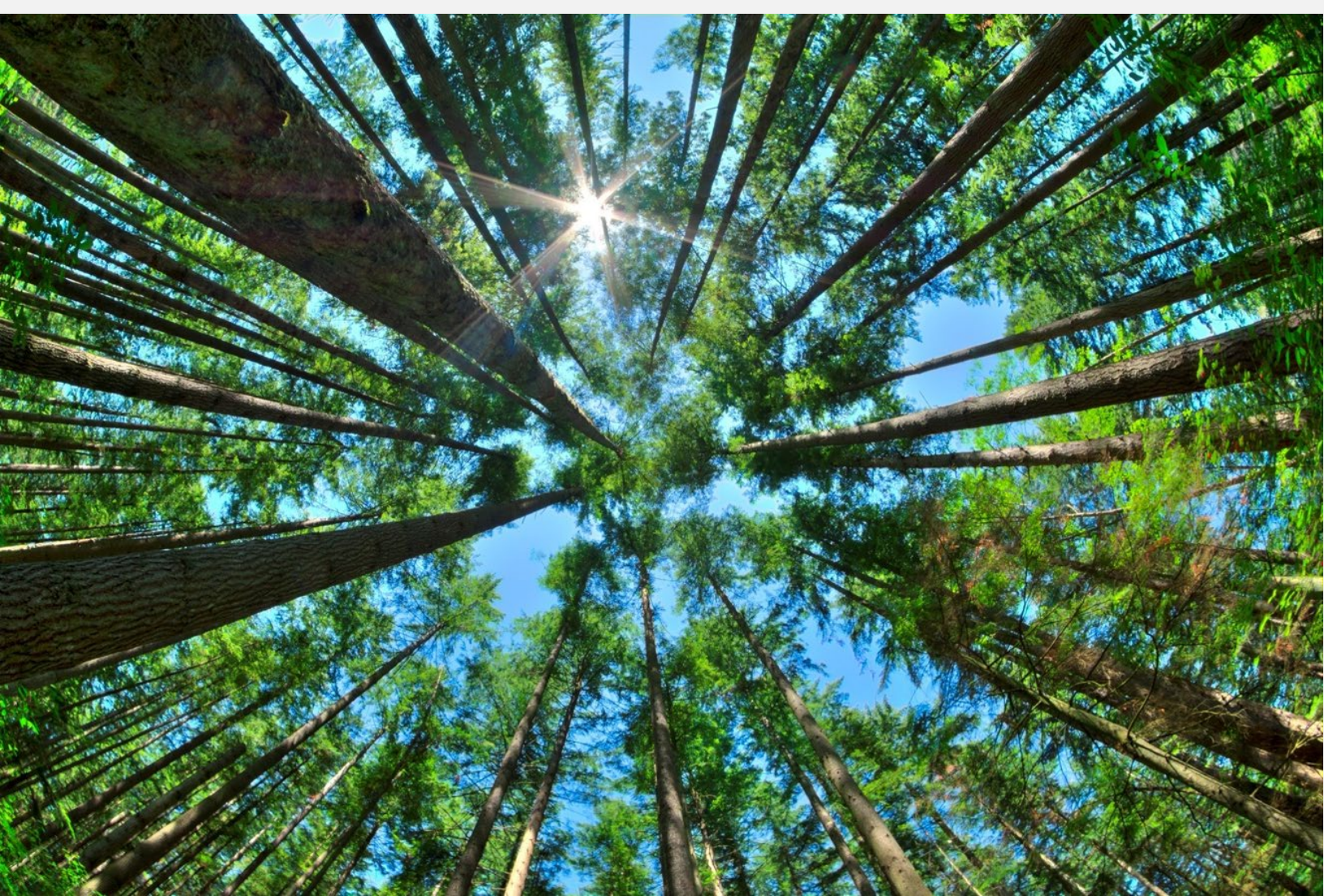




Draft Supplemental Corrective Action Plan

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Vermont

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Draft Supplemental Corrective Action Plan

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EXECUTIVE SUMMARY

On behalf of Energizer Holdings, Inc. (Energizer), ERM Consulting and Engineering, Inc. (ERM), prepared this Supplemental Corrective Action Plan (CAP) for the facility located at 401 Gage Street, Bennington, Vermont (Site). The Site is managed by the Vermont Department of Environmental Conservation (VTDEC) as Site Number 2006-3509. The previous CAP and post-remediation monitoring requirements (last updated 8 February 2016) associated with Site Number 2006-3509 will be superseded by this Report. The CAP was completed in accordance with VTDEC Investigation and Remediation of Contaminated Properties Rule §35-606 (IRule) and is inclusive of the conditions in the previous CAP. This CAP applies to groundwater for the Site. As described in the VTDEC-approved Evaluation of Corrective Action Alternatives (ECAA) (ERM 2021c), a separate CAP addendum will be prepared for soil vapor and vapor intrusion at a later date when future Site use can be incorporated into the plan.

As described in the ECAA, tetrachloroethene [PCE] and per- and polyfluorinated alkyl substances (PFAS) are present in groundwater at and downgradient of the Site at concentrations exceeding the Vermont Primary Groundwater Quality Enforcement Standards (GWQES), necessitating remediation to mitigate impacts to potential on- and off-site receptors. For groundwater, a combination of long-term monitoring and institutional controls is the preferred remedial alternative as described in the ECAA. Institutional controls consist of reclassification of groundwater to Class IV (not suitable as a source of potable water), preventing the installation of new water supply wells. A groundwater reclassification order including the Site and potential downgradient receptors was put into place by others on 2 November 2021. Additional institutional controls consist of a soil and groundwater management plan for future Site activities as documented in Appendix A (Institutional Control Plan) of this report. Long-term monitoring will track potential future risks to downgradient receptors and document natural attenuation of Site-related constituents of concern (COCs) through routine sampling of on- and off-site monitoring wells.

Long term monitoring includes annual monitoring of eight (8) monitoring wells in the shallow aquifer: ERM-8, ERM-11S, ERM-12, ERM-13, ERM-16, MW-102, MW-103, and MW-104, and include the five compliance points included in the previous CAP. Wells will be sampled on an annual basis. Five year reviews of the long term monitoring plan (or more frequent reviews if data permits) will be completed to determine if the sampling modifications can be made. Samples will be collected using low-flow techniques for analysis of chlorinated ethenes (volatile organic compounds by USEPA Method 8260C) and PFAS (modified USEPA Method 537.1) by a VTDEC-certified analytical laboratory. Laboratory results will be tabulated and shared with the VTDEC via email, similar to the previous post-remediation monitoring conducted at this Site.

1. INTRODUCTION

On behalf of Energizer Holdings, Inc. (Energizer), ERM Consulting and Engineering, Inc. (ERM), prepared this Corrective Action Plan (CAP) for the facility located at 401 Gage Street, Bennington, Vermont (Site). Reports for previous investigation and remediation activities completed at the Site were provided to the Vermont Department of Environmental Conservation (VTDEC) under Site Number 2006-3509. The previous CAP and post-remediation monitoring requirements (last updated 8 February 2016) associated with Site Number 2006-3509 will be superseded by this Report. The CAP detailed below was completed in accordance with VTDEC Investigation and Remediation of Contaminated Properties Rule §35-606 (IRule) and is inclusive of the conditions in the previous CAP. This CAP applies to groundwater for the Site. As described in the VTDEC-approved Evaluation of Corrective Action Alternatives (ECAA) (ERM 2021c), a separate CAP will be prepared for soil vapor and vapor intrusion at a later date when future Site use can be incorporated into the plan.

2. PROJECT SITE

The Site is located on the south side of Gage Street, northeast of downtown Bennington in Bennington County, Vermont. The Walloomsac River is located to the south. The general location of the Site Property and the surrounding area are depicted on **Figure 1**.

The Site Property comprises five land parcels (four tax ID parcels), which total approximately 9.29 acres, developed with six buildings which include Plant 1, Plant 2, a Boiler House, Tank Farm Enclosure, an unnamed storage building, and a wooden storage shed. The land parcels are divided into several lots, which are shown on the Site map provided as **Figure 2**. The two main facility buildings are Plant 1 and Plant 2. Plant 1 is located immediately south of Gage Street and operations in this building ceased in January 2021. Plant 2 is located further south on Scott Street and was vacated in 2016. Information on historical Site building use is described in Section 2.1 below.

2.1 Site History

Plant 1 was built in stages between approximately 1896 and the 1970s. Prior to battery manufacturing, the facility was a hosiery manufacturer. Plant 2 and the Boiler House were built in 1917 and were originally a manufacturing facility for cotton underwear. Union Carbide, a predecessor of Energizer, began operations at Plant 1 in 1942 and at Plant 2 in the 1950s. Union Carbide operations in the 1950s included the production of flat cell batteries and lead plating operations on the first floor of Plant 2. Union Carbide began the production of miniature alkaline batteries in the 1960s, with the alkaline battery division known as the Eveready Battery Co.

In 1984, the Site was upgraded to include the production of miniature lithium batteries, lithium extruders, and additional packaging/printing lines. In 1987, a zinc air cell line was installed to manufacture hearing aid batteries. According to Site personnel, the lead plating operations on the first floor of Plant 2 ceased in the 1980s and remediation was conducted under VTDEC site number 770098 (also recorded as #77-98), including removal of the concrete floor and excavation of the underlying soil. The facility stopped production of lithium ion batteries in 1999.

Eveready Battery Co. was rebranded as Energizer in 2000. Operations ceased in Plant 2 in 2016 and molding operations were relocated to Plant 1. The most recent manufacturing activities in Plant 1 included production of silver oxide chemistry batteries and the repackaging of lithium metal batteries that were manufactured overseas. Plant 1 operations ceased in January 2021.

The historical use of other areas of the Site property (Figure 2) are summarized as follows:

- Lot 1: The paved area east of Plant 2 has historically been used for parking since the 1940s.
- Lot 2: The paved area west of Plant 2 was originally occupied by several small commercial and industrial buildings, including a paper box factory from the 1880s through the 1950s. The buildings were used by Plant 2 for storage in the 1960s prior to their demolition.
- Lots 3 and 4: The paved area west of Plant 1 was originally built with residences, but which by the 1970s had been demolished and paved over.
- Lot 6: The paved area east of Plant 1 was originally occupied by a knitting mill, dye house, boiler house, and machine shop from the 1880s through the 1960s. From at least the 1920s through the 1930s, a portion of the property was occupied by a dry cleaner. The former Lot 6 buildings were demolished in the 1970s.
- Lot 7: The unpaved area east of Plant 2 was originally used as storage for surrounding industrial buildings from the 1880s through the 1970s. The existing empty storage shed has been present since at least the 1970s.

2.2 Conceptual Site Model

The conceptual site model (CSM) for the Site was first documented in the 2007 Site Investigation Report (ERM 2007). The CSM is based on the high resolution site characterization investigations completed at the Site in 2006 and 2007 and has since been updated as part of the 2020 Site Investigation Work Plan (ERM 2020) and based on data collected and summarized in the 2021 Supplemental Site Investigation Report (ERM 2021b). For convenience of VTDEC review, the CSM below is adapted from the VTDEC-approved ECAA (ERM 2021c).

The initial CSM identified six areas of concern (AOCs) under and around Plant 1 documenting impacts of primarily tetrachloroethene (PCE) and trichloroethene (TCE) in soil, groundwater, and soil gas. The six AOCs included:

- AOC-1: Former active degreaser area;
- AOC-2: Former machine shop;
- AOC-3: Production area;
- AOC-4: Former loading dock area;
- AOC-5: Former drain line; and
- AOC-6: Former process area sump.

As documented in the 2007 Site Investigation Report, dissolved-phase plumes from the six AOCs coalesced, resulting in a single groundwater plume migrating off-site to the west-northwest along the direction of groundwater flow. Groundwater elevation measurements, interpolated contours, and flow directions have consistently showed flow to the northwest throughout numerous rounds of sampling from 2006 through to the present (**Figure 3**). The dissolved phase plume migrated within the shallow sand and gravel aquifer as the underlying silt layer acts as an aquitard to contaminant migration. Although there is a downward vertical gradient to groundwater flow, it is significantly less than the horizontal migration of groundwater and is impeded by the silt aquitard.

Minimal transverse dispersivity occurs downgradient of the Site, based on observations of a consistent off-Site plume width when the plume was originally delineated in 2006. Evidence of longitudinal dispersivity was observed, based on significant decreases in constituents of concern (COC) concentrations with increased distance downgradient of the AOCs. In addition, groundwater recharge is occurring along the length of the off-Site plume, resulting in dilution of COC concentrations. Remediation

activities between 2008 and 2012 targeted off-Site migration of this dissolved-phase groundwater plume via operation of an air sparge/soil vapor extraction (AS/SVE) system along the Site boundary. Following remediation, TCE concentrations were reduced to below the Vermont Primary Groundwater Quality Enforcement Standards (GWQES) and are currently below laboratory reporting limits in wells being monitored at the Site. PCE concentrations in the dissolved phase plume have decreased by up to 98% since monitoring began in 2006.

In 2006, evidence suggestive of the presence of dense non-aqueous phase liquid (DNAPL; i.e., detection of PCE in a groundwater sample collected from ERM-1 at a concentration approaching its aqueous solubility) was observed in AOC 1 within the upper portion of the silt aquitard. Total petroleum hydrocarbons (TPH) were detected within the vadose zone and shallow sand and gravel aquifer within AOCs 1 and 3. This TPH was thought to be associated with historical degreasing activities that may have contained PCE and TCE. Source area remediation within the largest AOC, AOC-1, was completed via thermally enhanced AS/SVE between 2008 and 2009. PCE concentrations in groundwater near the former AOC-1 source area have been reduced by over 99.9% and TCE is not currently detected above reporting limits. The current dissolved-phase plume is being monitored on an annual basis, laboratory data is sent to VTDEC annually and Interim Remedial Measure/CAP Operation, Maintenance, and Monitoring Reports are submitted biennially.

Consistent with the preliminary CSM (ERM 2007), groundwater data collected since the 2007 SIR demonstrate that TCE concentrations have been reduced to below GWQES by active remediation previously completed at the Site. No additional sources of TCE or detections of TCE were identified in the vicinity of Plant 2. PCE continues to be detected in groundwater, with the highest concentrations near the northwest property boundary of the Site and a low concentration plume extending in the direction of groundwater flow, to the northwest. Based on groundwater PCE concentrations measured since 2009, concentrations have not increased, and are expected to decline over time through natural attenuation. Monitoring of CVOC concentrations in groundwater is a part of this CAP.

Contaminants of concern (COCs) present and migrating within the vadose zone were investigated and discussed in the 2007 SIR CSM as well as in the 2008 Vapor Intrusion Investigation Report (ERM, 2008), the 2011 and 2012 residential property investigations (ERM 2011, 2012a, 2012b), the November 2019 soil gas survey, and the 2021 SIR. Primary risk drivers present in soil gas include PCE and TCE. PCE and TCE continue to be present in soil vapor under Plant 1, Plant 2 and the Boiler House. Based on data collected to date, it does not appear that soil gas concentrations migrate significantly from the Site. The 2011 and 2012 investigations on the residential properties (including two passive soil gas surveys, a Waterloo APSTM investigation, and depth-discrete soil sampling) indicate that Morgan Brook impedes soil gas migration. These investigations also demonstrated that soil gas impacts on the residential properties are likely due to the presence of a separate and distinct off-site source of PCE in soil that did not migrate from the Energizer property. In an email dated 17 August 2012, VTDEC concurred with the conclusion that there was “a separate and distinct off-site source area on the residential properties.”

A 2019 sub-slab soil gas survey confirmed PCE and TCE are present in sub-slab soil gas below Plant 1 but indoor air was not sampled due to ongoing manufacturing and facility closure cleaning activities. Plant 1 indoor air sampling following finalization of facility closure/cleaning may be proposed to VTDEC under a separate work plan. PCE and TCE concentrations under Plant 2 and the boiler house are present at lower concentrations than under Plant 1. PCE and TCE are not present under the tank farm enclosure. As PCE and TCE concentrations in groundwater near the Site buildings are generally low or below laboratory reporting limits, the concentrations measured in soil gas are indicative of low concentrations of these compounds adsorbed to organic matter in soils likely near or under Site buildings. As these compounds volatilize into soil gas, the concentrations will decrease over time through natural attenuation. A combination of active vapor mitigation and institutional controls is the selected corrective action for soil vapor and the VOC vapor intrusion pathway as described in the ECAA (ERM 2021c). As the Site is

currently vacant and future Site use is unknown, the specific combination of controls cannot be determined at this time and this pathway will be addressed under a separate CAP when needed.

Per- and polyfluorinated alkyl substances (PFAS) have also been detected in groundwater at the Site. Of the PFAS detected, only perfluorooctanoic acid (PFOA) was detected in all locations sampled. Variability in PFAS concentrations within and immediately downgradient of the site are consistent with the variability noted in groundwater samples collected by others in the Bennington area over the past several years. Based on concentrations detected in groundwater, there is no evidence of a PFAS groundwater source area at the Site. Based on Site records, products potentially containing PFAS were used at the Site (in particular in Plant 2). Products that potentially contained PFAS were used as finished products and no PFAS were manufactured or used directly as raw materials at the Site. Based on these uses, Site operations were unlikely to have released PFOA to Site soils and/or groundwater. A source of PFOA in the Bennington area is the former ChemFab facility that used PTFE dispersions containing PFOA. Based on air deposition models, emissions of PFOA from the ChemFab facility to the air are documented to have deposited on soils and impacted groundwater in portions of Bennington, and the extent of these impacts is currently under investigation by others. To the extent that there are PFAS impacts in Site groundwater, the distribution of concentrations indicate background concentrations from anthropogenic sources with storm water and subsurface infrastructure as the likely predominant distribution pathway. The isolated and low concentrations of other PFAS are consistent with anthropogenic background and there is no source area to include in the CSM. Appropriate mitigation measures for groundwater impacted by PFAS are addressed in this CAP (i.e., groundwater monitoring). PFAS are not sufficiently volatile to impact indoor air through vapor intrusion and were not considered as part of the corrective action.

3. PUBLIC NOTICE

In accordance with Section 35-607(b)(1) of the IRule, upon approval of this CAP, Energizer will provide notice to property owners impacted by the release and to adjoining property owners. **Figure 4** shows the properties adjacent to the Site, and the relevant contact information for these properties is provided in **Table 1**.

4. PERFORMANCE STANDARDS

This section demonstrates that the corrective actions meet the performance standards outlined in Section 35-606(b)(4) of the IRule.

4.1 Corrective Actions - Groundwater

Long term monitoring and institutional controls are the proposed corrective actions for COCs in groundwater. Long term monitoring consists of collecting samples from on- and off-Site monitoring wells to monitor concentrations of chlorinated volatile organic compounds (CVOCs), in particular PCE, and PFAS. Although this does not reduce contaminant mass and concentrations, routine monitoring will allow routine assessment of COC concentrations to determine if they are increasing, if there are potential exposures that have not been controlled, and will monitor natural attenuation over time. Eight (8) existing monitoring wells will be used in the long term monitoring program (**Figure 5**). Each of the eight wells are screened at the target depth which is the shallow aquifer above the silt aquitard (approximately 5 to 15 ft bgs). The monitoring wells selected for monitoring are identified in Section 4.3 and the sampling frequency and methodology are described in Section 9.2.

Land use restrictions are also part of the remedy to mitigate risk to future potential receptors. Ingestion and direct contact of impacted groundwater by current and future downgradient residents and/or commercial/industrial workers will be controlled by a groundwater reclassification restricting the installation of wells downgradient of the Site. Although the Site is currently unoccupied, this groundwater reclassification will also control exposure of potential future on-site residents or commercial/industrial workers to impacted groundwater through ingestion or direct contact. A soil and groundwater management plan will include institutional controls specific to off- and on-site construction workers who may be exposed to impacted soil and groundwater during construction activities. The institutional control plan is included as Appendix A.

Currently operations at the Site have ceased and the Site is available for sale. As mentioned in the VTDEC-approved ECAA (ERM 2021c), Energizer will prepare and submit a CAP for active vapor mitigation and institutional controls to mitigate exposure of occupants to COCs through vapor intrusion upon identification of a future Site owner or occupant.

The remainder of this document applies to the groundwater corrective action only.

4.1.1 Corrective Action Objectives

According to §35-603 of the VTDEC IRule, corrective actions should be designed to mitigate the impacts of hazardous materials to sensitive receptors to the maximum extent practicable. As identified in the ECAA (ERM 2021c), there are no complete exposure pathways for receptors to groundwater that are identified as related to the Energizer Site. Long term monitoring will achieve the corrective action objectives consistent with the VTDEC IRule by identifying any potential exposure conditions that may arise with time, and enabling the implementation of additional corrective actions, if needed, in the future. Institutional Controls will further meet corrective action objectives by precluding the use of groundwater for potable water purposes without prior sampling and consent by Vermont Agency of Natural Resources (VTANR) (i.e., a groundwater reclassification in the area) and by directing the management of soil and groundwater at the facility if it is disturbed by construction or maintenance activities (i.e., a soil and groundwater management plan).

4.2 Applicable Environmental Media Standards

As described in the approved ECAA, Site COCs are PFAS, PCE and TCE. In addition, PCE's chlorinated daughter products will also be monitored (cis-1,2-dichloroethene [cDCE], trans-1,2-dichloroethene [tDCE], vinyl chloride[VC]). The groundwater standards for the Site are provided in Appendix 1 of the VTDEC Groundwater Protection Rule and Strategy (7/6/2019), and relevant criteria are shown in Table 2 below.

Table 2: Applicable Groundwater Standards

Analyte	CAS Number	Groundwater Enforcement Standard (µg/L) ¹	Vermont Action Level (µg/L)	Preventative Action Level (µg/L) ²
PCE	127-18-4	5	1	0.5
TCE	79-01-6	5	0.5	0.5
cDCE	156-59-2	70	NE	35
tDCE	156-60-5	100	NE	50
VC	75-01-4	2	0.5	0.5
Perfluorohexane Sulfonic Acid (PFHxS)	355-46-4	0.02	NE	0.02
Perfluoroheptanoic Acid (PFHpA)	375-85-9	0.02	NE	0.02
Perfluorononanoic Acid (PFNA)	375-95-1	0.02	NE	0.02
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.02	NE	0.02
Perfluorooctanoic Acid (PFOA)	355-67-1	0.02	NE	0.02

¹Groundwater enforcement standard of 0.02 µg/L for any combination of PFOA, PFOS, PFHxS, PFHpA, and PFNA.

²Preventative action level of 0.002 µg/L for any combination of PFOA, PFOS, PFHxS, PFHpA, and PFNA.

NE=not established

4.3 Compliance Points

Long term monitoring includes annual monitoring of eight (8) monitoring wells in the shallow aquifer, as shown in **Figure 5**. These eight wells (ERM-8, ERM-11S, ERM-12, ERM-13, ERM-16, MW-102, MW-103, and MW-104) were chosen as to serve as downgradient monitoring points from Plants 1 and 2. These compliance points contain the five compliance points included in the previous CAP (ERM-8, ERM-11S, ERM-12, ERM-13, and ERM-16), which was last updated on 8 February 2016.

4.4 Selection of Compliance Points

The compliance points were selected based on CVOC and PFAS concentrations and on the direction of groundwater flow.

- ERM-12 was selected because the highest PCE concentrations have been measured at this location.
- ERM-13, ERM-11S, and ERM-8 are located up- and cross-gradient from ERM-12 and were selected to monitor potential migration of PCE from ERM-12.

- ERM-16 was selected due to its location downgradient and because previous sampling has detected TCE concentrations above the GWQES.
- MW-103 and MW-104 were selected because they contained PFAS exceeding the GWQES during the site investigation.
- MW-102 was selected as a cross-gradient PFAS monitoring location.

The wells selected for monitoring due to PCE concentrations (ERM-8, ERM-11S, ERM-12, ERM-14, and ERM-16) also serve as downgradient monitoring locations for PFAS migration from MW-103 and MW-104. The spatial distribution of these eight monitoring wells both perpendicular and parallel to the direction of groundwater flow (**Figure 3**) increases the likelihood of detecting contaminants if they are migrating from the Site.

4.5 Status of Exposure Pathways

As discussed in the approved ECAA, there are no complete exposure pathways for receptors to groundwater that are identified as related to the Energizer Site (ERM 2021c).

4.6 Remaining Contaminant Mass and Removal Rates

As discussed in the approved ECAA, no Site-specific sources of COCs were found to be remaining on-Site. Because there is no identified source area, Energizer is not able to estimate the amount of remaining contaminant mass based on currently available information.

No active COC removal is included with long term monitoring, so mass removal depends on natural processes of biological degradation, adsorption, and dilution. The mass removal rate for these processes cannot be estimated with currently available information.

4.7 Performance Standards

Long-term monitoring will continue until COC concentrations are below regulatory thresholds. Land-use restrictions will be part of the long-term monitoring remedy to mitigate the potential exposure pathways. The monitoring data will be reviewed annually, and the program will be reviewed every five years to determine if modifications need to be made.

4.8 Estimated Duration of Corrective Action or to Site Closure

As explained in Section 4.6, Energizer is not able to determine the amount of remaining contaminant mass due to off-Site sources. Although PCE is expected to attenuate naturally over time, there is no natural degradation mechanism for PFAS compounds. Long-term monitoring and institutional controls will continue and the overall plan will be reassessed as part of a five-year review to understand progress towards Site closure and if modifications to the program need to be made. Modifications to the program may also be requested outside of a five-year review if data supports changes and a request is made to VTDEC.

5. PERMITS

The legal requirement for implementing long term monitoring is a VTDEC-approved work plan. For institutional controls, a VTDEC approved CAP is needed as well as an approval of the land use-restrictions to be implemented (i.e., approval of groundwater reclassification and a soil management plan). No specific permits are required for these corrective actions.

6. REMEDIAL CONSTRUCTION PLAN

No active remediation will be taking place under long-term monitoring, and no remedial construction is necessary for this corrective action.

7. WASTE MANAGEMENT

Wastes generated during long-term monitoring will consist of equipment decontamination fluids and monitoring well groundwater purged during sampling. During each sampling event, the liquid waste stream will be containerized in Department of Transportation approved 55-gallon steel drums and staged on-Site in the vacant buildings for subsequent waste disposal pending receipt of analytical results and waste profiling. Given that the waste generated from the proposed monitoring activities cannot be attributed to a specific manufacturing or industrial operation, this investigation derived waste (IDW) does not qualify as a listed waste. All waste containers will be labeled with the generator name, Site address, contents, determination status, and accumulation start date. Waste will be shipped under an approved waste profile by a qualified waste transporter to a qualified waste management entity.

