
Leicester General Store 1620 US Route 7 Leicester, Vermont

VTDEC #89-0429
KAS #409070287

JULY 2020 GROUNDWATER/DRINKING WATER MONITORING REPORT

September 8, 2020

Prepared for:

Leicester General Store
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Certification

This report, which summarizes the July 2020 annual groundwater and drinking water monitoring event conducted at the Leicester General Store located at 1620 US Route 7 in Leicester, Vermont, State of Vermont Department of Environmental Conservation Site #89-0429, has been prepared and reviewed by the following personnel.

We certify under penalty of perjury that we are environmental professionals and that all content contained within this deliverable is to the best of our knowledge true and accurate.

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Executive Summary

The July 2020 groundwater and drinking water monitoring has been completed by KAS, Inc. (KAS) at the Leicester General Store property in Leicester, Vermont ("Site").

Based on the results of this monitoring event, the water table was observed to be very low, and at some wells, was the lowest measured to date. A dissolved-phase methyl tertiary butyl ether (MTBE) plume persists at the Site and extends off-site towards the southeast. MTBE concentrations were reported in excess of Vermont Groundwater Enforcement Standards (VGES) in three of the six wells sampled, with the highest level being 93.1 ug/L. At MW-3, petroleum volatile organic compounds (VOCs) were reported with benzene above VGES (e.g., 6.0 ug/L).

It is presumed that the source area/plume core is in the vicinity of MW-4; however, MW-4 was destroyed in 2008. The data collected to date indicates that the MTBE plume migration has a downward vertical gradient as it extends off-site. The extent of the MTBE plume has not been fully defined both spatially and vertically. The data collected to date suggests that the plume is unstable. Degradation of MTBE via natural attenuation appears to be occurring at a very slow rate; however, it is difficult to confirm based on the existing monitoring well network.

Petroleum contamination from the Site has impacted the private water supply wells at the 1602 US Route 7 (south) and 1583 US Route 7 (southeast) properties. The water supply at 1602 US Route 7, which also serves the Site, is equipped with a point-of-entry treatment (POET) system. Based on the results of this monitoring event, MTBE in the influent (untreated) drinking water sample was reported at 39.6 ug/L, which exceeds the Vermont Health Advisory (VHA) standard of 11.3 ug/L. No contaminants were reported above laboratory detection levels in the effluent (treated) drinking water sample, which shows that the POET system is effectively removing MTBE and should continue to operate. At the 1583 US Route 7 residential property, an MTBE concentration of 5.8 ug/L was reported in the drinking water sample and continues to remain below the VHA standard. KAS' attempts to make contact with the resident at 1657 US Route 7 have been unsuccessful to date. As such, a drinking water sample from this property has not been collected for analysis.

In June 2020, the POET system at 1602 US Route 7 property was serviced and maintained by Vermont Water following complaints of low flow by the users. The system was found to be in



bypass and required unanticipated repairs, which were completed. According to Mr. Beauchamp of Vermont Water, there is the potential for increased maintenance requirements for the existing POET system. At this time, it is unclear if the water usage exceeds the capacity of POET system. It is also unclear the frequency and duration of when the system is placed in bypass by the user, and when full maintenance/GAC replacement is actually needed. The existing metering system for the POET does not seem to adequately measure flow and discontinues when in bypass mode. At this time, KAS recommends that a new flow metering system be installed to better track the total water usage and the flow through the POET system. Better flow data should help determine when full maintenance/GAC replacement is needed and if major modifications/upgrades to the POET are warranted.

Based on the above findings, KAS recommends the following:

- Groundwater and drinking water monitoring should continue on an annual basis due to the continued presence of VGES and VHA exceedances;
- A drinking water sample should be collected from the 1657 US Route 7 property during the next monitoring event, if access can be obtained;
- During the next groundwater monitoring, MW-2 should be included for sampling and analysis;
- It is recommended that the former monitoring well MW-4, which is presumed to be near the plume core/source area, be replaced; and,
- A new flow metering system should be installed on the POET system to better assess future maintenance activities and the need for modifications/upgrades.

1.0 Introduction

This report summarizes the July 2020 groundwater and drinking water monitoring conducted at the Leicester General Store property located at 1620 US Route 7 in Leicester, Vermont ("Site"), as well as the maintenance and repair of the drinking water point-of-entry treatment (POET) system at 1602 US Route 7. A Site Location Map and Vicinity Map is included in Appendix A. This work was approved by the Vermont Department of Environmental Conservation (VT DEC) on June 22, 2020 and was completed in accordance with the VT DEC requirements as presented in the Investigation and Remediation of Contaminated Properties Rule (I-Rule) dated July 6, 2019. The I-Rule Long Term Monitoring Report Checklist is presented in Appendix F.

Previous reports documenting the site history and previous investigative/monitoring work conducted at the Site are on file at the VT DEC office in Montpelier, Vermont.

2.0 Maintenance of Drinking Water Treatment System

On June 30, 2020, the drinking water POET system at 1602 US Route 7 property was serviced by Vermont Water of Lincoln, VT based on complaints of low flow by the users. The system serves the residence, as well as the Leicester General Store property. Per John Beauchamp of Vermont Water, the system was found in bypass and in need of repair. Specifically, a cracked shut off valve in the valve body and a ruptured quartz sleeve in the UV lamp was found. Both components were replaced and repaired. In addition to the repairs, the system was also fully maintained as planned. Specifically, the granular activated carbon (GAC) canisters and UV lamp were replaced, and the softener salt replenished. The sand trap, which is separate from the POET system, was also flushed of fine sand and colloidal clay.

Mr. Beauchamp has expressed his concern about the potential for increased maintenance requirements for the existing POET system. At this time, it is unclear if the water usage exceeds the capacity of POET system. It is also unclear the frequency and duration of when the system is placed in bypass by the user, and when full maintenance/GAC replacement is actually needed. The existing metering system for the POET does not seem to adequately measure flow and discontinues when in bypass mode. At this time, KAS recommends that a new flow metering system be installed to better track the total water usage and the flow through the POET system. Better flow data should help determine when full maintenance/GAC replacement is needed and if modifications/upgrades to the POET are warranted.

3.0 Groundwater Monitoring

3.1 Determination of Groundwater Flow Direction and Gradient

On July 28, 2020, depth-to-water measurements were collected with the use of a Geotech™ interface probe (IP) from all site-related monitoring wells (MW-2, MW-3, MW-6, MW-9, MW-10, MW15-11S, and MW15-11D) in accordance with KAS Protocol #003¹. Liquid gauging was conducted for the multi-level monitoring wells MLMW-1 and MLMW-2 with the use of a Solinst Model 102 water level meter. No measurable petroleum non-aqueous phase liquid (NAPL) was

¹ KAS Protocol #003: Use and Maintenance of Electronic Interface Probes and Water Level Indicators, revised December 2010

detected in any of the wells. The depth to groundwater ranged from 3.44 to 10.16 feet below top of casing (btoc). The casing elevations were determined relative to an arbitrary datum of 100 feet previously established at the top of the casing for MW-1, which has since been destroyed. Liquid level monitoring data, both current and historic, are presented in Appendix B.

Groundwater elevations, including the top channel of the multi-level wells and MW15-11S, were plotted on the Groundwater Contour Map (Appendix A). Groundwater from the Site flows southeasterly at a hydraulic gradient of approximately 0.088 feet/feet. Farther downgradient/away from the Site, flow direction appears to vary, and become less defined based on the existing well network (e.g., especially south of the Site). Overall, groundwater elevations were on the lower end of the historical range; for half of the wells gauged, the levels were the lowest measured to date.

At MW-10, due to well construction, the water table is generally above the screened interval. Therefore, the volatile organic compound (VOC) data reported to date may be biased low. Nonetheless, this well is deemed adequate for long-term monitoring purposes and for establishing overall trends. At MLMW-1, the depth to groundwater among the three levels are essentially the same. This indicates that the integrity of the packer system, which isolates each interval, is likely compromised. This well is no longer included in the sampling plan and is only used to gauge groundwater levels. At MLMW-2, the depths to groundwater are different at each level but are above the screened interval. This may be due the water level meter being sensitive to moisture along the interior of the small diameter pipe.

3.2 Groundwater Sample Collection and Analysis

On July 28, 2020, groundwater samples were collected from six (6) site-related monitoring wells: MLMW-2, MW-3, MW-6, MW-10, MW15-11S, and MW15-11D. Monitoring wells MLMW-1 and MW-9 have been removed from the sampling schedule per VT DEC approval.

The groundwater samples were collected according to KAS Protocol #006² and #011³, stored on ice in the field, and submitted to Endyne, Inc. of Williston, Vermont under proper chain-of-custody procedures. For quality assurance/quality control (QA/QC) purposes, one trip blank and one duplicate sample were submitted along with the groundwater samples collected during the sampling event. The samples were submitted and analyzed for select petroleum VOCs via EPA method 8021B. The samples from MLMW-2 and MW-10, which typically exhibit the highest MTBE levels, were analyzed for full VOCs via EPA method 8260C to see if t-butyl alcohol (TBA) is present, which is an intermediate by-product of the breakdown of MTBE. Groundwater analytical results are summarized and compared to their respective Vermont Groundwater Enforcement Standards (VGES) in Appendix C. The full laboratory report is provided in Appendix E.

Analytical Results

Based on the results of the July 28, 2020 groundwater sampling event, a dissolved-phase MTBE plume persists at the Site. Reported MTBE concentrations ranged from 2.64 to 93.1 micrograms per liter (ug/L). MTBE concentrations exceeded VGES in three (3) of the six (6) wells sampled (e.g., MLMW-2 (top and middle channel), MW-10, and MW15-11D). No TBA was reported above detection levels at MLMW-2 and MW-10. Carbon disulfide was reported at MLMW-2 (e.g., 10.5 ug/L) but is not considered to be a constituent of concern for the Site. Petroleum VOCs were reported at MW-3, with benzene at levels exceeding VGES (e.g., 6.0 ug/L). No VOCs were reported above laboratory method detection levels in monitoring wells MW-6 and MW15-11S.

² KAS Protocol #006: Sample Containerization, Preservation, Handling and Packaging, revised December 2010

³ KAS Protocol #011: Monitoring Well Sampling with Bailers, revised January 2011

Trend Analysis

At MW-3 (upgradient well), petroleum VOCs have increased compared to the 2019 levels. However, overall, the levels remain low and are similar to levels reported in 2016 when the water table was also low. MTBE levels at MLMW-2 (middle channel) continue to exhibit a slightly increasing trend (see graph in Appendix C). At MW15-11D, although MTBE was lower than the last sampling event in 2019, levels continue to fluctuate with the groundwater fluctuations, and may be low due to the low water table. A definitive trend has not yet been established at MW15-11D. MTBE levels at MW-10 increased from 2019 but continue to exhibit an overall decreasing trend; however, this decrease may be due to the plume migrating deeper than MW-10's screened length versus natural attenuation or biodegradation. Overall, the trends suggest that the plume is not stable. In order to better evaluate the plume, it is important to replace MW-4, the presumed source area of the plume.

Dissolved-Phase VOC Distribution

Results from the July 28, 2020 monitoring event are shown on the MTBE distribution map in Appendix A. It is presumed that the former well MW-4 is located near the source area/plume core since it has historically been shown to exhibit the highest petroleum VOCs based on data collected between 2002 and 2008. Groundwater monitoring has not been done at MW-4 since 2008 (presumed to be destroyed). It appears that the MTBE plume extends southeasterly to MW-10. MTBE levels at MW-10 continues to be the highest relative to the other wells. This suggests a migrating plume. The spatial extent of the MTBE plume has not been fully defined to date.

The vertical distribution of the MTBE plume is described by MLMW-2 and MW15-11S/MW15-11D. At MLMW-2, the MTBE plume appears to be highest in the middle channel (approximately 8 feet below grade). Farther downgradient, at MW15-11S/MW15-11D, MTBE continues to be present only in the deep well (MW15-11D), which is screened at 21 to 24 feet below grade. Therefore, with increased distance from the plume core, there appears to be an increasing downward component. This can be expected given the transition from impervious hardscaping on the gas station site and the road to the grassy (pervious) surface on the residential properties to the south and southeast. The vertical extent of the MTBE plume, at its farthest reach, has not been fully defined to date.

Quality Assurance and Quality Control

The groundwater samples obtained during this study were collected in accordance with KAS' groundwater sampling protocols. VOCs were not detected in the trip blank sample prepared by Endyne. A duplicate sample was obtained at monitoring well MW-10. The relative percent difference (RPD) value for the one contaminant detected (MTBE) was 0.9%, indicating excellent precision/quality assurance and control were maintained during sampling, transporting, and analysis. The RPD is defined as 100 times the difference between the actual and duplicate sample, divided by the mean of the two samples. A low RPD indicates a good correlation between the two samples, while a high RPD indicates a poor correlation. This data is presented in Appendix C.

