3A & 5

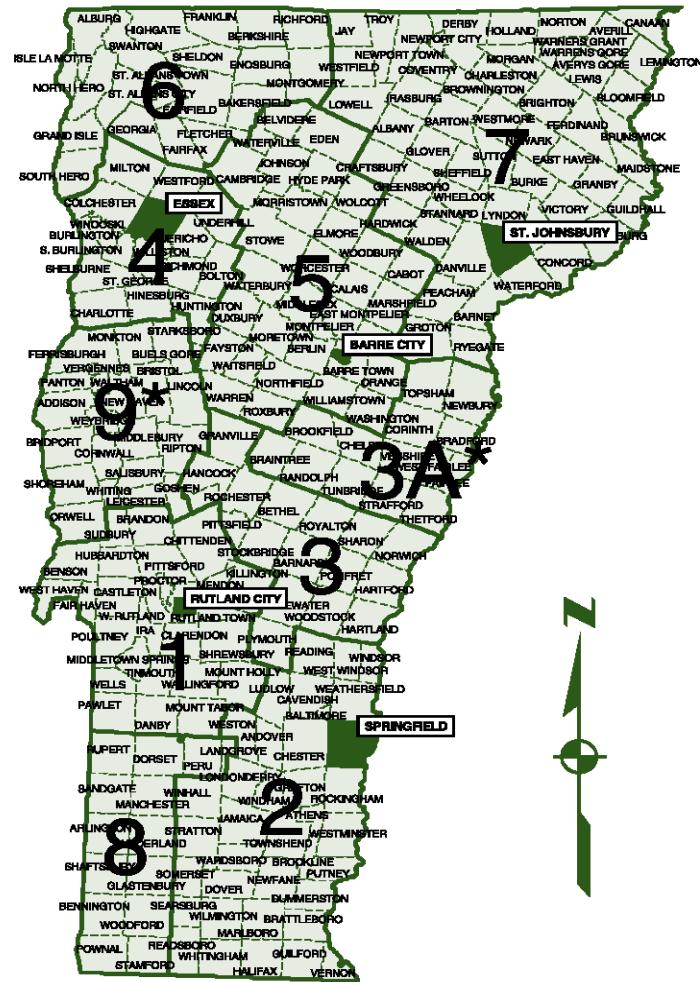
5 Perry Street, Suite 80
Barre, VT 05641-4282

DEC Permit Specialist.....476-0195
DEC Regional Engineer476-0190
Act 250 (Dist # 3A)885-8855
Act 250 (Dist # 5)476-0185
DEC River Management.....476-2679
DEC Wetlands (Dist #3A).....476-2678
DEC Wetlands (Dist #5).....241-3762

DISTRICT 7

1229 Portland St-Ste 201
St. Johnsbury, VT 05819

DEC Permit Specialist (Tues)751-0127
DEC Regional Engineer751-0130
Act 250751-0120
DEC River Management.....476-2679
DEC Wetlands241-3762



DEC and ACT 250 Regional Office Map

February 17, 2006

3A* NOTE:

For towns in District 3A, contact the Springfield Office for Act 250 Permits. For Water Supply, Wastewater Disposal and Subdivision Permits, District 3A must contact the Barre Office.

9* NOTE:

For towns in District 9, contact the Essex Junction Office for Act 250 Permits. For Water Supply, Wastewater Disposal and Subdivision Permits, District 9 must contact the Rutland Office.



State of Vermont
PERMIT AND LICENSE INFORMATION

**SOLID WASTE:
 INSIGNIFICANT WASTE MANAGEMENT EVENT APPROVALS (IWMEA)**

SUMMARY DESCRIPTION OF PERMIT	IWMEAs allow an owner/operator to conduct a waste disposal, storage, treatment or processing event of limited duration.
EXAMPLES OF REGULATED ACTIVITY	<ul style="list-style-type: none"> • Disposal of inert solid waste such as stumps, brush, untreated wood, concrete, masonry and mortar. • Collection of hazardous waste from households (HHW) and from conditionally exempt generators (CEG) during scheduled collection events. • Disposal of clogged septic system stone and soil. <p>Material must be managed in an environmentally satisfactory manner. NOTE: persons who dispose of trees, stumps, yard waste, and wood chips generated from these materials are exempt when the origin and disposal occurs on property under the same ownership or control.</p>
INFORMATION REQUIRED	In order to qualify for this authorization, the owner/operator must submit information regarding the event location, waste to be handled, site information and material management.
WEB ADDRESS	http://dec.vermont.gov/waste-management/solid/solid-waste-facility-application-forms#IWMEA
FEES	\$100.00
APPLICATION TIME FRAME	The performance standard for processing a complete application is 30 days
ADMINISTERING AGENCY	<div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>AGENCY OF NATURAL RESOURCES DEPARTMENT OF ENVIRONMENTAL CONSERVATION WASTE MANAGEMENT & PREVENTION DIVISION SOLID WASTE PROGRAM</p> <p>CONTACT: Dennis Fekert Dennis.Fekert@vermont.gov 802-522-0195</p> <p>ADDRESS: Solid Waste Program 1 National Life Drive – Davis 1 Montpelier, Vermont 05620-3704 802-828-1138</p> </div>

AUTHORITY	<u>10 VSA Chapter 159</u>
APPLICABLE RULES	<u>Solid Waste Management Rules</u>
APPEAL PROCESS	Within 30 days of the date of an act or decision, any person aggrieved by an act or decision of the secretary, or any party by right, may appeal to the environmental court in accordance with the provisions of <u>10 VSA Chapter 220</u> .
OTHER PERMITS AND APPROVALS	Contact a Permit Specialist for a Project Review Sheet, see: <u>http://dec.vermont.gov/environmental-assistance/permits</u>

Appendix D: Health & Safety Plan

SECTION 1: GENERAL INFORMATION AND DISCLAIMER

PROJECT NAME:	Former UVRLC Property	PROJECT NUMBER:	20-096
PROJECT MANAGER:	Rebecca Treat	SITE SAFETY OFFICER:	Laura Rajnak
PREPARED BY:	Serena Veilleux	DATE:	12/9/2024

NOTE: This site specific Health and Safety Plan – Long Form (HASP-LF) has been prepared for use by Stone Environmental, Inc. (Stone) employees for work at this site / facility. The HASP-LF has been written for the specific site / facility conditions, purposes, tasks, dates and personnel specified, and must be amended and reviewed by those personnel named in Section 4 if these conditions change. Stone is not responsible for its use by others.

Subcontractors shall be solely responsible for the health and safety of their employees and shall comply with all applicable laws and regulations. In accordance with 1910.120(b)(1)(iv) and (v), Stone will inform subcontractors of the site / facility emergency response procedures, and any potential fire, explosion, health, safety or other hazards by making this HASP-LF and site information obtained by others available during regular business hours. All contractors and subcontractors are responsible for: (1) developing their own Health and Safety Plan, including a written Hazard Communication Program and any other written hazard specific or safety programs required by federal, state and local laws and regulations, that details subcontractor tasks, potential or actual hazards identified as a result of a risk analysis of those tasks, and the engineering controls, work practices and personal protective equipment to be utilized to minimize or eliminate employee exposure to the hazard; (2) providing their own personal protective equipment; (3) providing documentation that their employees have been health and safety trained in accordance with applicable federal, state and local laws and regulations; (4) providing evidence of medical surveillance and medical approvals for their employees; and (5) designating their own site safety officer responsible for ensuring that their employees comply with their own Health and Safety plan and taking any other additional measures required by their site activities.