8. IMPLEMENTATION SCHEDULE

Following approval of this CAP, Energizer will submit a long-term monitoring work plan (an initial long term monitoring plan is provided in Appendix B). Long term monitoring will begin immediately following approval by the Secretary of the VTANR with the first samples collected within six months of approval. The implementation schedule for institutional controls is ongoing. As noted in Section 9.3, some institutional controls (i.e., groundwater reclassification) are already submitted by others to VTANR. The other institutional controls, the soil and groundwater management plan, will be drafted and submitted to the agency following approval of the CAP.

9. CORRECTIVE ACTION OPERATION AND MAINTENANCE PLAN

This section details the corrective action operation and maintenance plan in accordance with Section 35-606(b)(9) of the IRule.

9.1 Description of Monitoring and Maintenance of Engineered Solution

No engineered solution will be implemented or maintained as part of long-term monitoring.

9.2 Performance Monitoring and Data Collection Strategy

No active remediation will occur during long term monitoring. The groundwater monitoring wells included in the long-term monitoring will be sampled annually and then may be reduced in frequency based on data collected (see Section 4.8). Sampling will be completed in accordance with USEPA and VTDEC guidance for sampling monitoring wells for CVOCs and PFAS (USEPA 2017; VTDEC 2020). Prior to initiating monitoring well sampling, depths to water will be collected from the selected monitoring wells using an electronic water level indicator. The depths to water will be recorded from a reference point at each monitoring well and recorded on a field gauging form. The water level indicator will be decontaminated between each gauging location using an Alconox® and PFAS-free potable water solution followed by a PFAS-free distilled water rinse between uses.

Groundwater samples will be collected from the approximate middle of the screened interval using low-flow purging techniques as outlined in USEPA Region I procedure (USEPA, 2017). Low-flow monitoring well purging will be conducted using peristaltic pumps and polypropylene tubing. Select in-situ geochemical parameters will be monitored in the field using a calibrated YSI 566 meter (or equivalent) with a flow-through cell. These parameters will be recorded every 5 minutes during purging to provide geochemical data and evaluate groundwater stabilization prior to sample collection. The following parameters and stabilization will be considered to be achieved when three (3) consecutive readings are within the following limits:

- Dissolved Oxygen $\leq 10\%$
- Turbidity < 50 Nephelometric Turbidity Units
- Specific Conductance $\leq 3\%$
- Temperature $\leq 3\%$ ($^{\circ}\text{C}$)
- pH ± 0.1 unit
- Oxygen Reduction Potential ± 10 millivolts.

Samples will be collected directly into laboratory-supplied sampling containers, which will be pre-labeled and stored in a clean, pre-chilled cooler. Samples will be transported under chain-of-custody to the laboratory. Groundwater samples will be analyzed by a VTDEC-certified laboratory for PFAS by Modified USEPA Method 537.1 and for VOCs by USEPA Method 8260C. The reported VOC list will be PCE, TCE, cDCE, tDCE, and VC. Laboratory results will be tabulated and shared with the VTDEC via email, similar to the previous post-remediation monitoring conducted at this Site.

9.3 Institutional Controls

Institutional controls are summarized in Section 10 and will be monitored and maintained in accordance with the Institutional Control Plan included in **Appendix A**.

9.4 Cost estimate for implementation of Corrective Action Plan

As described in the approved ECAA, the estimated cost to implement long term monitoring over the next 30 years (net present value) is approximately \$366,000. The basis for this cost estimate is summarized in **Table 3**. At the request of the Secretary of VTANR, financial assurance can be provided as required under 40 CFR Part 264 Subpart H.

9.5 Operation and Maintenance of Active Remedial Option until Corrective Action Objectives Achieved

No active remediation will occur during long term monitoring, so no operation and maintenance will be necessary.

9.6 Treatment System Deconstruction/Decommission

No treatment system will be established as part of long-term monitoring so no deconstruction or decommissioning will take place. It should be noted that, from prior remediation activities at the Site, an air sparge/soil vapor extraction system (AS/SVE) and a steam enhanced SVE system existed in the Plant 1 building. These systems have been shut down for multiple years (i.e., shut down in 2009 for the steam system and in 2012 for the AS/SVE system). The deconstruction and decommissioning of these systems were completed using the general procedures documented in the Site Closure Plan (Energizer, 2021a).

Air sparge, soil vapor extraction and steam injections wells are still present in and around the Plant 1 building. These locations and groundwater monitoring wells that are not part of the long-term monitoring plan will remain in place until the potential future Site use is determined. Details of the closure and removal of these wells will be provided in a CAP amendment. When decommissioned, wells will be closed by a Vermont licensed driller by filling with grout in accordance with the Water Supply Rule Sections 12.2.5 and 12.3.18.

10. INSTITUTIONAL CONTROL PLAN

An institutional control plan (ICP) is included in **Appendix A**, in accordance with IRule §35-901. Two institutional controls will be used for this Site:

- Groundwater reclassification; and,
- Soil and groundwater management plan.

A groundwater reclassification order has recently (2 November 2021) been put in place by others and covers the area of the Site as well as a large area of the city of Bennington. The groundwater within the region has been reclassified from Class III to Class IV, indicating that it is not suitable as a source of potable water. Under the terms of the reclassification order, installation of new drinking water supply wells is prohibited unless there are extenuating circumstances approved by the VTANR for residents or businesses located within 200 feet of a municipal water line. In addition, the order requires that VTDEC be notified of any new wells for industrial, commercial, and geothermal use so they can assess the suitability of such well or use in light of the Class IV designation. Although the order does not affect the existing use of overburden wells or springs, there are no existing private or public water supply wells in the area of downgradient impacts as described in the Supplemental Site Investigation Report (ERM, 2021b) and the VTDEC-approved ECAA (ERM, 2021c). Thus, the 2 November 2021 groundwater reclassification order serves as an institutional control to protect current and future off-site residents and/or commercial/industrial workers from Site-impacted groundwater through ingestion and direct contact. There are no impacted private or public water supply wells downgradient of the Site and installation of wells for water supply, industrial, commercial, or geothermal use is prohibited without VTANR and/or VTDEC waivers.

Construction workers may be exposed to impacted Site soils and groundwater during on-site activities, including excavations. Proper monitoring and personal protective equipment can prevent exposure of these workers to COCs. A soil and groundwater management plan detailing these controls will be prepared and submitted following approval of this CAP and as part of the ICP. Additional details of the Institutional Controls are included in **Appendix A**.

11. LONG TERM MONITORING PLAN

Following approval of this CAP by the Secretary of VTANR, Energizer will submit a long-term monitoring plan. As detailed in this CAP, Energizer plans to monitor eight groundwater monitoring wells annually as shown on Figure 5. Annual monitoring will continue for five years after which data will be reviewed in a five-year review to determine if the sampling frequency or other modifications can be made. Modifications to the program may also be requested outside of a five-year review if data supports changes and a request is made to VTDEC. A draft Long Term Monitoring Plan is included as **Appendix B**.

12. REDEVELOPMENT AND REUSE PLAN

Energizer does not anticipate a redevelopment and reuse plan will be necessary as part of long term monitoring. Property redevelopment and reuse is dependent on a future property sale. Once a potential purchaser is identified additional corrective actions including corrective actions for soil vapor and vapor intrusion management will be proposed and an amendment to this CAP will be submitted.

13. QUALITY ASSURANCE AND QUALITY CONTROL PLAN

Long term monitoring will be performed in accordance with the following guidance:

- VTDEC IRule, dated 6 July 2019;
- United States Environmental Protection Agency (USEPA) Region I Low-Stress Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells; and
- VTDEC PFAS Sample Collection Information (VTDEC 2020).

If the guidance documents listed above are updated, the latest versions will be followed to the extent practicable.

Quality Assurance/Quality Control (QA/QC) samples will be collected to confirm the usability of field analytical results generated are consistent with Precision, Accuracy, Representativeness, Completeness, Comparability and Sensitivity parameters. The following QA/QC samples will be collected:

Field Duplicate Samples: Field duplicate samples will be collected to determine analytical and sampling precision. One field duplicate sample will be collected for every 10 groundwater samples. Parent samples of duplicates will be recorded both on field forms and in the field book. Field blanks will be analyzed for identical parameters as the corresponding media samples.

- Trip Blanks: Trip blanks will prepared by the laboratory in advance and follow the sample bottles and same shipping containers before returning to the laboratory for analysis with the other samples. Trip blanks will not be opened. One trip blank sample will be prepared and analyzed for VOCs in groundwater during each sampling event.
- Field Rinseate Blanks (FRBs)/Trip Blanks: FRBs will also double as the PFAS trip blank. The FRB will be prepared by pouring laboratory-provided, ultra-pure, PFAS-free deionized water into lab-provided sample containers. One FRB will be collected for groundwater per field event. The FRB will be analyzed for identical parameters as the associated samples.

14. COST ESTIMATE

Because Energizer will not be using state or federal funds to complete long term monitoring and the Site not currently enrolled in the Brownfields Reuse and Environmental Liability Limitation (BRELLA) program, a detailed cost estimate of the corrective action is not applicable under Section 35-606(b)(14) of the IRule. If a future Site owner brings the Site into the BRELLA program, the required cost estimates will be prepared and submitted.

15. UPDATED MAP SET

The most recent maps, required by Section 35-306(b)(14) of the IRule are included with this CAP.

- Site Vicinity Map (**Figure 1**)
- Site Layout Map (**Figure 2**)
- Most Recent Groundwater Contour Map (**Figure 3**)
- Most Recent CVOC and PFAS Concentration Maps (**Figures 6 and 7**)

16. TABULAR, TIME-SERIES SUMMARIES OF CONTAMINANT CONCENTRATIONS IN ENVIRONMENTAL MEDIA

Concentrations of VOCs and PFAS in groundwater are included in tabular form in **Appendix C** as Tables C1 and C2. These tables include historical results for Site monitoring wells in chronological order.

17. CROSS-SECTIONS OF CONTAMINATED ZONE

A cross-section of the Site is included as **Figure 8**.

18. PROPOSED CONTRACTORS, SUB-CONTRACTORS

No construction contractors will be necessary for long term monitoring. Energizer will select contractors to perform long-term monitoring after approval of the CAP. Current known contractors for groundwater sampling and laboratory analytical are as follows:

- ERM – 1 Beacon St. 5th floor, Boston, MA 02108 Phone: +1 (617) 646-7800 Contact: Catherine Regan
- Eurofins/Test America – 30 Community Drive, Suite 11, South Burlington, VT 05403 Phone: +1 (802) 923-1021 Contact: Kathryn Kelly

The contractor and laboratory performing long-term monitoring is subject to change at the discretion of Energizer.

REFERENCES

ERM. 2007. *Site Investigation Report/Corrective Action Feasibility Investigation*. Environmental Resources Management. 14 June 2007. Revised 27 August 2007.

ERM. 2008. *Vapor Intrusion Investigation Report – Addendum to Site Investigation Report*. 30 April 2008.

ERM. 2011. *Residential Property Investigation Work Plan – Updated Passive Soil Gas Sampling and Waterloo APS Investigation*. Environmental Resources Management. 21 September 2011.

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ERM. 2012b. *Residential Property Investigation – Fall 2011 and Spring 2012*. Environmental Resources Management. 7 August 2012.

ERM. 2020. *Site Investigation Work Plan*. Environmental Resources Management. 27 May 2020.

Energizer. 2021a. *Site Closure Plan*. Energizer, 401 Gage Street, Bennington, VT. 4 May 2021.

ERM. 2021b. *Supplemental Site Investigation Report*. Environmental Resources Management. 16 June 2021.

ERM. 2021b. *Supplemental Site Investigation Report*. Environmental Resources Management. 16 June 2021.

ERM. 2021c. *Evaluation of Corrective Action Alternatives*. Environmental Resources Management. 27 July 2021.

USEPA (United States Environmental Protection Agency) Region I. 2017. *Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells*. USEPA Region I. 19 September 2017.

VTDEC. 2019a. *Investigation and Remediation of Contaminated Properties Rule*. Vermont Department of Environmental Conservation. 6 July 2019.

VTDEC. 2019b. *Groundwater Protection Rule and Strategy*. Vermont Department of Environmental Conservation. 6 July 2019.

VTDEC. 2020. *PFAS Sample Collection Information*. Vermont Department of Environmental Conservation. Updated 31 January 2020.

TABLES

Table 1
Adjacent Property Contact Information
ENERGIZER Bennington Facility
Bennington, Vermont

Parcel ID	Owner Address	Ownership Name	Registered Agent (if LLC)	Contact Phone Number or email address
-50530102	119.5 PARK ST APT 3 BENNINGTON, VT, 05201	VEZINA MATTHEW J	N/A	(860) 739-0596
-50532300	106 SCOTT ST BENNINGTON, VT, 05201	GAUTHIER JEFFREY J	N/A	(802) 447-8943
-50533400	110 PRATT ST BENNINGTON, VT, 05201	RYAN KERRY G & MARY B, LIFE ESTATE	N/A	(802) 447-7133
-50533500	108-10 SCOTT ST BENNINGTON, VT, 05201	CASSANO LINDA C LIFE ESTATE	N/A	(802) 447-1320
-50533600	1481 STROHMAIER RD BENNINGTON, VT, 05201	TAHIRIH LLC,	Strohmaier Genevieve	(802) 442-2536
-50533700	241 GEORGE ST N BENNINGTON, VT, 05257	WOODARD DOUGLAS J & JUDITH	N/A	(802) 442-6209
-50534500	638 MAIN ST BENNINGTON, VT, 05201	318-320 GAGE STREET LLC, C/O PETER K CROSS MEMBER	Cross Peter K	(802) 447-3753
-50534600	315 GAGE ST BENNINGTON, VT, 05201	NOLAN ROBERT D	N/A	(802) 447-4938
-50534700	PO BOX 326 BENNINGTON, VT, 05201	ALP PROPERTIES LLC	Parizo Jennifer	(802) 442-2665
-50535900	638 MAIN ST BENNINGTON, VT, 05201	322-324 GAGE ST LLC	Cross Peter K	(802) 447-3753
-50536200	203 MAPLE ST BENNINGTON, VT, 05201	ELWELL SALLY M	N/A	(802) 447-7197
-50537700	404 GAGE ST BENNINGTON, VT, 05201	DASSATTI DANIEL VINCENT L & KATELYN M	N/A	(802) 442-4577
-50537800	403 GAGE ST BENNINGTON, VT, 05201	KENNEDY CHRISTOPHER J & BETSY A	N/A	(802) 447-2420

Table 1
Adjacent Property Contact Information
ENERGIZER Bennington Facility
Bennington, Vermont

Parcel ID	Owner Address	Ownership Name	Registered Agent (if LLC)	Contact Phone Number or email address
-50537900	406 GAGE ST BENNINGTON, VT, 05201	CUMMINGS ANN F & KATHERINE E	N/A	(585) 446-0284
-50538600	405 GAGE ST BENNINGTON, VT, 05201	DANVILLE ARLENE H	N/A	(802) 442-3735
-50538700	102 COULTER ST BENNINGTON, VT, 05201	AKIN DEAN M & JEAN F	N/A	(518) 753-6963
-50539200	PO BOX 29 BENNINGTON, VT, 05201	MACKSEY COLEEN B	N/A	(802) 447-0300
-50539300	PO BOX 639 N BENNINGTON, VT, 05257	GD PROPERTIES LLC	Cohen Jonathan M	BassComp@rcn.com
-50544900	638 MAIN ST BENNINGTON, VT, 05201	7 VALENTINE LANE LLC, C/O PETER K CROSS MEMBER	Cross Peter K	(802) 447-3753
-50546800	39 WESTERN AVENUE BRATTLEBORO, VT, 05301	KEEP STEPHANIE A	N/A	(802) 254-4711
-50547800	PO BOX 656 N BENNINGTON, VT, 05257	DOMMKE LLC	Dommke Brian R	(802) 442-7935
-50547801	115 PARK ST BENNINGTON, VT, 05201	DOMMKE RONALD S & BARBARA J	N/A	(802) 447-7006
-50547802	117 PARK ST BENNINGTON, VT, 05201	DALY MICHAEL & MARGARET	N/A	(802) 447-1892
-50552200	246 S STREAM RD BENNINGTON, VT, 05201	SW VT UNION ELEMENTARY SCHOOL DIST, C/O SVSU	N/A	(802) 447-7501
-51530100	503 GAGE ST BENNINGTON, VT, 05201	GALLI BARBARA B LIFE ESTATE	N/A	(802) 442-3675
-51530200	509 GAGE STREET BENNINGTON, VT, 05201	CAVE CHARLES L JR & NICOLE R	N/A	(802) 447-7897

Table 1
Adjacent Property Contact Information
ENERGIZER Bennington Facility
Bennington, Vermont

Parcel ID	Owner Address	Ownership Name	Registered Agent (if LLC)	Contact Phone Number or email address
-51530300	511 GAGE ST BENNINGTON, VT, 05201	MCLELLAN JOHN M SR & DIANNE E	N/A	(860) 698-9601
-51530900	PO BOX 55 BENNINGTON, VT, 05201	CUSHMAN THOMAS A	N/A	(802) 442-2248
-51531000	881 MONUMENT AVE BENNINGTON, VT, 05201	MAHAR JOHN A & TRISHA M	N/A	(802) 447-2324
-51532400	112 SAFFORD ST BENNINGTON, VT, 05201	ANDREWS ANTHONY F & PATRICIA A	N/A	(802) 442-2957
-51532500	116 SAFFORD ST BENNINGTON, VT, 05201	BOISSE MICHELLE & PETER	N/A	(802) 447-4931
-51532700	215 SCOTT ST BENNINGTON, VT, 05201	BALDIC TIMOTHY C, WHITE ANNETTE	N/A	(603) 883-3790
-51535600	205 SCOTT ST BENNINGTON, VT, 05201	CROTEAU RAYMOND J & JOYCE M, LIFE ESTATE	N/A	(802) 447-7695
-51535700	203 SCOTT ST BENNINGTON, VT, 05201	NGO MIHN	N/A	(518) 434-4716
-51536500	201 SCOTT ST BENNINGTON, VT, 05201	COOK KATHLEEN	N/A	(802) 442-3501
-51536600	197-99 SCOTT ST BENNINGTON, VT, 05201	MORANDI JOHN L & HELEN E	N/A	(802) 442-2496

Table 3 - Long Term Monitoring Cost Estimate

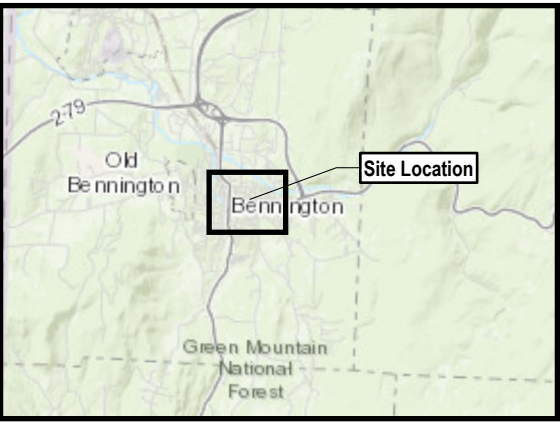
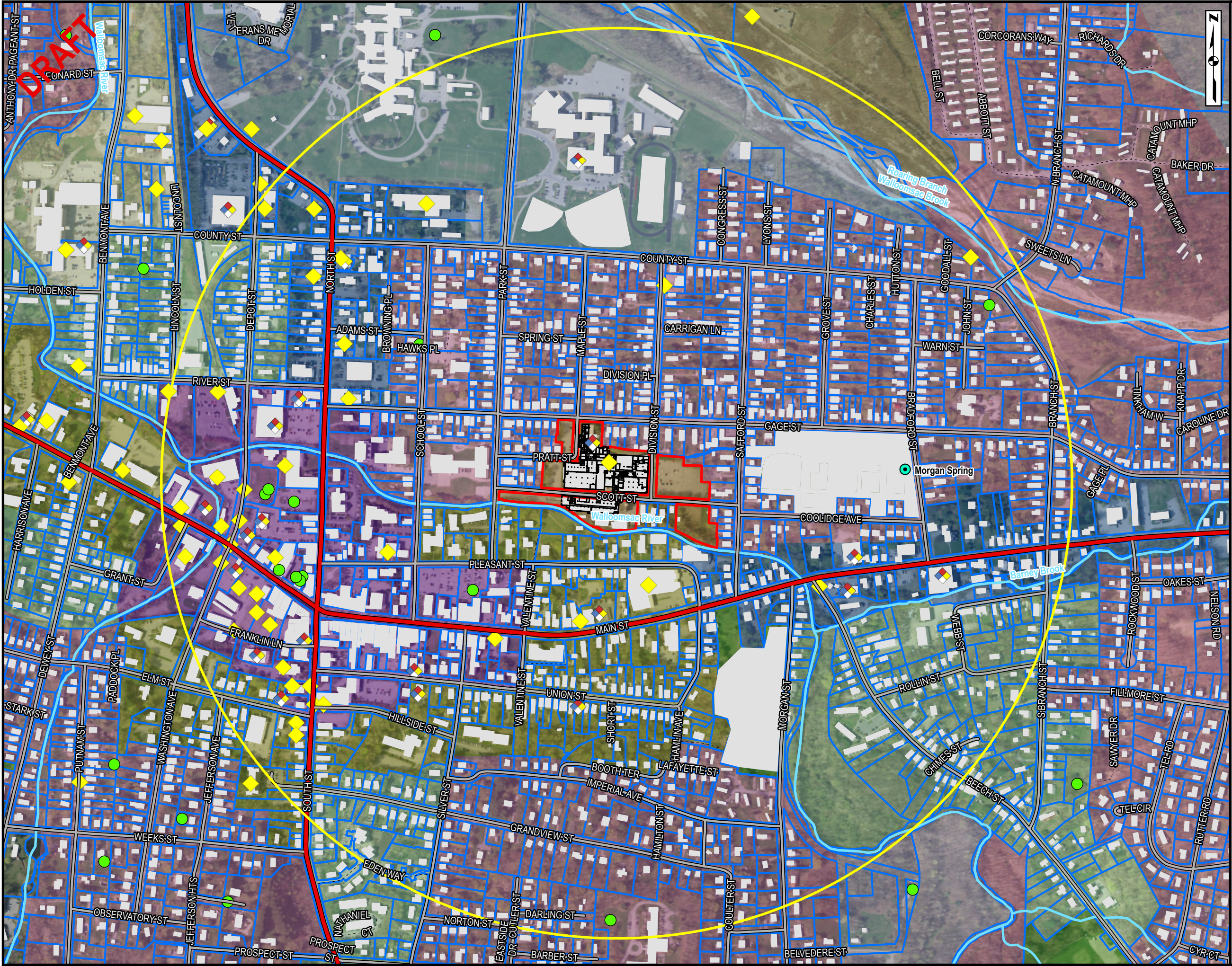
CAPITAL COSTS				
Description	Number of Units	Unit	Cost per Unit	Cost
None	1	LS	\$ -	\$ -
Project Management			12%	\$ -
Contingency			10%	\$ -
TOTAL				\$ -

Land Use Restrictions				
Description	Number of Units	Unit	Cost per Unit	Cost
Institutional Controls	1	LS	\$ 30,000	\$ 30,000
TOTAL				\$ 30,000

O&M Costs				
Description	Number of Units	Unit	Cost per Unit	Cost
Sampling	1	events	\$ 8,000	\$ 8,000
Reporting	1	LS	\$ 5,000	\$ 5,000
Project Management			5%	\$ 650
Contingency			10%	\$ 1,365
Annual Total				\$ 15,020

30-year Costs (NPV)				
Discount Rate		5%		
Inflation Rate		3%		
Year 0 Costs	\$	30,000		
Year 1 - 30 Costs	\$	15,020		
Net Present Value (NPV)	\$	366,395		

FIGURES



Legend

— Site Building Outline	Office and Apartment
— Site Property Boundaries	Public Open Space
— Property Boundary Lines	Village Commercial
— 2,000 Foot Buffer	Village Industrial
— Surface Water - Rivers/Streams	Village Residential
— Active	Industrial and Profession
— Proposed	Mixed Residential
— Inactive	Rural Residential
— Private Wells	Urban Mixed Use
— VT E911 Building Footprints	Industrial
— Zoning	
— Central Business	

Public Water Sources

- Active
- Proposed
- Inactive
- Private Wells

Hazardous Waste Site

- Hazardous Waste Site
- Hazardous Waste Generators

NOTES:

- Aerial Imagery: ESRI World Imagery
Reproduced under license in ArcGIS 10.7
- Data collected from Vermont Agency of Natural Resources in 2021