4.0 Drinking Water Sampling

On July 28, 2020, KAS collected drinking water samples at the 1602 and 1583 US Route 7 residences. All samples were collected in accordance with KAS' and Endyne's drinking water sampling protocol and were submitted to Endyne for laboratory analysis of VOCs via EPA method



524.2. One trip blank, which was prepared and supplied by Endyne, was also analyzed for VOCs by EPA Method 524.2.

MTBE was reported in the influent (untreated) drinking water sample collected at 1602 US Route 7 at 39.6 ug/L, which is above the VHA standard. Since 2008, MTBE levels have fluctuated significantly. Although a very slight overall decrease may be observed since 2008, no clear trend is evident. No contaminants were reported above laboratory detection levels in the effluent (treated) drinking water sample. Therefore, the water treatment system is effective at removing the constituents of concern and should continue to operate. MTBE was reported in the 1583 US Route 7 residence water sample at 5.8 ug/L, which remains below the VHA standard. Since 2001, low-level MTBE concentrations have continued to fluctuate. Although a very slight overall decrease may be observed since 2001, no clear trend is evident. Analytical results of the supply well samples are tabulated in Appendix D along with the applicable EPA Maximum Contaminant Levels (MCL) and Vermont Health Advisory (VHA)/Vermont Action Levels (VALs) for drinking water. The full laboratory report for the July 28, 2020 sampling data is included in Appendix E.

A drinking water sample from the 1657 US Route 7 residence was not collected during this monitoring event as planned. Although this property is located cross-gradient to the Site, the data may provide insights on background, or other potential point sources of, dissolved-phase MTBE. On July 28, 2020, KAS attempted to speak with someone at the house; however, no one was present at the time. KAS has previously made several attempts to make contact with a resident at this property but there has been no response to date.

5.0 Updated Conceptual Site Model

5.1 Current and Historical Land Use for the Site and Immediate Surrounding Area

The Site is located on the western side of US Route 7, in Leicester, Vermont (see Vicinity Map in Appendix A). A gas station and convenience store, known as the Leicester General Store, are located on the Site. The property was reportedly developed in 1940. No other historical property uses are known at this time. Topography of the gas station property is generally flat throughout and gradually slopes down east of US Route 7. The area immediately around the on-site building consists primarily of a paved asphalt parking lot. The Site, and area of monitoring, includes two (2) residential properties to the south/southeast (e.g., 1602 US Route 7 and 1583 US Route 7).

Adjacent nearby properties as of July 2020 consist of a mix of commercial and residential development as follows:

North: Commercial property used for auto repair, known as Doc's Mountain View Automotive & Tire LLC;

South: Residential properties (1602 US Route 7 and 1583 US Route 7);

West: Leicester Central School property; and,

East: Residential property (1657 US Route 7).

The auto repair property to the north may also serve as an auto salvage yard. Farther north (approximately ½ mile), is a larger auto salvage yard known as the Brandon Scrap Metal Co., Inc. In general, the potential for groundwater and surface water contamination due to the mishandling of vehicular fluids at salvage yards are an environmental concern. The potential for these properties to be a source of MTBE in the groundwater has not been ruled out. No other historical land uses of the adjacent properties are known.



The Leicester Central School property was identified as a hazardous site (#2006-3499) based on subsurface contamination discovered during a UST removal. After subsequent remediation, site investigations, and monitoring activities were completed, the site was closed and issued a Site Management Activity Completed (SMAC) designation in October 2013.

5.2 Source of the Release

Petroleum impacts were first detected in the vicinity of the Leicester General Store in 1989, when the residence located at 1583 US Route 7 (southeast of Site) reported a petroleum taste and odor in their drinking water. Subsurface petroleum contamination that is present beneath the Site can be attributed to one or all of the following; (1) a gasoline release from the former gasoline UST systems removed in 1995, (2) a gasoline release from the former UST systems removed on an unknown date prior to 1989 or (3) a historical kerosene/heating oil release from two former (closed in place) 1,000 gallon UST located partially under the store building that are believed to be as old as the 1940's.

In 1989, during initial investigations, three (3) abandoned, privately owned USTs located in the vicinity of the former supply well on 1583 US Route 7 (e.g., near MW-6) were identified as potential sources of petroleum contamination. Although petroleum impacts from these former USTs have not been fully ruled out, the gasoline station remains the presumed source of subsurface petroleum contamination.

5.3 Remediation

Water Supply

In 1989, the former water supply well located on the 1583 US Route 7 property (formerly identified as the Scarborough residence) was contaminated with petroleum. A packer test, which was conducted on the former supply well, indicated groundwater from the overburden aquifer was leaking into the supply well. However, the test results were inconclusive as to whether or not the bedrock aquifer was contaminated (e.g., petroleum VOCs were detected in the supply well but not in the surficial aquifer). In October 1990, the former well was abandoned and a new supply well was installed. Long-term monitoring indicates that low levels of MTBE remains present in the supply well at levels below the applicable drinking standard.

In April 1991, a replacement supply well was installed on the 1602 US Route 7 property. This supply well also provides potable water to the Leicester General Store property. Based on the results of subsequent monitoring, a drinking water POET system was installed at 1602 US Route 7 in November 2007. Water quality monitoring and POET maintenance continues to be conducted to date.

Soil Excavation

On June 25, 1990, petroleum impacted soils were excavated from the Site. The excavation area was between the former USTs and the existing pump island. Approximately 120 cubic yards of soil were excavated down to a depth of approximately 8-feet below grade. VOC contaminated soils at concentrations greater than 20 ppm were stockpiled onsite. The stockpiled soil was later thin spread after soil screening in July 1992 indicated no VOCs.

In 1995, during the UST closures/removals from the gas station site, petroleum impacted soil from the former gasoline UST pit were observed. Approximately 35 cubic yards of impacted soil were excavated and stockpiled on site. Two former 1,000-gallon kerosene/heating oil USTs, which were

located underneath the northeast and southeast corners of the building and could not be excavated without undermining the integrity of the store building foundation, were pumped out, filled with slurry and permanently closed in place. The tank under the northeast corner of the building appeared to be in fair condition and was not leaking. However, the tank under the southeast corner of the building appeared to be in poor condition and was leaking from a visible hole in the bottom of the tank.

5.4 Contaminant Characterization

Gasoline is a colorless petroleum-derived flammable liquid which consists mostly of organic compounds obtained by the fractional distillation of petroleum, enhanced with a variety of additives. The specific gravity of gasoline is 0.739, making it lighter than water. In 1990, the United States made amendments to the Clean Air Act in which lead was banned from gasoline. The compound MTBE began being added to gasoline in 1979, mostly to replace lead as an octane enhancer but to also provide an oxygenate to raise the octane number.

Once petroleum is released into the subsurface as free-phase/mobile NAPL, it can exist in the environment in any of the four phases: free-phase, dissolved-phase, adsorbed-phase, and vapor-phase. NAPL has not been encountered in the monitoring wells since the beginning of monitoring; however, some residual NAPL may remain trapped in the soils. Most of the petroleum beneath the Site is presumed to be as adsorbed and dissolved phase. Dissolved phase MTBE concentrations exceed VGES at three (3) site-related monitoring wells. Since MTBE is considered to be highly soluble compared to other petroleum constituents, it is typically the most mobile in the aqueous phase. Less soluble constituents sorb to soils (solid/adsorbed phase) and can function as a continuing source of contaminants to groundwater for long periods of time. Vapor-phase petroleum occurs when constituents partition/volatilize from a solid or liquid phase. Vapor-phase petroleum may migrate into nearby buildings and impact indoor air quality (vapor intrusion). Contaminant mass totals for these phases have not been estimated to date.

5.5 Geology

Bedrock in the local region is indicated as being either Shelburne Whitehall and Strites Pond Formation, which consists of white marble and grey limestone or/and Cutting Dolomit and Undifferentiated Morgan Corner and Wallace Creek Formations, which consists gray weathered, nondescript dolomite with calcareous sandstone at base according to the Centennial Geological Map of the State of Vermont (Doll, 1961).

Based on investigation activities conducted at the Site to date, the Site geology generally consists of silt and gravel on top of a dense, clayey sand layer observed from approximately 4 to 16 feet below grade.

5.6 Hydrogeology

Leicester is situated within the Otter Creek watershed. As such, all land in Leicester ultimately drains to Otter Creek, which is located about two (2) miles west of the Site. Based on the topography of the local region, groundwater from the Site is expected to flow southerly towards Seymour Brook, a tributary to Otter Creek.

Groundwater has generally been observed to flow towards the southeast away from the site at an approximate average hydraulic gradient of 5% with steeper gradients in the vicinity of the Leicester General Store and shallower gradients in the vicinity of the 1583 US Route 7 residence. Depth to groundwater has ranged from approximately 2 to 6 feet below grade in the vicinity of the

Site. Groundwater beneath the southern section of 1583 US Route 7 residence appears to have a north-northeast flow component. This is somewhat consistent with the watershed delineation tool of the ANR Natural Resources Atlas, which indicates that groundwater from the surrounding area (e.g., north, west, and south of the Site) flows to a point east of the Site. This may explain why there appears to be a northerly-to-easterly flow component in the off-site wells located to the southeast.

5.7 Contaminant Fate and Transport

MTBE has high solubility, low volatility, and low sorption properties. Therefore, MTBE tends to be more mobile in groundwater compared to other petroleum VOCs and may gradually move downward with advective groundwater flow. Also, MTBE is more resistant to biological degradation relative to other petroleum compounds. Consequently, the compound exhibits low retardation in groundwater aquifers and tends to migrate over greater distances. MTBE impacts appears to extend beyond the expanded well network.

Sites contaminated with MTBE are likely to persist for longer periods of time and may require more extensive monitoring over both time and space.

The dissolved-phase MTBE plume at the Site is not fully defined horizontally or vertically. Based on the historical data collected during subsurface investigations conducted at and in the vicinity of the Site, it appears petroleum contamination is migrating in a general southeast direction across US Route 7 and is also potentially vertically migrating into the shallow bedrock and southeast via bedrock fractures. The migration of petroleum contamination towards the southeast in the predominantly clay overburden is expected to continue but at a slow rate due to the very low hydraulic conductivity of clay. However, if petroleum contamination originating from this site is actually migrating into the bedrock and transporting in bedrock fractures, it would be expected to continue at a much faster rate. Historical data from groundwater monitoring events conducted onsite suggests that the highest levels of subsurface VOC impacts exist in the vicinity of MW-4, which is adjacent to the pump island. Current groundwater monitoring has not included MW-4 (presumed to be destroyed) since 2008. The off-site, farthest downgradient well MW-10 exhibits the highest levels of MTBE (above VGES). It is not clear whether this is because the plume core has migrated off-site or if there is a different migration pathway that has not been identified to date.

As described below nearby residential supply wells have been impacted by MTBE. Groundwater monitoring indicates that the MTBE plume is diving. It is presumed that the contaminated groundwater in the surficial acquire has migrated, via weathered bedrock, into the deeper aquifers from which nearby supply wells draw; however, this transport pathway has not been verified to date. According to the Vermont Agency of Natural Resources (ANR) online mapping tool, the depth of the supply well (Tag #277-A) for 1602 US Route 7 is 240 feet below surface and the depth of the supply well (Tag #256-A) for 1583 US Route 7 is 625 feet below surface. Other potential sources of MTBE in the deep aquifer, either from point or non-point sources, are unknown at this time.

5.8 Sensitive Receptor Risk Assessment

A sensitive receptor risk assessment of the area surrounding the Site is provided below, and a determination of the potential risk to identified receptors has been made based on proximity to the dissolved-phase plume, groundwater flow direction, petroleum constituent mobility and volatility, and petroleum constituent concentration levels in subsurface soils and groundwater. To date three sensitive receptors (soil, groundwater, and drinking water from private water supply



wells) have been identified as being impacted from the subsurface petroleum impacts originating from the Site.

Buildings in the Vicinity

Petroleum impacts to shallow soils on-site have been observed in relatively close proximity to the former USTs and the store building. No complaints have been documented concerning petroleum vapors in any buildings on-site or down-gradient from the Site. The 1583 and 1602 US Route 7 residences are the only structures near or on the Site that are known to contain a basement. There are no exceedances of groundwater vapor intrusion standards. Based on the soil and groundwater data collected to date, the immediate and future risk of vapor intrusion to the buildings near the petroleum plume from the Leicester General Store is considered to be low at this time.

Water Supplies

The nearby private supply wells have been impacted by the petroleum contamination from the Site. All residences and businesses in the vicinity of the Site are serviced by individual or shared deep aquifer supply wells. Since site activity first started in 1989, petroleum related VOC compounds have been present in the drinking water at low to high (above the VHA) levels at the residential properties located at 1602 and 1583 US Route 7. Other nearby supply wells have also been tested historically and no petroleum related VOCs were detected. Since the supply well at 1583 US Route 7 was abandoned and a new well was drilled in 1989/1990, low levels of petroleum contamination have been reported. Since 2007, the supply well at 1602 US Route 7 has been treated with a granular activated carbon treatment system to remove high levels of MTBE from the drinking water.