Providing a copy of this Stone HASP-LF to subcontractors does not establish, nor is it intended to establish, a "joint employer" relationship between the Contractor and Stone. This allowance does not establish, nor is it intended to establish, a direct or indirect employer/employee relationship with subcontractor's employees. In addition, if any site has a HASP prepared by another contractor, that document should be made available to Stone Staff.

SECTION 2: EMERGENCY CONTACT INFORMATION

LOCAL RESOURCES	NAME/ADDRESS:	NON-EMERGENCY PHONE:
EMERGENCY MEDICAL SERVICES	Dartmouth Hitchcock Medical Center / 1 Medical Center Drive, Lebanon, NH	603-650-5000
HOSPITAL (attach map/directions)	Dartmouth Hitchcock Medical Center / 1 Medical Center Drive, Lebanon, NH	603-650-5000
FIRE DEPARTMENT	Thetford Volunteer Fire Department / 2829 Route 113, Thetford Center, VT	802-785-2412
POLICE / SECURITY	Thetford Police Department / 3910 VT Route 113, Thetford Center, VT	802-785-2200
HAZMAT / SPILL / OTHER	US Ecology / 54 Avenue D, Williston, VT	802-860-1200
CORPORATE RESOURCES	NAME	PHONE (OFFICE AND CELL)
CORPORATE HEALTH & SAFETY	Jenn Cypher	802-229-2196/603-306-2877

PROJECT MANAGER	Rebecca Treat	617-780-4383
SITE SAFETY OFFICER	Laura Rajnak	228-731-1000

SECTION 3: PROJECT INFORMATION					
SITE NAME:	Former UVRLC Property		SITE CLIENT CONTACT/PHONE:	GMEDC - Erika Hoffman-Kiess/802-299-5769	
ADDRESS/TOWN/STATE:	7412 VT Route 113, Thetford, VT		CLIENT SITE SAFETY CONTACT:	Erika Hoffman-Kiess	
ANTICIPATED DATE(S) OF SITE ACTIVITIES:			May and October of every year beginning 2025		
SITE/FACILITY TYPE:					
<input type="checkbox"/> ACTIVE	<input type="checkbox"/> HAZARDOUS (RCRA)	<input type="checkbox"/> WTP / WWTP			
<input checked="" type="checkbox"/> BROWNFIELD	<input type="checkbox"/> INACTIVE	<input checked="" type="checkbox"/> OTHER (SPECIFY): closed landfill			
<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> NON-HAZARDOUS LANDFILL	Click or tap here to enter text.			
<input type="checkbox"/> FIFRA	<input type="checkbox"/> STATE	Click or tap here to enter text.			
<input type="checkbox"/> HAZARDOUS (CERCLA / SUPERFUND)	<input type="checkbox"/> UST / LUST	Click or tap here to enter text.			
INVESTIGATION TYPE:					
<input type="checkbox"/> AIR	<input type="checkbox"/> INDOOR / VAPOR	<input checked="" type="checkbox"/> SURFACE SOIL			
<input type="checkbox"/> AIR / ODOR	<input checked="" type="checkbox"/> INSPECTION	<input type="checkbox"/> SURFACE WATER			
<input type="checkbox"/> AUDIT	<input type="checkbox"/> INVESTIGATION SURVEY	<input checked="" type="checkbox"/> WASTE STREAM			
<input type="checkbox"/> CONSTRUCTION	<input checked="" type="checkbox"/> LANDFILL	<input type="checkbox"/> WASTEWATER			
<input checked="" type="checkbox"/> ENVIRONMENTAL	<input type="checkbox"/> PRE-JOB VISIT	<input type="checkbox"/> OTHER (SPECIFY):			
<input checked="" type="checkbox"/> GROUNDWATER	<input type="checkbox"/> SEDIMENT	Click or tap here to enter text.			
<input type="checkbox"/> HAZARDOUS WASTE	<input type="checkbox"/> SOLID WASTE	Click or tap here to enter text.			
<input type="checkbox"/> HYDROGEOLOGY	<input checked="" type="checkbox"/> SUBCONTRACTOR OVERSIGHT	Click or tap here to enter text.			
FIELD TASKS:					
Label with a unique identifier for use in later sections (Sn = Stone tasks, On = tasks performed by others)					
S1	Groundwater Assessment				
S2	Drinking Water Assessment				
O1	Drum and Tire Removal				

SECTION 4: PROJECT SAFETY ORGANIZATION, HEALTH AND SAFETY TRAINING, AND MEDICAN SURVEILLANCE
PROJECT HEALTH AND SAFETY ROLES, RESPONSIBILITIES AND COORDINATION

SENIOR MANAGER:	Dan Voisin	CORPORATE HEALTH & SAFETY MANAGER:	Jenn Cypher
PROJECT MANAGER:*	Rebecca Treat	SITE SAFETY OFFICER:*	Laura Rajnak
	Laura Rajnak	SITE SAFETY OFFICER (ALT):*	Jodie Wright
FIELD TEAM:*	Jodie Wright	SUBCONTRACTORS AND OTHER ON-SITE PERSONNEL:	Calkins Excavating, Inc.
	Click or tap here to enter text.		Click or tap here to enter text.
	Click or tap here to enter text.		Click or tap here to enter text.
	Click or tap here to enter text.		Click or tap here to enter text.

*NOTE: Attach evidence of applicable training and medical surveillance to this HASP-LF for all on-site Stone personnel.

A summary of the responsibilities for the roles listed above is as follows:

The **Senior Manager** (SM) is ultimately responsible for project performance. The SM seeks and gets appropriate approvals for risk management decisions (e.g. Legal Counsel, Corporate Health and Safety, Other On-Site HASPs), and selects an effective and qualified project team. The SM supports the Project Manager with appropriate resources. The Senior Manager is the chief liaison with the client and will coordinate Stone Project Managers and Resources to respond to the client's needs.

The **Project Manager** (PM) has the responsibility for executing the project in accordance with the scope of work and good engineering practice. The PM will supervise the allocation of resources and staff to implement specific aspects of this HASP-LF and may delegate authority to expedite and facilitate any application of the program. The PM implements and executes an effective program of site-specific personnel protection and accident prevention. The Project Manager reports to the Program Manager.

The **Corporate Health and Safety Officer (HSO)** is responsible for Stone's overall Health and Safety Program and provides project guidance on appropriate project engineering controls, work practices, and personal protective equipment. HSO also reviews and approves HASPs in accordance with Section 1.

The **Site Safety Officer (SSO)** is responsible for interpreting and implementing the site health and safety provisions set out in this HASP-LF and will guide the efforts of field team personnel in their day-to-day compliance with this HASP-LF. The SSO has the ability and authority to make necessary changes or additions to this HASP-LF and provide technical assistance to field team personnel on problems relating to worksite safety. The SSO has the authority to correct safety-related deficiencies in materials or practice and to halt all site activities if necessary.