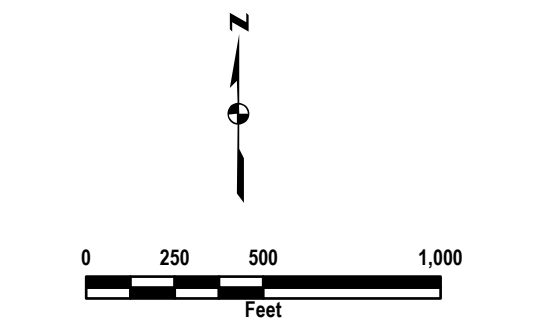
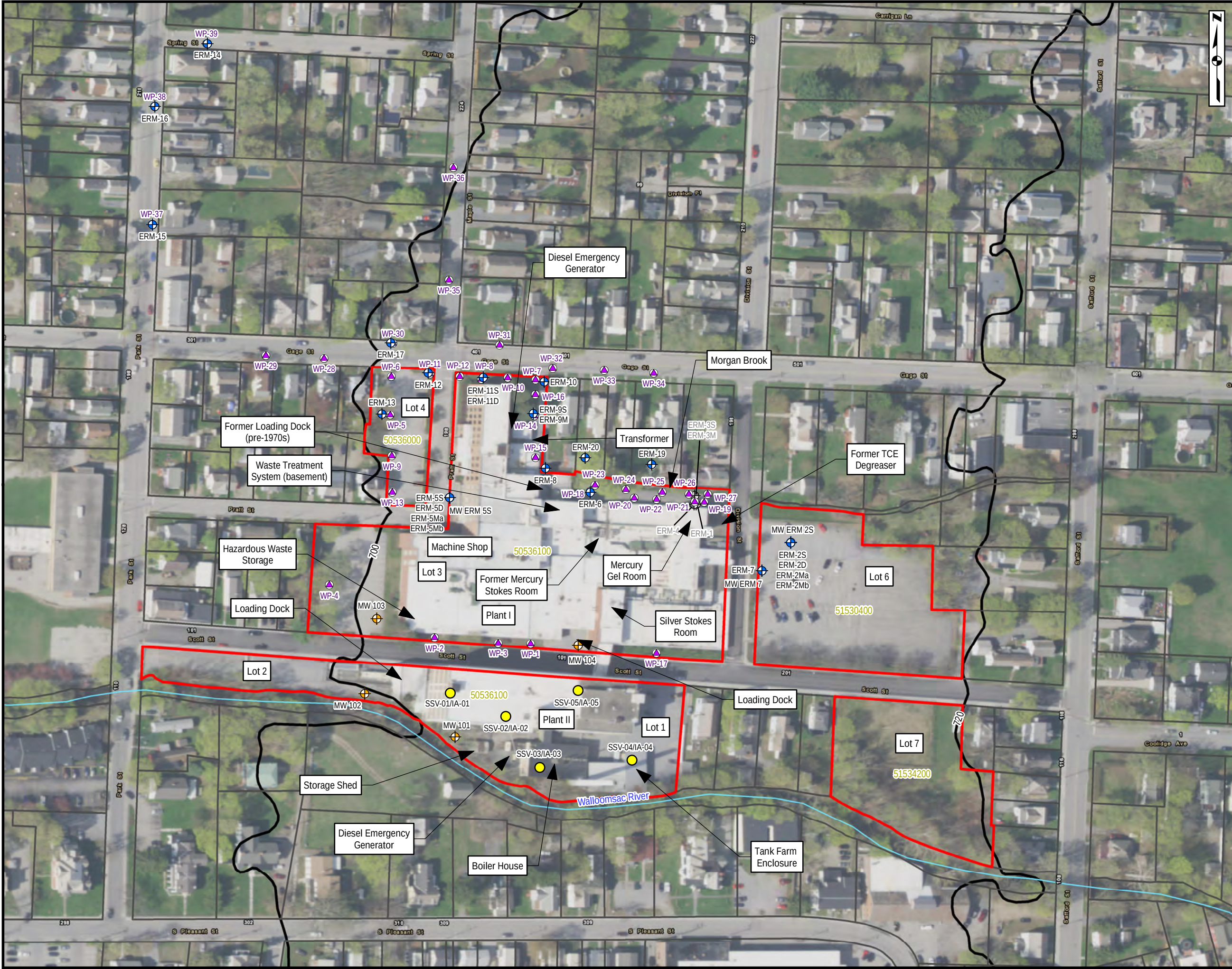


Figure 1: Vicinity Map
Energizer Holdings, Inc.
Bennington, Vermont





Legend

- Monitoring Well
- New monitoring well, installed July 2020
- Decommissioned Monitoring Well
- Waterloo Profiling Boring Location
- Sub-Slab Soil Gas Location/
Indoor Air Sample Location
- Elevation Contours
- Site Property Boundaries
- Tax Parcels
- 50536100 Tax Parcel ID

NOTES:

- Aerial Imagery: ESRI World Imagery
Reproduced under license in ArcGIS 10.7
- Data collected from Vermont Agency of Natural
Resources and USGS

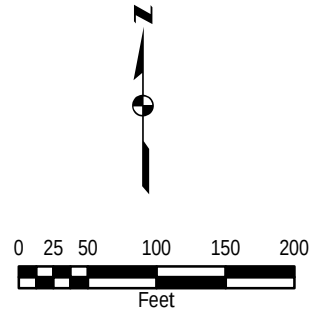
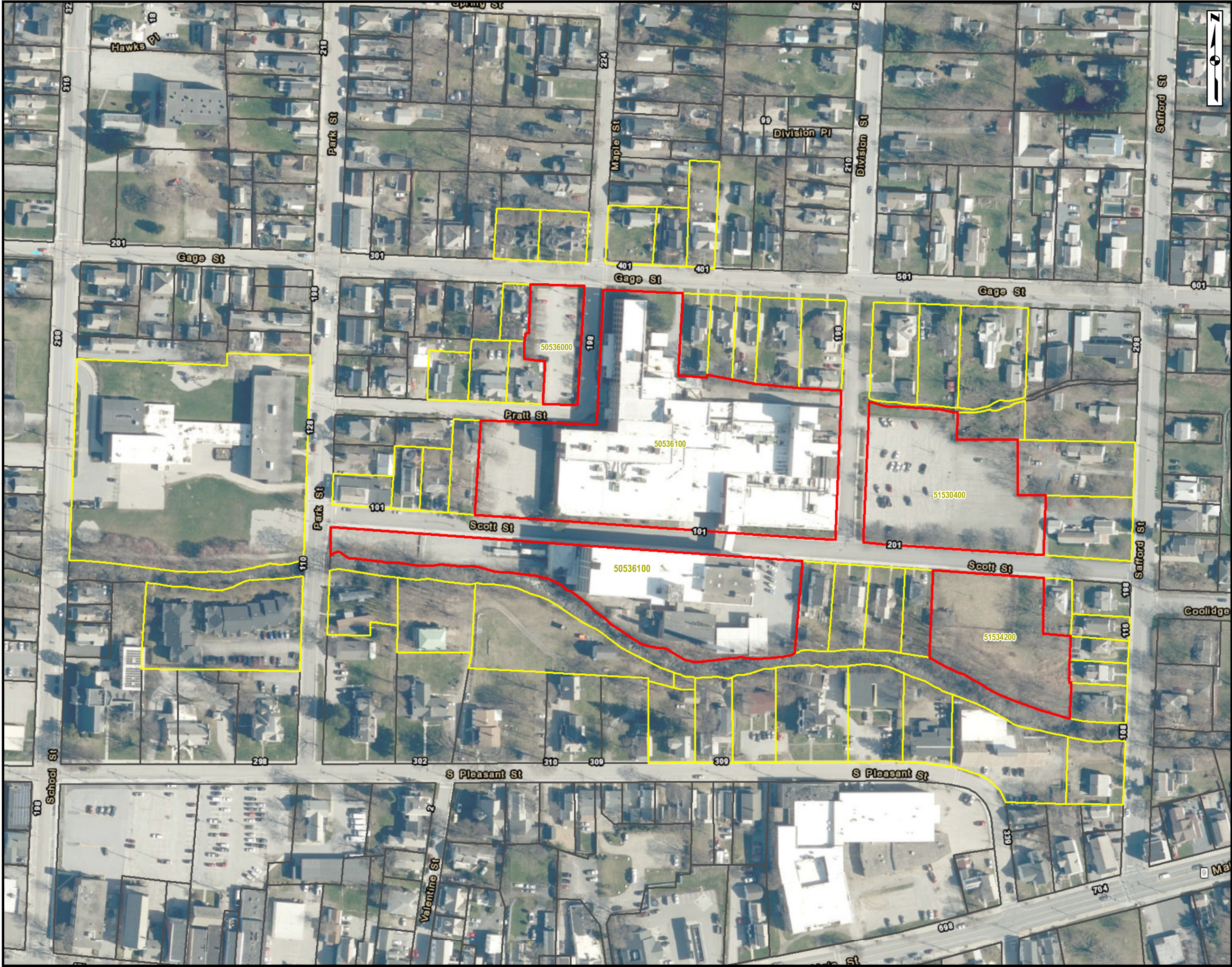


Figure 2: Site Layout Map
Energizer Holdings, Inc.
Bennington, Vermont





- Legend**
- Site Property Boundaries
 - Adjacent Property Boundaries
 - Tax Parcels

50536100 Tax Parcel ID

- NOTES:**
- Aerial Imagery: ESRI World Imagery
Reproduced under license in ArcGIS 10.7
 - Data collected from Vermont Agency of Natural Resources and USGS

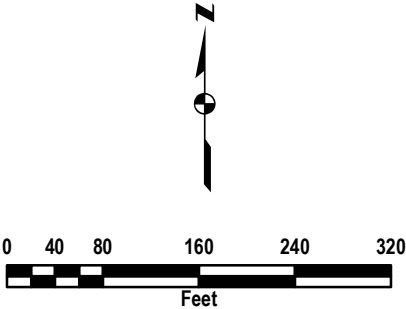
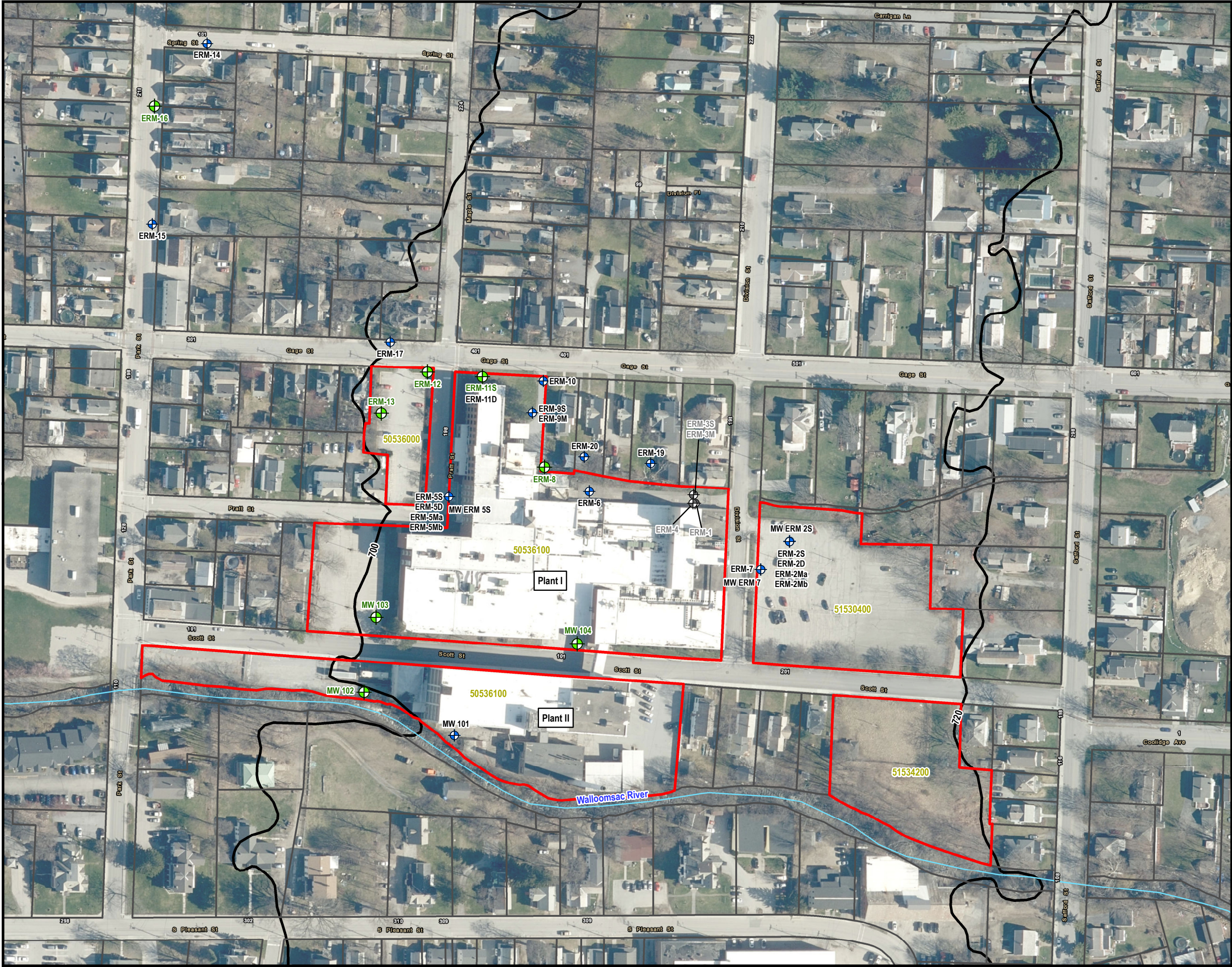


Figure 4: Parcel Boundary Map
Energizer Holdings, Inc.
Bennington, Vermont





Legend

- Existing Well Proposed for Long-Term Monitoring
- Monitoring Well
- Decommissioned Monitoring Well
- Elevation
- Site Property
- Tax Parcels
- 50536100 Tax Parcel ID

NOTES:

1. Aerial Imagery: ESRI World Imagery
Reproduced under license in ArcGIS 10.7
2. Data collected from Vermont Agency of Natural Resources and USGS

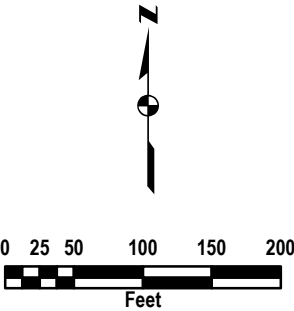
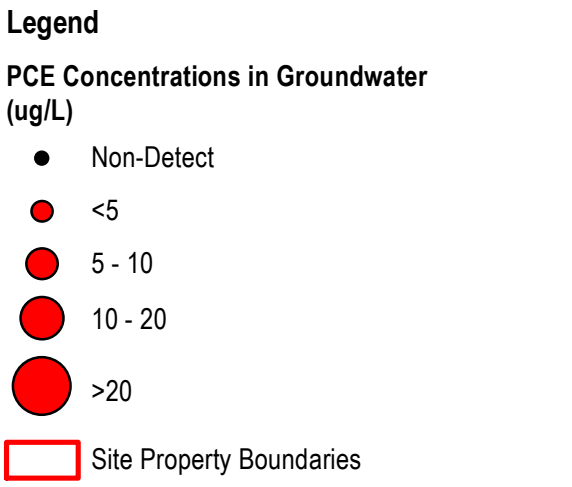
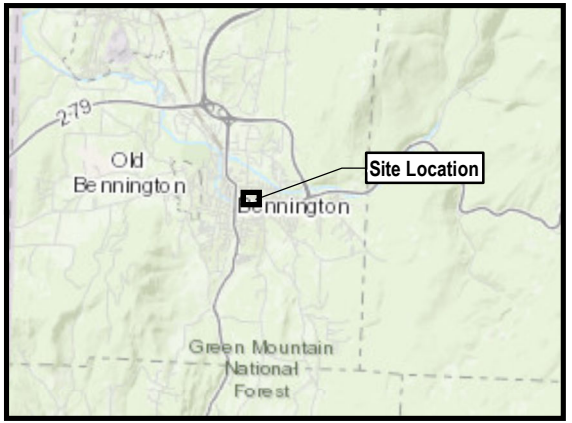


Figure 5: Long-Term Monitoring Well Locations
Energizer Holdings, Inc.
Bennington, Vermont



DRAFT



NOTES:
1. Aerial Imagery: ESRI World Imagery
Reproduced under license in ArcGIS 10.7

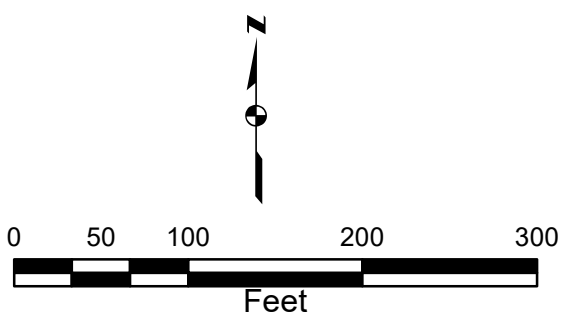


Figure 6: PCE Concentrations in Groundwater
October 2020
Energizer Holdings, Inc.
Bennington, Vermont



DRAFT

ERM-16
9.8

ERM-12
6.3

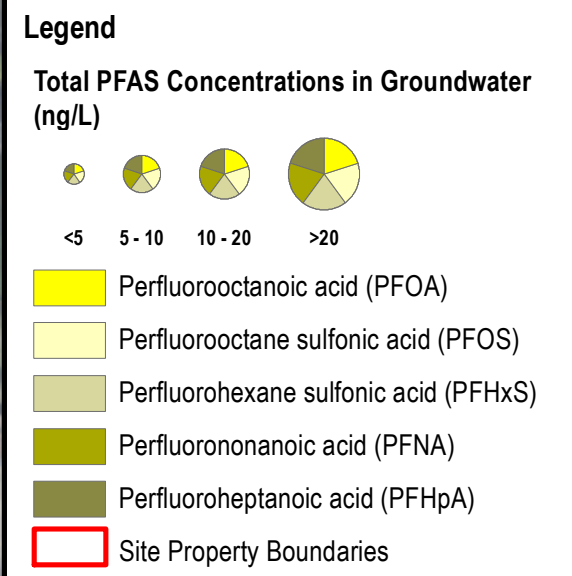
ERM-8
3.4

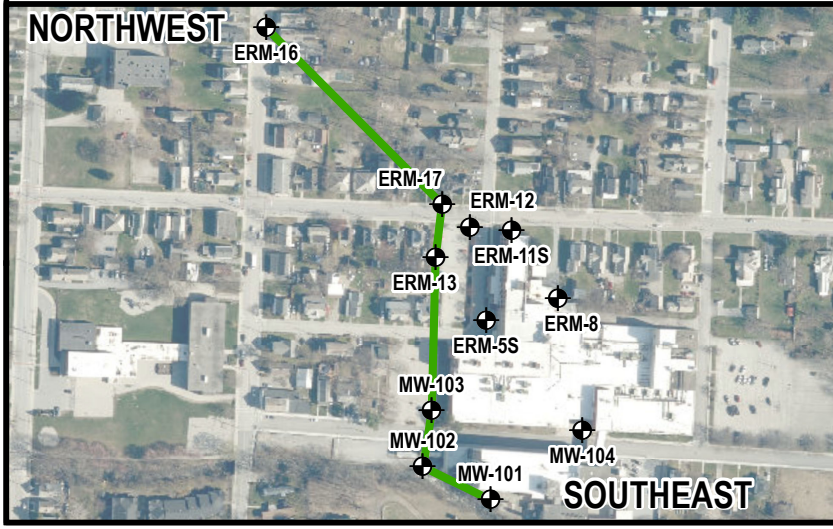
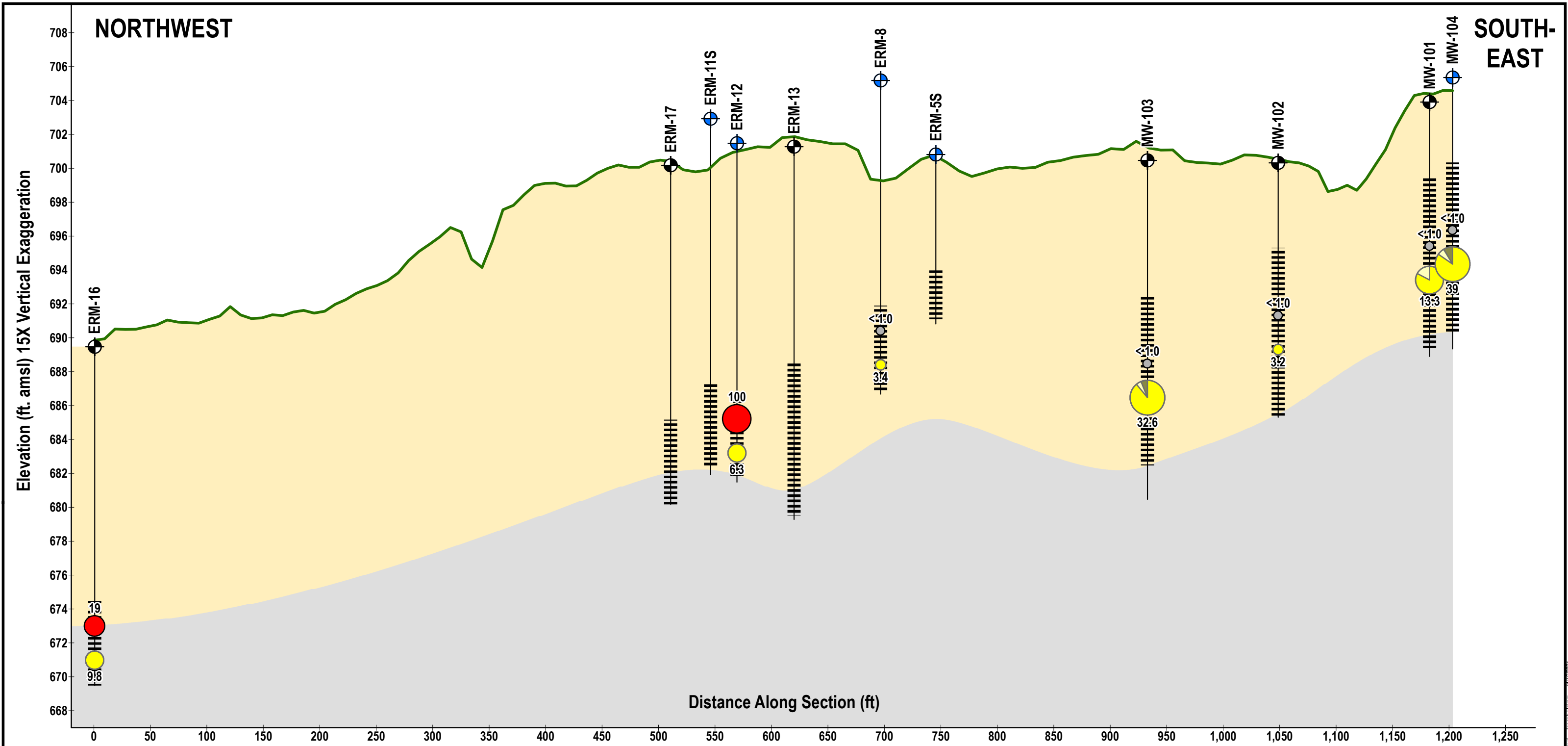
MW-103
32.6

MW-104
39

MW-102
3.2

MW-101
13.3





Legend

- Monitoring Well
- Well Projected Onto Section*
- Borehole
- Well Screen

Geology

- Sand/Gravel/Cobbles
- Silt

PCE Concentration (ug/L)

- >20
- 10 - 20
- 5 - 10
- <5
- Non-Detect

Total PFAS Concentrations in Groundwater (ng/L)

- <5
- 5 - 10
- 10 - 20
- >20
- Perfluorooctanoic acid (PFOA)
- Perfluorooctane sulfonic acid (PFOS)
- Perfluorohexane sulfonic acid (PFHxS)
- Perfluorononanoic acid (PFNA)
- Perfluoroheptanoic acid (PFHpA)

NOTES:

- * - Well does not lie along transect. Its location is projected onto the transect
- Analytical results from October 2020 sampling event

Figure 8: Cross-Section
October 2020 Sampling Event
Energizer Holding, Inc.
Bennington, Vermont
November 2021



APPENDIX A INSTITUTIONAL CONTROL PLAN

December 2021



Institutional Control Plan

1. INTRODUCTION

On behalf of Energizer Holdings, Inc. (Energizer), ERM Consulting and Engineering, Inc. (ERM) has developed this Institutional Control Plan (ICP) for site activities at 401 Gage Street, Bennington, Vermont (Site). As part of the 2021 Supplemental Corrective Action Plan (CAP) for the Site (ERM 2021b), this ICP is designed to limit exposure to Site contaminants of concern (COCs). This Plan was developed in accordance with the Vermont Department of Environmental Conservation (VTDEC) Investigation and Remediation of Contaminated Properties Rule §35-901 (IRule).

2. EXPOSURE PATHWAYS

This ICP will be implemented to eliminate exposure pathways of Site COCs. The potential exposure pathways of COCs at the Site to receptors come from contact, ingestion, or inhalation of contaminated indoor air, soil, or groundwater. The plan for eliminating exposure to the source of each of these pathways (indoor air, soil, groundwater) is explained in the following sections.

2.1 Indoor Air

As of January 2021, Site operations ceased and all buildings are vacated with the exception of minimal site maintenance and site security. Under these conditions, there is no exposure pathway from indoor air. The 2021 CAP (submitted concurrently with this ICP) specifically addresses contaminated groundwater. An additional Soil Vapor/Indoor Air CAP and accompanying ICP will be required should there be plans to restore operations at the Site, occupy the Site buildings again and/or construct/occupy new buildings. Until the Soil Vapor/Indoor Air CAP and ICP are required, no one will be allowed to occupy the buildings at the Site. This will be enforced by Energizer, as the current owner, and may be transferred to future owner(s) until an updated CAP and ICP can be implemented for indoor air.

2.2 Soil

There are two receptors that could potentially be exposed to Site-impacted soil:

- future residents and and/or commercial/industrial workers; and,
- future construction/utility worker.

Although the Site is currently vacant and operations have ceased, contaminated soil may be encountered if soil is moved at the Site. Because of this, the Vermont Agency of Natural Resources (VTANR) Secretary must approve a Soil Management Plan (as part of a Soil and Groundwater Management Plan) completed in accordance with Section §35-804 of the IRule prior to ground disturbance activities at the Site. This will be enforced by Energizer as the current

owner, and will be transferred to future owner(s) as part of a deed on the property and/or a remediation agreement as part of the purchase and sale.

A draft Soil and Groundwater Management Plan will be prepared and submitted following approval of the 2021 CAP. With respect to soil, this plan will document the personal protective equipment, air and dust monitoring, and action levels required to limit exposure of potential future construction/utility workers to COCs in Site soils. The need to properly characterize and dispose of potentially-impacted soil will also be included in the Soil and Groundwater Management Plan. For potential future residence, the Soil and Groundwater Management Plan will include restrictions on Site use to prevent exposure of residents to impacted soil and groundwater. These include prohibitions on digging, gardening, and installation of swimming pools. Upon transfer of the property, the Soil and Groundwater Management Plan will be included in the deed and/or a remediation agreement.

2.3 Groundwater

There are two groups that could potentially be exposed to Site-impacted groundwater through separate exposure pathways:

- Current and future residents and/or commercial/industrial workers; and
- Potential future construction/utility workers.

Exposure pathways and institutional controls for these receptors are described separately below.

2.3.1 Residents and/or Commercial/Industrial Workers

Current and future residents and/or commercial/industrial workers, both on-site and off-site, have the potential to be exposed to Site-impacted groundwater through ingestion or direct contact if groundwater is used for municipal or industrial purposes. This potential future pathway is controlled through groundwater reclassification.