Surface Waters

No potential jurisdictional wetlands were observed in the immediate vicinity (Site and abutters) of the Site. The nearest surface waters to the Site are an unnamed stream located approximately 0.16 miles to the southeast. The unnamed stream flows south to Seymour Brook, a tributary to Otter Creek. Based on data collected to date, surface waters are not believed to be potential sensitive receptors to the subsurface contamination at this time.

Utility Corridors

There are limited underground utilities in the vicinity of the Site. On-site, there are known private fuel lines and conduits that serve the gasoline storage and dispensing system. The Leicester General Store and the surrounding buildings are all served by private water supply wells and wastewater disposal systems. There is no known natural gas line in the vicinity of the Site. Electric and cable run predominantly on the west side of US Route 7 and are believed to run aboveground to residences and businesses. There is one storm drain located on the west side of US Route 7 near the southeast corner of the dispenser pump island. The location of the discharge is not known but it is believed to run east across Route 7. Given the shallow groundwater elevations, and the catch basin's proximity to the presumed source area (MW-4), it is possible that the stormwater line is serving as a preferential pathway. However, given that the VOC plume extends in a southeasterly direction and that the stormwater likely line runs easterly away from the Site, the risk of impacting this utility corridor is considered low at this time.

5.9 Potential Exposure Pathways

Potential exposure pathways to the subsurface petroleum impacts identified beneath the Site have been evaluated. Routes of potential exposure to current and future site users include inhalation of vapors or petroleum impacted dust; ingestion of soil; absorption via dermal contact; and/or ingestion of soil or groundwater. Exposure to soil and groundwater is currently minimized by the site use and property development. Impacted soils have been identified to be present several feet below grade and are currently capped by several feet of non-impacted soil or hardscape cover (asphalt). Current and historical data does not support the existence of a complete vapor intrusion pathway beneath the Site. Should the property use change in the future, the identified potential exposure pathways will need to be reevaluated to confirm adequate protection to human health is being accomplished.

5.10 Data Gaps

It is presumed that the source area/plume core is in the vicinity of MW-4 based on historical data; however, MW-4 was destroyed in 2008. It is recommended that MW-4 be replaced with a new one (via Geoprobe due to limited clearance by overhead electrical lines).

The migration pathway of the plume from the shallow aquifer to the deeper aquifer, which serve nearby supply wells, is suspected but has not been confirmed to date. It is recommended that a drinking water sample be collected from the 1657 US Route 7 property during the next monitoring event, if access can be obtained. Although this property is located cross-gradient to the Site, the data may provide insights on background, or other potential point sources of, dissolved-phase MTBE.

The downgradient/southeasterly extent of the MTBE plume is not known. MW-10 is the farthest downgradient well, which shows a decreasing trend in MTBE levels; however, this trend may be due to a diving plume. Given that there does not appear to be potentially impacted sensitive receptors farther downgradient and that the water supply well on the 1583 US Route 7 residence is monitored, additional subsurface investigation downgradient of MW-10 is not recommended at this time.

6.0 Conclusions

Based on the results of the July 2020 annual groundwater and drinking water monitoring event conducted at the Leicester General Store property in Leicester, Vermont, KAS presents the following conclusions:

1. The depth to groundwater ranged from 3.44 to 10.16 btoc. Groundwater from the Site flows primarily towards the southeast at hydraulic gradient of approximately 0.088 feet/feet. Overall, groundwater elevations were on the lower end of the historical range, with levels being the lowest to date at half of the wells;
2. MW-2 was previously removed from the sampling schedule since it was presumed destroyed in 2015. However, MW-2 was found and gauged for liquid levels. No sample was collected from MW-2;
3. MTBE remains the primary contaminant of concern for the Site, with the highest level being 93.1 ug/L at MW-10. MTBE exceeded VGES in three (3) of the six (6) wells sampled (e.g., MLMW-2 (top and middle channel), MW-10, and MW15-11D). Benzene was reported at

MW-3, at levels above VGES (e.g., 6.0 ug/L). Benzene was last reported in 2016 when groundwater levels were low;

4. No TBA, which is an intermediate by-product of the breakdown of MTBE, was reported above detection levels at MLMW-2 or MW-10;
5. Overall, MTBE levels in the groundwater continue to slowly decrease over time, with periodic fluctuations. The decreases observed during this monitoring event may be due to the unusually low water table. Furthermore, decreases may be due to the dispersion and dilution of a MTBE plume migrating away from the Site versus remediation by natural attenuation or biodegradation. The plume has not been fully characterized horizontally or vertically;
6. It appears that the MTBE plume is diving based on the data collected to date from the multi-level monitoring well MLMW-2, the clustered wells MW15-11S (shallow well) and MW15-11D (deep well), and known impacts to private water supply wells located south-southeast of the Site;
7. MTBE was reported at 39.6 ug/L in the influent (untreated) drinking water sample collected at 1602 US Route 7, which is above the VHA standard. Since 2008, fluctuations in MTBE in the influent drinking water has ranged from 32.8 to 72.9 ug/L. No contaminants were reported above laboratory detection levels in the effluent (treated) drinking water sample. Therefore, the drinking water POET system is effective at removing MTBE and should continue to operate;
8. An MTBE concentration of 5.8 ug/L was reported in the 1583 US Route 7 drinking water sample, which is below the VHA standard;
9. The potential sensitive receptors to the dissolved-phase MTBE plume originating from the Site include soil, groundwater, and private supply wells located on 1583 and 1602 US Route 7 properties; and,
10. On June 30, 2020, the POET system at 1602 US Route 7 was fully maintained but also required repairs. There is the concern that the system will continue to require more maintenance and repair over time.

7.0 Recommendations

Based on the results of the July 2020 annual groundwater and drinking water monitoring event conducted at the Leicester General Store property in Leicester, Vermont, KAS recommends the following:

- Groundwater and drinking water monitoring should continue on an annual basis due to the continued presence of VGES and VHA exceedances;
- A drinking water sample should be collected from the 1657 US Route 7 property during the next monitoring event, if access can be obtained;
- During the next groundwater monitoring, MW-2 should be included for sampling and analysis;

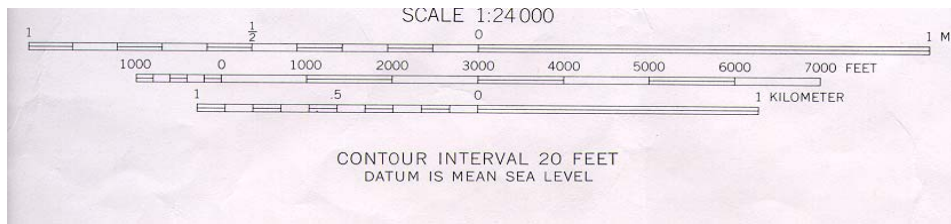
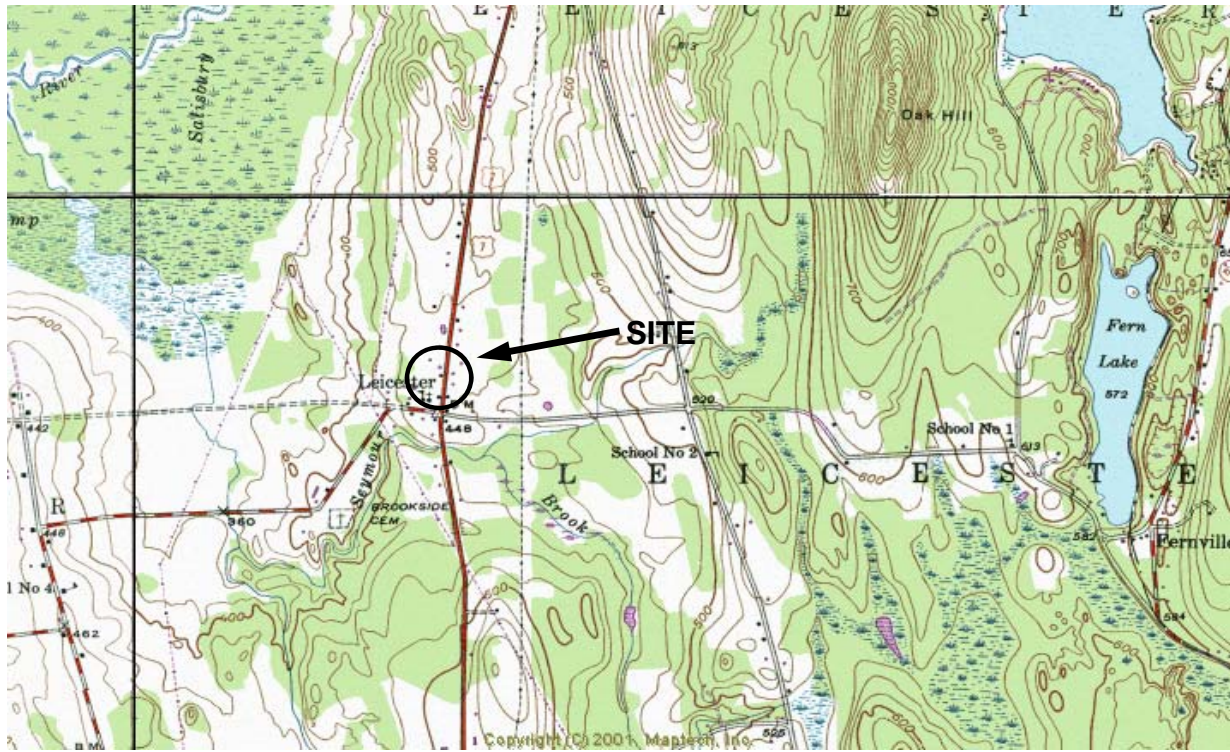


- It is recommended that the former monitoring well MW-4, which is presumed to be near the plume core/source area, be replaced; and,
- A new flow metering system should be installed on the POET system to better assess future maintenance and the need for modifications/upgrades.



Appendix A

- 1) Site Location Map
- 2) Site Vicinity Map
- 3) Site Map
- 4) Groundwater Contour Map
- 5) Groundwater: MTBE Distribution Map
- 6) Groundwater: Benzene Concentration Map



↑
North

KAS Job number: 409070287

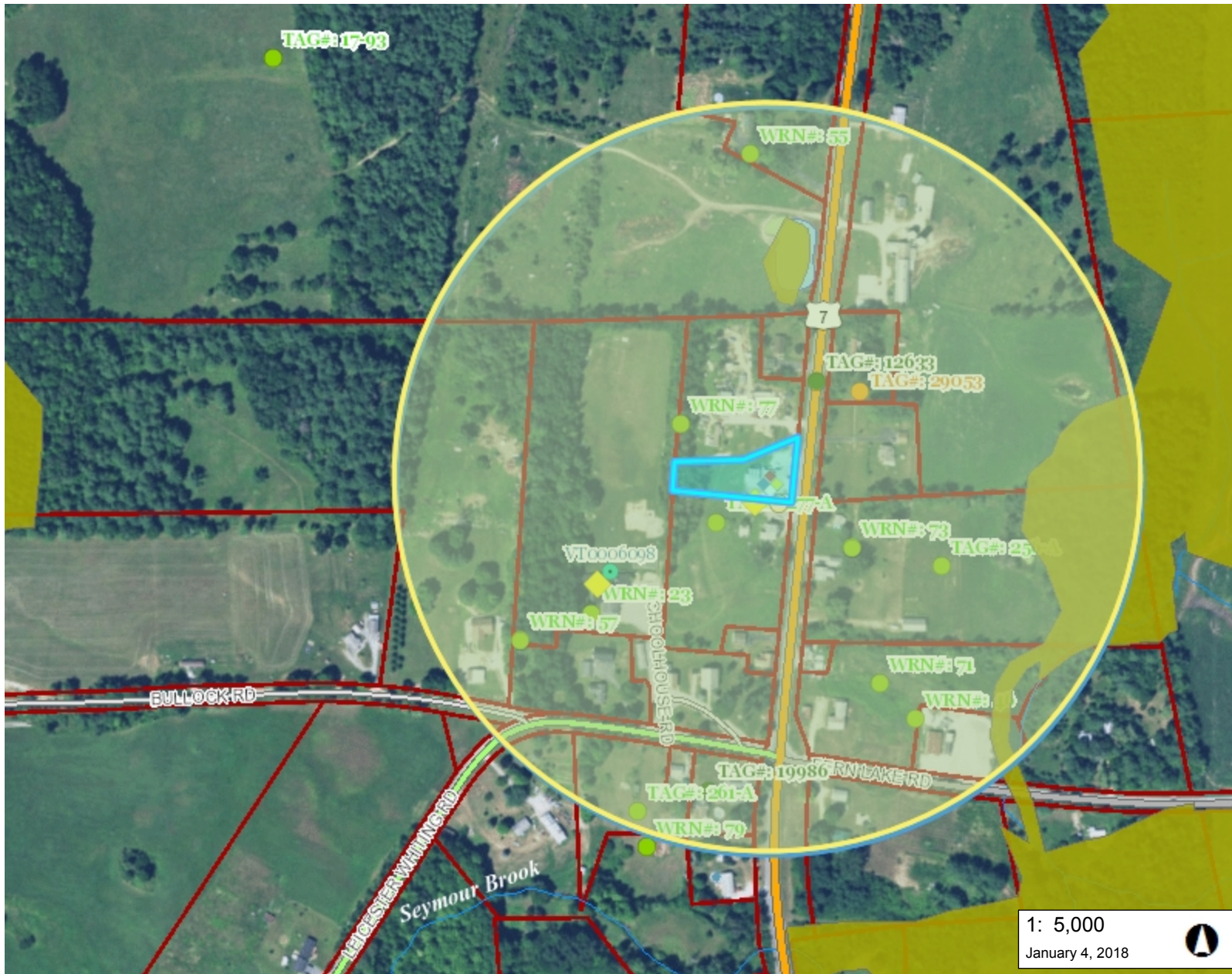
Source: USGS 7.5' Mapping Brandon, VT 1948, photorevised 1987