The **Alternate Site Safety Officer (ASSO)** is assigned all duties and responsibilities of the Site Safety Officer in his/her absence.

Field Team Personnel are responsible for implementing the procedures set forth in the HASP-LF; taking all reasonable precautions to prevent injury to themselves and their fellow employees, performing only those tasks that they believe they can do safely, and immediately report any accidents and/or unsafe conditions in accordance with Section 1.

Other On-Site Personnel, including subcontractors, have access to this HASP-LF and are designated to carry out the stated project job functions on site. **NOTE:** subcontractors and other companies are solely responsible for the health and safety of their employees and shall comply with all applicable laws and regulations as described in Section 1.

SECTION 5: HAZARD ANALYSIS
ACTUAL OR POTENTIAL PHYSICAL HAZARDS (check all that apply)

<input checked="" type="checkbox"/>	ANIMALS / PLANTS	<input type="checkbox"/>	EXCAVATIONS (SEE SECTION 13)	<input type="checkbox"/>	IONIZING RADIATION	<input type="checkbox"/>	SCAFFOLDING
<input type="checkbox"/>	ASBESTOS / LEAD	<input type="checkbox"/>	EXTREME COLD (SEE SECTION 10)	<input type="checkbox"/>	LIGHT RADIATION	<input type="checkbox"/>	SHARP OBJECTS
<input type="checkbox"/>	CHEMICAL EXPOSURE (SEE BELOW)	<input type="checkbox"/>	FALL > 6 FEET	<input type="checkbox"/>	LIMITED CONTACT	<input checked="" type="checkbox"/>	STEEP / UNEVEN TERRAIN
<input type="checkbox"/>	CONFINED SPACE (SEE BELOW)	<input type="checkbox"/>	FALLING OBJECTS	<input type="checkbox"/>	MOVING PARTS	<input type="checkbox"/>	TRAFFIC
<input checked="" type="checkbox"/>	DEMOLITION	<input checked="" type="checkbox"/>	HEAT STRESS	<input type="checkbox"/>	NOISE > 85 DB	<input type="checkbox"/>	WEATHER CONDITIONS (LIGHTNING, TORNADOES)
<input type="checkbox"/>	DRILLING	<input type="checkbox"/>	HEAVY EQUIPMENT	<input type="checkbox"/>	NON-IONIZING RADIATION	<input type="checkbox"/>	OTHER:
<input checked="" type="checkbox"/>	DRUM HANDLING	<input type="checkbox"/>	HEAVY LIFTING	<input type="checkbox"/>	POWERED PLATFORMS	<input type="checkbox"/>	Click or tap here to enter text.
<input type="checkbox"/>	DUST, HARMFUL	<input type="checkbox"/>	HUNTING SEASON	<input type="checkbox"/>	POOR VISIBILITY	<input type="checkbox"/>	Click or tap here to enter text.
<input type="checkbox"/>	ELECTRICAL	<input type="checkbox"/>	IMMERSION	<input type="checkbox"/>	ROLLING OBJECTS	<input type="checkbox"/>	Click or tap here to enter text.

PRESENCE OF HAZARDOUS MATERIALS STORED OR USED ON SITE:

CURRENT	FORMER	TYPE	CURRENT	FORMER	TYPE
<input type="checkbox"/>	<input type="checkbox"/>	EXPLOSIVES	<input type="checkbox"/>	<input type="checkbox"/>	TOXIC / INFECTIOUS
<input type="checkbox"/>	<input type="checkbox"/>	COMPRESSED GASES	<input type="checkbox"/>	<input type="checkbox"/>	RADIOACTIVE
<input type="checkbox"/>	<input type="checkbox"/>	FLAMMABLE / COMBUSTIBLE LIQUIDS	<input type="checkbox"/>	<input type="checkbox"/>	CORROSIVE
<input type="checkbox"/>	<input type="checkbox"/>	FLAMMABLE / REACTIVE SOLIDS	<input type="checkbox"/>	<input type="checkbox"/>	STORED HAZARDOUS WASTE
<input type="checkbox"/>	<input type="checkbox"/>	OXIDIZERS	<input type="checkbox"/>	<input type="checkbox"/>	OTHER: Click or tap here to enter text.

CHEMICAL HAZARDS OF CONTAMINANTS INFORMATION					
SUBSTANCES INVOLVED	CHARACTERISTICS*	MEDIA**	EST. CONCENTRATIONS	LOWEST PEL OR TLV	
				CONCENTRATION	UNITS
VOCs (1,4-dioxane)	TO, VO	GW, SL	50 ppb	1	ppmv
PFAS	TO	GW, SL	25 ppt	0.01	mg/m ³
Lead	TO	GW, SL	10 ppm	50	ug/m ³

*Characteristics: CA (corrosive, acid), CC (corrosive, caustic), IG (ignitable), RA (radioactive), VO (volatile), TO (toxic), RE (reactive), BIO (infectious), UN (unknown), OT (other, describe)

**Media Types: GW (ground water), SW (surface water), WW (wastewater), AIR (air), SG (soil, gas), SL (soil), SD (sediment), WL (waste, liquid), WS (waste, solid), WD (waste, sludge), WG (waste, gas), OT (other, describe).

DESCRIBE POTENTIAL FOR CONTACT WITH EACH MEDIA TYPE FOR EACH OF THE MPI TASKS LISTED IN SECTION 3:			
MPI TASK	ROUTE OF EXPOSURE (INHAL / INGEST / CONTACT / ABSORB)	POTENTIAL FOR CONTACT (HIGH / MED / LOW)	METHOD OF CONTROL
Groundwater Assessment	Direct Contact	Low	Donning PPE
Drinking Water Assessment	Direct Contact	Low	Donning PPE
Drum and Tire Removal	Direct Contact	Low	Donning PPE

SECTION 6: SITE CONTROL MEASURES
WORK ZONES – EXCAVATIONS, DRILLING OPERATIONS, AND HEAVY EQUIPMENT

PERSON DESIGNATED TO COORDINATE ACCESS CONTROL AND SECURITY FOR OPERATIONS ON SITE:	N/A
WORK ZONES – CONTAMINATION	
PREVAILING WIND CONDITIONS:	SSE
CONTROL BOUNDARIES ARE IDENTIFIED BY:	Parcel Boundary

Note: a wind direction indicator is used to determine daily wind direction. The command post is located away from the exclusion zone or at sufficient distance to prevent exposure should a release occur. **No unauthorized person should be within this area.**

SECTION 7: SAFETY PROCEDURES / EQUIPMENT REQUIRED

Identify all procedures and equipment needed to eliminate or minimize exposure to hazards identified in Section 5.