VTANR has reclassified groundwater for an area located in the Towns of Bennington and Shaftsbury, and the Village of North Bennington as of November 2, 2021 (**Attachment A**). The reclassification of groundwater from Class III to Class IV is due to the presence of per- and polyfluoroalkyl substances (PFAS) above the applicable regulatory standards. The boundaries of this reclassification include the Site property, and the restrictions imposed by this order serve as an institutional control for groundwater for the Site COCs.

The Bennington Groundwater Reclassification order:

- Prohibits the installation of new drinking water supply wells unless there are extenuating circumstances approved by VTANR for residents or businesses located within 200 feet of a municipal water line;
- Requires that the VTDEC be notified of any new wells for industrial, commercial, and geothermal use so they can assess the suitability of such well or use in light of the Class IV designation;

- Does not affect the existing use of overburden wells or springs as a potable or public water supply; and
- Allows existing water supplies that have had PFAS be considered potable in the future depending on established criteria.

There are currently no Site-impacted drinking water wells downgradient of the Site as described in the VTDEC-approved ECAA (ERM 2021a). Therefore, there are no current exposure pathways for residents and or commercial/industrial workers based on the groundwater reclassification.

Impacted groundwater downgradient of the Site is located in a neighborhood of Bennington in which homes are located within 200 feet of a municipal water line. Due to the availability of municipal water lines, the groundwater reclassification order prohibits installation of drinking water wells without a VTANR waiver. Similarly, installation of industrial, commercial, or geothermal wells requires notification to VTDEC and an assessment of suitability. Although the reclassification is specific to PFAS, the need for an agency waiver or assessment and submittal of this ICP provides a sufficient institutional control to prevent installation of wells and exposure of current and future residents and commercial/industrial workers to Site-impacted groundwater via direct contact or ingestion.

Based on the limitations imposed by the Bennington Groundwater Reclassification of 2 November 2021, this institutional control is sufficient for limiting exposure to contaminated groundwater beneath and downgradient of the Site.

2.3.2 Construction/Utility Workers

Potential future construction workers, both on-site and off-site, have the potential to be exposed to Site-impacted groundwater through ingestion or direct contact if groundwater is encountered during construction activities (e.g., excavation)

A draft Soil and Groundwater Management Plan will be prepared and submitted following approval of the 2021 CAP. With respect to groundwater, this plan will document the personal protective equipment, air monitoring, groundwater sampling, and action levels required to limit exposure of potential future construction workers to COCs in Site groundwater. The need to properly characterize and dispose of potentially-impacted groundwater will also be included in the Soil and Groundwater Management Plan.

3. REFERENCES

ERM. 2021a. *Evaluation of Corrective Action Alternatives*. Environmental Resources Management. 27 July 2021.

ERM. 2021b. *Corrective Action Plan*. Environmental Resources Management. 19 November 2021.

VTDEC. 2019. *Investigation and Remediation of Contaminated Properties Rule*. Vermont Department of Environmental Conservation. 6 July 2019.

ATTACHMENT A FINDINGS OF FACT AND RECLASSIFICATION ORDER

Findings of Fact & Reclassification Order

Groundwater Reclassification in Bennington and Shaftsbury due to PFAS Contamination Bennington, Village of North Bennington, and Shaftsbury

October 2021

Prepared by:

The Vermont Agency of Natural Resources

**Final
Findings of Fact & Reclassification Order
Groundwater Reclassification in Bennington and Shaftsbury
PFAS Contamination**

INTRODUCTION

This document represents the Vermont Agency of Natural Resources (ANR) findings and determination (Reclassification Order) to reclassify groundwater from Class III to Class IV for an area located in the Towns of Bennington and Shaftsbury and the Village of North Bennington. This Class IV designation means that at least a part of the underlying groundwater is not suitable as drinking water due to the presence of per- and polyfluoroalkyl substances (PFAS) in groundwater above the applicable regulatory standards. This document is divided into the following section:

- **Introduction**
- **Overview**- explains the reasons groundwater is being reclassified and the rationale for the reclassification order.
- **Background**
- **Petition and Supporting Documents**-provides a description of the groundwater reclassification petition and the documents that supported this petition and order.
- **Class IV Area**-describes how Class IV boundaries were determined.
- **Monitoring Requirements**-describes the monitoring that will take place within the reclassification area.
- **Public Notification**-describes the public notification process for the reclassification.
- **The Finding of Facts and the Reclassification Order**-contains the formal reclassification order that reclassifies the groundwater from Class III to Class IV, along with conditions.

The sections leading up to the Finding of Facts and the Reclassification Order supplement the formal order by providing context for the groundwater reclassification.

OVERVIEW

The reclassification addresses the presence of PFAS found in some parts of the underlying groundwater within Bennington, the Village of North Bennington, and Shaftsbury as shown on the map in Attachment A. This formal reclassification order is in response to the groundwater reclassification petition (Attachment B), dated January 28, 2021, submitted by Barr Engineering Company (Barr) on behalf of Saint-Gobain Performance Plastics. A list of the supporting documentation used in issuing this order is provided in Attachment C. This petition was submitted to meet the requirements specified in the following documents related to groundwater reclassification and institutional controls:

- The Vermont Groundwater Protection Rule and Strategy, effective July 6, 2019;

- The Consent Order and Final Judgment between the State of Vermont and Saint-Gobain Performance Plastics, effective May 2019 (referred in the remainder of the document as the Consent Order); and
- The ANR-approved corrective action plans for the Bennington-wide PFAS response pursuant to the authority under 10 V.S.A. §6615b and the Vermont Investigation and Remediation of Contaminated Properties Rule:
 - Interim Measures Corrective Action Plan for Public Water System (PWS) Extensions Corrective Action Area I Operable Unit A, dated August 11, 2017;
 - Interim Measures Corrective Action Plan for Public Water System (PWS) Extensions Corrective Action Area II Operable Unit A, dated June 7, 2019;
 - Corrective Action Plan for Public Water System (PWS) Extensions Corrective Action Area II Operable Unit C, dated March 19, 2020; and
 - Corrective Action Plan 2-Corrective Action Areas I and II – Operable Unit B, North Bennington, and Bennington, dated March 2020.

As stated in the ANR Record of Decisions and Selection of Remedies (Appendices D and D1) of the Consent Order, ANR determined that active remediation was not technically feasible nor cost effective to remove PFAS contaminated area-wide groundwater. The selected corrective actions focused on providing long-term drinking water remedies and implementing institutional controls, primarily groundwater reclassification, to restrict groundwater use given the expected persistence of PFAS in parts of the underlying groundwater.

Reasons and Purpose of this Class IV Designation

Groundwater in Vermont, by default, is considered Class III groundwater unless reclassified. Class III groundwater means it is suitable for being used as drinking water, that is, a potable or public water supply. In the Bennington area, reclassification of area-wide groundwater from a Class III to a Class IV designates and maps where much of the underlying groundwater are expected to have PFAS levels above the Vermont Groundwater Enforcement Standards or the Maximum Contaminant Levels (MCLs), that is, the applicable regulatory standards, for more than five years, likely decades. The Vermont Groundwater Enforcement Standards and MCLs for PFAS is 20 ng/L for the cumulative total of perfluorooctanoic acid (PFOA), perfluorooctane sulfate (PFOS), perfluoroheptanoic acid (PFHpA), perfluorononanoic acid (PFNA), and perfluorohexane sulfate (PFHxS). The boundary of the proposed reclassification area is the same boundary as the Corrective Action Area as defined in the Consent Order, with one modification, the addition of one parcel in the northeastern portion of the reclassification area.

The main purpose for reclassifying the groundwater to Class IV within the area shown on the map in Attachment A is to protect human health and the environment by providing an institutional control that requires notification of landowners, well drillers, and regulatory agencies that groundwater is or may be contaminated by PFAS. ANR recognizes the practical and policy issues in reclassifying an area so large. The proposed reclassification order attempts to balance the following:

- Public notification that parts of the underlying groundwater within the proposed reclassification likely has PFAS levels above the applicable regulatory standards;

- Restrictions on the issuance of State permits that authorize the public to use groundwater with PFAS levels above the applicable regulatory standards within the Class IV area for potable purposes, especially newly permitted wells;
- Area-wide groundwater within the proposed Class IV area, particularly shallow groundwater but also deeper groundwater in many areas, likely has PFAS at levels that may not be suitable as a source of drinking water (potable or public water systems) or may not be suitable for non-potable uses, such as agriculture, commercial, industrial, or geothermal use;
- The reality that in many areas within the proposed reclassification boundary, the installation of a new well is the only practical source for a potable or public water supply;
- Potable water can be found within the proposed reclassification area as evidenced by the over 130 water supply wells that are either non-detect for PFAS or have PFAS levels below the applicable regulatory standards;
- The potential for degrading groundwater quality and spreading PFAS to other parts of the aquifer due to drilling new wells within the Class IV boundary, and
- Consistency with the requirements in the Consent Order and the approved corrective action plans.

The proposed Reclassification Order will prohibit, unless there are extenuating circumstances approved by ANR, the installation of a drinking water supply well (potable or public water supply) for a resident or business that is located within 200-feet of an existing municipal waterline.

The ANR does consider municipal connections as the preferred long-term drinking water remedy for all areas and encourages property owners to connect to municipal water whenever feasible. However, there are parcels, or parts of parcels, where connecting to waterlines is not technically feasible or may be economically prohibitive. This proposed Reclassification Order will allow for the possibility of installing a new drinking water well for development located more than 200 feet away from a waterline, provided that the well is constructed following the specifications in Attachment D, or meets an equivalent standard as determined by ANR. The ANR considers the well construction specifications in Attachment D as best management practices to mitigate further impairment of groundwater quality or the spreading of contamination within the Class IV boundary. If ANR determines that there are sufficient extenuating conditions in which connecting to a waterline is not technically or economically feasible, then a new drinking water well for a building or structure within 200 feet of a waterline must also be constructed following the specifications in Attachment D, or an equivalent standard as determined by ANR.

This proposed Reclassification Order will prohibit the use of new overburden wells or springs as a potable or public water supply, given the likelihood that such a well will have groundwater that is contaminated with PFAS above the applicable standards. This order will not affect the existing use of overburden wells or springs as a potable or public water supply. The Vermont Department of Environmental Conservation, Waste Management and Prevention Division will need to be notified prior to any new well being installed for industrial, commercial, and geothermal use so they can assess the suitability of such well or

use in light of the Class IV designation. The Agency of Agriculture, Food, and Markets will need to be notified prior to any new well being installed for agricultural use so they can assess the suitability of such well or use in light of the Class IV designation.

Summary of supporting documentation for this Reclassification Determination

The findings and Reclassification Order are based on the considerations outlined in Section 12-506 of the Vermont Groundwater Protection Rule and Strategy, effective July 6, 2019. A copy of the rule is available online at <https://dec.vermont.gov/water/groundwater> or by contacting the Vermont Department of Environmental Conservation, Waste Management and Prevention Division, One National Life Drive, Davis Building-1st floor.

The petition to reclassify and other supporting documents is available online at <https://dec.vermont.gov/bennington-groundwater-reclassification>. Much of the information contained in this order was obtained from the following:

- Petition to reclassify groundwater prepared by Barr, dated January 28, 2021;
- Barr Response to Technical Comments from ANR, dated October 23, 2020;
- Conceptual Site Model Site Investigation Report: Bennington, Vermont, prepared by Barr, dated March 2018; and
- Record of Decision and Selection of Remedies for Corrective Action Area I and Corrective Action Area II-(Appendix D1) of the Consent Order.

The petition, final decision and Reclassification Order will also be available at the Bennington Town Offices-205 South St, Bennington VT.

BACKGROUND

Two former Teflon-coating facilities were operated in Bennington by Chemfab. The first Teflon-coating facility located on Northside Drive in Bennington operated from 1969 to 1978. The second Teflon-coating facility on Water Street in North Bennington operated from 1978 to February 2002.

In February 2016, PFAS, primarily PFOA, were discovered in drinking water wells in the vicinity of the former Teflon-coating facility in North Bennington. Subsequent sampling found PFAS above the Vermont Groundwater Enforcement Standards in over 330 drinking water wells, mainly private residences, within Bennington, the Village of North Bennington, and portions of Shaftsbury. The initial response to this area-wide groundwater contamination was to provide bottled water and to install point-of-entry treatment systems (POETs) to remove PFAS. Over the next several years, subsequent response actions included connecting homes/businesses to municipal waterlines under approved corrective action plans; site investigation activities (soil boring, monitoring wells; sample collection of groundwater; surface water; springs; sediment; agricultural products; and fish) and the development of a Conceptual Site Model (CSM). A CSM provides a representation of the likely major contaminant sources; how the contaminants are moving through environmental media, particularly groundwater; and the degree and extent of the contamination in present time and into the future based on available technical and site investigation data. The CSM serves as the foundation for any proposed activities, remedial or protective, and is updated as needed based on future monitoring results or new information.

Waterline work is now substantially complete. There are 486 residences/businesses eligible to be connected to municipal water as part of approved the corrective action plans. Four-hundred

forty-six (446) residences/businesses have chosen to be connected to municipal water and are now connected. As a condition of connecting, the water supply wells are disconnected from the residence/business and properly abandoned to ensure there is no contaminated water getting into the municipal system. Also, the closure of these individual water supplies removes a possible pathway for surface water or groundwater contaminated with PFAS to move vertically along the well into the underlying aquifers. The closure of these wells also eliminates the possibility that these wells could be used for drinking water in the future.

There are parts of the Corrective Action Area, which is within the proposed Class IV reclassification area, where it was determined not feasible to connect residences or businesses to municipal water. In those areas, Saint-Gobain Performance Plastics, who purchased Chemfab in 2000 and operated the facility until it closed in February, 2002, is obligated under the Consent Order to continue operating and monitoring existing POETs; evaluate residences/businesses with treatment systems for the feasibility of other long-term drinking water remedies, such as replacement wells or potential connection to a waterline, if they are nearby; and continue long-term monitoring of drinking water wells that are currently below the applicable regulatory standards.

Based on information provided in the Conceptual Site Model Site Investigation Report: Bennington Vermont, prepared by Barr, dated March 2018, and documented in the Record of Decision and Selection of Remedies for Corrective Action Area I and Corrective Action Area II- (Appendix D1) of the Consent Order, ANR determined that past air emissions from two former Teflon-coating facilities caused area-wide PFAS contamination in groundwater and PFAS in groundwater is expected to exceed the applicable regulatory standards for over five years, if not decades.

PETITION

ANR has determined that the Groundwater Reclassification Petition prepared by Barr on behalf of Saint-Gobain Performance Plastics, dated January 28, 2021, is administratively and technically complete. The petition is consistent with the reclassification requirements specified in Subchapter 5-in the Vermont Groundwater Protection Rule and Strategy, effective July 6, 2019, and the Vermont Procedure for Class IV Groundwater Reclassification, effective July 5, 2018. This petition references the Conceptual Site Model Site Investigation Report: Bennington, Vermont, prepared by Barr, dated March 2018, which provides the technical basis for this reclassification. This report addresses the technical information required in Section 12-503(c) and Section 12-504 (c) of the Vermont Groundwater Protection Rule and Strategy, dated July 6, 2019. Referencing this Barr report in the petition also meets the requirements of the Vermont Procedure for Class IV Groundwater Reclassification, given that the area-wide Bennington PFAS response is being managed pursuant to the requirements in the Consent Order and the Investigation and Remediation of Contaminated Properties Rule (IRCPR).

CLASS IV AREA DESIGNATED IN THE PETITION

The Class IV boundary matches that of the Corrective Action Area boundary as established in the Consent Order (Attachment A), except the addition of one parcel due to PFAS concentrations being recently found in water supply wells on this parcel above Vermont Groundwater Enforcement Standards for PFAS. The reclassification boundaries followed the nearest parcel boundaries that reflects the current knowledge about the degree and extent of PFAS contamination in groundwater and its movement through the environment obtained from the following:

- The collection and analysis of data and information summarized in the report entitled, Conceptual Site Model Site Investigation Report: Bennington, Vermont; and
- The PFAS sampling results of over 700 private water supplies as shown on the map in Attachment A.

The east-west boundaries extend roughly from the Vermont-New York state line to the Green Mountain National Forest boundary. The northern boundary roughly follows the Bennington-Shaftsbury town line, however, portions of the Class IV extend into Shaftsbury. The southern boundary roughly follows VT State Route 9.

Attachment A also depicts the peak concentration of drinking water well results and shows these results relative to the proposed Class IV boundaries.

MONITORING REQUIREMENTS

As part of the requirements of the Consent Order, Saint-Gobain Performance Plastics is obligated to perform long-term monitoring per an approved corrective action plan. A corrective action plan, entitled “Corrective Action Plan 2-Corrective Action Areas I and II – Operable Unit B by Barr Engineering Company on behalf of Saint-Gobain Performance Plastics” was approved by ANR in April 2020. This plan includes a long-term well monitoring plan and a long-term natural attenuation monitoring plan for PFAS in groundwater. This long-term monitoring will provide the data to help assess whether adjustments to the Class IV boundary will be needed in the future. These adjustments could be to expand, contract, or reclassify the Class IV area back to a Class III designation, as demonstrated by future monitoring data, new technical information, or both.

PUBLIC NOTIFICATION OF PETITION AND DRAFT RECLASSIFICATION ORDER

The public notification of the administratively complete petition and the draft Reclassification Order followed the public participation requirements in Section 12-505 of the Vermont Groundwater Protection Rule and Strategy and Vermont Procedures for Class IV Groundwater Reclassification, which consisted of the following:

- Notification of the Petition and Draft order on the Vermont Environmental Notice Bulletin (ENB);
- Written notice to all property owners within and immediately adjacent to the proposed groundwater reclassification area; List of property owners can be found in the petition.
- Advertisement in the Bennington Banner about the proposed reclassification.
- Written Notice to the town clerks for Bennington and Shaftsbury;
- Written Notice to the Bennington County Regional Commission; and
- Written Notice to the Vermont Groundwater Coordinating Committee.

The original deadline to receive public comments was March 19, 2021, which was 30 days from when the petition and draft order was placed on the Environmental Notice Bulletin (ENB). However, the deadline was extended several times. These extensions were in response to requests from the public and elected officials. The final deadline to receive comments was May 28, 2021. The ANR participated in multiple public meetings about the proposed reclassification. These meetings are listed below:

- ANR-led Virtual Public Meetings on March 4, 2021, and May 11, 2021;

- Bennington Selectboard Meeting on April 12, 2021;
- Village of North Bennington Trustee Meeting on April 13, 2021;
- Shaftsbury Selectboard Meeting on April 19, 2021

The ANR received multiple formal and informal comments on the proposed groundwater reclassification. The ANR responsive summary to the public comments and a copy of the comments can be found in Attachments E and F, respectively. Most of the comments focused on the effect of reclassifying the groundwater to a Class IV designation will have on property values. Comments also expressed confusion about why the ANR was declaring that the groundwater was non-potable given that over 130 water supply wells within the proposed reclassification area have either had no PFAS detected in their well or had PFAS levels below the applicable regulatory standards since sampling for PFAS began in the area in 2016.

After reaching out to many of the commenters and public officials about their concerns, the Finding of Facts and the Reclassification Order were revised to:

- Acknowledge that potable water is present and can be found within the proposed reclassification area, as evidenced by the over 130 water supply wells that are either non-detect for PFAS or below the applicable regulatory standards;
- Clarify that the Class IV designation does not apply to existing water supplies that continue to test below the applicable regulatory standards for PFAS. This means that these wells are potable;
- Specify the criteria on which a water supply that has or has had PFAS will be considered potable in the future, meaning that the Class IV designation would no longer apply to this water supply; and
- Clarify the conditions on which newly permitted wells are considered a potable water supply, meaning the Class IV designation does not apply.

These proposed changes to the Finding of Facts and the Reclassification Order were presented at the ANR-led virtual meeting on May 14, 2021. The general feedback from these proposed changes was positive from those community members and public officials who were in attendance, many of which had provided comments previously opposing the reclassification. Attachment G includes the proposed changes to the Finding of Facts and the Reclassification Order (changes highlighted in yellow). The final Finding of Facts and Reclassification Order presented later in this document reflects these changes. Note, minor non-substantive changes were made to Final Finding of Facts and Reclassification Order for clarity and to correct grammar errors.

The final order, found below, will serve as the basis for the final decision and delineated reclassification area.

Findings of Fact

- Barr Engineering, on behalf of Saint-Gobain Performance Plastics, has submitted an administratively complete reclassification petition. The final petition was received on January 28, 2021. The Vermont Agency of Natural Resources (ANR) determined that the petition was administratively and technically complete on February 5, 2020.
- The ANR has reviewed the petition and determined that the factual information provided in the petition and other documents referenced in the petition or this Decision Document are in accordance with the requirements of Sections 12-503 and 12-504 of the Vermont Groundwater Protection Rule & Strategy and 10 V.S.A. Chapter 48. This information supports the reclassification of groundwater to a Class IV as shown on map in Attachment A. The final approved Class IV boundary is located on the ANR Atlas.
- Extensive environmental investigations, as summarized in the petition, have identified a zone of PFAS groundwater contamination (Attachment A) that exceeds the Vermont Groundwater Enforcement Standards and the Maximum Contaminants Levels (MCLs), that is, the applicable regulatory standards. The major source of the groundwater PFAS contamination appear to be the leaching through soils from past air emissions of two former Teflon coating facilities. Given this contaminant pathway and results of the environmental investigations, it appears, in general, that the highest PFAS levels are found in shallow groundwater.
- Per the requirements in Section 12-502 of the Groundwater Protection Rule & Strategy, reclassification is required because much of the underlying groundwater within the proposed Class IV boundary area (Attachment A) exceeds the Vermont Groundwater Enforcement Standards for PFAS, and the PFAS contamination in groundwater is predicted to persist for more than five years, likely decades.
- Area-wide groundwater within the proposed Class IV area, particularly shallow groundwater, is contaminated to the point that it may not be suitable as a source of drinking water for potable or public water systems and may not be suitable for non-potable uses, such as agriculture, commercial, industrial, or geothermal use.
- Potable water can be found within the proposed reclassification area as evidenced by the over 130 water supply wells that are either non-detect for PFAS or below the applicable regulatory standards.
- ANR considers the connection to a municipal water system as the preferred long-term drinking water remedy for all properties within this proposed Class IV and will strongly encourage property owners to connect where feasible; however, there are locations where connecting to a municipal water system are not technically feasible nor economically viable, given the size and population densities of some parts of the proposed Class IV area. In some cases, homeowners strongly objected to connecting to municipal water. In these cases, the homeowners were allowed to keep their existing drinking water well but were responsible to maintain any treatment system that was installed to remove PFAS.

Reclassification Order

The Secretary of the Agency of Natural Resources (ANR) hereby makes the Findings of Fact identified above and reclassifies the groundwater to Class IV for the area identified on the map in Attachment A, subject to the following conditions and clarifications:

1. All existing water supplies that have not had an exceedance from testing above the applicable regulatory standards for per-and polyfluoroalkyl substances (PFAS) and continue to test below the applicable regulatory standards are considered a potable water supply with respect to PFAS, which means the Class IV designation does not apply to these water supplies. The applicable regulatory standards are the Maximum Contaminant Level (MCL) for public water supplies and the Vermont Groundwater Enforcement Standards (VGES) for all other potable water supplies.
2. Water supplies that have or have had PFAS concentration above the applicable regulatory standards are considered a potable water supply with respect to PFAS, as defined in #1 above, once the following criteria are met:
 - i. Testing shows that PFAS levels have met the performance standard in Appendix A of the Consent Order for being eligible to remove a treatment system from a water supply. This performance standard is eight (8) consecutive rounds of quarterly sampling, showing an overall downward trend in PFOA, PFOS, PFHxS, PFHpA, and PFNA contaminant levels in the water supply or a flat trend if the contaminant level is below the applicable regulatory standards.
 - ii. Continued testing shows PFAS levels below the applicable regulatory standards.
3. The installation of a new permitted drinking water well (a potable or public drinking water well) may be allowed for a building or structure outside 200-feet of an existing waterline or within 200-feet if given a variance by ANR, provided the following are met:
 - i. The new well is constructed following the requirement specified in Attachment D, or an acceptable equivalence, as determined and approved by ANR;
 - ii. Prior to use, the water must be tested for PFAS that are regulated under either the Vermont Groundwater Protection Rule and Strategy or the Vermont Water Supply Rule, as may be amended. At the time of this order, there are five regulated PFAS: PFOA, PFOS, PFHpA, PFNA, and PFHxS. The current standards are 20 ng/L for the combination of the five regulated compounds. The water samples must be sampled using a laboratory method that is accepted by ANR. At the time of the issuance of this order, EPA Method 537.1 was the exclusive Laboratory Method accepted by ANR for drinking water supplies. Results of the water test shall be submitted to the Vermont Department of Environmental Conservation, Drinking Water and Groundwater Protection Division for review and approval prior to use of the water supply well;
 - iii. The submittal of a long-term monitoring plan for PFAS testing to the Vermont Department of Environmental Conservation, Drinking Water and Groundwater Protection Division for review and approval, or verification that this well is part of a long-term monitoring plan under an ongoing corrective action being performed by Saint-Gobain Performance Plastics pursuant to the requirements of the Consent Order and an approved corrective action plan by ANR. Monitoring will be required until there is sufficient data and information, as determined by

ANR, that long-term monitoring is no longer warranted. Results from the ongoing monitoring must be provided by the permittee to the Vermont Department of Environmental Conservation, Drinking Water and Groundwater Protection Division as specified in the conditions of any applicable permit, unless this well is being monitored as part of work performed by Saint-Gobain Performance Plastics under the requirements of the Consent Order and an approved action plan by ANR; and

- iv. If the PFAS concentrations in a water sample from a well are above the regulatory standards for the regulated PFAS, then a suitable point-of-entry system (POET), or other long-term remedy approved by ANR, must be installed. If a treatment system is not required as part of an approved corrective action plan overseen by ANR, then a design plan of the long-term remedy must be submitted for review and approval to the Vermont Department of Environmental Conservation, Drinking Water and Groundwater Protection Division, along with an operation and maintenance plan for the proposed remedy.
4. All newly permitted wells (potable and public) that meet the conditions outlined in #3 above, have PFAS levels below the applicable regulatory standards, and continue to test below the applicable regulatory standards, are also considered a potable water supply with respect to PFAS, as defined in #1 above.
5. New overburden wells, springs, or shallow dug wells for drinking water wells are prohibited.
6. The VT Department of Environmental Conservation, Waste Management and Prevention Division must be notified prior to any new well being installed for industrial, commercial, or geothermal use so they can assess the suitability of such well or use in light of the Class IV designation.
7. The Agency of Agriculture, Food, and Markets must be notified prior to any new well being installed for agricultural use so they can assess the suitability of such well or use in light of the Class IV designation.
8. Long-term monitoring within the Class IV is required by Saint-Gobain Performance Plastics, consistent with the approved corrective action plan, entitled, "Corrective Action Plan 2-Corrective Action Areas I and II – Operable Unit B North Bennington and Bennington", dated March 2020, prepared by Barr, or any subsequent updates to this plan approved by ANR. This long-term monitoring will provide groundwater data to assess whether adjustment (expansion, contraction, or reclassification back to a Class III) of the Class IV designation is warranted.