Leicester General Store
1620 U.S. Route 7
Leicester, VT

Site Location Map
 USGS Mapping

Date: 07/23/14 Drawing No 1 Scale: 1:24,000 By: BG



LEGEND

- Wetland - VSWI**
 - Class 1 Wetland
 - Class 2 Wetland
 - Buffer
- ◆ Hazardous Site
- ◆ Hazardous Waste Generators
- Brownfields
- Salvage Yard
- Aboveground Storage Tank
- Underground Storage Tank (w/ Rare Threatened Endangered)
- Threatened or Endangered
- Rare
- Private Wells**
 - GPS Location
 - screen digitized
 - E911 Address
 - Welldriller/Clarion
 - Unknown
- Public Water Sources**
 - Active
 - Proposed
 - Inactive
- Roads**
 - Interstate
 - Principal Arterial
 - Minor Arterial
 - Major Collector

1: 5,000
January 4, 2018

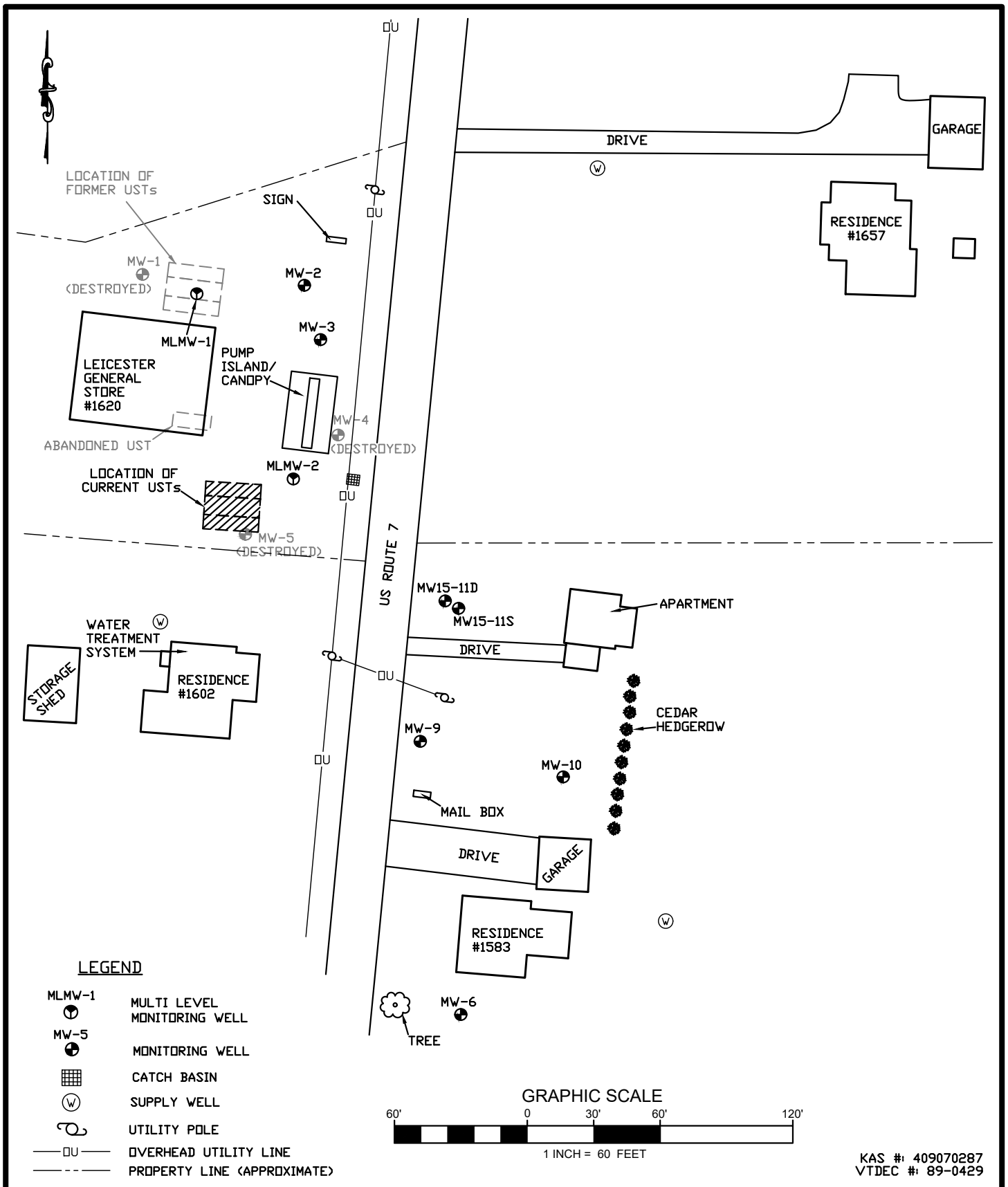
NOTES

Map created using ANR's Natural Resources Atlas; Leicester General Store

254.0 0 127.00 254.0 Meters

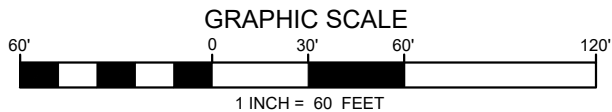
WGS_1984_Web_Mercator_Auxiliary_Sphere 1" = 417 Ft. 1cm = 50 Meters
© Vermont Agency of Natural Resources THIS MAP IS NOT TO BE USED FOR NAVIGATION

DISCLAIMER: This map is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. ANR and the State of Vermont make no representations of any kind, including but not limited to, the warranties of merchantability, or fitness for a particular use, nor are any such warranties to be implied with respect to the data on this map.



LEGEND

- MLMW-1 MULTI LEVEL MONITORING WELL
- MW-5 MONITORING WELL
- ▣ CATCH BASIN
- ⊙ SUPPLY WELL
- ⊕ UTILITY POLE
- DU— OVERHEAD UTILITY LINE
- - - PROPERTY LINE (APPROXIMATE)



KAS #: 409070287
VTDEC #: 89-0429

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802 383.0486 p
802 383.0490 f



LEICESTER GENERAL STORE
1620 US ROUTE 7
LEICESTER, VERMONT

SITE MAP

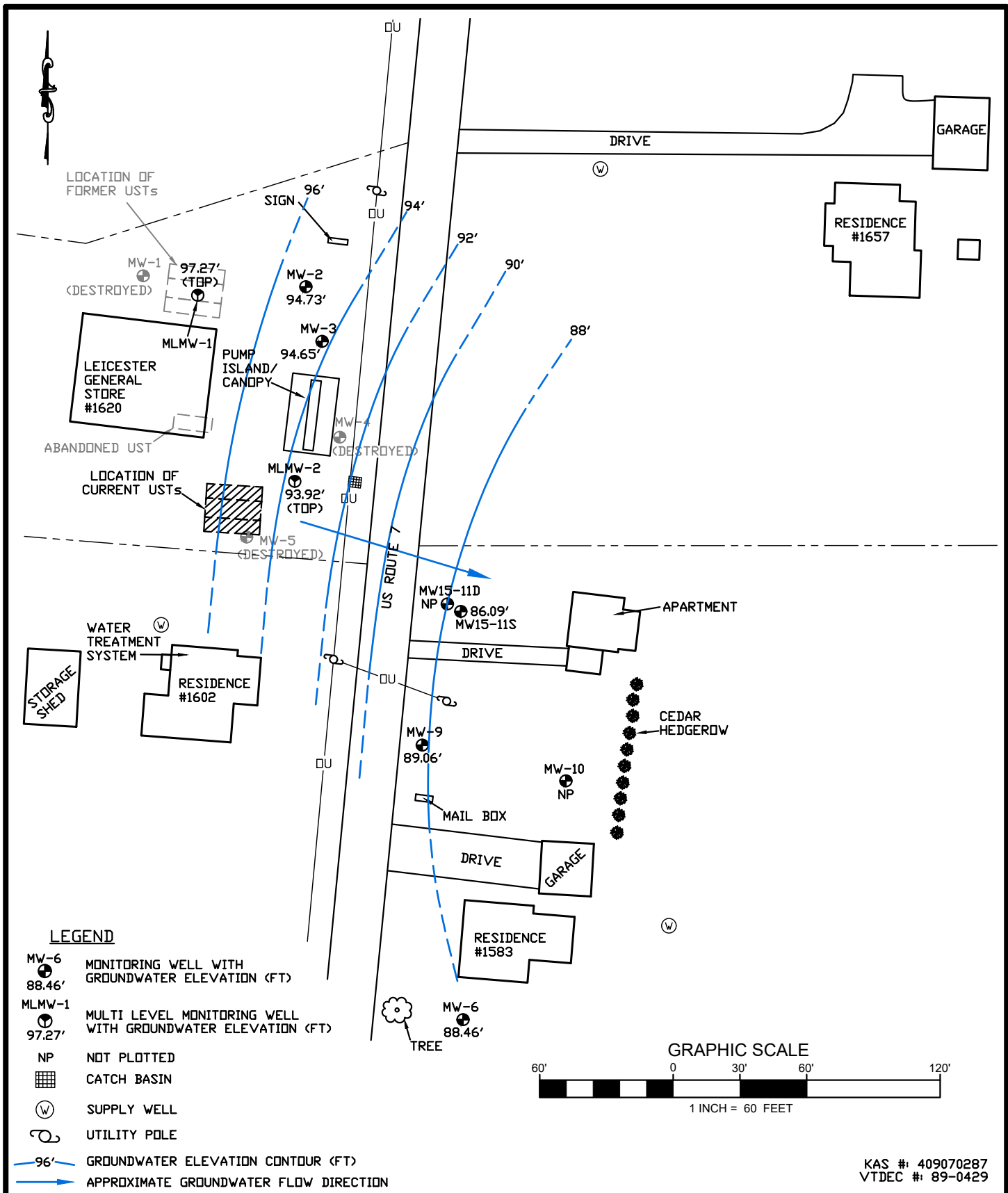
DATE: 8/27/20

DWG. #: 1

SCALE: 1"=60'