<input type="checkbox"/>	AIR MONITORING EQUIPMENT	<input type="checkbox"/>	EYE WASH	<input checked="" type="checkbox"/>	INSECT REPELLENT	<input checked="" type="checkbox"/>	SAFETY VESTS
<input type="checkbox"/>	BARRIER TAPE	<input type="checkbox"/>	FALL PROTECTION EQUIPMENT	<input type="checkbox"/>	LIGHTING – FIXED EMERGENCY	<input type="checkbox"/>	SDS - ATTACH
<input type="checkbox"/>	COMMUNICATION – OFF SITE	<input type="checkbox"/>	FIRE EXTINGUISHERS	<input type="checkbox"/>	LIGHTING - HANDHELD	<input type="checkbox"/>	TRAFFIC CONES
<input checked="" type="checkbox"/>	COMMUNICATION – ON SITE	<input checked="" type="checkbox"/>	FIRST AID KIT	<input type="checkbox"/>	LONE WORKER	<input type="checkbox"/>	VENTILATION EQUIPMENT
<input type="checkbox"/>	CONFINED SPACE PROGRAM (SEE SECTION 12)	<input type="checkbox"/>	FLOTATION DEVICE (USCG)	<input type="checkbox"/>	LOTO EQUIPMENT	<input type="checkbox"/>	OTHER:
<input type="checkbox"/>	EMERGENCY AIR HORN	<input type="checkbox"/>	GFCI EXTENSION CORDS	<input checked="" type="checkbox"/>	PPE - SEE SECTION 15	<input type="checkbox"/>	Click or tap here to enter text.
<input type="checkbox"/>	EMERGENCY SHOWERS	<input type="checkbox"/>	HARNESS/ LIFELINE	<input type="checkbox"/>	REPIRATOR - SEE SECTION 15	<input type="checkbox"/>	Click or tap here to enter text.

SECTION 8: COMMUNICATION AND SAFE WORK PRACTICE

COMMUNICATIONS – ON SITE: Whenever possible, communication between site personnel should be face-to-face. Radios will be used when verbal communication is not possible. If necessary, the following hand signals will be used:

OK; I AM ALL RIGHT; I UNDERSTAND	THUMBS UP
NO; NEGATIVE	THUMBS DOWN
NEED ASSISTANCE	BOTH HANDS ON TOP OF HEAD
DANGER – LEAVE AREA IMMEDIATELY	GRIP PARTNER'S WRIST WITH BOTH HANDS
HAVING DIFFICULTY BREATHING	HANDS TO THROAT

COMMUNICATIONS – OFF SITE:

TELEPHONE NUMBERS THAT CAN BE USED TO REACH THE COMMAND POST:	Rebecca Treat 617-780-4383
	Daniel Voisin 802-229-1875

SAFE WORK PRACTICES

LONE WORKER: MUST ENSURE THAT SOMEONE KNOWS WHERE YOU ARE AND WHEN YOU ARE EXPECTED HOME. MUST HAVE MOBILE PHONE ACCESS AT ALL TIMES AND CONTACT SAFETY OFFICER OR DESIGNEE WHEN YOU ARE HOME SAFE (BY TEXTING OR CALLING).

A "BUDDY SYSTEM" IN WHICH ANOTHER WORKER IS CLOSE ENOUGH TO RENDER IMMEDIATE AID WILL BE IN EFFECT. CLIENTS AND/OR CONTRACTORS MAY SERVE AS A "DESIGNATED BUDDY."

WHERE THE EYES OR BODY MAY BE EXPOSED TO CORROSIVE MATERIALS, SUITABLE FACILITIES FOR QUICK DRENCHING OR FLUSHING SHALL BE AVAILABLE FOR IMMEDIATE USE (SEE SECTION 7).

IF DRILLING EQUIPMENT IS INVOLVED, HAVE A CURRENT UTILITY SURVEY, AND KNOW WHERE THE 'KILL SWITCH' IS.

CONTACT WITH SAMPLES, EXCAVATED MATERIALS, OR OTHER CONTAMINATED MATERIALS MUST BE MINIMIZED.

ALL ELECTRICAL EQUIPMENT USED IN OUTSIDE LOCATIONS, WET AREAS OR NEAR WATER MUST BE PLUGGED INTO GROUND FAULT CIRCUIT INTERRUPTER (GFCI) PROTECTED OUTLETS (SEE SECTION 7).

IN THE EVENT OF TREACHEROUS WEATHER-RELATED WORKING CONDITIONS (I.E., THUNDERSTORM, LIMITED VISIBILITY, EXTREME COLD OR HEAT) FIELD TASKS WILL BE SUSPENDED UNTIL CONDITIONS IMPROVE OR APPROPRIATE PROTECTION FROM THE ELEMENTS IS PROVIDED.

SMOKING, EATING, CHEWING GUM OR TOBACCO, OR DRINKING ARE FORBIDDEN EXCEPT IN CLEAN OR DESIGNATED AREAS.

USE OF CONTACT LENSES NEAR CHEMICALS OR DURING USE OF RESPIRATORY PROTECTION IS PROHIBITED AT ALL TIMES.

GOOD HOUSEKEEPING PRACTICES ARE TO BE MAINTAINED.

FOLLOW ALL SITE / FACILITY H&S REQUIREMENTS-PROTECTIVE EYEWEAR AT ALL TIMES

SECTION 9: ENVIRONMENTAL MONITORING

THIS SECTION NOT APPLICABLE TO SITE ACTIVITIES

The following environmental monitoring instruments shall be used on site at the specified intervals and recorded in the site daily field notes. Record action limit for upgrade or stop work. **NOTE:** If monitoring period is "OTHER", monitoring schedule will be attached to this plan.

EQUIPMENT	CONTINUOUS	HOURLY	DAILY	OTHER	ACTION LEVEL
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COMBUSTIBLE GAS INDICATOR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Click or tap here to enter text.
O ₂ METER	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Click or tap here to enter text.
TOXICS					
CO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Click or tap here to enter text.
H ₂ S	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Click or tap here to enter text.
OTHER	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Click or tap here to enter text.
PID (LAMP: eV)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Click or tap here to enter text.
FID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Click or tap here to enter text.
COLORIMETRIC TUBES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Click or tap here to enter text.
RADIATION					
α	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Click or tap here to enter text.
β	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Click or tap here to enter text.
γ	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Click or tap here to enter text.
RESPIRABLE DUST METER	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Click or tap here to enter text.
NOISE METER	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Click or tap here to enter text.
OTHER:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Click or tap here to enter text.
Click or tap here to enter text.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Click or tap here to enter text.

NOTE: monitoring equipment is calibrated according to manufacturers' instructions. Record calibration data and air concentrations in daily field notes.

RECOMMENDED ACTION LEVELS FOR UPGRADE OR DOWNGRADE OF RESPIRATORY PROTECTION, OR SITE SHUTDOWN AND EVACUATION. These are average values. Consideration should be given to the potential for release of highly toxic compounds from the waste or from reaction by-products. Levels are for persistent (> 10 min) breathing zone measurements in non-confined spaces. For unexpected conditions, stop all work and contact Corporate Health and Safety.

OXYGEN LEVELS

< 19.5%	Level B necessary for work to start / continue. Consider toxicity potential.
19.5% to 23.5%	Work may start / continue. Investigate changes. Continuous monitoring.
> 23.5%	PROHIBITED WORK CONDITION

FLAMMABILITY / EXPLOSIVE HAZARDS

< 10% of LEL	Work may start / continue. Consider toxicity potential.
10% to 25% of LEL	Work may start / continue. Continuous monitoring.
> 25% of LEL	PROHIBITED WORK CONDITION

UNCHARACTERIZED AIRBORNE ORGANIC VAPORS OR GASES (see above for actual action levels)

Background	Work may start / continue. Continue to monitor conditions.
0 to 5 meter units (m.u. or ppm) above background	Level C necessary for work to start / continue. Continuous monitoring. Use colorimetric tubes to characterize vapors.
5 to 50 m.u. above background	Level B necessary for work to start / continue. Continuous monitoring.
> 50 m.u. above background	PROHIBITED WORK CONDITION.