Julie Moore, Secretary
Agency of Natural Resources

Date 11/02/2021

Attachments

Attachment A Map Showing Class IV Reclassification Area-Also included on the ANR website dedicated to the Bennington Class IV Groundwater Reclassification

<https://dec.vermont.gov/bennington-groundwater-reclassification>

Attachment B-Groundwater Reclassification Petition dated January 29, 2021-Text only included in this Attachment. This petition as well as the supporting documentation will be provided on the Bennington Class IV Groundwater Reclassification website due to the size of the supporting documentation

Attachment C- List of Reports and Corrective Action Plans referenced in this Order-These documents are also accessible through the Bennington Class IV Groundwater Reclassification website.

Attachment D-Well Construction Design Requirements for New and Replacement Well within the Class IV Boundary-This document is also accessible through the Bennington Class IV Groundwater Reclassification website.

Attachment E- Responsiveness Summary of Public Comments-This documents provides the ANR's response to questions and comments received during the public comment period. This document is also accessible through the Bennington Class IV Groundwater Reclassification website.

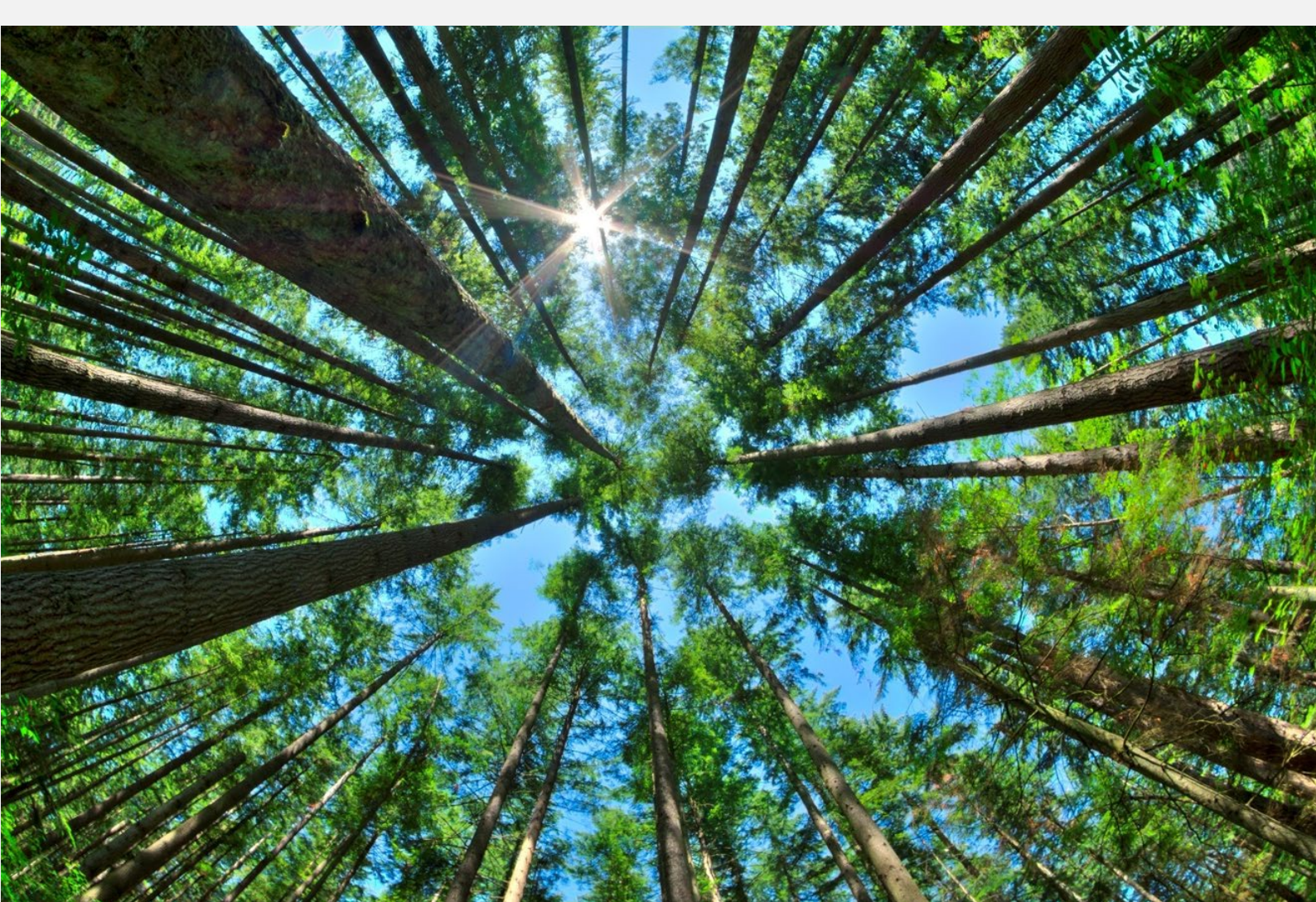
Attachment F- Copy of Formal Comments in response to proposed Class IV Reclassification- This document is also accessible through the Bennington Class IV Groundwater Reclassification website.

Attachment G- Proposed changes to the February 2021 Draft Finding of Facts and the Reclassification Order (changes highlighted in yellow).

A list of the supporting documentation used in issuing this order is provided in Attachment C. This document is also accessible through the Bennington Class IV Groundwater Reclassification website.

APPENDIX B DRAFT LONG TERM MONITORING PLAN

December 2021



Draft Long Term Monitoring Plan

Energizer, 401 Gage Street, Bennington,
Vermont

3 December 2021

Project No.: 0529121

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1. INTRODUCTION

Environmental Resources Engineering and Consulting, Inc. (ERM) prepared this draft Long Term Monitoring Plan (LTMP) on behalf of Energizer Holdings, Inc. (Energizer) for the Site at 401 Gage Street in Bennington, Vermont (Site). This document was prepared in accordance with the 2021 Corrective Action Plan for the Site, and to support the transition of the Site to long term monitoring. The Vermont Department of Environmental Conservation (VTDEC) is required to approve this plan before its implementation. This draft LTMP is being submitted for review as an appendix to Energizer's 2021 Supplemental Corrective Action Plan (CAP) for the Site. Once the CAP is approved, this draft LTMP will be finalized and submitted to VTDEC under separate cover.

2. BACKGROUND

The Site is located on the south side of Gage Street, northeast of downtown Bennington in Bennington County, Vermont. The Walloomsac River is located to the south. The general location of the Site Property and the surrounding area are depicted on **Figure 1**.

The Site Property comprises five land parcels (four tax ID parcels), which total approximately 9.29 acres, developed with six buildings which include Plant 1, Plant 2, a Boiler House, Tank Farm Enclosure, an unnamed storage building, and a wooden storage shed. The land parcels are divided into several lots, which are shown on the Site map provided as **Figure 2**. The two main facility buildings are Plant 1 and Plant 2. Plant 1 is located immediately south of Gage Street and ceased manufacturing operations in January 2021. Plant 2 is located further south on Scott Street and was vacated in 2016.

2.1 Site Investigation and Remediation/Mitigation Activities

Site investigation and remediation activities occurred at the Site between 2006 and 2021. As described in the 2021 Supplemental Site Investigation Report, a record of the associated investigation and remediation activities completed to date can be found in documents filed with VTDEC, including but not limited to:

- Initial Shallow Groundwater Investigation Report (ERM 2006a);
- Dynamic Work Plan for Site Investigation (ERM 2006b);
- Work Plan for Off-Site Investigation Activities (ERM 2007a);
- Summary of Air Sparge/Soil Vapor Extraction (AS/SVE) (ERM 2007b);
- Site Investigation Report/Corrective Action Feasibility Investigation (ERM 2007c);
- Corrective Action Plan (CAP; ERM 2007d);
- Vapor Intrusion Investigation Report – Addendum to Site Investigation Report (ERM 2008a);
- Interim Remedial Measure and CAP Final Construction Report (ERM 2008b);
- Residential Property Investigation Work Plans and Site Investigation Addendum Report (ERM 2011, 2012a, 2012b)
- CAP Addendum (ERM 2013);
- PFAS Investigation Work Plan and Results (ERM 2017, ERM 2018);
- Historical Use PFAS Report (Energizer 2018);
- Supplemental Site Investigation Report (ERM 2021a);
- ERM remediation and post-remediation Operation, Maintenance, and Monitoring Reports from 2008 through present day.

Investigation, remediation and mitigation activities were conducted in coordination with relevant VTDEC regulations and guidance. The primary groundwater contaminants of concern (COC) at this Site are chlorinated volatile organic compounds (CVOCs), primarily tetrachloroethene (PCE), and per- and polyfluoroalkyl substances (PFAS). In December 2021, ERM submitted a Corrective Action Plan to the VTDEC which documented Energizer's transition to Long Term Monitoring at the Site (ERM, 2021b). This Long Term Monitoring Plan will focus on the monitoring of these compounds over time.

3. ENVIRONMENTAL OPERATION, MAINTENANCE, AND MONITORING ACTIVITIES

Upon VTDEC approval, environmental OM&M activities will begin at the Site and continue until COC concentrations are below regulatory thresholds. The monitoring data will be reviewed annually, and the overall program will be reviewed every five years to determine if modifications need to be made. The activities include:

- Groundwater gauging
- Groundwater sampling
- Reporting

Additional details about the scope, schedule, and reporting of each activity is described below.

3.1 Purpose and Scope

Long term monitoring consists of collecting samples from on- and off-Site monitoring wells to monitor concentrations of CVOCs, in particular PCE, and PFAS. Although this does not reduce contaminant mass and concentrations, routine monitoring will allow assessment of COC concentrations to determine if they are increasing, identify potential exposures that have not been controlled, and will monitor natural attenuation over time. Eight (8) existing monitoring wells will be used in the long term monitoring program (**Figure 3**). Each of the eight wells are screened at the target depth which is the shallow aquifer above the silt aquitard (see Table 1). Boring logs for these eight wells are included in Appendix A.

Table 1: Summary of Wells Part of Long Term Monitoring Plan

Well ID	Screened Interval, feet below ground surface (ft bgs)
ERM-8	13.5 – 18.5
ERM-11S	16 – 21
ERM-12	15 – 20
ERM-13	13 – 23
ERM-16	15 – 20
MW-102	5 – 15
MW-103	8 – 18
MW-104	5 – 15

The current scope includes the following annual monitoring activities:

- Measure groundwater elevations and total depths in eight groundwater monitoring wells (**Table 1**);
- Low-flow groundwater sample the eight groundwater monitoring wells in Table 1 according to United States Environmental Protection Agency (USEPA) guidance for low flow sampling (USEPA 2017) and VTDEC guidance for PFAS sample collection (VTDEC 2020).
- Ship the samples to a qualified environmental laboratory for CVOC and PFAS analyses.
- Submit report of findings to VTDEC after each sampling event.

This current scope may be updated as appropriate with VTDEC approval.

3.2 Methodology

The groundwater monitoring wells included in the long term monitoring will be sampled in accordance with USEPA and VTDEC guidance for sampling monitoring wells for CVOCs and PFAS (USEPA 2017; VTDEC 2020).

Prior to initiating monitoring well sampling, depths to water and total well depths will be collected from the monitoring wells using an electronic water level indicator. Both measurements will be recorded to the nearest hundredth of a foot from a reference point at each monitoring well and recorded on a field gauging form. An example field gauging form is included in Appendix A. The water level indicator will be decontaminated between each gauging location using an Alconox® and PFAS-free potable water solution followed by a PFAS-free distilled water rinse between uses.

Groundwater samples will be collected from the approximate middle of the screened interval using low-flow purging techniques as outlined in the United States Environmental Protection Agency (USEPA) Region I procedure (USEPA, 2017). Low-flow monitoring well purging will be conducted using peristaltic pumps and polypropylene tubing. Select in-situ geochemical parameters will be monitored in the field using a calibrated YSI 566 meter (or equivalent) with a flow-through cell. These parameters will be recorded every 5 minutes during purging to provide geochemical data and evaluate groundwater stabilization prior to sample collection. An example groundwater sampling form is included in Appendix A. The following parameters and stabilization will be considered to be achieved when three (3) consecutive readings are within the following limits:

- Dissolved Oxygen $\leq 10\%$
- Turbidity < 50 Nephelometric Turbidity Units
- Specific Conductance $\leq 3\%$
- Temperature $\leq 3\%$ (C°)
- pH ± 0.1 unit
- Oxygen Reduction Potential ± 10 millivolts.

Samples will be collected directly into laboratory-supplied sampling containers, which will be pre-labeled and stored in a clean, pre-chilled cooler. Samples will be transported under chain-of-custody to the laboratory.

Groundwater samples will be analyzed by a VTDEC-certified laboratory for PFAS by Modified USEPA Method 537.1 and for VOCs by USEPA Method 8260C. Only a subset of VOCs (PCE, trichloroethene, *cis*-1,2-dichloroethene, *trans*-1,2-dichloroethene, and vinyl chloride) will be reported by the laboratory. Laboratory results will be tabulated and shared with the VTDEC via email, similar to the previous post-remediation monitoring conducted at this Site.

3.2.1 Quality Assurance and Quality Control Plan

Long term monitoring will be performed in accordance with the following guidance:

- VTDEC IRule, dated 6 July 2019;
- United States Environmental Protection Agency (USEPA) Region I Low-Stress Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells; and
- VTDEC PFAS Sample Collection Information (VTDEC 2020).

If the guidance documents listed above are updated, the latest versions will be followed to the extent practicable.

Quality Assurance/Quality Control (QA/QC) samples will be collected to confirm the usability of field analytical results generated are consistent with Precision, Accuracy, Representativeness, Completeness, Comparability and Sensitivity parameters. The following QA/QC samples will be collected:

Field Duplicate Samples: Field duplicate samples will be collected to determine analytical and sampling precision. One field duplicate sample will be collected for every 10 groundwater samples. Parent samples of duplicates will be recorded both on field forms and in the field book. Field blanks will be analyzed for identical parameters as the corresponding media samples.

- Trip Blanks: Trip blanks will be prepared by the laboratory in advance and follow the sample bottles and same shipping containers before returning to the laboratory for analysis with the other samples. Trip blanks will not be opened. One trip blank sample will be prepared and analyzed for VOCs in groundwater during each sampling event.
- Field Rinseate Blanks (FRBs)/Trip Blanks: FRBs will also double as the PFAS trip blank. The FRB will be prepared by pouring laboratory-provided, ultra-pure, PFAS-free deionized water into lab-provided sample containers. One FRB will be collected for groundwater per field event. The FRB will be analyzed for identical parameters as the associated samples.

3.3 Sampling Schedule

Sampling under the LTMP will begin within six months of approval of the CAP and this plan. Monitoring will then be completed on an annual basis for the first five years. After five years the frequency of monitoring will be assessed and modifications will be proposed to the VTDEC as appropriate. Laboratory analytical data is expected to be received two weeks (14 days) after receipt of samples by the analytical laboratory.

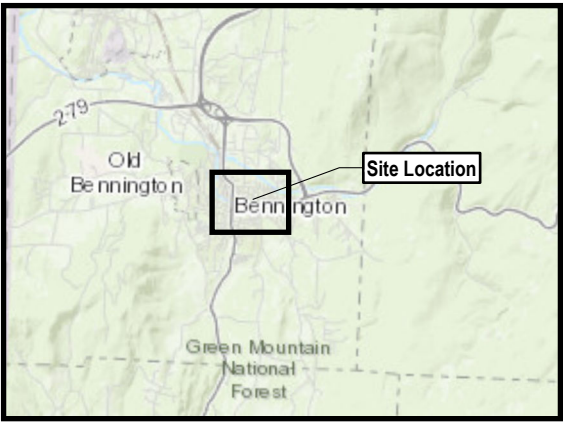
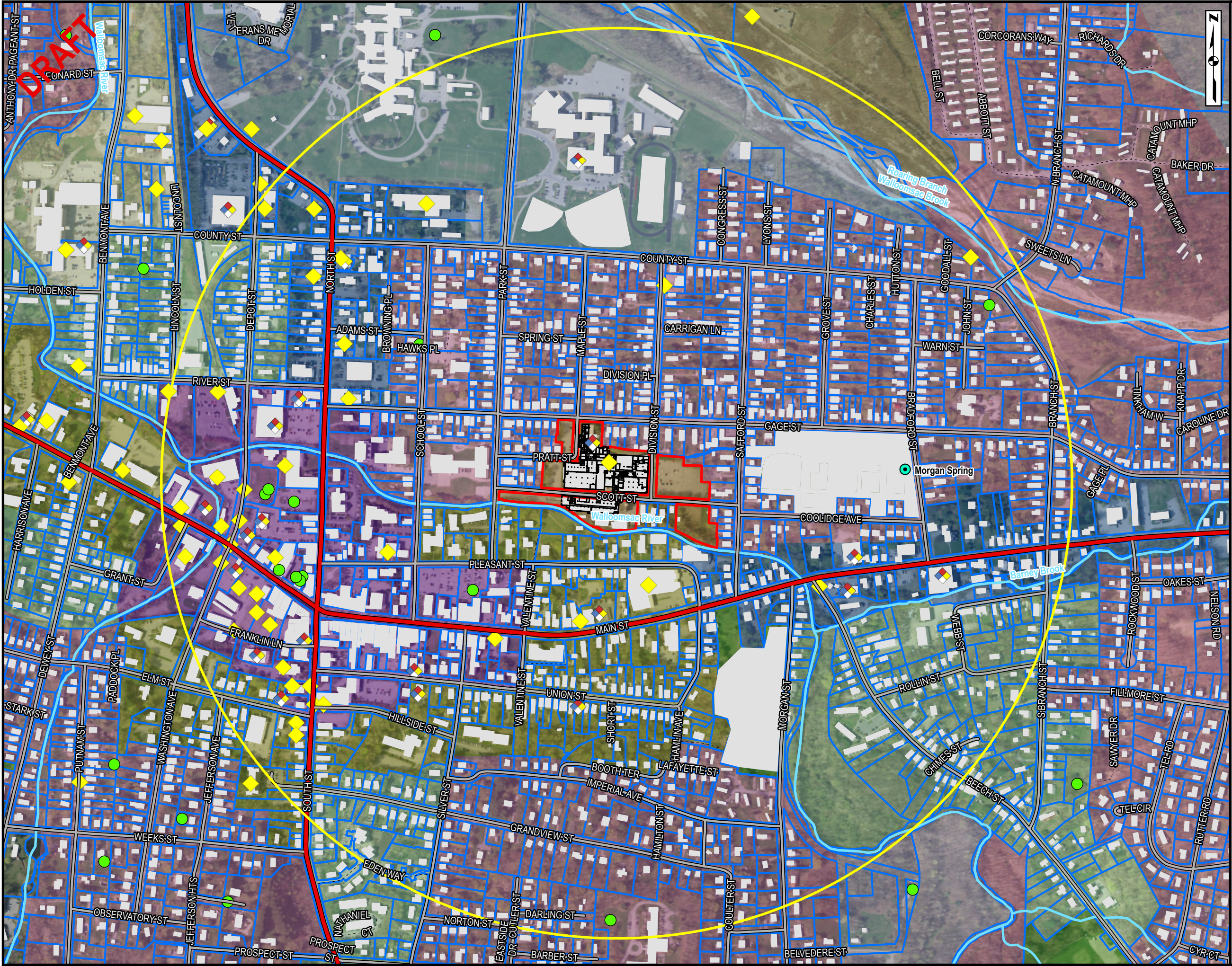
3.4 Reporting and Notification

Following each sampling event, laboratory results will be tabulated and shared with the VTDEC via email, similar to the previous post-remediation monitoring conducted at this Site. As part of the five-year review of the CAP, the monitoring locations and sampling frequencies specified in this LTMP will be assessed and modified if warranted. Modifications to the program may also be requested outside of a five-year review if data supports changes and a request is made to VTDEC.

4. REFERENCES

- Energizer. 2018. *Bennington Historical Use PFAS Report*. Energizer Holdings, Inc. 2 March 2018.
- ERM 2006a. *Initial Shallow Groundwater Investigation Report*. Environmental Resources Management. 13 March 2006.
- ERM. 2006b. *Dynamic Work Plan for Site Investigation*. Environmental Resources Management. 5 April 2006.
- ERM. 2007a. *Work Plan for Off-Site Investigation Activities*. Environmental Resources Management. 31 January 2007.
- ERM. 2007b. *Summary of Air Sparge/Soil Vapor Extraction (AS/SVE)*. Environmental Resources Management. 1 May 2007.
- ERM. 2007c. *Site Investigation Report/Corrective Action Feasibility Investigation*. Environmental Resources Management. 14 June 2007. Revised 27 August 2007.
- ERM. 2007d. *Corrective Action Plan (CAP)*. Environmental Resources Management. 30 July 2007.
- ERM. 2008a. *Vapor Intrusion Investigation Report – Addendum to Site Investigation Report*. 30 April 2008.
- ERM. 2008b. *Interim Remedial Measure and Corrective Action Plan Final Construction Report*. Environmental Resources Management. 20 June 2008.
- ERM. 2011. *Residential Property Investigation Work Plan – Updated Passive Soil Gas Sampling and Waterloo APS Investigation*. Environmental Resources Management. 21 September 2011.
- ERM. 2012a. *Residential Property Investigation Work Plan – Expanded Passive Soil Gas Survey and Soil Sampling*. Environmental Resources Management. 5 April 2012.
- ERM. 2012b. *Residential Property Investigation – Fall 2011 and Spring 2012*. Environmental Resources Management. 7 August 2012.
- ERM. 2013. *Cap Addendum*. Environmental Resources Management. 21 May 2013.
- ERM. 2017. *Work Plan to Investigate Per- and Polyfluoroalkyl Substances (PFAS)*. Environmental Resources Management. 17 November 2007.
- ERM. 2018. *PFAS Groundwater Sampling Results*. Environmental Resources Management. 31 January 2018.
- ERM. 2021a. *Supplemental Site Investigation Report*. Environmental Resources Management. 16 June 2021.
- ERM. 2021b. *Corrective Action Plan*. Environmental Resources Management. Pending Approval.
- USEPA (United States Environmental Protection Agency) Region I. 2017. *Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells*. USEPA Region I. 19 September 2017.
- VTDEC. 2020. *PFAS Sample Collection Information*. Vermont Department of Environmental Conservation. Updated 31 January 2020.