DRN: TB

APP: CS



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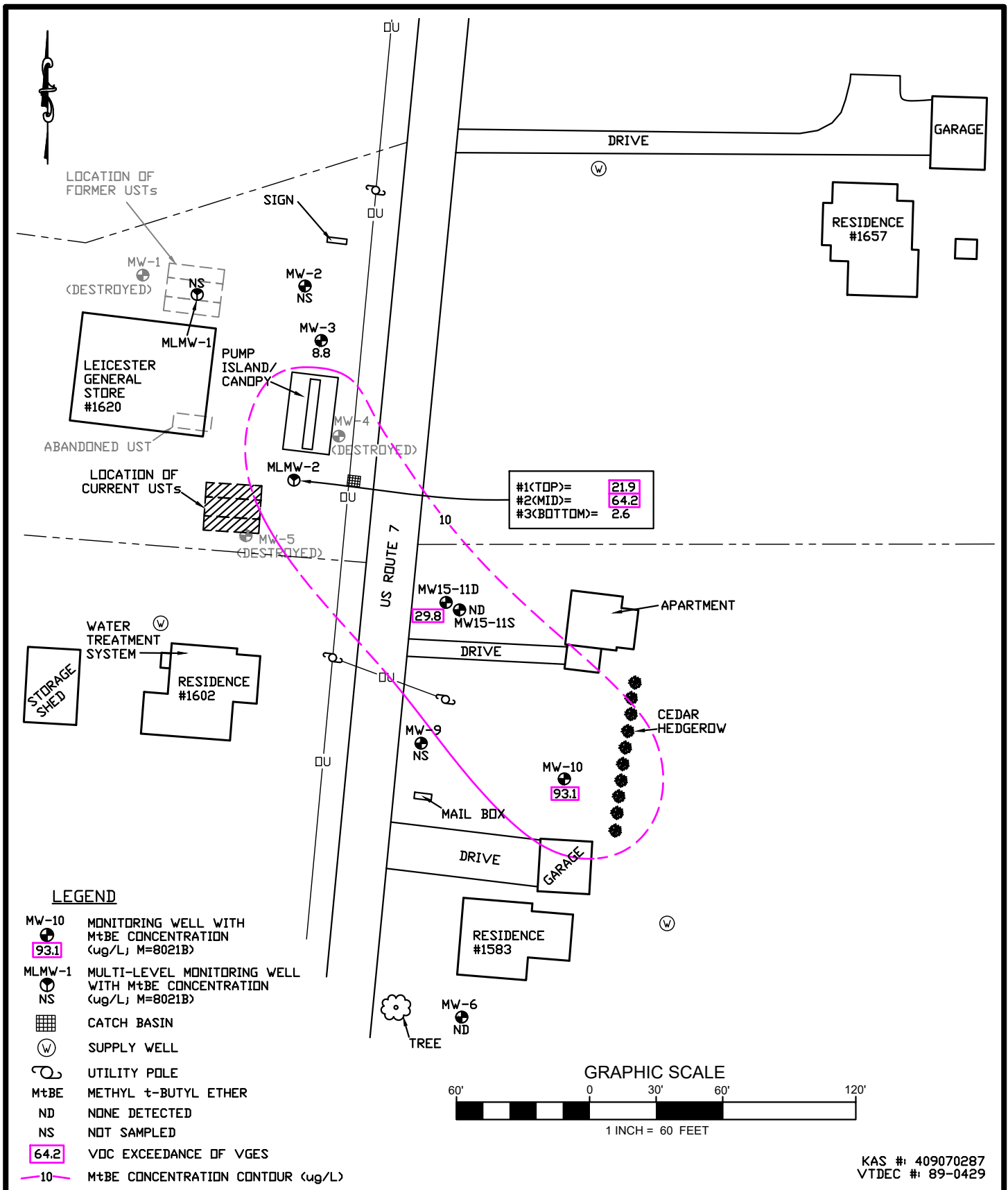


LEICESTER GENERAL STORE
1620 US ROUTE 7
LEICESTER, VERMONT

GROUNDWATER CONTOUR MAP

MEASURED: 7/28/20

DATE: 8/27/20	DWG. #: 2	SCALE: 1"=60'	DRN.: TB	APP.: CS
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LEICESTER GENERAL STORE
1620 US ROUTE 7
LEICESTER, VERMONT

GROUNDWATER: M&tBE DISTRIBUTION MAP

SAMPLED: 7/28/20

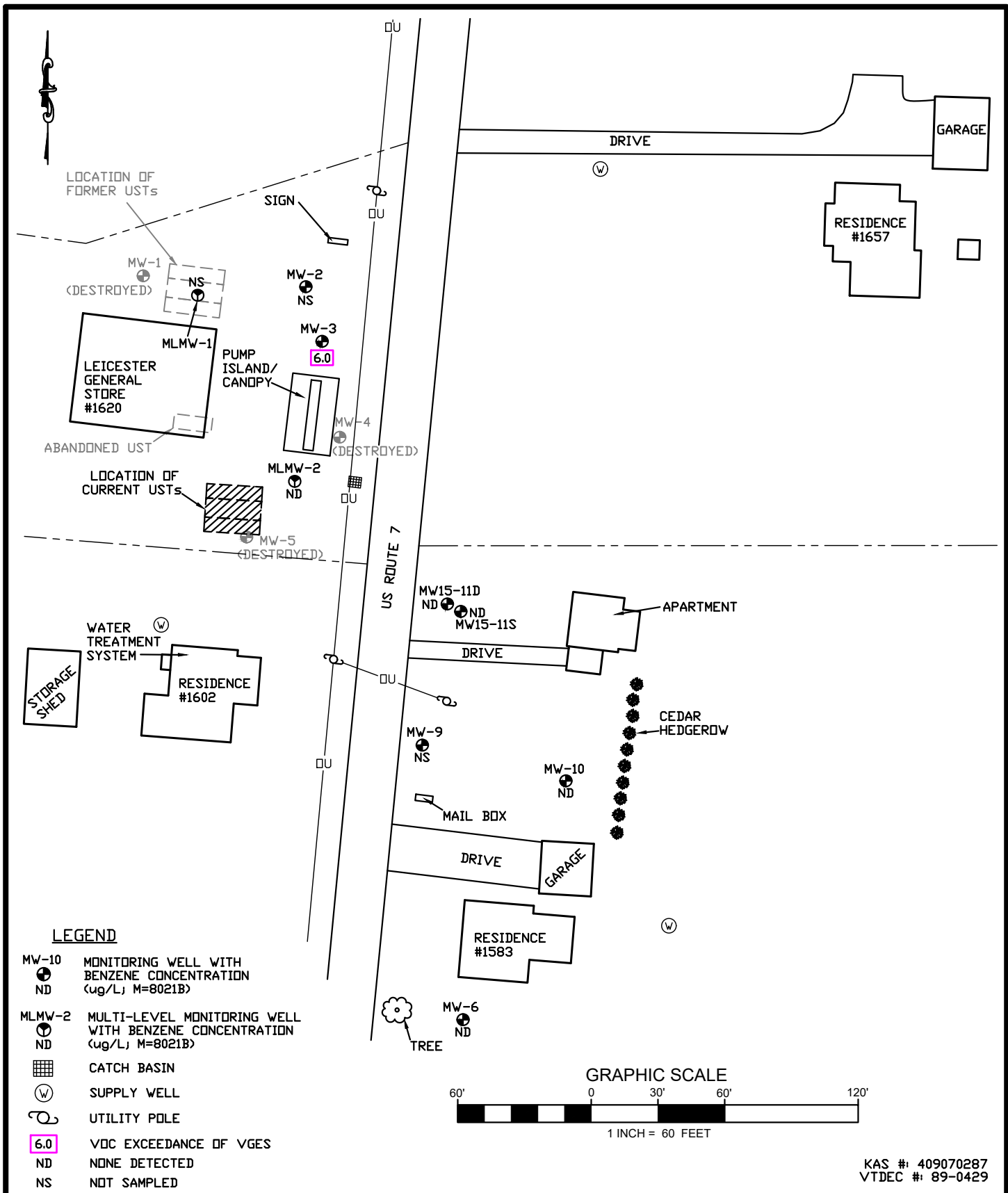
DATE: 9/4/20

DWG. #: 4

SCALE: 1"=60'

DRN: TB

APP: CS



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LEICESTER GENERAL STORE
1620 US ROUTE 7
LEICESTER, VERMONT

GROUNDWATER: BENZENE CONCENTRATION MAP

SAMPLED: 7/28/20

DATE: 8/27/20

DWG. #: 3

SCALE: 1"=60'

DRN: TB

APP: CS



Appendix B

Liquid Level Monitoring Data



Liquid Level Monitoring Data

Leicester General Store
Leicester, Vermont

Measurement Date: July 28, 2020

Well I.D.	Date of Installation	Well Depth	Well Diameter	Well Screen Interval	Top of Casing Elevation	Depth To Product	Depth To Water	Corrected Depth To Water	Corrected Water Table Elevation
MW-2	1/18/1990	12.50	2"	2.5-12.5	98.17	-	3.44	3.44	94.73
MW-3	1/18/1990	10.64	2"	2.5-12.5	99.71	-	5.06	5.06	94.65
MW-6	1/18/1990	14.60	2"	5-20'	95.78	-	7.32	7.32	88.46
MW-9	5/16/1990	19.54	2"	11.7-21.2'	97.96	-	8.90	8.90	89.06
MW-10	5/17/1990	13.34	2"	8.7-13.7'	95.93	-	7.41	7.41	88.52
MLMW-1 - #1	7/31/2013	6.78	1"	6.5-7.5'	99.45	-	2.18	2.18	97.27
MLMW-1 - #2	7/31/2013	14.74	1"	14.5-15.5'	99.45	-	2.16	2.16	97.29
MLMW-1 - #3	7/31/2013	10.78	1"	10.5-11.5'	99.45	-	2.12	2.12	97.33
MLMW-2 - #1	7/31/2013	8.04	1"	7.5-8.5'	99.29	-	5.37	5.37	93.92
MLMW-2 - #2	7/31/2013	20.80	1"	20.5-21.5'	99.29	-	10.16	10.16	89.13
MLMW-2 - #3	7/31/2013	13.05	1"	12.5-13.5'	99.29	-	7.95	7.95	91.34
MW15-11S	11/3/2015	9.00	2"	4-9'	93.06	-	6.97	6.97	86.09
MW15-11D	11/3/2015	24.00	2"	21-24'	92.76	-	7.99	7.99	84.77

Notes:

All values reported in feet

Top-of-casing elevations measured in feet relative to MW-3 (arbitrary elevation)

Monitoring Well locations surveyed by Griffin International, Inc. on January 3, 2002

Multi-Channel Monitoring Well locations surveyed by KAS, Inc. on September 3, 2013

NM = Not Measured

Elevations for MW-3 and MW-9 lowered in February 2002 due to well repair.

Elevations for MW-3 was again lowered in July 2015 due to well repair.



Historical Summary of Liquid Level Data

Well I.D.	Measurement Date:														
	9/20/2001	1/3/2002	7/12/2002	9/18/2007	3/5/2008	10/7/2008	6/23/2011	9/3/2013	5/9/2014	7/15/2015	11/20/2015	9/15/2016	12/15/2017	12/5/2019	7/28/2020
MW-2	Dry	93.64	97.68	96.02	NM	95.33	NM	NM	98.58	Destroyed	-	-	-	-	94.73
MW-3	Dry	93.96	96.93	95.03	97.67	96.33	97.37	96.56	98.49	98.00	96.84	94.86	-	97.43	94.65
MW-4	NM	94.55	95.71	94.19	95.97	92.14	NM	Destroyed	-	-	-	-	-	-	-
MW-5	84.35	91.66	92.42	92.27	98.77	93.69	NM	Destroyed	-	-	-	-	-	-	-
MW-6	83.14	91.09	91.33	91.50	94.44	92.75	93.13	92.30	92.88	92.24	92.58	89.06	92.57	93.13	88.46
MW-9	84.35	91.23	91.71	91.70	94.61	93.14	94.16	93.16	93.92	93.05	93.49	90.58	93.35	93.10	89.06
MW-10	83.67	90.73	91.21	91.17	94.03	92.62	93.22	92.60	93.08	92.57	92.81	88.90	92.99	93.08	88.52
MLMW-1 - #1	-	-	-	-	-	-	-	96.85	97.85	96.81	97.16	93.80	97.66	97.27	97.27
MLMW-1 - #2	-	-	-	-	-	-	-	84.91	97.80	96.81	97.14	94.11	97.10	97.29	97.29
MLMW-1 - #3	-	-	-	-	-	-	-	88.89	97.70	96.81	97.15	94.15	97.12	97.33	97.33
MLMW-2 - #1	-	-	-	-	-	-	-	95.82	97.04	96.27	95.81	93.76	95.99	95.90	93.92
MLMW-2 - #2	-	-	-	-	-	-	-	95.17	95.99	96.27	95.36	91.81	95.37	95.65	89.13
MLMW-2 - #3	-	-	-	-	-	-	-	95.53	95.89	96.27	95.73	92.19	95.70	95.89	91.34
MW15-11S	-	-	-	-	-	-	-	-	-	-	89.13	86.41	89.54	89.50	86.09
MW15-11D	-	-	-	-	-	-	-	-	-	-	88.72	85.25	89.02	89.16	84.77

Notes:

- All Values Reported in Feet
- btoc - Below Top of Casing
- NM - not measured
- Site surveyed by Griffin International, Inc., - January 3, 2002
- Elevations determined relative to MW-3, which was arbitrarily set at 100.00 feet