CHARACTERIZED AIRBORNE ORGANIC VAPORS OR GASES (see above for actual action levels)

NOTE: Use mixture calculations (% allowed = ΣC_{NELN}) if more than one contaminant is present.

Up to 50% of TLV, or PET or REL	Work may start / continue. Continue to monitor conditions.
Up to 25X TLV, PEL, or REL	Level C necessary for work to start / continue. Continuous monitoring.
Up to 500X TLV, PEL or REL	Level B necessary for work to start / continue. Continuous monitoring.
> 500X TLV, PEL, OR REL	PROHIBITED WORK CONDITION.

RADIATION

<0.5 mR/Hour (500 μ R)	Work may start / continue. Continue to monitor conditions.
Up to 1 mR/Hour above background	Work may start / continue with Radiation Safety Officer present on site.
> 1 mR/Hour above background	PROHIBITED WORK CONDITION.

SECTION 10: PERSONAL MONITORING	
THIS SECTION NOT APPLICABLE TO SITE ACTIVITIES <input type="checkbox"/>	
PERSONAL EXPOSURE SAMPLING (consider if high concentrations of lead, mercury or arsenic are present)	
THE FOLLOWING PERSONAL MONITORING WILL BE IN EFFECT ON SITE:	Click or tap here to enter text.
HEAT / COLD STRESS MONITORING	
EXPECTED AIR TEMPERATURES:	Click or tap here to enter text.
DESCRIBE HEAT / COLD STRESS MONITORING IN EFFECT:	Click or tap here to enter text.

NOTE: heat / cold stress monitoring is required for heavy exertion in PPE at temperatures over 70°F, or at temperatures below 40° wind chill equivalent.

SECTION 11: HAZARD COMMUNICATION PROGRAM	
THIS SECTION NOT APPLICABLE TO SITE ACTIVITIES <input type="checkbox"/>	
If chemicals are introduced to the site by Stone (e.g., decontamination liquids, preservatives, etc.), a copy of the applicable Safety Data Sheets (SDSs) is attached. The Site Safety Officer will review this information with all field personnel prior to the start of the project, and will inform other employers (e.g., Owner, Contractor and Subcontractors) of the availability and location of this information. The Comprehensive List of Chemicals introduced by Stone to this site is:	
Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.
All chemicals being introduced to the site, hazardous/potentially hazardous samples prepared at the site, and/or any hazardous materials previously sent to the site, that will be stored at the site or will be transported from the site by common carrier, will be packaged, labeled and identified as hazardous materials in accordance with U.S. Department of Transportation (DOT) and/or International Air Transport Association (IATA) regulations by a trained HazMat employee. At multi-employer sites, the Site Safety Officer will obtain information, if applicable, on hazardous chemicals other employers may produce or introduce to the job site to which Stone employees may be exposed, including the location of their written hazard communication program(s), labeling program(s), and Safety Data Sheet(s).	

SECTION 12: CONFINED SPACE ENTRY	
THIS SECTION NOT APPLICABLE TO SITE ACTIVITIES <input type="checkbox"/>	
If a permit-required confined space entry will be made on site, a copy of the Confined Space Entry Program, and a completed Space Pre-Entry Inspection Check List will be attached to this plan. A Confined Space Entry Permit must be completed and posted outside the confined space prior to entry, and the entry will follow the Confined Space Entry written program. Permits are to be saved and logged with project documentation.	
NAME OF COMPETENT PERSON:	Click or tap here to enter text.

SECTION 13: EXCAVATION SAFETY	
THIS SECTION NOT APPLICABLE TO SITE ACTIVITIES <input type="checkbox"/>	
Excavations being created to accomplish Stone tasks or in progress during Stone inspection of other activities or tasks, shall be shored or sloped or otherwise protected to prevent accidental collapse prior to entry, in accordance with Subpart F of 29 CFR 1926. Stone personnel will not enter trench or excavated areas without approval of Corporate Health and Safety. If an entry into an excavation by Stone personnel is necessary, a Competent Person will be designated by the Corporate Health and Safety Officer. Excavations will not be left open overnight unless absolutely necessary.	
NAME OF COMPETENT PERSON:	Click or tap here to enter text.

SECTION 14: DECONTAMINATION PROCEDURES		THIS SECTION NOT APPLICABLE TO SITE ACTIVITIES <input type="checkbox"/>					
Personnel and equipment leaving the Exclusion Zone (hot) shall be thoroughly decontaminated. The Site Safety Officer is responsible for monitoring adherence with this decontamination plan and SOP-5.1.n.							
DECONTAMINATION STATIONS:							
Edge of Property Boundary			Click or tap here to enter text.				
Click or tap here to enter text.			Click or tap here to enter text.				
REQUIRED DECONTAMINATION EQUIPMENT:							
<input type="checkbox"/>	DECON PAD (PLASTIC SHEET)	<input type="checkbox"/>	DRY BRUSHES	<input checked="" type="checkbox"/>	BUCKETS	<input type="checkbox"/>	TRASH CANS / BAGS
<input checked="" type="checkbox"/>	WET BRUSHES	<input type="checkbox"/>	HOSE / SPRAY	<input type="checkbox"/>	OTHER: Click or tap here to enter text.		
DECONTAMINATION SOLUTION:		Alconox and potable water rinse					

SECTION 15: PERSONAL PROTECTIVE EQUIPMENT						
List all that apply. Use same codes for clothing and boots of same material.						
TASK*	RESPIRATOR/ CARTRIDGE	USE	CLOTHING	GLOVES	BOOTS	OTHER
Groundwater Assessment			N/S	N	SL	
Drinking Water Assessment			N/S	N	SL	
Drum and Tire Removal			N/S	N	SL	HH, G, HP

*Task list must match Section 3

CODES:

Respirators: HF (Half Face APR); FF (Full Face APR); ESCBA (Escape Bottle); SAR (Airline); SCBA

Cartridges: P (Particulate); OV (Organic Vapors); AG (Acid Gas); Multi (Multiple Gas / Vapor); Other

Clothing: N/S (No Special); C (Coveralls); T (Tyvek); Sx (Saranex); PT (PE Tyvek)

Gloves: Co (Cotton); Le (Leather); L (Latex); N (Nitrile); B (Butyl); Neo (Neoprene); V (Viton); PVC (Polyvinyl Chloride); PVA (Polyvinyl Alcohol); T (Teflon); O (Other)

Boots: SL (Leather Safety); H (Hip); O (Latex Overboots); CHM (Chemical Resistant)

Other: HH (Hard Hat); G (Safety Glasses); GP (Glare Protection); GI (Goggles, Impact); GS (Goggles, Splash); FS (Face Shield); HP (Hearing Protection); PFD (Personal Flotation Device)

SECTION 16: PERSONAL PROTECTIVE EQUIPMENT CONTINUED

RESPIRATORY PROTECTION WILL BE UPGRADED UNDER THE FOLLOWING CONDITIONS:	Click or tap here to enter text.
CARTRIDGE CHANGE OUT SCHEDULE:	Click or tap here to enter text.