FIGURES



NOTES:

1. Aerial Imagery: ESRI World Imagery
Reproduced under license in ArcGIS 10.7
2. Data collected from Vermont Agency of Natural Resources in 2021

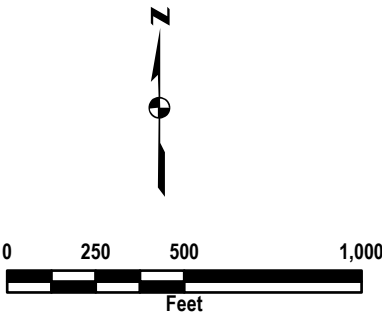
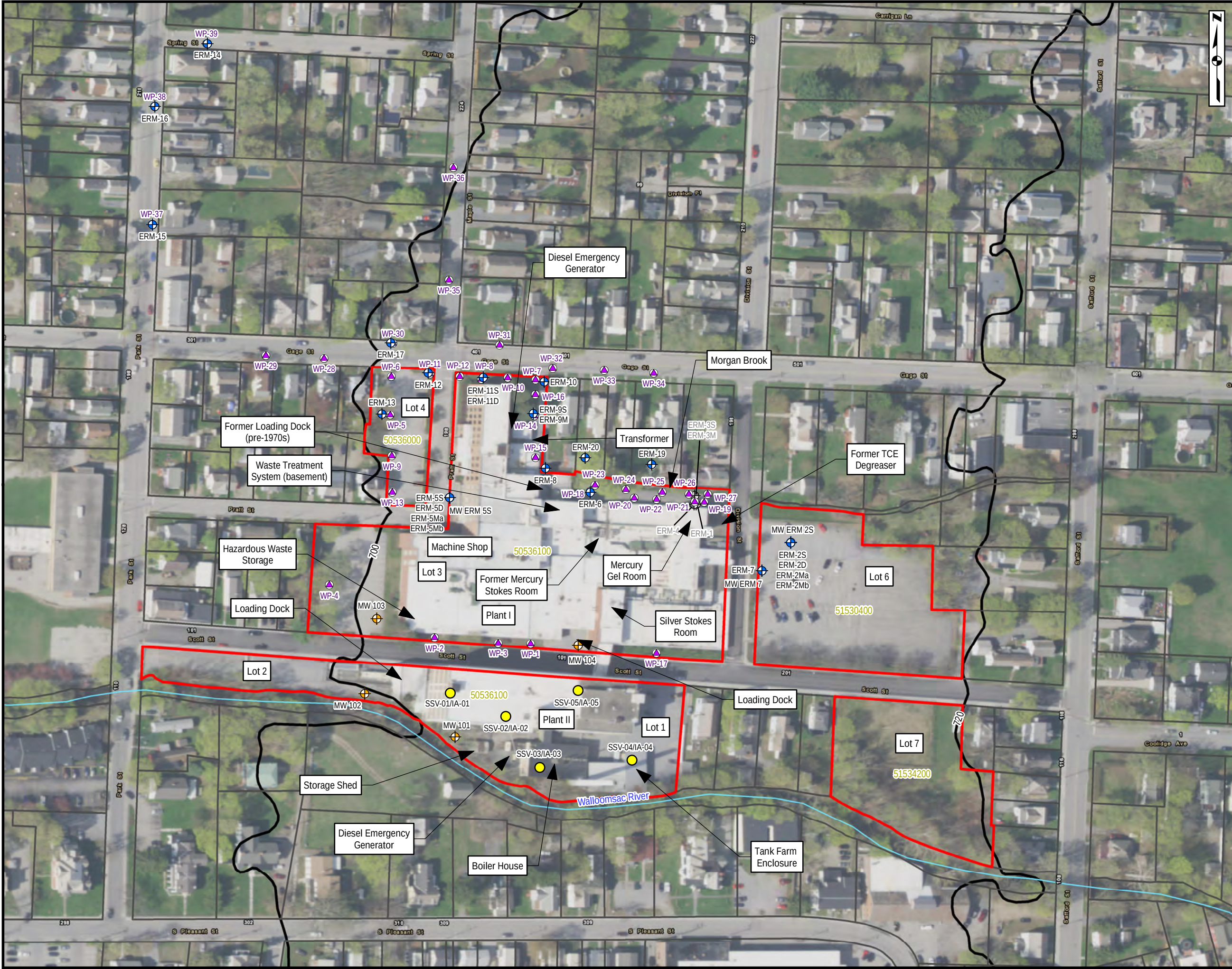


Figure 1: Vicinity Map
Energizer Holdings, Inc.
Bennington, Vermont





Legend

- Monitoring Well
- New monitoring well, installed July 2020
- Decommissioned Monitoring Well
- Waterloo Profiling Boring Location
- Sub-Slab Soil Gas Location/
Indoor Air Sample Location
- Elevation Contours
- Site Property Boundaries
- Tax Parcels
- 50536100 Tax Parcel ID

NOTES:

- Aerial Imagery: ESRI World Imagery
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- Data collected from Vermont Agency of Natural
Resources and USGS

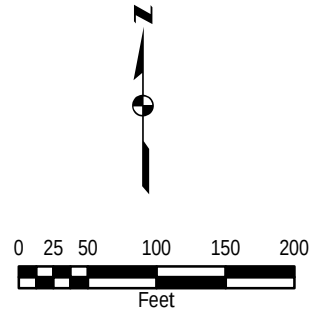


Figure 2: Site Layout Map
Energizer Holdings, Inc.
Bennington, Vermont



Question: team\BMM\Clients_A\Energizer\bennington\2021\01\fig2_sitelayoutmap_20210119.mxd - Joseph Halem - 1/26/2021

APPENDIX A SUPPORTING DOCUMENTS

Boring Logs for Active Monitoring Wells

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WELL NUMBER ERM-8

PAGE 1 OF 1

CLIENT <u>Energizer</u>	PROJECT NAME <u>Energizer-Bennington</u>
PROJECT NUMBER <u>0044701</u>	PROJECT LOCATION <u>Bennington, VT</u>
DATE STARTED <u>2/20/2007</u> COMPLETED <u>2/20/2007</u>	GROUND ELEVATION <u>705.42 ft</u> WELL/BORING DIAMETER <u>2"</u>
DRILLING CONTRACTOR <u>Boart Longyear</u>	MEASURING POINT ELEVATION (ft) <u>705.17</u>
DRILLING METHOD <u>Roto Sonic</u>	GROUNDWATER ELEVATION (ft) <u>697.66</u>
LOGGED BY <u>Moore</u> CHECKED BY <u>Ravella</u>	GROUNDWATER ELEVATION DATE <u>2/28/07</u>
NOTES	

ENERGIZER ENERGIZER-BENNINGTON.GPJ 3/20/07

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID screen (ppm)	WELL DIAGRAM
0							
	SC	92	SW		Asphalt.	18.2	
	SC		SW		SILTY SAND AND GRAVEL poorly sorted (well graded), loose, dry, light tan.	0.5	
	SC				SILTY SAND AND GRAVEL poorly sorted (well graded), loose, dry to moist, dark brown to tan.	1.6	
	SC		SW		COARSE TO MEDIUM SAND AND GRAVEL with sub-angular cobbles and trace silt, poorly sorted (well graded), loose, moist, dark brown.	3.0	
	SC					1.6	
5	SC	32	SW		COARSE TO MEDIUM SAND AND GRAVEL with sub-angular cobbles, poorly sorted (well graded), loose, moist, brown.	28.2	
	SC		GW		COBBLES/ GRAVEL with coarse to medium sand and silt, poorly sorted (well graded), loose, wet, tan/ orange brown.	31.0	
	SC					16.0	
	SC					9.5	
	SC					4.0	
10	SC	37	GW		COARSE SAND AND GRAVEL WITH SUB-ANGULAR CLASTS with medium sand and silt, poorly sorted (well graded), loose, wet, brown.	4.5	
	SC		GW		COARSE SAND AND GRAVEL WITH SUB-ANGULAR CLASTS with medium sand and silt, poorly sorted (well graded), loose, wet, orange brown.	3.7	
	SC					5.7	
	SC					0.7	
	SC					0.0	
15	SC	73	SW		COARSE SAND AND GRAVEL with cobbles and silt, poorly sorted (well graded), loose, orange brown.	2.7	
	SC				SILT with horizontal clay layers, fine sand layers, and dropstones, stiff, very moist, gray.	3.6	
	SC		ML			2.8	
	SC					3.3	
	SC					2.9	
					Bottom of hole at 18.5 feet.		

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WELL NUMBER ERM-11 S/D

PAGE 1 OF 2

CLIENT	Energizer	PROJECT NAME	Energizer-Bennington
PROJECT NUMBER	0044701	PROJECT LOCATION	Bennington, VT
DATE STARTED	2/22/2007	COMPLETED	2/22/2007
GROUND ELEVATION	703.35 ft	WELL/BORING DIAMETER	1.25"
DRILLING CONTRACTOR	Boart Longyear	MEASURING POINT ELEVATION (ft)	702.94/ 702.81
DRILLING METHOD	Roto Sonic	GROUNDWATER ELEVATION (ft)	692.40/ 686.71
LOGGED BY	Moore	CHECKED BY	Ravella
GROUNDWATER ELEVATION DATE	2/28/07		
NOTES			

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID screen (ppm)	WELL DIAGRAM
0							
	SC		SW		SILTY SAND AND GRAVEL with some cobbles, poorly sorted (well graded), dark brown.	0.0	
	SC		SW		MEDIUM TO COARSE SAND, SILT AND GRAVEL with some clasts, poorly sorted (well graded), stiff, moist, dark brown/orange brown.	3.1	
	SC	33				1.2	
	SC					0.2	
5	SC					0.0	
	SC		SW		MEDIUM TO COARSE SAND, SILT AND GRAVEL poorly sorted (well graded), slightly moist, dark brown.	2.4	
	SC				GRAVEL, BOULDERS, AND MEDIUM TO COARSE SAND with trace fine sandy silt, poorly sorted (well graded), loose, dry, orange brown.	0.1	
	SC	88	GW			0.0	← Bentonite
	SC					18.2	
10	SC					43.3	
	SC		GW		SAND AND GRAVEL Shattered boulder, gray/white.	12.4	
	SC				VERY COARSE SAND AND GRAVEL with cobbles, sand and trace silt, very poorly sorted (well graded), very loose, wet, orange brown.	7.1	
	SC	40				0.0	
	SC					0.0	
15	SC					0.0	
	SC		GW		COARSE TO MEDIUM SAND AND GRAVEL with trace silt, poorly sorted (well graded), very loose, wet.	0.0	
	SC		GW		COARSE TO MEDIUM SAND AND GRAVEL with some cobbles and silt, poorly sorted (well graded), loose, wet.	0.0	
	SC	38	ML		SILT with horizontal clay layer, stiff, wet, orange brown.	0.2	← no. 2 sand filter pack
	SC					0.0	← 0.020 slot screen
20	SC					0.0	
	SC		ML		SILT with some small clay layers, stiff, wet, olive gray.	0.0	
	SC					0.0	
	SC	10				0.0	
	SC					0.0	
25	SC					0.0	

ENERGIZER ENERGIZER-BENNINGTON.GPJ 3/20/07

(Continued Next Page)

WELL NUMBER ERM-11 S/D
PAGE 2 OF 2

CLIENT	Energizer	PROJECT NAME	Energizer-Bennington
PROJECT NUMBER	0044701	PROJECT LOCATION	Bennington, VT

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID screen (ppm)	WELL DIAGRAM
25							
	SC					0.0	
	SC					0.0	
	SC					0.0	
	SC					0.0	
	SC					0.0	
30						0.0	
	SC					0.0	
	SC					0.0	
	SC					0.0	
	SC					0.0	
35						0.0	
	SC					0.0	
	SC					0.0	
	SC					0.0	
	SC					0.0	
	SC					0.0	
40						0.0	
	SC					0.0	
	SC					0.0	
	SC					0.0	
	SC					0.0	
	SC					0.0	
45						0.0	

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WELL NUMBER ERM-12

PAGE 1 OF 1

CLIENT	Energizer	PROJECT NAME	Energizer-Bennington
PROJECT NUMBER	0044701	PROJECT LOCATION	Bennington, VT
DATE STARTED	2/26/2007	COMPLETED	2/26/2007
GROUND ELEVATION	701.74 ft	WELL/BORING DIAMETER	2"
DRILLING CONTRACTOR	Boart Longyear	MEASURING POINT ELEVATION (ft)	701.48
DRILLING METHOD	Roto Sonic	GROUNDWATER ELEVATION (ft)	689.87
LOGGED BY	Moore	CHECKED BY	Ravella
GROUNDWATER ELEVATION DATE	2/28/07		
NOTES			

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID screen (ppm)	WELL DIAGRAM
0							
	SC	47	SW		SAND, SILT, AND GRAVEL Topsoil, poorly sorted (well graded), loose, moist, dark brown.	0.8	
	SC				MEDIUM TO COARSE SAND, SILT AND GRAVEL poorly sorted (well graded), loose, moist, orange brown.	0.6	
	SC					0.9	
	SC					0.6	
	SC					0.9	
5	SC	93	SW		MEDIUM TO COARSE SAND, SILT AND GRAVEL poorly sorted (well graded), loose, moist, orange brown.	0.7	
	SC				BOULDERS with coarse to medium sand, and silt, Rock flour, poorly sorted (well graded), loose, moist, orange brown/ tan.	2.3	
	SC					4.3	
	SC					0.5	
	SC					4.3	
10	SC	52	GW		LARGE COBBLES, GRAVEL, SAND and silt, Rock flour, poorly sorted (well graded), loose, moist.	12.3	
	SC				VERY COARSE SAND AND GRAVEL with medium sand and trace silt, Some large Cobbles, very poorly sorted (well graded), very loose, wet.	1.5	
	SC					1.2	
	SC					17.4	
	SC					1.9	
15	SC	33	GW		COBBLES, GRAVEL, SILT AND SAND poorly sorted (well graded), medium loose, wet, orange brown/ brown.	2.1	
	SC				COBBLES, GRAVEL, AND COARSE TO MEDIUM SAND poorly sorted (well graded), loose, wet.	2.0	
20		0			Bottom of hole at 20.0 feet.		

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WELL NUMBER ERM-13

PAGE 1 OF 1

CLIENT <u>Energizer</u>	PROJECT NAME <u>Energizer-Bennington</u>
PROJECT NUMBER <u>0044701</u>	PROJECT LOCATION <u>Bennington, VT</u>
DATE STARTED <u>2/26/2007</u> COMPLETED <u>2/26/2007</u>	GROUND ELEVATION <u>701.46 ft</u> WELL/BORING DIAMETER <u>2"</u>
DRILLING CONTRACTOR <u>Boart Longyear</u>	MEASURING POINT ELEVATION (ft) <u>-</u>
DRILLING METHOD <u>Roto Sonic</u>	GROUNDWATER ELEVATION (ft) <u>691.15</u>
LOGGED BY <u>Moore</u> CHECKED BY <u>Ravella</u>	GROUNDWATER ELEVATION DATE <u>2/28/07</u>
NOTES	

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID screen (ppm)	WELL DIAGRAM
0							
	SC		SW		MEDIUM TO COARSE SAND AND GRAVEL with silt, poorly sorted (well graded), loose, dry, tan.	1.0	
	SC		SW		MEDIUM TO COARSE SAND AND GRAVEL with silt, poorly sorted (well graded), loose, dry, dark brown.	38.8	
	SC	100	SW		MEDIUM TO COARSE SAND AND GRAVEL with silt, poorly sorted (well graded), loose, dry, tan.	1.9	
	SC		SP-SM		FINE TO MEDIUM SILTY SAND with cobbles/ gravel, poorly sorted (well graded), loose, moist, orange brown.	1.0	
5	SC				BOULDERS tan.	1.1	
	SC		SW		MEDIUM TO COARSE SAND AND GRAVEL with cobbles and silt, poorly sorted (well graded), loose, moist, orange brown.	19.8	← Bentonite
	SC					5.6	
	SC	53			FRACTURED ROCK.	34.5	
	SC					8.7	
10	SC					15.6	
	SC		SW		SILTY SAND AND GRAVEL with cobbles, poorly sorted (well graded), loose, moist, orange brown.	21.8	
	SC		GW		COBBLES/ GRAVEL with medium to coarse sand and silt, poorly sorted (well graded), loose, wet, orange brown.	18.3	
	SC	50	SW		MEDIUM TO COARSE SAND AND GRAVEL with trace silt, poorly sorted (well graded), loose, wet, orange brown.	13.9	
	SC					4.5	
15	SC					0.9	
	SC		SW		MEDIUM TO COARSE SAND AND GRAVEL with trace silt, poorly sorted (well graded), loose, wet, orange brown.	1.6	← 0.020 slot screen
	SC					0.3	
	SC	75	SM		FINE SAND/SILT with some medium to coarse sand, orange brown.	0.2	← no. 2 sand filter pack
	SC		SM		FINE SAND/SILT stiff, wet, orange brown/ olive grey.	0.2	
20	SC					0.5	← 0.010 slot screen
					Bottom of hole at 22.0 feet.		

ENERGIZER ENERGIZER-BENNINGTON.GPJ 3/20/07

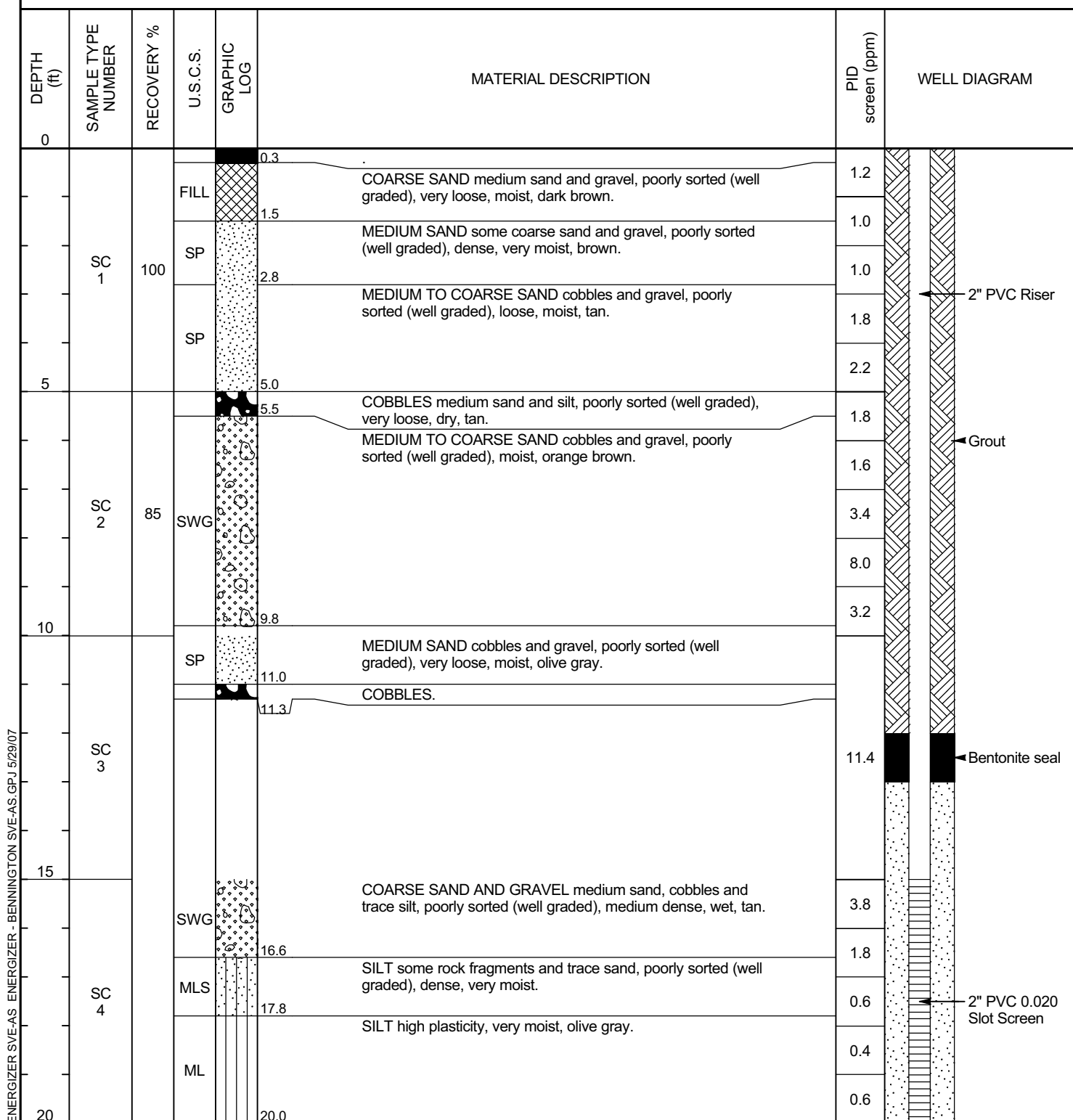


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WELL ID: ERM-16

PAGE 1 OF 1

CLIENT	Energizer	PROJECT NAME	IRM Installation
PROJECT NUMBER	0066698	PROJECT LOCATION	Bennington, VT
DATE STARTED	5/9/07	COMPLETED	5/9/07
GROUND ELEVATION		WELL/BORING DIAMETER	6"
DRILLING CONTRACTOR	Boart Longyear		
DRILLING METHOD	Mini-Sonic		
LOGGED BY	Anzenberger	CHECKED BY	Moore
NOTES	Flush mount roadbox		



Bottom of hole at 20.0 feet.



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MW/B-102
PAGE 1 OF 1

Client: Energizer Holdings, Inc.

Project Name: Energizer - Bennington

Project Number: 0529121

Project Location: 401 Gage Street, Bennington, Vermont

DRILLING CONTRACTOR: Cascade Drilling

TOTAL DEPTH: 15 feet bgs

SAMPLE TYPE

GRAPHIC LOG LEGEND

DRILLING METHOD: Pre-Cleared/Sonic Drilling

DIAMETER: 6 inches

Pre-Cleared

Poorly-graded Gravel

Poorly-graded Sand

DATE BORING COMPLETED: 7/7/2020

LOGGED BY: K. Popyack

Sonic Drilling

Poorly-graded Gravelly Sand

Silt

DATE WELL INSTALLED: 7/7/2020

CHECKED BY: H. Usle

GROUND ELEVATION: 700.90 feet amsl

NORTHING: 1454982.878

PVC ELEVATION: 700.31 feet amsl

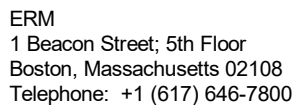
EASTING: 139289.9588

NOTES: Depth to groundwater collected on 7/13/2020. Horizontal survey datum in VT SPCS NAD83; vertical in NAVD88 (survey feet).

DEPTH (feet bgs)	ELEVATION (feet amsl)	SAMPLE TYPE	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
		PC							
		PC							
		PC	60	100			NO RECOVERY, Soil logging not conducted from 0 to 5 feet bgs. Subsurface material pre-cleared using vacuum excavation.		
		PC							
5	696	PC							
					GP		Brown, COBBLES, and subangular and subrounded sandy gravel, poorly sorted, loose, moist.	0.0	
		SC	36	60	SP		Brown, FINE SAND, few cobbles, poorly sorted, loose, wet.	0.0	
					SP		Brown, COARSE SAND AND GRAVEL, few cobbles, poorly sorted, loose, wet.	0.0	
10	691							0.0	
					SP		Dark Brown, COARSE SAND, loose, saturated.	0.0	
		SC	40	67	SP		Dark Brown, COARSE SAND AND GRAVEL, few cobbles, poorly sorted, loose, wet.	0.0	
					SP		Light Brown, COARSE SAND AND GRAVEL, few cobbles, poorly sorted, loose, wet.	0.0	
15	686							0.0	
					ML		Brown, SILT, compact.	0.0	
							Bottom of Boring @ 15.0 feet bgs		
20	681								

ACRONYM LEGEND:

amsl = above mean sea level; bgs = below ground surface; NAD = North American Datum; NAVD = North American Vertical Datum; NR = no recovery; ppm = parts per million; PID = photoionization detector; PVC = polyvinyl chloride casing; U.S.C.S = Unified Soil Classification System; VT SPCS = Vermont State Plane Coordinate System.



Project Name: Energizer - Bennington

Project Location: 401 Gage Street, Bennington, Vermont

TOTAL DEPTH: 20 feet bgs

GRAPHIC LOG LEGEND

DIAMETER: 6 inches

 Poorly-graded
Sandy Gravel

 Poorly-graded Sand

LOGGED BY: K. Popyack

 Sonic Drilling

☐ Poorly-graded

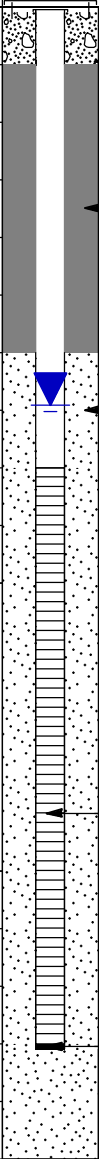
100

CHECKED BY: H. Usle

NORTHING: 1455001.052

EASTING: 139404.2664

NOTES: Depth to groundwater collected on 7/13/2020. Horizontal survey datum in VT SPCS NAD83; vertical in NAVD88 (survey feet).

DEPTH (feet bgs)	ELEVATION (feet amsl)	SAMPLE TYPE	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
		PC	60	100			NO RECOVERY, Soil logging not conducted from 0 to 5 feet bgs. Subsurface material pre-cleared using vacuum excavation.		 Flush-Mount Protective Casing Concrete Pad (2 x 2 feet) Hydrated Granular Bentonite (1 to 6 feet bgs) #0 Filter Sand (6 to 20 feet bgs) Well Screen (2 SCH 40 PVC/ 0.01 slot) (8 to 18 feet bgs) End Cap
		PC			0.0				
		PC			0.0				
		PC			0.0				
		PC			0.0				
5	696					5.0		0.0	
		SC	60	100	GP		Brown, SANDY GRAVEL, subrounded poorly sorted, loose, wet.	0.0	
					SP		Light Brown, SAND, some subrounded gravel, gray, light brown and white gravels, poorly sorted, dry.	0.0	
					SP		FINE SAND, few gravel, cobble at 9.5 feet bgs, loose, dry.	2.1	
10	691					9.0		0.0	
		SC	0	0			NO RECOVERY.	NR	
15	686					15.0			
		SC	60	100	SP		Brown, COARSE SAND AND GRAVEL, few cobbles, minor silt, poorly sorted, loose, wet.	0.0	
					ML		Gray, SILT, compact, wet.	0.0	
20	681					20.0		0.0	
							Bottom of Boring @ 20.0 feet bgs		

ACRONYM LEGEND:

amsl = above mean sea level; bgs = below ground surface; NAD = North American Datum; NAVD = North American Vertical Datum; NR = no recovery; ppm = parts per million; PID = photoionization detector; PVC = polyvinyl chloride casing; U.S.C.S = Unified Soil Classification System; VT SPCS = Vermont State Plane Coordinate System.



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MW/B-104
PAGE 1 OF 1

Client: Energizer Holdings, Inc.

Project Name: Energizer - Bennington

Project Number: 0529121

Project Location: 401 Gage Street, Bennington, Vermont

DRILLING CONTRACTOR: Cascade Drilling

TOTAL DEPTH: 16 feet bgs

SAMPLE TYPE

GRAPHIC LOG LEGEND

DRILLING METHOD: Pre-Cleared/Sonic Drilling

DIAMETER: 6 inches

Pre Cleared

Poorly-graded Sandy Gravel

Poorly-graded Gravelly Sand

DATE BORING COMPLETED: 7/8/2020

LOGGED BY: K. Popyack

Sonic Drilling

Silt

DATE WELL INSTALLED: 7/8/2020

CHECKED BY: H. Usle

GROUND ELEVATION: 705.82 feet amsl

NORTHING: 1455309.138

PVC ELEVATION: 705.34 feet amsl

EASTING: 139363.4937

NOTES: Depth to groundwater collected on 7/13/2020. Horizontal survey datum in VT SPCS NAD83; vertical in NAVD88 (survey feet).

DEPTH (feet bgs)	ELEVATION (feet amsl)	SAMPLE TYPE	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
		PC						0.0	Flush-Mount Protective Casing
		PC						0.0	Concrete Pad (2 x 2 feet)
		PC	60	100			NO RECOVERY, Soil logging not conducted from 0 to 5 feet bgs. Subsurface material pre-cleared using vacuum excavation.	0.0	Hydrated Granular Bentonite (1 to 3 feet bgs)
		PC						0.0	
5	701	PC						0.0	#0 Filter Sand (3 to 15 feet bgs)
		SC	60	100	GP		SANDY GRAVEL, anthropogenic material from preclearing activities, product visible at 5 feet bgs, "oil-like" material and odor present, poorly sorted, loose, wet.	51.7	
								0.0	
					GP		Light Brown, SANDY GRAVEL, some cobbles, poorly sorted, loose, wet.	0.0	
10	696							0.0	
					SP		Brown, COARSE SAND AND GRAVEL, few cobbles, poorly sorted, loose, saturated.	0.0	Well Screen (2 SCH 40 PVC/ 0.01 slot) (5 to 15 feet bgs)
								0.0	
		SC	72	100	SP		Brown, COARSE SANDY GRAVEL, some cobbles, poorly sorted, loose, wet to saturated.	0.0	
								0.0	
								0.0	
15	691				SP		Brown, SAND AND GRAVEL, few cobbles, lithic sand, poorly sorted, loose, wet.	0.0	
								0.0	
					ML		SILT, dense, wet, gray mottling.	0.0	End Cap
								0.0	
							Bottom of Boring @ 16.0 feet bgs		
20	686								

ACRONYM LEGEND:

amsl = above mean sea level; bgs = below ground surface; NAD = North American Datum; NAVD = North American Vertical Datum; NR = no recovery; ppm = parts per million; PID = photoionization detector; PVC = polyvinyl chloride casing; U.S.C.S = Unified Soil Classification System; VT SPCS = Vermont State Plane Coordinate System.