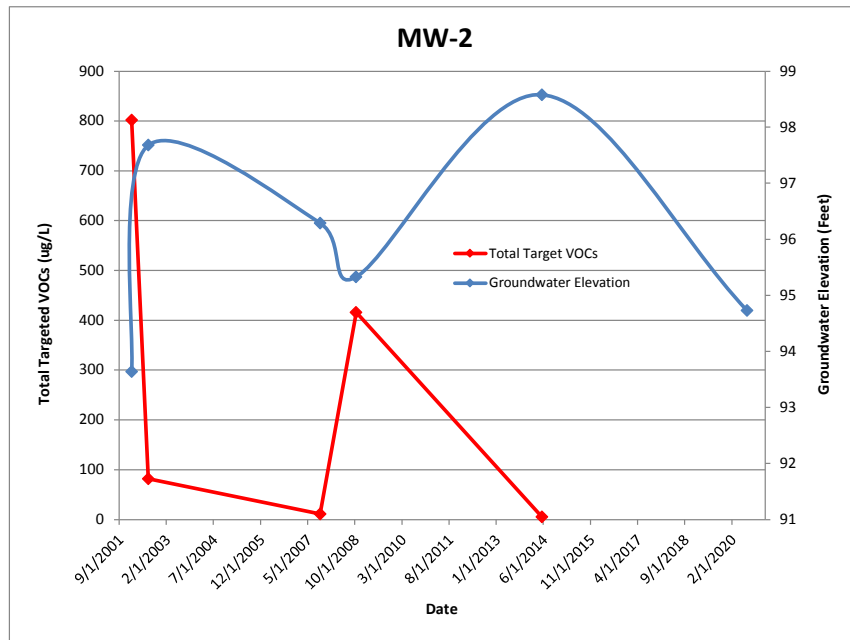


Appendix C

Groundwater Quality Summary



Groundwater Quality Summary



MW-2

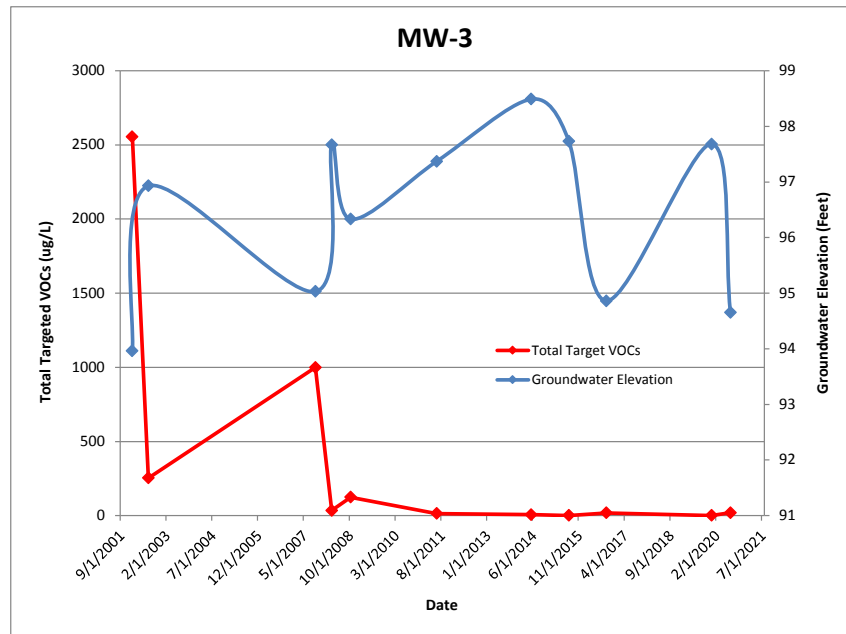
PARAMETER	Date of Sample Collection:						VGES
	9/20/2001	1/3/2002	7/12/2002	9/18/2007	3/5/2008	10/7/2008	
Benzene	Well	237.	48.0	3.9	Well	79.2	5
Toluene	Not	47.8	ND(1.0)	ND(1.0)	Not	ND(20.0)	1000
Ethylbenzene	Sampled	129.	6.8	2.3	Sampled	73.3	700
Xylenes		169.	ND(2.0)	ND(2.0)		166.	10,000
Total BTEX:		583.	54.8	6.2		319.	
1,3,5 Trimethyl Benzene		3.3	ND(1.0)	ND(1.0)		ND(20.0)	
1,2,4 Trimethyl Benzene	Well	64.7	1.1	ND(1.0)	Unable to	97.7	350
Naphthalene	Dry	19.5	1.2	ND(2.0)	Locate	ND(40.0)	20
MTBE		132.	24.6	5.0		ND(40.0)	40
Total Targeted VOCs:		802.	81.7	11.2		416.	

PARAMETER	Date of Sample Collection:					VGES
	6/23/2011	9/3/2013	5/9/2014	7/15/2015	7/28/2020	
Benzene	Well	Well	ND(1.0)	Well		5
Toluene	Not	Not	ND(1.0)	Not		1000
Ethylbenzene	Sampled	Located	2.4	Located	Well	700
Xylenes			ND(2.0)		Located	10,000
Total BTEX:			2.4			
1,3,5 Trimethyl Benzene			ND(1.0)	PRESUMED	Gauged	
1,2,4 Trimethyl Benzene			1.1	DESTROYED	Only	350
Naphthalene			ND(2.0)			20
MTBE			2.1			40
Total Targeted VOCs:			5.6			

All values reported in ug/L
 ND() = None detected (detection limit)
 VGES - Vermont Groundwater Enforcement Standard
 Shaded values meet or exceed VGES in place at the time of sampling



Groundwater Quality Summary



MW-3

PARAMETER	Date of Sample Collection						VGES
	9/20/2001	1/3/2002	7/12/2002	9/18/2007	3/5/2008	10/7/2008	
Benzene	Well	789.	26.2	290	17.3	44.5	5
Toluene	Not	81.3	3.5	27.5	1.3	3.1	1,000
Ethylbenzene	Sampled	458.	65.6	229	8.5	35.1	700
Xylenes		567.	81.3	230	2.6	12.9	10,000
Total BTEX:		1,895.	176.6	777	29.7	95.6	
1,3,5 Trimethyl Benzene		73.0	4.8	24.9	ND(1.0)	ND(1.0)	
1,2,4 Trimethyl Benzene	Well	372.	53.6	125.	ND(1.0)	9.8	350
Naphthalene	Dry	105.	15.1	43.8	ND(2.0)	4.6	20
MTBE		110.	2.4	28.4	4.2	13.2	40
Total Targeted VOCs:		2,555.	252.5	999	33.9	123.2	

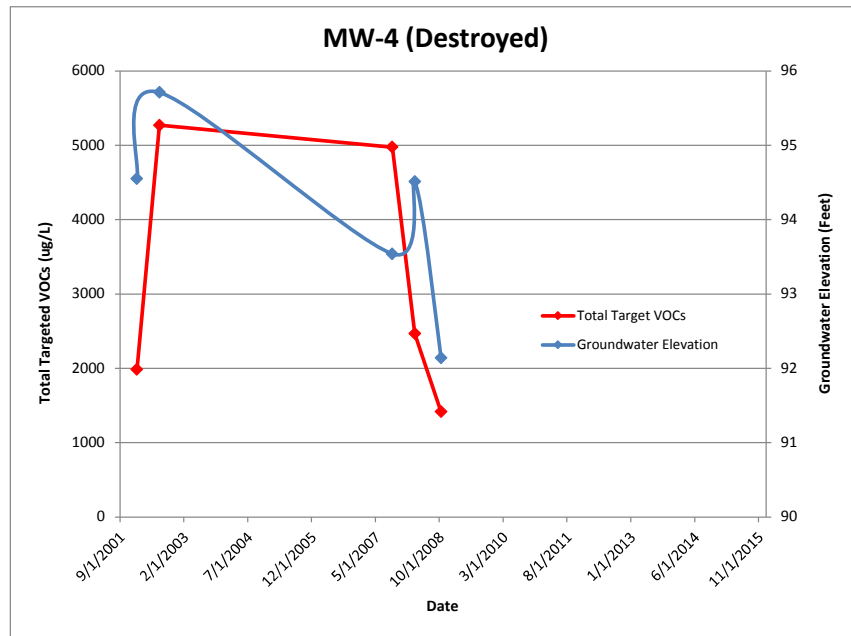
PARAMETER	Date of Sample Collection						VGES
	6/23/2011	9/3/2013	5/9/2014	7/15/2015	9/15/2016	12/15/2017	
Benzene	4.0	2.5	1.4	ND(1.0)	4.1		5
Toluene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	No	1,000
Ethylbenzene	1.3	4.2	ND(1.0)	ND(1.0)	2.4	Sample	700
Xylenes	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	Collected	10,000
Total BTEX:	5.3	6.7	1.4	ND	6.5		
1,3,5 Trimethyl Benzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	Well	
1,2,4 Trimethyl Benzene	ND(1.0)	1.1	ND(1.0)	ND(1.0)	ND(1.0)	Not	350
Naphthalene	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	Accessible	20
MTBE	7.8	7.9	4.4	ND(2.0)	10.9		40
Total Targeted VOCs:	13.1	15.7	5.8	ND	17.4		

PARAMETER	Date of Sample Collection						VGES
	12/5/2019	7/28/2020					
Benzene	ND(0.5)	6.0					5
Toluene	ND(1.0)	ND(1.0)					1,000
Ethylbenzene	ND(1.0)	3.1					700
Xylenes	ND(2.0)	ND(2.0)					10,000
Total BTEX:	ND	9.1					-
1,3,5 Trimethyl Benzene	ND(1.0)	ND(1.0)					
1,2,3 Trimethyl Benzene	ND(1.0)	ND(1.0)					23
1,2,4 Trimethyl Benzene	ND(1.0)	1.1					
Naphthalene	ND(0.5)	ND(0.5)					0.5
MTBE	ND(2.0)	8.8					11
Total Targeted VOCs:	ND	19.0					

All values reported in ug/L
 ND () = None detected (detection limit)
Bold values indicate a detected concentration
 VGES - Vermont Groundwater Enforcement Standard
 Shaded values meet or exceed VGES in place at the time of sampling



Groundwater Quality Summary



MW-4 (Destroyed)

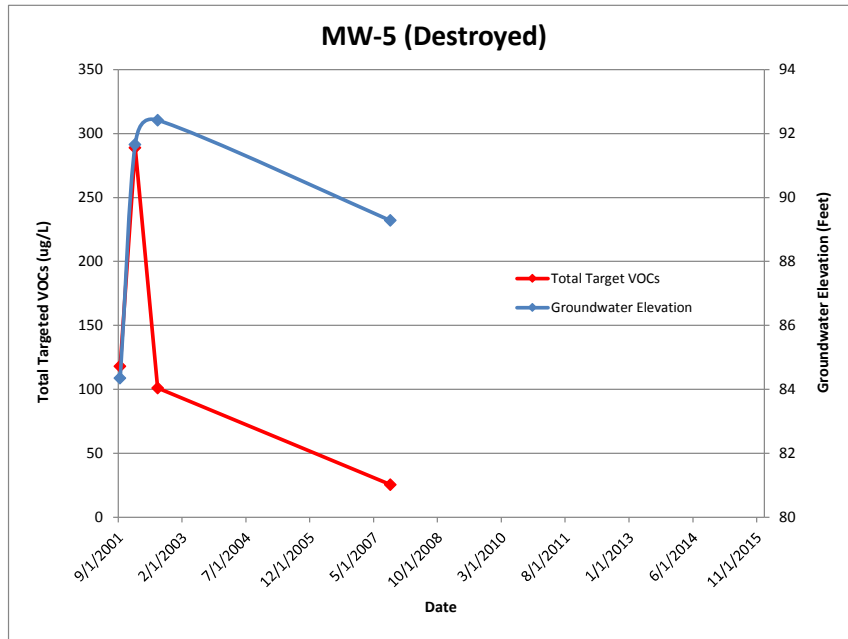
PARAMETER	Date of Sample Collection:						VGES
	9/20/2001	1/3/2002	7/12/2002	9/18/2007	3/5/2008	10/7/2008	
Benzene	Well	619.	1,300.	486.	311.	465.	5
Toluene	Not	23.0	111.	50.4	22.6	68.3	1,000
Ethylbenzene	Sampled	282.	655.	802.	465.	915.	700
Xylenes		256.	1,440.	1,850.	866.	1,480.	10,000
Total BTEX:		1,180.	3,506.	3,188.	1,665.	2,928.	
1,3,5 Trimethyl Benzene	Could	35.3	91.3	117.	ND(20)	106.	
1,2,4 Trimethyl Benzene	Not	237.	752.	809.	408.	741.	350
Naphthalene	Locate	59.1	229.	245.	121.	290.	20
MTBE		474.	691.	616.	271.	279.	40
Total Targeted VOCs:		1,985.	5,269.	4,975.	2,465.	1,416.	