SECTION 17: EMERGENCY ACTION PLAN

The following standard emergency response procedures will be used by onsite personnel. The Site Safety Officer shall be notified of any onsite emergencies and be responsible for ensuring that the appropriate procedures are followed.

EVACUATION

All work activities are suspended, and the site is to be evacuated immediately, when there is a threat to life or health as determined by individual good judgment, i.e. fire, hazardous chemical spill, dangerous gas leak, severe weather (i.e., tornado, thunderstorm); or when notified by other site / facility staff and local fire or police officials. If an evacuation is called for, the emergency alarm system for weather-related, medical, fire and other evacuation emergencies is 3 short blasts on a compressed air horn or notification by the SSO or designee using a cell phone or walkie talkie. In the case of tornado or lightning strikes a designated evacuation area will be identified during the tail gate meeting. Be sure to include time and distance to these shelters to give staff time to evacuate safely. Typically, evacuation time takes about 5-10 minutes. Once off site, all staff should gather at the assigned rally point which is a minimum of 250 feet away from the incident.

NOTE: Evacuation from the Exclusion Zone should occur through the decontamination line if possible.

FIRE OR EXPLOSION

Upon discovery of a fire or an explosion, follow the procedure above for evacuating the site and notify the fire department. If a person's clothing should catch fire, instruct the person to drop to the floor and roll. If necessary, physically restrain the person and roll them around on the floor to smother the flames. Use a fire blanket or extinguisher if one is readily available and you have been trained in its use. If a person's clothing is saturated with a chemical, douse the individual with water from the nearest safety shower if available. Consult the chemical Safety Data Sheets (SDSs) for further information. Call emergency medical services if indicated by the SDSs. Never re-enter the site / facility until the emergency has been declared over and permission to re-enter has been given by site / facility health and safety staff or local fire or police officials. If any staff is unaccounted for, notify an individual in charge.

MEDICAL EMERGENCY

If you discover a medical emergency and are by yourself, CALL OUT FOR HELP. When someone arrives, tell them to call for help. If no one comes or you know you are alone, provide whatever care you can for 1 minute, and then make the call yourself. (See Section 2). Upon notification of an injury the SSO or alternate should evaluate the nature of the injury and shall initiate the appropriate first aid, and contact should be made for an ambulance (and other emergency services as needed) and with the designated medical facility (if required). No one may re-enter the Exclusion Zone until the cause of the injury is determined. If applicable, local fire and police should be briefed on the situation and the potential hazards and the substances involved. When IDLH conditions exist, arrangements should be made for onsite standby of emergency services. A map for directions to the nearest hospital is attached to this plan along with a site map.

LIGHTNING

Monitor the weather. Follow the "30-30" Rule: count the time from the flash to the bang. Activate lightning safety plan at a count of 30 seconds, and don't resume activities for 30 minutes. Evacuate to hardtop metal vehicle or large enclosed structure. If outside and unable to get to shelter, crouch on the ground with your weight on the balls of your feet, head lowered, eyes closed, and ears covered.

TORNADOES

If you are outdoors and can safely drive away from the tornado, do so. If you can't drive away, abandon your vehicle and seek shelter in a nearby structure. The safest place to be is always an underground shelter, basement or safe room. If no buildings are available and driving away is not an option, stay in the car with the seat belt on. Put your head down below the windows, covering with your hands and a blanket if possible. If you can safely get noticeably lower than the level of the roadway, exit your car and lie in that area, covering your head with your hands. Never seek shelter under a bridge or overpass.

FOLLOW UP

In all situations when an onsite / facility emergency results in evacuation of the work area or a "large spill" has occurred, staff shall not resume work until the conditions resulting in the emergency have been corrected; the hazards have been reassessed by the SSO and Corporate Health and Safety Officer; the HASP has been updated if applicable; and site personnel have been briefed on any changes.

SECTION 18: SPILL CONTAINMENT / CONTROL

THIS SECTION NOT APPLICABLE TO SITE ACTIVITIES

Incidental spills will be controlled in the immediate area of the spill. Such spills shall be handled utilizing precautions appropriate for the chemical characteristics specified in the SDS for the chemical including spill control methods and selection and use of minimum personal protective equipment.

For chemicals in large quantities (greater than 55 gallons), a copy of the appropriate Emergency Response Guidebook (ERG) guide shall be attached to this plan, and a spill response contractor shall be identified in Section 2.

SECTION 19: ACKNOWLEDGMENTS

PLAN REVIEWED BY:	NAME	SIGNATURE / DATE
Senior Manager	Dan Voisin	
Project Manager	Rebecca Treat	
Site Safety Officer	Laura Rajnak	
Corporate Health & Safety Officer	Jenn Cypher	

The undersigned acknowledge that they have read the information on this HASP-LF (and attachments), understand the site / facility hazards as described and agree to comply with the components of the plan. Attach additional sheets if necessary.

NAME	SIGNATURE / DATE
Click or tap here to enter text.	
Click or tap here to enter text.	

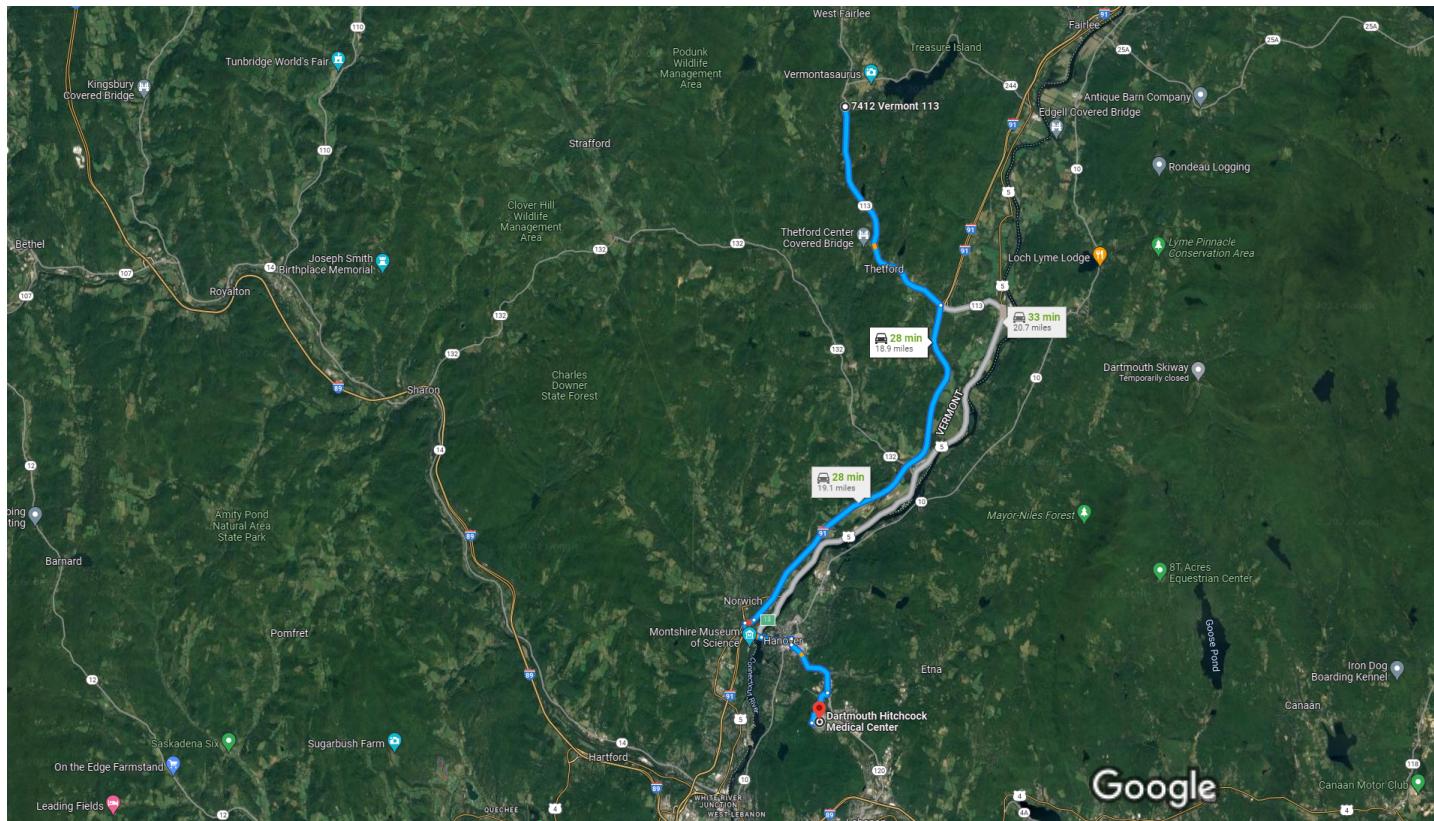
Attachments:

<input type="checkbox"/>	SDSs	<input type="checkbox"/>	Hazard Communication Program	<input type="checkbox"/>	Confined Space Entry Program	<input type="checkbox"/>	Respiratory Protection Program
<input type="checkbox"/>	Site Map	<input type="checkbox"/>	Personal Protective Program	<input type="checkbox"/>	DOT ERG Guides	<input type="checkbox"/>	Activity Hazard Analysis Forms
<input checked="" type="checkbox"/>	Directions to hospital	<input type="checkbox"/>	Emergency Action Plan	<input checked="" type="checkbox"/>	Daily Site Sheet	<input type="checkbox"/>	Other:



7412 VT-113, Post Mills, VT 05058 to Dartmouth Hitchcock Medical Center

Drive 18.9 miles, 28 min



Imagery ©2022 TerraMetrics, Map data ©2022 Google 1 mi

via VT-113 E and I-91 S **28 min**

Fastest route now due to traffic conditions

via VT-113 E, I-91 S and Lebanon St **28 min**

19.1 miles

via VT-113 E and US-5 S **33 min**

20.7 miles

[Explore Dartmouth Hitchcock Medical Center](#)

[Restaurants](#) [Hotels](#) [Gas stations](#) [Parking Lots](#) [More](#)

Appendix E: Detailed Cost Estimate

Detailed Cost Estimate
Corrective Action Plan / Post-Closure Plan Amendment
Former UVRLC Property

Task Number/Name	Description			Unit Rate	Unit	Units	Amount	Notes
1- Project Management / Coordination								Routine project management/coordination, invoicing, stakeholder communication and meetings (cost is annual)
Professional Services								
	Scientist	Senior Professional 1		\$ 174.00	Hours	8	\$ 1,392.00	PM/coord (2 hr), invoicing (2 hr), mtgs/correspond (2 hr), contracting/access (2 hr)
2- Groundwater Sampling (semi-annual)								Sample 8 wells via low-flow and collect 1 drinking water sample in May & October of each year (cost is per event)
Professional Services								
	Scientist	Senior Professional 1		\$ 174.00	Hours	4	\$ 696.00	task coord, sr oversight and field management (4hr)
	Scientist	Staff Professional 3		\$ 123.00	Hours	15	\$ 1,845.00	GW sampling (3 hr RT, 9 hr onsite, 3 hr mob/demob/sample management)
	Scientist	Staff Professional 2		\$ 114.00	Hours	18	\$ 2,052.00	GW sampling (3 hr RT, 9 hr onsite, 6 hr mob/demob/sample management)
	Scientist	Staff Professional 1		\$ 106.00	Hours	18	\$ 1,908.00	GW sampling (3 hr RT, 9 hr onsite, 6 hr mob/demob/sample management)
Subcontractors/Consultants								
	EAI naphthalene (8260)			\$ 120.00	Each	3	\$ 396.00	MW-101D + 1 dup + 1 EB, 1 TB (no charge for TB)
	EAI 1,4-dioxane (8260 SIM)			\$ 75.00	Each	4	\$ 330.00	MW-101D + 1 EB, BR-3 + 1 dup, 1 TB (no charge for TB)
	EAI PFAS 1633			\$ 520.00	Each	5	\$ 2,860.00	MW-101D, BR-3, 1 dup, 1 FRB, 1 EB, 1 TB (no charge for TB)
	EAI COD and total chloride			\$ 45.00	Each	11	\$ 544.50	8 wells, 1 DW, 1 dup, 1 EB
	EAI total Mn + aqueous prep			\$ 22.50	Each	11	\$ 272.25	8 wells, 1 DW, 1 dup, 1 EB
	EAI total sodium + aqueous prep			\$ 22.50	Each	11	\$ 272.25	8 wells, 1 DW, 1 dup, 1 EB
	EAI total lead + aqueous prep			\$ 22.50	Each	3	\$ 74.25	MW-1 + 1 dup + 1 EB
	EAI PFAS 537.1			\$ 325.00	Each	5	\$ 1,787.50	1 DW, 1 dup, 1 FRB, 1 TB, 1 EB
	EAI overnight shipping to sub lab			\$ 75.00	Each	1	\$ 82.50	
External Expenses								
	Geotech - YSI			\$ 140.00	Each	2	\$ 308.00	
	Geotech - Bladder Pump			\$ 275.00	Each	1	\$ 302.50	MW-1
	Geotech - Geosub			\$ 175.00	Each	1	\$ 192.50	BR-1, BR-2, MW-101D
	Geotech - Turb Meter			\$ 40.00	Each	2	\$ 88.00	
	Geotech - 300' WL			\$ 60.00	Each	1	\$ 66.00	
	Field Supplies & Equipment			\$ 100.00	Each	1	\$ 110.00	
	Shipping/Freight			\$ 200.00	Each	1	\$ 220.00	
	Rental-Field Equipment			\$ 300.00	Each	1	\$ 330.00	generator to operate pump at BR-3
	Other External Expense			\$ 225.00	Each	1	\$ 247.50	1/2 X 5/8 HDPE (500' roll) tubing for BR-1, BR-2, and MW-101D
Internal Expenses								
	F-150 Daily Usage Fees			\$ 125.00	Day	2	\$ 250.00	
	Peristaltic Pump (EAR)			\$ 75.00	Day	1	\$ 75.00	BR-201, BR-202, MW-2
	Water Level Indicator			\$ 30.00	Day	1	\$ 30.00	
	Electrical Generator - Honda Eu 2000			\$ 50.00	Day	1	\$ 50.00	
	Multi-Parameter Meter Calibration Solutions			\$ 7.50	Day/Unit	2	\$ 15.00	
	PPE			\$ 22.00	Day/Staff	3	\$ 66.00	
	1/4" OD HDPE tubing (EAR)			\$ 0.28	Feet	350	\$ 98.00	Perri Pump tubing (BR-202, BR-201, MW-2) + air line on bladder (MW-1)
	Peristaltic Pump tubing (L15)			\$ 2.80	Feet	10	\$ 28.00	
	3/8" OD HDPE Tubing			\$ 2.60	Feet	50	\$ 130.00	Bladder pump tubing for MW-1
	Peristaltic Pump Tubing (L36)			\$ 6.50	Feet	10	\$ 65.00	
3- Groundwater Sampling Reporting (semi-annual)								Stone to prepare semi-annual monitoring report. Assumes CSM not required. (cost is per event)
Professional Services								
	Scientist	Senior Professional 1		\$ 174.00	Hours	6	\$ 1,044.00	rpt review & task management (6 hr)
	Engineer	Project Professional 2		\$ 153.00	Hours	6	\$ 918.00	rpt prep/peer review (6 hr)
	Scientist	Staff Professional 3		\$ 123.00	Hours	14	\$ 1,722.00	rpt prep (14 hr)
	Scientist	Staff Professional 1		\$ 106.00	Hours	12	\$ 1,272.00	historical data entry (4 yrs), data management (4 hrs), figures (4 hrs)