Groundwater Gauging Form

Monitoring Well Gauging Form**Energizer Holdings, Inc., Bennington, Vermont**

Well ID	Depth To Water (ft bTOC)	Total Depth (ft bTOC)	Date / Time	Notes
ERM-8				
ERM-11S				
ERM-12				
ERM-16				
MW-101				
MW-102				
MW-103				
MW-104				

Groundwater Sampling Form

Site Name: _____

Low-Flow Groundwater Sampling Form

Well ID:	Sample ID:
Date:	Well Diameter:
Sampling Personnel:	Casing Type:
Weather Conditions:	Sampling Device:
Time:	Measuring Point:
YSI File Name:	YSI Unit Serial Number:
Total Depth (T.D.):	Screen Length:
Depth to Water (D.T.W): ⁽¹⁾	Depth Top of Sample:
Total Volume Purged:	Depth bottom Sample:
Average Purge Rate:	Sample Method:
Tubing Type:	Date to Lab:

Pump Intake (ft below M.P.):	color*:	odor*:
------------------------------	---------	--------

Time:	DTW: ³ (feet)	Purge Rate (ml/min)	Temp (°C)	SpC (uS/cm)	Cond (uS/cm)	Turb. NTU	DO (mg/L)	pH (std units)	ORP mV
Elapsed Time		Stabilization Criteria	+/- 3%	+/- 3%	+/- 3%	+/- 10%	+/- 10%	+/- 0.1 unit	+/- 10 mV
0:00									
5:00									
10:00									
15:00									
20:00									
25:00									
30:00									
35:00									
40:00									
45:00									
50:00									
55:00									
60:00									
65:00									
70:00									
75:00									
80:00									
85:00									
90:00									
95:00									
100:00									

Sample ID's and Times:	
------------------------	--

_____	_____
_____	_____

# of Bottles	Bottle Size	Bottle Type	Preservative	Analysis	Lab
--------------	-------------	-------------	--------------	----------	-----

Materials Used (filters, tubing, etc.):

- Notes:
- (1) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.
 - (2) - Stabilization criteria based on three most recent consecutive measurements.
 - (3) - Total drawdown in well to be less than 0.1 m (0.32 ft). Purging rate to be lowered as necessary to keep drawdown below 0.1 m (0.32 ft).
- *Record color and odor at time of sample collection

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Ghana	Senegal
Guyana	Singapore
Hong Kong	South Africa
India	South Korea
Indonesia	Spain
Ireland	Sweden
Italy	Switzerland
Japan	Taiwan
Kazakhstan	Tanzania
Kenya	Thailand
Malaysia	UAE
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Myanmar	Vietnam

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APPENDIX C COC CONCENTRATION TABLES

December 2021

Appendix C
Groundwater Analytical Results
ENERGIZER Bennington Facility
Bennington, Vermont

	Location ID	ERM-1	ERM-1	ERM-1	ERM-1	ERM-1	ERM-1	ERM-10	ERM-10	ERM-10	ERM-10	ERM-10	ERM-10	ERM-10	ERM-10	ERM-10	ERM-10	ERM-10-PDB
	Sample Date	19-Feb-06	18-Jul-06	18-Jul-06	19-Jul-06	14-Feb-07	14-Feb-07	23-Feb-07	23-Feb-07	16-Jun-10	15-Sep-10	16-Dec-10	17-Mar-11	28-Jun-11	25-Oct-11	21-Dec-11	16-Jun-10	
	Sample Type	N	N	FD	N	N	N	N	FD	N	N	N	N	N	N	N	N	
Analyte	Unit																	
Method 8260																		
cis-1,2-Dichloroethene	µg/L	< 1,200	< 2	< 2	< 2			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Tetrachloroethene	µg/L	130,000	2,600	1,600	1,400		470	1.3	1.2	2.2	7.3	1.7	1.6	1.3	1.3	1.6	2.4	
trans-1,2-Dichloroethene	µg/L	< 1,900	< 2	< 2	< 2			< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75
Trichloroethene	µg/L	< 1,200	1 J	< 2	1 J			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Vinyl chloride	µg/L	< 2,500	< 2	< 2	< 2			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Method 8260B																		
cis-1,2-Dichloroethene	µg/L						< 2											
Tetrachloroethene	µg/L																	
trans-1,2-Dichloroethene	µg/L						< 2											
Trichloroethene	µg/L						< 2											
Vinyl chloride	µg/L						< 2											
Method E537																		
Perfluorobutane sulfonic acid (PFBS)	ng/l																	
Perfluorodecanoic acid (PFDA)	ng/l																	
Perfluorododecanoic acid (PFDoDA)	ng/l																	
Perfluoroheptanoic acid (PFHpA)	ng/l																	
Perfluorohexane sulfonic acid (PFHxS)	ng/l																	
Perfluorohexanoic acid (PFHxA)	ng/l																	
Perfluorononanoic acid (PFNA)	ng/l																	
Perfluorooctane sulfonic acid (PFOS)	ng/l																	
Perfluorooctanoic acid (PFOA)	ng/l																	
Perfluorotetradecanoic acid (PFTeDA)	ng/l																	
Perfluorotridecanoic acid (PFTriDA)	ng/l																	
Perfluoroundecanoic acid (PFUnDA)	ng/l																	

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
N = Normal Environmental Sample
FD = Field Duplicate Sample
µg/L = micrograms per liter
ng/l = nanogram per liter
PDB = sample collected using passive diffusion bag.
All others collected using low-flow techniques

Appendix C
Groundwater Analytical Results
ENERGIZER Bennington Facility
Bennington, Vermont

		Location ID	ERM-11D	ERM-11S	ERM-11S	ERM-11S	ERM-11S	ERM-11S	ERM-11S	ERM-11S	ERM-11S	ERM-11S	ERM-11S	ERM-11S	ERM-11S	ERM-11S	ERM-11S	ERM-11S-PDB
		Sample Date	23-Feb-07	23-Feb-07	16-Jun-10	15-Sep-10	16-Dec-10	18-Mar-11	28-Jun-11	24-Oct-11	21-Dec-11	22-Mar-12	26-Jun-12	25-Sep-12	23-Sep-15	06-Sep-19	29-Sep-21	16-Jun-10
Analyte	Unit	Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Method 8260																		
cis-1,2-Dichloroethene	µg/L		< 0.50	< 2.5	< 0.50	< 1.2	< 1.2	< 1.0	< 1.2	< 1.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Tetrachloroethene	µg/L		1.7	180	100	100	90	100	83	68	100	83	92	100	120	82	85	78
trans-1,2-Dichloroethene	µg/L		< 0.75	< 3.8	< 0.75	< 1.9	< 1.9	< 1.5	< 1.9	< 1.9	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75
Trichloroethene	µg/L		< 0.50	< 2.5	< 0.50	5.3	< 1.2	< 1.0	< 1.2	< 1.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Vinyl chloride	µg/L		< 1.0	< 5.0	< 1.0	< 2.5	< 2.5	< 2.0	< 2.5	< 2.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Method 8260B																		
cis-1,2-Dichloroethene	µg/L																	
Tetrachloroethene	µg/L																	
trans-1,2-Dichloroethene	µg/L																	
Trichloroethene	µg/L																	
Vinyl chloride	µg/L																	
Method E537																		
Perfluorobutane sulfonic acid (PFBS)	ng/l																	
Perfluorodecanoic acid (PFDA)	ng/l																	
Perfluorododecanoic acid (PFDoDA)	ng/l																	
Perfluoroheptanoic acid (PFHpA)	ng/l																	
Perfluorohexane sulfonic acid (PFHxS)	ng/l																	
Perfluorohexanoic acid (PFHxA)	ng/l																	
Perfluorononanoic acid (PFNA)	ng/l																	
Perfluorooctane sulfonic acid (PFOS)	ng/l																	
Perfluorooctanoic acid (PFOA)	ng/l																	
Perfluorotetradecanoic acid (PFTeDA)	ng/l																	
Perfluorotridecanoic acid (PFTrDA)	ng/l																	
Perfluoroundecanoic acid (PFUnDA)	ng/l																	

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
N = Normal Environmental Sample
FD = Field Duplicate Sample
µg/L = micrograms per liter
ng/l = nanogram per liter
PDB = sample collected using passive diffusion bag.
All others collected using low-flow techniques

Appendix C
Groundwater Analytical Results
ENERGIZER Bennington Facility
Bennington, Vermont

	Location ID	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	
	Sample Date	27-Feb-07	04-Sep-07	04-Sep-07	18-Dec-07	10-Mar-08	10-Mar-08	16-Jun-08	26-Sep-08	10-Dec-08	11-Mar-09	17-Jun-09	16-Sep-09	08-Dec-09	30-Mar-10	16-Jun-10	16-Jun-10	15-Sep-10	16-Dec-10	18-Mar-11	28-Jun-11	24-Oct-11	21-Dec-11	22-Mar-12	26-Jun-12	25-Sep-12	25-Sep-12	11-Dec-12	11-Dec-12
Analyte	Sample Type	N	N	FD	N	N	FD	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	FD	N	FD
	Unit																												
Method 8260																													
cis-1,2-Dichloroethene	µg/L	< 2.0	< 10	< 10	< 2.0	< 0.5	< 0.5	< 1.0	< 2.0	24	3.6	< 2.00	< 1.2	< 0.50	< 0.50	< 0.50	< 1.2	< 1.2	< 1.0	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
Tetrachloroethene	µg/L	120	210	180	150	72	69	190	84	290	60	32.8	50	39	58	100	120	62	70	54	53	80	57	55	76	78	120	120	
trans-1,2-Dichloroethene	µg/L	< 3.0	< 10	< 10	< 3.0	< 0.75	< 0.75	< 1.5	< 3.0	< 3.0	< 1.5	< 2.00	< 1.9	< 0.75	< 0.75	< 0.75	< 1.9	< 1.9	< 1.5	< 1.5	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	
Trichloroethene	µg/L	< 2.0	< 10	< 10	< 2.0	0.5	< 0.5	< 1.0	4.2	40	11	6.78	3.5	1.1	< 0.50	< 0.50	5.0	< 1.2	< 1.0	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
Vinyl chloride	µg/L	< 4.0	< 20	< 20	< 4.0	< 1	< 1	< 2.0	< 4.0	< 4.0	< 2.0	< 2.00	< 2.5	< 1.0	< 1.0	< 1.0	< 2.5	< 2.5	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Method 8260B																													
cis-1,2-Dichloroethene	µg/L																												
Tetrachloroethene	µg/L																												
trans-1,2-Dichloroethene	µg/L																												
Trichloroethene	µg/L																												
Vinyl chloride	µg/L																												
Method E537																													
Perfluorobutane sulfonic acid (PFBS)	ng/l																												
Perfluorodecanoic acid (PFDA)	ng/l																												
Perfluorododecanoic acid (PFDoDA)	ng/l																												
Perfluoroheptanoic acid (PFHpA)	ng/l																												
Perfluorohexane sulfonic acid (PFHxS)	ng/l																												
Perfluorohexanoic acid (PFHxA)	ng/l																												
Perfluorononanoic acid (PFNA)	ng/l																												
Perfluorooctane sulfonic acid (PFOS)	ng/l																												
Perfluorooctanoic acid (PFOA)	ng/l																												
Perfluorotetradecanoic acid (PFTeDA)	ng/l																												
Perfluorotridecanoic acid (PFTTrDA)	ng/l																												
Perfluoroundecanoic acid (PFUnDA)	ng/l																												

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit.
The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
N = Normal Environmental Sample
FD = Field Duplicate Sample
µg/L = micrograms per liter
ng/l = nanogram per liter
PDB = sample collected using passive diffusion bag.
All others collected using low-flow techniques

Appendix C
Groundwater Analytical Results
ENERGIZER Bennington Facility
Bennington, Vermont

	Location ID	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12	ERM-12-PDB
	Sample Date	19-Mar-13	19-Jun-13	19-Jun-13	25-Mar-14	25-Mar-14	23-Apr-15	23-Sep-15	27-Sep-16	07-Sep-18	06-Sep-19	14-Jul-20	14-Jul-20	26-Oct-20	26-Oct-20	29-Sep-21	29-Sep-21	16-Jun-10	
Analyte	Sample Type	N	N	FD	N	FD	N	N	N	N	N	N	FD	N	FD	N	FD	N	
	Unit																		
Method 8260																			
cis-1,2-Dichloroethene	µg/L	< 1.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0	< 2.0	< 4.0	< 2.0	< 0.50	< 0.50	< 0.50	
Tetrachloroethene	µg/L	91	66	63	100	100	100	72	90	28	94	93	92	100	92	84	80	100	
trans-1,2-Dichloroethene	µg/L	< 1.9	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 2.0	< 2.0	< 4.0	< 2.0	< 0.75	< 0.75	< 0.75	
Trichloroethene	µg/L	< 1.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0	< 2.0	< 4.0	< 2.0	< 0.50	< 0.50	< 0.50	
Vinyl chloride	µg/L	< 2.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 4.0	< 2.0	< 1.0	< 1.0	< 1.0	
Method 8260B																			
cis-1,2-Dichloroethene	µg/L																		
Tetrachloroethene	µg/L																		
trans-1,2-Dichloroethene	µg/L																		
Trichloroethene	µg/L																		
Vinyl chloride	µg/L																		
Method E537																			
Perfluorobutane sulfonic acid (PFBS)	ng/l													< 1.7	< 1.7				
Perfluorodecanoic acid (PFDA)	ng/l													< 1.7	< 1.7				
Perfluorododecanoic acid (PFDoDA)	ng/l													< 1.7	< 1.7				
Perfluoroheptanoic acid (PFHpA)	ng/l													< 1.7	< 1.7				
Perfluorohexane sulfonic acid (PFHxS)	ng/l													< 1.7	< 1.7				
Perfluorohexanoic acid (PFHxA)	ng/l													< 1.7	< 1.7				
Perfluorononanoic acid (PFNA)	ng/l													< 1.7	< 1.7				
Perfluorooctane sulfonic acid (PFOS)	ng/l													< 1.7	< 1.7				
Perfluorooctanoic acid (PFOA)	ng/l															6.3	6.7		
Perfluorotetradecanoic acid (PFTeDA)	ng/l													< 1.7	< 1.7				
Perfluorotridecanoic acid (PFTTrDA)	ng/l													< 1.7	< 1.7				
Perfluoroundecanoic acid (PFUnDA)	ng/l													< 1.7	< 1.7				

Notes:
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N = Normal Environmental Sample
FD = Field Duplicate Sample
µg/L = micrograms per liter
ng/l = nanogram per liter
PDB = sample collected using passive diffusion bag.
All others collected using low-flow techniques

Appendix C
Groundwater Analytical Results
ENERGIZER Bennington Facility
Bennington, Vermont

	Location ID	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13	ERM-13
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Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit.
The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
N = Normal Environmental Sample
FD = Field Duplicate Sample
µg/L = micrograms per liter
ng/l = nanogram per liter
PDB = sample collected using passive diffusion bag.
All others collected using low-flow techniques

Appendix C
Groundwater Analytical Results
ENERGIZER Bennington Facility
Bennington, Vermont

	Location ID	ERM-14	ERM-14	ERM-14	ERM-14	ERM-14	ERM-14	ERM-14	ERM-14	ERM-14	ERM-14	ERM-14	ERM-14	ERM-14-PDB
	Sample Date	16-Jun-08	26-Sep-08	10-Dec-08	10-Mar-09	18-Jun-09	16-Sep-09	07-Dec-09	30-Mar-10	15-Jun-10	15-Sep-10	15-Sep-10	15-Dec-10	15-Jun-10
Analyte	Sample Type	N	N	N	N	N	N	N	N	N	N	FD	N	N
	Unit													
Method 8260														
cis-1,2-Dichloroethene	µg/L	< 0.50	< 0.50	< 0.50	< 0.50	< 2.00	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Tetrachloroethene	µg/L	6.9	1.5	0.97	4.7	2.94	3.3	3.7	3.7	3.1	3.8	4.1	4.0	2.3
trans-1,2-Dichloroethene	µg/L	< 0.75	< 0.75	< 0.75	< 0.75	< 2.00	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75
Trichloroethene	µg/L	< 0.50	< 0.50	< 0.50	< 0.50	< 2.00	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Vinyl chloride	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 2.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Method 8260B														
cis-1,2-Dichloroethene	µg/L													
Tetrachloroethene	µg/L													
trans-1,2-Dichloroethene	µg/L													
Trichloroethene	µg/L													
Vinyl chloride	µg/L													
Method E537														
Perfluorobutane sulfonic acid (PFBS)	ng/l													
Perfluorodecanoic acid (PFDA)	ng/l													
Perfluorododecanoic acid (PFDoDA)	ng/l													
Perfluoroheptanoic acid (PFHpA)	ng/l													
Perfluorohexane sulfonic acid (PFHxS)	ng/l													
Perfluorohexanoic acid (PFHxA)	ng/l													
Perfluorononanoic acid (PFNA)	ng/l													
Perfluorooctane sulfonic acid (PFOS)	ng/l													
Perfluorooctanoic acid (PFOA)	ng/l													
Perfluorotetradecanoic acid (PFTeDA)	ng/l													
Perfluorotridecanoic acid (PFTTrDA)	ng/l													
Perfluoroundecanoic acid (PFUnDA)	ng/l													

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
N = Normal Environmental Sample
FD = Field Duplicate Sample
µg/L = micrograms per liter
ng/l = nanogram per liter
PDB = sample collected using passive diffusion bag.
All others collected using low-flow techniques

Appendix C
Groundwater Analytical Results
ENERGIZER Bennington Facility
Bennington, Vermont

	Location ID	ERM-15	ERM-15	ERM-15	ERM-15	ERM-15	ERM-15	ERM-15	ERM-15	ERM-15	ERM-15	ERM-15	ERM-15	ERM-15	ERM-15	ERM-15	ERM-15-PDB
	Sample Date	22-May-07	04-Sep-07	11-Mar-08	16-Jun-08	26-Sep-08	10-Dec-08	10-Mar-09	18-Jun-09	16-Sep-09	08-Dec-09	08-Dec-09	31-Mar-10	16-Jun-10	15-Sep-10	15-Dec-10	16-Jun-10
Analyte	Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	Unit											FD					
Method 8260																	
cis-1,2-Dichloroethene	µg/L	< 0.50	< 10	< 0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 2.00	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Tetrachloroethene	µg/L	3.3	< 10	1.1	1.8	1.2	3.9	1.9	< 2.00	0.83	0.64	0.60	< 0.50	< 0.50	1.3	< 0.50	< 0.50
trans-1,2-Dichloroethene	µg/L	< 0.75	< 10	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 2.00	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75
Trichloroethene	µg/L	0.63	< 10	< 0.5	< 0.50	< 0.50	0.56	< 0.50	< 2.00	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Vinyl chloride	µg/L	< 1.0	< 20	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 2.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Method 8260B																	
cis-1,2-Dichloroethene	µg/L																
Tetrachloroethene	µg/L																
trans-1,2-Dichloroethene	µg/L																
Trichloroethene	µg/L																
Vinyl chloride	µg/L																
Method E537																	
Perfluorobutane sulfonic acid (PFBS)	ng/l																
Perfluorodecanoic acid (PFDA)	ng/l																
Perfluorododecanoic acid (PFDoDA)	ng/l																
Perfluoroheptanoic acid (PFHpA)	ng/l																
Perfluorohexane sulfonic acid (PFHxS)	ng/l																
Perfluorohexanoic acid (PFHxA)	ng/l																
Perfluorononanoic acid (PFNA)	ng/l																
Perfluorooctane sulfonic acid (PFOS)	ng/l																
Perfluorooctanoic acid (PFOA)	ng/l																
Perfluorotetradecanoic acid (PFTeDA)	ng/l																
Perfluorotridecanoic acid (PFTTrDA)	ng/l																
Perfluoroundecanoic acid (PFUnDA)	ng/l																

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
N = Normal Environmental Sample
FD = Field Duplicate Sample
µg/L = micrograms per liter
ng/l = nanogram per liter
PDB = sample collected using passive diffusion bag.
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Appendix C
Groundwater Analytical Results
ENERGIZER Bennington Facility
Bennington, Vermont

	Location ID	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	
Sample Date	Sample Type	22-May-07	04-Sep-07	11-Mar-08	16-Jun-08	26-Sep-08	10-Dec-08	10-Mar-09	18-Jun-09	17-Sep-09	08-Dec-09	30-Mar-10	15-Jun-10	15-Jun-10	15-Sep-10	15-Dec-10	18-Mar-11	28-Jun-11	24-Oct-11	24-Oct-11	21-Dec-11	21-Dec-11	22-Mar-12	26-Jun-12	25-Sep-12	11-Dec-12	19-Mar-13	19-Jun-13	
Analyte	Unit	N	N	N	N	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	FD	N	FD	N	N	N	N	N	N	
Method 8260																													
cis-1,2-Dichloroethene	µg/L	< 0.50	< 10	< 0.5	< 0.50	0.82	11	2.5	< 2.00	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
Tetrachloroethene	µg/L	54	38	31	54	49	99	33	15.1	21	23	18	24	18	3.3	7.7	23	15	6.3	6.2	3.7	3.5	6.1	< 0.50	4.9	4.7	18	9.0	
trans-1,2-Dichloroethene	µg/L	< 0.75	< 10	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 2.00	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75		
Trichloroethene	µg/L	1.5	< 10	< 0.5	< 0.50	2.5	23	6.0	6.43	3.6	2.0	< 0.50	< 0.50	1.6	2.5	1.1	< 0.50	0.71	0.74	0.73	0.56	0.54	0.63	< 0.50	0.94	0.55	< 0.50	< 0.50	
Vinyl chloride	µg/L	< 1.0	< 20	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 2.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
Method 8260B																													
cis-1,2-Dichloroethene	µg/L																												
Tetrachloroethene	µg/L																												
trans-1,2-Dichloroethene	µg/L																												
Trichloroethene	µg/L																												
Vinyl chloride	µg/L																												
Method E537																													
Perfluorobutane sulfonic acid (PFBS)	ng/l																												
Perfluorodecanoic acid (PFDA)	ng/l																												
Perfluorododecanoic acid (PFDoDA)	ng/l																												
Perfluoroheptanoic acid (PFHpA)	ng/l																												
Perfluorohexane sulfonic acid (PFHxS)	ng/l																												
Perfluorohexanoic acid (PFHxA)	ng/l																												
Perfluorononanoic acid (PFNA)	ng/l																												
Perfluorooctane sulfonic acid (PFOS)	ng/l																												
Perfluorooctanoic acid (PFOA)	ng/l																												
Perfluorotetradecanoic acid (PFTeDA)	ng/l																												
Perfluorotridecanoic acid (PFTTrDA)	ng/l																												
Perfluoroundecanoic acid (PFUnDA)	ng/l																												

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit.
The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
N = Normal Environmental Sample
FD = Field Duplicate Sample
µg/L = micrograms per liter
ng/l = nanogram per liter
PDB = sample collected using passive diffusion bag.
All others collected using low-flow techniques

Appendix C
Groundwater Analytical Results
ENERGIZER Bennington Facility
Bennington, Vermont

	Location ID	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16	ERM-16-PDB
	Sample Date	25-Mar-14	23-Apr-15	23-Apr-15	23-Sep-15	23-Sep-15	27-Sep-16	07-Sep-18	07-Sep-18	06-Sep-19	06-Sep-19	14-Jul-20	26-Oct-20	29-Sep-21	15-Jun-10
Analyte	Unit	N	N	FD	N	FD	N	N	FD	N	FD	N	N	N	N
Method 8260															
cis-1,2-Dichloroethene	µg/L	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 0.50
Tetrachloroethene	µg/L	14	9.5	9.5	12	11	25	< 0.50	< 0.50	13	13	19	19	13	12
trans-1,2-Dichloroethene	µg/L	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 1.0	< 1.0	< 0.75	< 0.75
Trichloroethene	µg/L	< 0.50	0.68	0.64	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	0.91
Vinyl chloride	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Method 8260B															
cis-1,2-Dichloroethene	µg/L														
Tetrachloroethene	µg/L														
trans-1,2-Dichloroethene	µg/L														
Trichloroethene	µg/L														
Vinyl chloride	µg/L														
Method E537															
Perfluorobutane sulfonic acid (PFBS)	ng/l													< 1.7	
Perfluorodecanoic acid (PFDA)	ng/l													< 1.7	
Perfluorododecanoic acid (PFDoDA)	ng/l													< 1.7	
Perfluoroheptanoic acid (PFHpA)	ng/l													< 1.7	
Perfluorohexane sulfonic acid (PFHxS)	ng/l													< 1.7	
Perfluorohexanoic acid (PFHxA)	ng/l													< 1.7	
Perfluorononanoic acid (PFNA)	ng/l													< 1.7	
Perfluorooctane sulfonic acid (PFOS)	ng/l													< 1.7	
Perfluorooctanoic acid (PFOA)	ng/l													9.8	
Perfluorotetradecanoic acid (PFTeDA)	ng/l													< 1.7	
Perfluorotridecanoic acid (PFTTrDA)	ng/l													< 1.7	
Perfluoroundecanoic acid (PFUnDA)	ng/l													< 1.7	

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
N = Normal Environmental Sample
FD = Field Duplicate Sample
µg/L = micrograms per liter
ng/l = nanogram per liter
PDB = sample collected using passive diffusion bag.
All others collected using low-flow techniques

Appendix C
Groundwater Analytical Results
ENERGIZER Bennington Facility
Bennington, Vermont