PARAMETER	Date of Sample Collection:					VGES
	6/23/2011					
Benzene	Well					5
Toluene	Not					1,000
Ethylbenzene	Sampled					700
Xylenes						10,000
Total BTEX:						
1,3,5 Trimethyl Benzene	PRESUMED					
1,2,4 Trimethyl Benzene	DESTROYED					350
Naphthalene						20
MTBE						40
Total Targeted VOCs:						

All values reported in ug/L
 ND() = None detected (detection limit)
 VGES - Vermont Groundwater Enforcement Standard
 Shaded values meet or exceed VGES in place at the time of sampling



Groundwater Quality Summary



MW-5

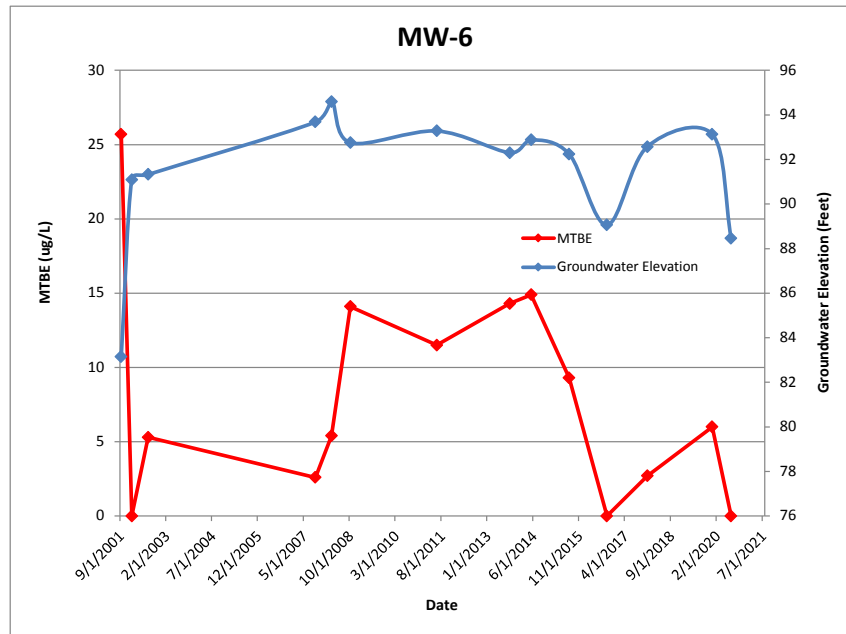
PARAMETER	Date of Sample Collection:						VGES
	9/20/2001	1/3/2002	7/12/2002	9/18/2007	3/5/2008	10/7/2008	
Benzene	ND(1.0)	112.	ND(1.0)	ND(1.0)	Well	Well	5
Toluene	ND(1.0)	4.2	ND(1.0)	ND(1.0)	Not	Not	1,000
Ethylbenzene	ND(1.0)	8.1	ND(1.0)	ND(1.0)	Sampled	Sampled	700
Xylenes	ND(1.0)	7.7	ND(2.0)	ND(2.0)		Removed	10,000
Total BTEX:	ND	132.	ND	ND		From	
1,3,5 Trimethyl Benzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)		Sampling	
1,2,4 Trimethyl Benzene	ND(1.0)	3.2	ND(1.0)	ND(1.0)		Schedule	350
Naphthalene	ND(1.0)	1.6	ND(1.0)	ND(1.0)			20
MTBE	118.	152.	101.	25.5			40
Total Targeted VOCs:	118.	289.	101.	25.5			

PARAMETER	Date of Sample Collection:						VGES
	6/23/2011						
Benzene	Well						5
Toluene	Not						1,000
Ethylbenzene	Sampled						700
Xylenes							10,000
Total BTEX:							
1,3,5 Trimethyl Benzene	PRESUMED						
1,2,4 Trimethyl Benzene	DESTROYED						350
Naphthalene							20
MTBE							40
Total Targeted VOCs:							

All values reported in ug/L
 ND() = None detected (detection limit)
 VGES - Vermont Groundwater Enforcement Standard
 Shaded values meet or exceed VGES in place at the time of sampling



Groundwater Quality Summary



MW-6

PARAMETER	Date of Sample Collection:						VGES
	9/20/2001	1/3/2002	7/12/2002	9/18/2007	3/5/2008	10/7/2008	
Benzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	5
Toluene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1,000
Ethylbenzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	700
Xylenes	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	10,000
Total BTEX:	ND	ND	ND	ND	ND	ND	
1,3,5 Trimethyl Benzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	
1,2,4 Trimethyl Benzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	350
Naphthalene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	20
MTBE	25.7	ND(5.0)	5.3	2.6	5.4	14.1	40
Total Targeted VOCs:	25.7	ND	5.3	2.6	5.4	14.1	

PARAMETER	Date of Sample Collection:						VGES
	6/23/2011	9/3/2013	5/9/2014	7/15/2015	9/15/2016	12/15/2017	
Benzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	5
Toluene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1,000
Ethylbenzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	700
Xylenes	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	10,000
Total BTEX:	ND	ND	ND	ND	ND	ND	
1,3,5 Trimethyl Benzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	
1,2,4 Trimethyl Benzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	350
Naphthalene	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	20
MTBE	11.5	14.3	14.9	9.3	ND(2.0)	2.7	40
Total Targeted VOCs:	11.5	14.3	14.9	9.3	ND	2.7	

PARAMETER	Date of Sample Collection						VGES
	12/5/2019	7/28/2020					
Benzene	ND(0.5)	ND(0.5)					5
Toluene	ND(1.0)	ND(1.0)					1,000
Ethylbenzene	ND(1.0)	ND(1.0)					700
Xylenes	ND(2.0)	ND(2.0)					10,000
Total BTEX:	ND	ND					-
1,3,5 Trimethyl Benzene	ND(1.0)	ND(1.0)					
1,2,3 Trimethyl Benzene	ND(1.0)	ND(1.0)					23
1,2,4 Trimethyl Benzene	ND(1.0)	ND(1.0)					
Naphthalene	ND(0.5)	ND(0.5)					0.5
MTBE	6.0	ND(2.0)					11
Total Targeted VOCs:	6.0	ND					

All values reported in ug/L
 ND() = None detected (detection limit)
Bold values indicate a detected concentration
 VGES - Vermont Groundwater Enforcement Standard
 Shaded values meet or exceed VGES in place at the time of sampling



Groundwater Quality Summary

MW-9 (Removed from Sampling Schedule)

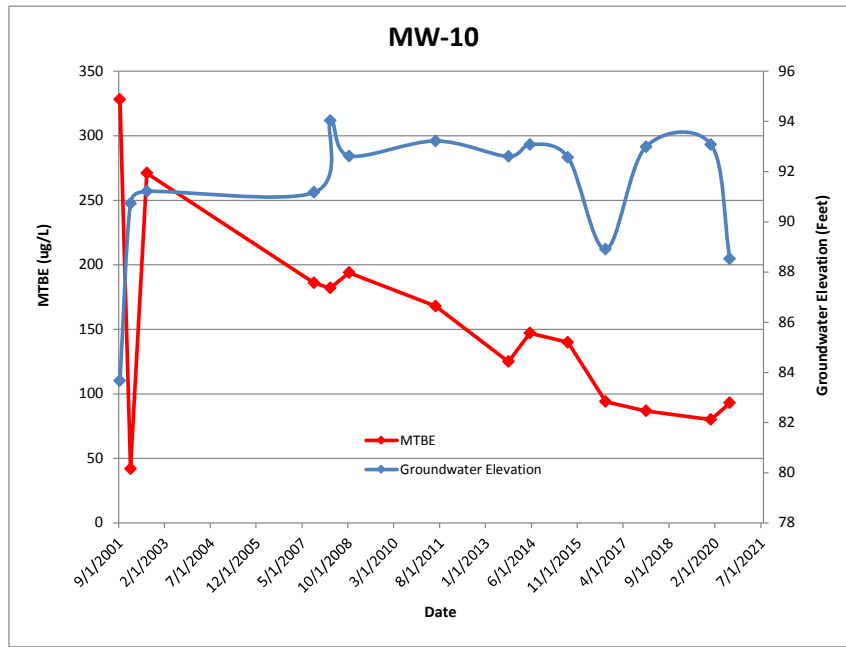
PARAMETER	Date of Sample Collection:						VGES
	9/20/2001	1/3/2002	7/12/2002	9/18/2007	3/5/2008	10/7/2008	
Benzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	Well	Well	5
Toluene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	Not	Not	1,000
Ethylbenzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	Sampled	Sampled	700
Xylenes	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)			10,000
Total BTEX:	ND	ND	ND	ND			
1,3,5 Trimethyl Benzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)			
1,2,4 Trimethyl Benzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)			350
Naphthalene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)			20
MTBE	ND(10.0)	ND(5.0)	ND(2.0)	ND(2.0)			40
Total Targeted VOCs:	ND	ND	ND	ND			

PARAMETER	Date of Sample Collection:					VGES
	6/23/2011	5/9/2014	7/15/2015	9/15/2016		
Benzene	Well	ND(1.0)	ND(1.0)			5
Toluene	Not	ND(1.0)	ND(1.0)	Not		1,000
Ethylbenzene	Sampled	ND(1.0)	ND(1.0)	Sampled		700
Xylenes	Removed	ND(2.0)	ND(2.0)			10,000
Total BTEX:	From	ND	ND			
1,3,5 Trimethyl Benzene	Sampling	ND(1.0)	ND(1.0)	Removed		
1,2,4 Trimethyl Benzene	Schedule	ND(1.0)	ND(1.0)	From		350
Naphthalene		ND(2.0)	ND(2.0)	Sampling		20
MTBE		ND(2.0)	ND(2.0)	Schedule		40
Total Targeted VOCs:		ND	ND			

All values reported in ug/L
 ND () = None detected (detection limit)
 VGES - Vermont Groundwater Enforcement Standard
 Shaded values meet or exceed VGES in place at the time of sampling



Groundwater Quality Summary



MW-10

PARAMETER	Date of Sample Collection:						VGES
	9/20/2001	1/3/2002	7/12/2002	9/18/2007	3/5/2008	10/7/2008	
Benzene	ND(4.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	5
Toluene	ND(4.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	1,000
Ethylbenzene	ND(4.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	700
Xylenes	ND(4.0)	ND(1.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	10,000
Total BTEX:	ND	ND	ND	ND	ND	ND	
1,3,5 Trimethyl Benzene	ND(4.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	
1,2,4 Trimethyl Benzene	ND(4.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	350
Naphthalene	ND(4.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(4.0)	ND(4.0)	20
MTBE	328.	42.1	271.	186.	182.	194.	40
Total Targeted VOCs:	328.	42.1	271.	186.	182.	194.	

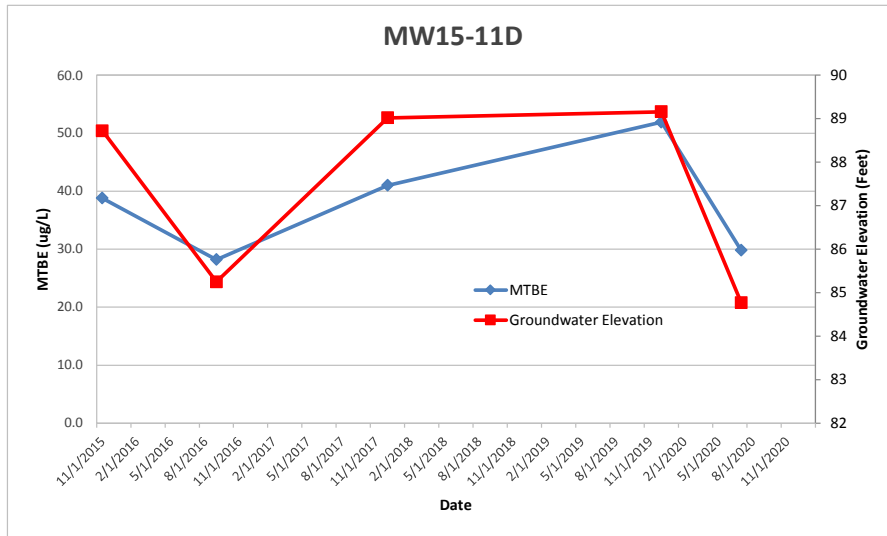
PARAMETER	Date of Sample Collection:						VGES
	6/23/2011	9/3/2013	5/9/2014	7/15/2015	9/15/2016	12/15/2017	
Benzene	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.5)	5
Toluene	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1,000
Ethylbenzene	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	700
Xylenes	ND(4.0)	ND(4.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	10,000
Total BTEX:	ND	ND	ND	ND	ND	ND	
1,3,5 Trimethyl Benzene	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	
1,2,4 Trimethyl Benzene	ND(2.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	350
Naphthalene	ND(4.0)	ND(4.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	20
MTBE	168	125.	147	140	94.0	86.9	40
Total Targeted VOCs:	168	125.	147	140	94.0	86.9	

PARAMETER	Date of Sample Collection				VGES
	12/5/2019	7/28/2020			
Benzene	ND(0.5)	ND(0.5)			5
Toluene	ND(1.0)	ND(1.0)			1,000
Ethylbenzene	ND(1.0)	ND(1.0)			700
Xylenes	ND(2.0)	ND(2.0)			10,000
Total BTEX:	ND	ND			-
1,3,5 Trimethyl Benzene	ND(1.0)	ND(1.0)			
1,2,3 Trimethyl Benzene	ND(1.0)	ND(1.0)			23
1,2,4 Trimethyl Benzene	ND(1.0)	ND(1.0)			
Naphthalene	ND(0.5)	ND(0.5)			0.5
MTBE	80.1	93.1			11
Total Targeted VOCs:	80.1	93.1			-