Detailed Cost Estimate
Corrective Action Plan / Post-Closure Plan Amendment
Former UVRLC Property

4- Engineering Inspection & Summary Report								Stone to perform annual landfill inspection in May and issue summary report on findings (cost is annual)
Professional Services					Annual Cost	\$ 2,827.00		
	Scientist	Senior Professional 1	\$ 174.00	Hours 1		\$ 2,680.00		
	Engineer	Senior Professional 1	\$ 182.00	Hours 2		\$ 174.00	task management (1 hr)	
	Engineer	Project Professional 2	\$ 153.00	Hours 14		\$ 364.00	senior review (2 hr)	
Internal Expenses						\$ 2,142.00	landfill inspection (3 hr RT, 5 hr onsite/mob/demob), summary rpt prep (6 hr)	
						\$ 147.00		
	F-150 Daily Usage Fees		\$ 125.00	Day 1		\$ 125.00		
	PPE		\$ 22.00	Day/Staff 1		\$ 22.00		
5- Landfill Maintenance (annual)						\$ 1,274.00	Annual mowing of landfill	
Professional Services						\$ 174.00		
	Scientist	Senior Professional 1	\$ 174.00	Hours 1		\$ 174.00	task management (1 hr)	
Subcontractors/Consultants						\$ 1,100.00		
		mowing (~ 10 acres)	\$ 1,000.00	Each 1		\$ 1,100.00	per quote from Dale Lewis at Thetford Highway Dept	
6- Drum Disposal						\$ 8,739.50	Removal of drums from site. Assumes 15 RCRA empty drums and task will take 1 day to complete.	
Professional Services						\$ 2,295.00		
	Scientist	Senior Professional 1	\$ 174.00	Hours 4		\$ 696.00	task coord, sr oversight, procurement of sub, and field management (4hr)	
	Scientist	Staff Professional 3	\$ 123.00	Hours 13		\$ 1,599.00	oversight (3 hr RT, 8 hrs onsite, 2 hrs prep/demob)	
Subcontractors/Consultants						\$ 6,297.50		
		Calkins - Labor	\$ 650.00	Each 1		\$ 715.00	per quote from Calkins (approx split)	
		Calkins - Equipment	\$ 2,900.00	Each 1		\$ 3,190.00	per quote from Calkins (approx split)	
		Calkins - Disposal	\$ 1,800.00	Each 1		\$ 1,980.00	per quote from Calkins - includes transport	
		Calkins - Seed & Mulch Repair	\$ 375.00	Each 1		\$ 412.50	per quote from Calkins	
Internal Expenses						\$ 147.00		
	F-150 Daily Usage Fees		\$ 125.00	Day 1		\$ 125.00		
	PPE		\$ 22.00	Day/Staff 1		\$ 22.00		
7- Tire Removal						\$ 7,804.50	Removal of tires from site. Assumes 25 average, 2 large and 2 extra large tires. Task will take 1 day to complete.	
Professional Services						\$ 2,295.00		
	Scientist	Senior Professional 1	\$ 174.00	Hours 4		\$ 696.00	task coord, sr oversight, procurement of sub, and field management (4hr)	
	Scientist	Staff Professional 3	\$ 123.00	Hours 13		\$ 1,599.00	oversight (3 hr RT, 8 hrs onsite, 2 hrs prep/demob)	
Subcontractors/Consultants						\$ 5,362.50		
		Calkins - Labor	\$ 1,000.00	Each 1		\$ 1,100.00	per quote from Calkins (approx split; includes site walk 12/18/2024)	
		Calkins - Equipment	\$ 2,900.00	Each 1		\$ 3,190.00	per quote from Calkins (approx split)	
		Calkins - Disposal	\$ 600.00	Each 1		\$ 660.00	per quote from Calkins - assumes no disposal fee (scrap metal) just transport	
		Calkins - Seed & Mulch Repair	\$ 375.00	Each 1		\$ 412.50	per quote from Calkins	
Internal Expenses						\$ 147.00		
	F-150 Daily Usage Fees		\$ 125.00	Day 1		\$ 125.00		
	PPE		\$ 22.00	Day/Staff 1		\$ 22.00		
8- CACCR						\$ 6,264.00	Prepare a CACCR after 1 year of post-closure monitoring and removal of tires/drums	
Professional Services						\$ 6,264.00		
	Scientist	Senior Professional 1	\$ 174.00	Hours 12		\$ 2,088.00	Manage and coordinate report drafting, review report	
	Engineer	Project Professional 2	\$ 153.00	Hours 8		\$ 1,224.00	Peer review, draft elements of report	
	Scientist	Staff Professional 3	\$ 123.00	Hours 24		\$ 2,952.00	Draft elements of report including figures and tables	
GRAND TOTAL						\$ 69,796.50		
Grand Total w/ 15% Contingency						\$ 80,265.98		

Detailed Cost Estimate
Corrective Action Plan / Post-Closure Plan Amendment
Former UVRLC Property

Task 1	\$	1,392.00
Task 2	\$	31,583.50
Task 3	\$	9,912.00
Task 4	\$	2,827.00
Task 5	\$	1,274.00
Task 6	\$	8,739.50
Task 7	\$	7,804.50
Task 8	\$	6,264.00

Total Cost (Yr 1)	\$	69,797
15% contingency	\$	10,469.48
Year 1 + 15% contingency	\$	80,265.98
Total Post-Closure Costs Yr 2	\$	46,988.50
Year 2+15%	\$	54,036.78

Uniform Series Present Worth $((1+i)^n-1)/(i(1+i)^n)$	6.23
Year 1 Cost	\$ 80,265.98
Year 2-8	\$ 46,988.50
Year 2-8 * Uniform Series Present Worth	\$ 292,751.65
Present worth of CAP/Post-Closure Care	\$ 373,017.63