	Location ID	ERM-17	ERM-17	ERM-17	ERM-17	ERM-17	ERM-17	ERM-17	ERM-17	ERM-17	ERM-17	ERM-17	ERM-17	ERM-17	ERM-17	ERM-17	ERM-17-PDB
	Sample Date	22-May-07	05-Sep-07	11-Mar-08	16-Jun-08	26-Sep-08	10-Dec-08	11-Mar-09	11-Mar-09	17-Jun-09	16-Sep-09	08-Dec-09	30-Mar-10	15-Jun-10	15-Sep-10	16-Dec-10	15-Jun-10
Analyte	Sample Type	N	N	N	N	N	N	N	N	FD	N	N	N	N	N	N	N
	Unit																
Method 8260																	
cis-1,2-Dichloroethene	µg/L	< 1.2	< 10	< 0.5	< 1.0	2.0	24	5.2	5.3	2.38	0.57	< 0.50	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	100	100	72	150	84	270	64	65	28.4	44	43	37	52	68	42	54
trans-1,2-Dichloroethene	µg/L	< 1.9	< 10	< 0.75	< 1.5	< 1.9	< 1.9	< 0.75	< 0.75	< 2.00	< 0.75	< 0.75	< 0.75	< 1.5	< 1.5	< 1.5	< 1.5
Trichloroethene	µg/L	< 1.2	< 10	0.63	< 1.0	5.2	47	15	15	13.0	5.8	2.8	< 0.50	< 1.0	4.2	< 1.0	< 1.0
Vinyl chloride	µg/L	< 2.5	< 20	< 1	< 2.0	< 2.5	< 2.5	< 1.0	< 1.0	< 2.00	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0
Method 8260B																	
cis-1,2-Dichloroethene	µg/L																
Tetrachloroethene	µg/L																
trans-1,2-Dichloroethene	µg/L																
Trichloroethene	µg/L																
Vinyl chloride	µg/L																
Method E537																	
Perfluorobutane sulfonic acid (PFBS)	ng/l																
Perfluorodecanoic acid (PFDA)	ng/l																
Perfluorododecanoic acid (PFDoDA)	ng/l																
Perfluoroheptanoic acid (PFHpA)	ng/l																
Perfluorohexane sulfonic acid (PFHxS)	ng/l																
Perfluorohexanoic acid (PFHxA)	ng/l																
Perfluorononanoic acid (PFNA)	ng/l																
Perfluorooctane sulfonic acid (PFOS)	ng/l																
Perfluorooctanoic acid (PFOA)	ng/l																
Perfluorotetradecanoic acid (PFTeDA)	ng/l																
Perfluorotridecanoic acid (PFTTrDA)	ng/l																
Perfluoroundecanoic acid (PFUnDA)	ng/l																

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
N = Normal Environmental Sample
FD = Field Duplicate Sample
µg/L = micrograms per liter
ng/l = nanogram per liter
PDB = sample collected using passive diffusion bag.
All others collected using low-flow techniques

Appendix C
Groundwater Analytical Results
ENERGIZER Bennington Facility
Bennington, Vermont

	Location ID	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19-PDE		
	Sample Date	25-Jul-07	17-Oct-07	15-Nov-07	18-Dec-07	11-Mar-08	17-Jun-08	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19	ERM-19-PDE		
Analyte	Sample Type Unit	N	N	N	N	N	N	FD	N	N	N	N	N	FD	N	N	N	FD	N	FD	N	N	N	N	N	N		
Method 8260																												
cis-1,2-Dichloroethene	µg/L	< 2.0	< 0.50	< 2.5	< 2.5	< 1	< 1.0	< 2.0	19	< 2.0	< 2.0	< 2.00	< 2.0	< 2.5	< 2.0	< 2.0	< 2.0	< 0.50	< 2.0	< 0.50	< 2.0	< 2.0	< 2.0	< 2.0	< 1.2	< 0.50		
Tetrachloroethene	µg/L	170	240	140	130	77	170	180	270	230	97	112	170	160	140	130	160	120	99	100	140	200	120	140	150	100	110	130
trans-1,2-Dichloroethene	µg/L	< 2.0	< 0.75	< 3.8	< 3.8	< 1.5	< 1.5	< 3.0	< 3.0	< 3.0	< 3.0	< 2.00	< 3.0	< 3.8	< 3.0	< 3.0	< 3.0	< 0.75	< 3.0	< 0.75	< 3.0	< 3.0	< 3.0	< 3.0	< 1.9	< 1.9	< 0.75	
Trichloroethene	µg/L	< 2.0	1.5	< 2.5	< 2.5	< 1	< 1.0	< 2.0	8.5	3.1	< 2.0	< 2.00	< 2.0	< 2.5	< 2.0	< 2.0	< 2.0	< 0.50	< 2.0	2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 1.2	< 1.2	< 0.50	
Vinyl chloride	µg/L	< 2.0	< 1.0	< 5.0	< 5.0	< 2	< 2.0	< 4.0	< 4.0	< 4.0	< 4.0	< 2.00	< 4.0	< 5.0	< 4.0	< 4.0	< 4.0	< 1.0	< 4.0	< 1.0	< 4.0	< 4.0	< 4.0	< 4.0	< 2.5	< 2.5	< 1.0	
Method 8260B																												
cis-1,2-Dichloroethene	µg/L																											
Tetrachloroethene	µg/L																											
trans-1,2-Dichloroethene	µg/L																											
Trichloroethene	µg/L																											
Vinyl chloride	µg/L																											
Method E537																												
Perfluorobutane sulfonic acid (PFBS)	ng/l																											
Perfluorodecanoic acid (PFDA)	ng/l																											
Perfluorododecanoic acid (PFDODA)	ng/l																											
Perfluoroheptanoic acid (PFHpA)	ng/l																											
Perfluorohexane sulfonic acid (PFHxS)	ng/l																											
Perfluorohexanoic acid (PFHxA)	ng/l																											
Perfluorononanoic acid (PFNA)	ng/l																											
Perfluorooctane sulfonic acid (PFOS)	ng/l																											
Perfluorooctanoic acid (PFOA)	ng/l																											
Perfluorotetradecanoic acid (PFTeDA)	ng/l																											
Perfluorotridecanoic acid (PFTrDA)	ng/l																											
Perfluoroundecanoic acid (PFUnDA)	ng/l																											

Notes:

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- Empty cells = Not analyzed
- N = Normal Environmental Sample
- FD = Field Duplicate Sample
- µg/L = micrograms per liter
- ng/l = nanogram per liter
- PDB = sample collected using passive diffusion bag.

All others collected using low-flow techniques

Appendix C
Groundwater Analytical Results
ENERGIZER Bennington Facility
Bennington, Vermont

	Location ID	ERM-20	ERM-20	ERM-20	ERM-20	ERM-20	ERM-20	ERM-20	ERM-20	ERM-20	ERM-20	ERM-20	ERM-20	ERM-20	ERM-20	ERM-20	ERM-20	ERM-20	ERM-20	ERM-20	ERM-20	ERM-20	ERM-20	ERM-20	ERM-20	ERM-20-PDB
	Sample Date	25-Jul-07	17-Oct-07	15-Nov-07	18-Dec-07	11-Mar-08	17-Jun-08	25-Sep-08	10-Dec-08	10-Mar-09	17-Jun-09	17-Jun-09	16-Sep-09	09-Dec-09	29-Mar-10	29-Mar-10	17-Jun-10	15-Sep-10	16-Dec-10	18-Mar-11	28-Jun-11	25-Oct-11	21-Dec-11	22-Mar-12	26-Jun-12	17-Jun-10
Analyte	Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	Unit																									
Method 8260																										
cis-1,2-Dichloroethene	µg/L	< 2.0	< 2.0	< 2.5	< 1.2	< 1	< 1.0	3.0	22	1.8	< 2.00	< 2.00	< 0.50	< 0.50	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50	< 0.50	< 1.2	< 1.2	< 1.2	< 0.50	< 0.50	< 0.50
Tetrachloroethene	µg/L	190	280	160	74	96	150	240	180	78	71.4	72.4	38	84	80	84	73	36	59	160	95	130	72	54	62	71
trans-1,2-Dichloroethene	µg/L	< 2.0	< 3.0	< 3.8	< 1.9	< 1.5	< 1.5	< 1.9	< 1.9	< 1.9	< 2.00	< 2.00	< 0.75	< 0.75	< 1.5	< 1.5	< 1.5	< 0.75	< 0.75	< 0.75	< 1.9	< 1.9	< 1.9	< 0.75	< 0.75	< 0.75
Trichloroethene	µg/L	< 2.0	< 2.0	< 2.5	< 1.2	< 1	< 1.0	5.4	14	2.8	< 2.00	< 2.00	2.4	0.83	< 1.0	< 1.0	< 1.0	2.3	< 0.50	< 0.50	< 1.2	< 1.2	< 1.2	< 0.50	< 0.50	< 0.50
Vinyl chloride	µg/L	< 2.0	< 4.0	< 5.0	< 2.5	< 2	< 2.0	< 2.5	< 2.5	< 2.5	< 2.00	< 2.00	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.5	< 2.5	< 2.5	< 1.0	< 1.0	< 1.0
Method 8260B																										
cis-1,2-Dichloroethene	µg/L																									
Tetrachloroethene	µg/L																									
trans-1,2-Dichloroethene	µg/L																									
Trichloroethene	µg/L																									
Vinyl chloride	µg/L																									
Method E537																										
Perfluorobutane sulfonic acid (PFBS)	ng/l																									
Perfluorodecanoic acid (PFDA)	ng/l																									
Perfluorododecanoic acid (PFDoDA)	ng/l																									
Perfluoroheptanoic acid (PFHpA)	ng/l																									
Perfluorohexane sulfonic acid (PFHxS)	ng/l																									
Perfluorohexanoic acid (PFHxA)	ng/l																									
Perfluorononanoic acid (PFNA)	ng/l																									
Perfluorooctane sulfonic acid (PFOS)	ng/l																									
Perfluorooctanoic acid (PFOA)	ng/l																									
Perfluorotetradecanoic acid (PFTeDA)	ng/l																									
Perfluorotridecanoic acid (PFTTrDA)	ng/l																									
Perfluoroundecanoic acid (PFUnDA)	ng/l																									

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µg/L = micrograms per liter
ng/l = nanogram per liter
PDB = sample collected using passive diffusion bag.
All others collected using low-flow techniques

Appendix C
Groundwater Analytical Results
ENERGIZER Bennington Facility
Bennington, Vermont

	Location ID	ERM-2D	ERM-2D	ERM-2MA	ERM-2MB	ERM-2S	ERM-2S	ERM-2S	ERM-3M	ERM-3M	ERM-3M	ERM-3M	ERM-3M	ERM-3S	ERM-3S	ERM-3S	ERM-3S	ERM-4	ERM-4	ERM-4	ERM-4	ERM-5D	ERM-5MA	ERM-5MA	ERM-5MA	ERM-5MB
	Sample Date	19-Jul-06	13-Feb-07	19-Jul-06	17-Jul-06	19-Jul-06	13-Feb-07	13-Feb-07	18-Jul-06	18-Jul-06	19-Jul-06	15-Feb-07	15-Feb-07	18-Jul-06	18-Jul-06	15-Feb-07	15-Feb-07	18-Jul-06	14-Feb-07	14-Feb-07	26-Jun-12	18-Jul-06	17-Jul-06	13-Feb-07	14-Jul-20	17-Jul-05
Analyte	Sample Type	N	N	N	N	N	N	N	N	FD	N	N	N	N	FD	N	N	N	N	N	N	N	N	N	N	N
	Unit																									
Method 8260																										
cis-1,2-Dichloroethene	µg/L	< 2		< 2	< 2	< 2			< 2	< 2	< 2			< 2	< 2			< 2		< 0.50	< 2	< 2			< 2	
Tetrachloroethene	µg/L	1 J		< 2	< 2	1 J			3	3	3			2 J	2 J			1 J		18	< 2	4			< 2	
trans-1,2-Dichloroethene	µg/L	< 2		< 2	< 2	< 2			< 2	< 2	< 2			< 2	< 2			< 2		< 0.75	< 2	< 2			< 2	
Trichloroethene	µg/L	< 2		< 2	< 2	< 2			< 2	< 2	< 2			< 2	< 2			< 2		0.58	< 2	< 2			< 2	
Vinyl chloride	µg/L	< 2		< 2	< 2	< 2			< 2	< 2	< 2			< 2	< 2			< 2		< 1.0	< 2	< 2			< 2	
Method 8260B																										
cis-1,2-Dichloroethene	µg/L		< 2					< 2					< 2							< 2				< 2		
Tetrachloroethene	µg/L		< 2					< 2					< 2							< 2				< 2		
trans-1,2-Dichloroethene	µg/L		< 2					< 2					< 2							< 2				< 2		
Trichloroethene	µg/L		< 2					< 2					< 2							< 2				< 2		
Vinyl chloride	µg/L		< 2					< 2					< 2							< 2				< 2		
Method E537																										
Perfluorobutane sulfonic acid (PFBS)	ng/l																									
Perfluorodecanoic acid (PFDA)	ng/l																									
Perfluorododecanoic acid (PFDoDA)	ng/l																									
Perfluoroheptanoic acid (PFHpA)	ng/l																									
Perfluorohexane sulfonic acid (PFHxS)	ng/l																									
Perfluorohexanoic acid (PFHxA)	ng/l																									
Perfluorononanoic acid (PFNA)	ng/l																									
Perfluorooctane sulfonic acid (PFOS)	ng/l																									
Perfluorooctanoic acid (PFOA)	ng/l																									
Perfluorotetradecanoic acid (PFTeDA)	ng/l																									
Perfluorotridecanoic acid (PFTTrDA)	ng/l																									
Perfluoroundecanoic acid (PFUnDA)	ng/l																									

Notes:
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Empty cells = Not analyzed
N = Normal Environmental Sample
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µg/L = micrograms per liter
ng/l = nanogram per liter
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All others collected using low-flow techniques

Appendix C
Groundwater Analytical Results
ENERGIZER Bennington Facility
Bennington, Vermont

Analyte	Unit	Location ID	ERM-5S	ERM-5S	ERM-5S	ERM-5S	ERM-5S	ERM-5S	ERM-5S	ERM-5S	ERM-5S	ERM-5S	ERM-5S	
		Sample Date	18-Jul-06	13-Feb-07	15-Sep-10	16-Dec-10	18-Mar-11	28-Jun-11	25-Sep-12	11-Dec-12	19-Mar-13	19-Jun-13	25-Mar-14	14-Jul-20
		Sample Type	N	N	N	N	N	N	N	N	N	N	N	N
Method 8260														
cis-1,2-Dichloroethene	µg/L	< 2		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
Tetrachloroethene	µg/L	24		1.5	1.2	0.80	1.7	0.71	< 0.50	1.2	0.95	0.91		
trans-1,2-Dichloroethene	µg/L	< 2		< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	
Trichloroethene	µg/L	3		2.0	< 0.50	< 0.50	0.57	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
Vinyl chloride	µg/L	< 2		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Method 8260B														
cis-1,2-Dichloroethene	µg/L		< 2											
Tetrachloroethene	µg/L		12											
trans-1,2-Dichloroethene	µg/L		< 2											
Trichloroethene	µg/L		2.3											
Vinyl chloride	µg/L		< 2											
Method E537														
Perfluorobutane sulfonic acid (PFBS)	ng/l													
Perfluorodecanoic acid (PFDA)	ng/l													
Perfluorododecanoic acid (PFDoDA)	ng/l													
Perfluoroheptanoic acid (PFHpA)	ng/l													
Perfluorohexane sulfonic acid (PFHxS)	ng/l													
Perfluorohexanoic acid (PFHxA)	ng/l													
Perfluorononanoic acid (PFNA)	ng/l													
Perfluorooctane sulfonic acid (PFOS)	ng/l													
Perfluorooctanoic acid (PFOA)	ng/l													
Perfluorotetradecanoic acid (PFTeDA)	ng/l													
Perfluorotridecanoic acid (PFTrDA)	ng/l													
Perfluoroundecanoic acid (PFUnDA)	ng/l													

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
N = Normal Environmental Sample
FD = Field Duplicate Sample
µg/L = micrograms per liter
ng/l = nanogram per liter
PDB = sample collected using passive diffusion bag.
All others collected using low-flow techniques

Appendix C
Groundwater Analytical Results
ENERGIZER Bennington Facility
Bennington, Vermont

	Location ID	ERM-6	ERM-6	ERM-6	ERM-6	ERM-6	ERM-6	ERM-6	ERM-6	ERM-6	ERM-6	ERM-6	ERM-6	ERM-6	ERM-6	ERM-6	ERM-6	ERM-6-PDB	ERM-7	
	Sample Date	16-Feb-07	16-Feb-07	16-Feb-07	17-Jun-10	15-Sep-10	15-Dec-10	18-Mar-11	29-Jun-11	29-Jun-11	16-Oct-11	21-Dec-11	21-Dec-11	21-Dec-11	22-Mar-12	26-Jun-12	14-Jul-20	14-Jul-20	17-Jun-10	19-Feb-07
Analyte	Sample Type	N	N	FD	N	N	N	N	N	FD	N	N	N	FD	N	N	N	FD	N	N
	Unit																			
Method 8260																				
cis-1,2-Dichloroethene	µg/L				0.96	1.4	2.3	2.9	3.8	3.8	1.0	2.3	2.2	1.2					1.3	
Tetrachloroethene	µg/L		240	280	12	5.2	6.4	61	7.3	7.0	1.6	7.1	6.7	8.9	5.9				14	
trans-1,2-Dichloroethene	µg/L				< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75				< 0.75	
Trichloroethene	µg/L				2.7	2.8	1.8	2.6	2.0	2.0	0.82	1.1	1.0	0.68	0.95				2.1	
Vinyl chloride	µg/L				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0				< 1.0	
Method 8260B																				
cis-1,2-Dichloroethene	µg/L		4.0																	< 2
Tetrachloroethene	µg/L																			< 2
trans-1,2-Dichloroethene	µg/L		< 2	< 2																< 2
Trichloroethene	µg/L		15	15																< 2
Vinyl chloride	µg/L		< 2	< 2																< 2
Method E537																				
Perfluorobutane sulfonic acid (PFBS)	ng/l																			
Perfluorodecanoic acid (PFDA)	ng/l																			
Perfluorododecanoic acid (PFDoDA)	ng/l																			
Perfluoroheptanoic acid (PFHpA)	ng/l																			
Perfluorohexane sulfonic acid (PFHxS)	ng/l																			
Perfluorohexanoic acid (PFHxA)	ng/l																			
Perfluorononanoic acid (PFNA)	ng/l																			
Perfluorooctane sulfonic acid (PFOS)	ng/l																			
Perfluorooctanoic acid (PFOA)	ng/l																			
Perfluorotetradecanoic acid (PFTeDA)	ng/l																			
Perfluorotridecanoic acid (PFTTrDA)	ng/l																			
Perfluoroundecanoic acid (PFUnDA)	ng/l																			

Notes:
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Empty cells = Not analyzed
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µg/L = micrograms per liter
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PDB = sample collected using passive diffusion bag.
All others collected using low-flow techniques

Appendix C
Groundwater Analytical Results
ENERGIZER Bennington Facility
Bennington, Vermont

	Location ID	ERM-8	ERM-8	ERM-8	ERM-8	ERM-8	ERM-8	ERM-8	ERM-8	ERM-8	ERM-8	ERM-8	ERM-8	ERM-8	ERM-8	ERM-8	ERM-8	ERM-8	ERM-8	ERM-8	ERM-8-PDB	ERM-9M
	Sample Date	21-Feb-07	17-Jun-10	15-Sep-10	16-Dec-10	17-Mar-11	28-Jun-11	28-Jun-11	25-Oct-11	21-Dec-11	22-Mar-12	22-Mar-12	26-Jun-12	26-Jun-12	25-Sep-12	23-Sep-15	06-Sep-19	14-Jul-20	26-Oct-20	29-Sep-21	17-Jun-10	23-Feb-07
Analyte	Sample Type	N	N	N	N	N	N	FD	N	N	N	FD	N	FD	N	N	N	N	N	N	N	N
	Unit																					
Method 8260																						
cis-1,2-Dichloroethene	µg/L	0.83	< 0.50	2.1	1.3	1.0	0.98	0.98	2.1	0.81	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		< 1.0	< 0.50	< 0.50	< 2.5
Tetrachloroethene	µg/L	62	7.7	7.7	2.7	4.4	7.9	7.7	7.0	3.2	1.5	1.5	2.3	2.3	1.5	1.6	1.6		< 1.0	0.88	8.9	240
trans-1,2-Dichloroethene	µg/L	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75		< 1.0	< 0.75	< 0.75	< 3.8
Trichloroethene	µg/L	3.9	0.74	4.0	1.6	0.95	1.1	1.1	1.5	0.64	< 0.50	< 0.50	< 0.50	< 0.50	0.52	0.91	0.67		< 1.0	0.77	0.83	< 2.5
Vinyl chloride	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0	< 1.0	< 1.0	< 5.0
Method 8260B																						
cis-1,2-Dichloroethene	µg/L																					
Tetrachloroethene	µg/L																					
trans-1,2-Dichloroethene	µg/L																					
Trichloroethene	µg/L																					
Vinyl chloride	µg/L																					
Method E537																						
Perfluorobutane sulfonic acid (PFBS)	ng/l																		< 1.8			
Perfluorodecanoic acid (PFDA)	ng/l																		< 1.8			
Perfluorododecanoic acid (PFDoDA)	ng/l																		< 1.8			
Perfluoroheptanoic acid (PFHpA)	ng/l																		< 1.8			
Perfluorohexane sulfonic acid (PFHxS)	ng/l																		< 1.8			
Perfluorohexanoic acid (PFHxA)	ng/l																		< 1.8			
Perfluorononanoic acid (PFNA)	ng/l																		< 1.8			
Perfluorooctane sulfonic acid (PFOS)	ng/l																		< 1.8			
Perfluorooctanoic acid (PFOA)	ng/l																		3.4			
Perfluorotetradecanoic acid (PFTeDA)	ng/l																		< 1.8			
Perfluorotridecanoic acid (PFTTrDA)	ng/l																		< 1.8			
Perfluoroundecanoic acid (PFUnDA)	ng/l																		< 1.8			

Notes:
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All others collected using low-flow techniques

Appendix C
Groundwater Analytical Results
ENERGIZER Bennington Facility
Bennington, Vermont

	Location ID	ERM-9S	ERM-9S	ERM-9S	ERM-9S	ERM-9S	ERM-9S	ERM-9S	ERM-9S	ERM-9S	ERM-9S	ERM-9S-PDB	MW-101	MW-101	MW-101	MW-102	MW-102	MW-102	MW-102	MW-103	MW-103	MW-103	MW-104	MW-104	MW-104
	Sample Date	23-Feb-07	17-Jun-10	15-Sep-10	16-Dec-10	17-Mar-11	28-Jun-11	25-Oct-11	21-Dec-11	22-Mar-12	26-Jun-12	17-Jun-10	13-Jul-20	13-Jul-20	27-Oct-20	13-Jul-20	13-Jul-20	13-Jul-20	27-Oct-20	13-Jul-20	13-Jul-20	26-Oct-20	13-Jul-20	13-Jul-20	26-Oct-20
	Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N	N	N
Analyte	Unit																								
Method 8260																									
cis-1,2-Dichloroethene	µg/L	< 2.5	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.2	< 1.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	250	170	140	160	140	170	160	160	130	150	170	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	µg/L	< 3.8	< 1.5	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 1.9	< 1.9	< 1.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	< 2.5	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.2	< 1.2	< 1.0	0.65 J	0.70 J	0.94 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	< 5.0	< 2.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 2.5	< 2.5	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Method 8260B																									
cis-1,2-Dichloroethene	µg/L																								
Tetrachloroethene	µg/L																								
trans-1,2-Dichloroethene	µg/L																								
Trichloroethene	µg/L																								
Vinyl chloride	µg/L																								
Method E537																									
Perfluorobutane sulfonic acid (PFBS)	ng/l												< 1.6	< 1.7	< 1.7	< 1.7	< 1.8	< 1.7	< 1.7	2.9	2.4	1.8	2.6	2.5	2.1
Perfluorodecanoic acid (PFDA)	ng/l												< 1.6	< 1.7	< 1.7	< 1.7	< 1.8	< 1.7	< 1.7	< 1.9	< 2.0	< 1.6	< 1.9	< 1.8	< 1.7
Perfluorododecanoic acid (PFDoDA)	ng/l												< 1.6	< 1.7	< 1.7	< 1.7	< 1.8	< 1.7	< 1.7	< 1.9	< 2.0	< 1.6	< 1.9	< 1.8	< 1.7
Perfluoroheptanoic acid (PFHpA)	ng/l												3.4	3.1	< 1.7	< 1.7	< 1.8	< 1.7	< 1.7	5.7	3.0	2.0	< 1.9	2.0	3.4
Perfluorohexane sulfonic acid (PFHxS)	ng/l												< 1.6	< 1.7	< 1.7	< 1.7	< 1.8	< 1.7	< 1.7	< 1.9	< 2.0	< 1.6	< 1.9	< 1.8	< 1.7
Perfluorohexanoic acid (PFHxA)	ng/l												3.6	3.9	< 1.7	< 1.7	< 1.8	< 1.7	< 1.7	2.3	< 2.0	< 1.6	< 1.9	< 1.8	3.2
Perfluorononanoic acid (PFNA)	ng/l												< 1.6	< 1.7	< 1.7	< 1.7	< 1.8	< 1.7	< 1.7	< 1.9	< 2.0	< 1.6	< 1.9	< 1.8	< 1.7
Perfluorooctane sulfonic acid (PFOS)	ng/l												3.0	2.6	2.3	< 1.7	< 1.8	< 1.7	< 1.7	2.2	2.1	1.6	2.9	3.0	2.6
Perfluorooctanoic acid (PFOA)	ng/l												18	21	11	3.7	2.6	2.9	3.2	73	38	29	20	21	33
Perfluorotetradecanoic acid (PFTeDA)	ng/l												< 1.6	< 1.7	< 1.7	< 1.7	< 1.8	< 1.7	< 1.7	< 1.9	< 2.0	< 1.6	< 1.9	< 1.8	< 1.7
Perfluorotridecanoic acid (PFTTrDA)	ng/l												< 1.6	< 1.7	< 1.7	< 1.7	< 1.8	< 1.7	< 1.7	< 1.9	< 2.0	< 1.6	< 1.9	< 1.8	< 1.7
Perfluoroundecanoic acid (PFUnDA)	ng/l												< 1.6	< 1.7	< 1.7	< 1.7	< 1.8	< 1.7	< 1.7	< 1.9	< 2.0	< 1.6	< 1.9	< 1.8	< 1.7

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