All values reported in ug/L
 ND() = None detected (detection limit)
Bold values indicate a detected concentration
 VGES - Vermont Groundwater Enforcement Standard
 Shaded values meet or exceed VGES in place at the time of sampling



Groundwater Quality Summary



MW15-11D

PARAMETER	Date of Sample Collection:					VGES
	11/20/2015	9/15/2016	12/15/2017	12/5/2019	7/28/2020	
Benzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.5)	ND(0.5)	5
Toluene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1,000
Ethylbenzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	700
Xylenes	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	10,000
Total BTEX:	ND	ND	ND	ND	ND	-
1,3,5 Trimethyl Benzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	23
1,2,3 Trimethyl Benzene	-	-	-	ND(1.0)	ND(1.0)	
1,2,4 Trimethyl Benzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	
Naphthalene	ND(2.0)	ND(2.0)	ND(2.0)	ND(0.5)	ND(0.5)	0.5
MTBE	38.8	28.2	41.0	51.9	29.8	11
Total Targeted VOCs:	38.8	28.2	41.0	51.9	29.8	-

All values reported in ug/L
 ND () = None detected (detection limit)
Bold values indicate a detected concentration
 VGES - Vermont Groundwater Enforcement Standard
 Shaded values meet or exceed VGES in place at the time of sampling

MW15-11S

PARAMETER	Date of Sample Collection:					VGES
	11/20/2015	9/15/2016	12/15/2017	12/5/2019	7/28/2020	
Benzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	5
Toluene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1,000
Ethylbenzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	700
Xylenes	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	10,000
Total BTEX:	ND	ND	ND	ND	ND	-
1,3,5 Trimethyl Benzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	23
1,2,3 Trimethyl Benzene	-	-	-	-	-	
1,2,4 Trimethyl Benzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	
Naphthalene	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	0.5
MTBE	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	11
Total Targeted VOCs:	ND	ND	ND	ND	ND	-

All values reported in ug/L
 ND () = None detected (detection limit)
Bold values indicate a detected concentration
 VGES - Vermont Groundwater Enforcement Standard
 Shaded values meet or exceed VGES in place at the time of sampling



Groundwater Quality Summary

Leicester General Store
Leicester, Vermont

MLMW-1 - Channel #1

PARAMETER	Date of Sample Collection:				VGES
	9/3/2013	5/9/2014	7/15/2015	9/15/2016	
Benzene	ND(1.0)	ND(1.0)	ND(1.0)		5
Toluene	ND(1.0)	ND(1.0)	ND(1.0)	Not	1000
Ethylbenzene	ND(1.0)	ND(1.0)	ND(1.0)	Sampled	700
Xylenes	ND(2.0)	ND(2.0)	ND(2.0)		10,000
Total BTEX:	ND	ND	ND		-
1,3,5 Trimethyl Benzene	ND(1.0)	ND(1.0)	ND(1.0)	Removed	
1,2,4 Trimethyl Benzene	ND(1.0)	ND(1.0)	ND(1.0)	From	350
Naphthalene	ND(2.0)	ND(2.0)	ND(2.0)	Sampling	20
MTBE	ND(2.0)	ND(2.0)	ND(2.0)	Plan	40
Total Targeted VOCs:	ND	ND	ND		-

MLMW-1 - Channel #2

PARAMETER	Date of Sample Collection:				VGES
	9/3/2013	5/9/2014	7/15/2015	9/15/2016	
Benzene	ND(1.0)	ND(1.0)	ND(1.0)		5
Toluene	ND(1.0)	ND(1.0)	ND(1.0)	Not	1000
Ethylbenzene	ND(1.0)	ND(1.0)	ND(1.0)	Sampled	700
Xylenes	ND(2.0)	ND(2.0)	ND(2.0)		10,000
Total BTEX:	ND	ND	ND		-
1,3,5 Trimethyl Benzene	ND(1.0)	ND(1.0)	ND(1.0)	Removed	
1,2,4 Trimethyl Benzene	ND(1.0)	ND(1.0)	ND(1.0)	From	350
Naphthalene	ND(2.0)	ND(2.0)	ND(2.0)	Sampling	20
MTBE	ND(2.0)	ND(2.0)	ND(2.0)	Plan	40
Total Targeted VOCs:	ND	ND	ND		-

MLMW-1 - Channel #3

PARAMETER	Date of Sample Collection:				VGES
	9/3/2013	5/9/2014	7/15/2015	9/15/2016	
Benzene	ND(1.0)	ND(1.0)	ND(1.0)		5
Toluene	ND(1.0)	ND(1.0)	ND(1.0)	Not	1000
Ethylbenzene	ND(1.0)	ND(1.0)	ND(1.0)	Sampled	700
Xylenes	ND(2.0)	ND(2.0)	ND(2.0)		10,000
Total BTEX:	ND	ND	ND		-
1,3,5 Trimethyl Benzene	ND(1.0)	ND(1.0)	ND(1.0)	Removed	
1,2,4 Trimethyl Benzene	ND(1.0)	ND(1.0)	ND(1.0)	From	350
Naphthalene	ND(2.0)	ND(2.0)	ND(2.0)	Sampling	20
MTBE	ND(2.0)	ND(2.0)	ND(2.0)	Plan	40
Total Targeted VOCs:	ND	ND	ND		-

All values reported in ug/L

ND - None Detected

Bold values indicate a detected concentration

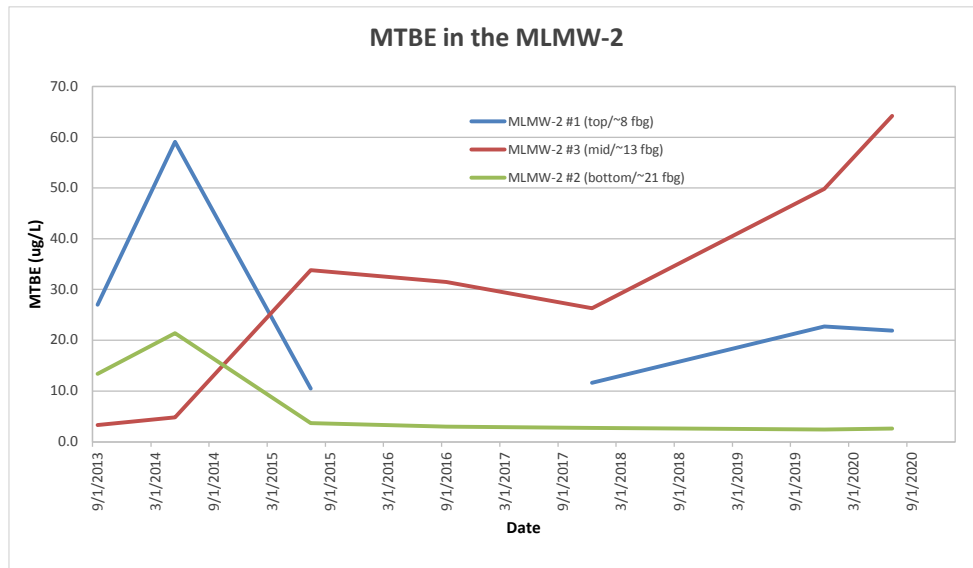
VGES - Vermont Groundwater Enforcement Standard

Shaded values meet or exceed VGES in place at the time of sampling



Groundwater Quality Summary

Leicester General Store
Leicester, Vermont



MLMW-2 - Channel #1 (Top)

PARAMETER	Date of Sample Collection:							VGES
	9/3/2013	5/9/2014	7/15/2015	9/15/2016	12/15/2017	12/5/2019	7/28/2020	
Benzene	ND(1.0)	ND(1.0)	ND(1.0)		ND(1.0)	ND(0.5)	ND(0.5)	5
Toluene	ND(1.0)	ND(1.0)	ND(1.0)	Not	ND(1.0)	ND(1.0)	ND(1.0)	1000
Ethylbenzene	ND(1.0)	ND(1.0)	ND(1.0)	Sampled	ND(1.0)	ND(1.0)	ND(1.0)	700
Xylenes	ND(2.0)	ND(2.0)	ND(2.0)		ND(2.0)	ND(2.0)	ND(2.0)	10,000
Total BTEX:	ND	ND	ND		ND	ND	ND	-
1,3,5 Trimethyl Benzene	ND(1.0)	ND(1.0)	ND(1.0)	Went dry/ no recharge	ND(1.0)	ND(1.0)	ND(1.0)	23
1,2,3 Trimethyl Benzene	-	-	-		-	ND(1.0)	ND(1.0)	
1,2,4 Trimethyl Benzene	ND(1.0)	ND(1.0)	ND(1.0)		ND(1.0)	ND(1.0)	ND(1.0)	
Naphthalene	ND(2.0)	ND(2.0)	ND(2.0)		ND(2.0)	ND(0.5)	ND(0.5)	0.5
MTBE	27.0	59.1	10.5		11.6	22.7	21.9	11
Total Targeted VOCs:	27.0	59.1	10.5		11.6	22.7	21.9	-

MLMW-2 - Channel #2 (Bottom)

PARAMETER	Date of Sample Collection:							VGES
	9/3/2013	5/9/2014	7/15/2015	9/15/2016	12/15/2017	12/5/2019	7/28/2020	
Benzene	3.3	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.5)	ND(0.5)	ND(0.5)	5
Toluene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1000
Ethylbenzene	1.1	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	700
Xylenes	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	10,000
Total BTEX:	4.4	ND	ND	ND	ND	ND	ND	-
1,3,5 Trimethyl Benzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	23
1,2,3 Trimethyl Benzene	-	-	-	-	-	ND(1.0)	ND(1.0)	
1,2,4 Trimethyl Benzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	
Naphthalene	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(0.5)	ND(0.5)	0.5
MTBE	13.4	21.4	3.7	3.0	2.7	2.4	2.6	11
Total Targeted VOCs:	17.8	21.4	3.7	3.0	2.7	2.4	2.6	-

MWLV-2 - Channel #3 (Middle)

PARAMETER	Date of Sample Collection:							VGES
	9/3/2013	5/9/2014	7/15/2015	9/15/2016	12/15/2017	12/5/2019	7/28/2020	
Benzene	ND(1.0)	ND(1.0)	ND(1.0)	4.4	ND(1.0)	ND(0.5)	ND(0.5)	5
Toluene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1000
Ethylbenzene	ND(1.0)	ND(1.0)	ND(1.0)	4.5	ND(1.0)	ND(1.0)	ND(1.0)	700
Xylenes	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	10,000
Total BTEX:	ND	ND	ND	8.9	ND	ND	ND	-
1,3,5 Trimethyl Benzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	23
1,2,3 Trimethyl Benzene	-	-	-	-	-	ND(1.0)	ND(1.0)	
1,2,4 Trimethyl Benzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	
Naphthalene	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(0.5)	ND(0.5)	0.5
MTBE	3.3	4.8	33.8	31.5	26.3	49.8	64.2	11
Total Targeted VOCs:	3.3	4.8	33.8	40.4	26.3	49.8	64.2	-

All values reported in ug/L

ND - None Detected

Bold values indicate a detected concentration

VGES - Vermont Groundwater Enforcement Standard

Shaded values meet or exceed VGES in place at the time of sampling



Groundwater Quality Summary

Leicester General Store
Leicester, Vermont

Quality Assurance and Control Samples

Sample Date: July 28, 2020

PARAMETER	Trip Blank (Method 524.2)	MW-10	Duplicate MW-10	RPD
Benzene	ND(0.5)	ND(0.5)	ND(0.5)	N/A
Toluene	ND(0.5)	ND(1.0)	ND(1.0)	N/A
Ethylbenzene	ND(0.5)	ND(1.0)	ND(1.0)	N/A
Xylenes	ND(1.0)	ND(2.0)	ND(2.0)	N/A
Total BTEX	ND	ND	ND	-
1,3,5 Trimethylbenzene	ND(0.5)	ND(1.0)	ND(1.0)	N/A
1,2,3 Trimethylbenzene	ND(0.5)	ND(1.0)	ND(1.0)	N/A
1,2,4 Trimethylbenzene	ND(0.5)	ND(1.0)	ND(1.0)	N/A
Naphthalene	ND(0.5)	ND(0.5)	ND(0.5)	N/A
MTBE	ND(0.5)	93.1	93.9	-0.9
Total Targeted VOCs	ND	93.1	93.9	-0.9

All values in ug/L unless noted

ND() = None detected (detection limit)

N/A = not applicable (RPD cannot be calculated on non-numerical values)

Bold values indicate a detected concentration

VGES - Vermont Groundwater Enforcement Standard

Shaded values meet or exceed VGES in place at the time of sampling



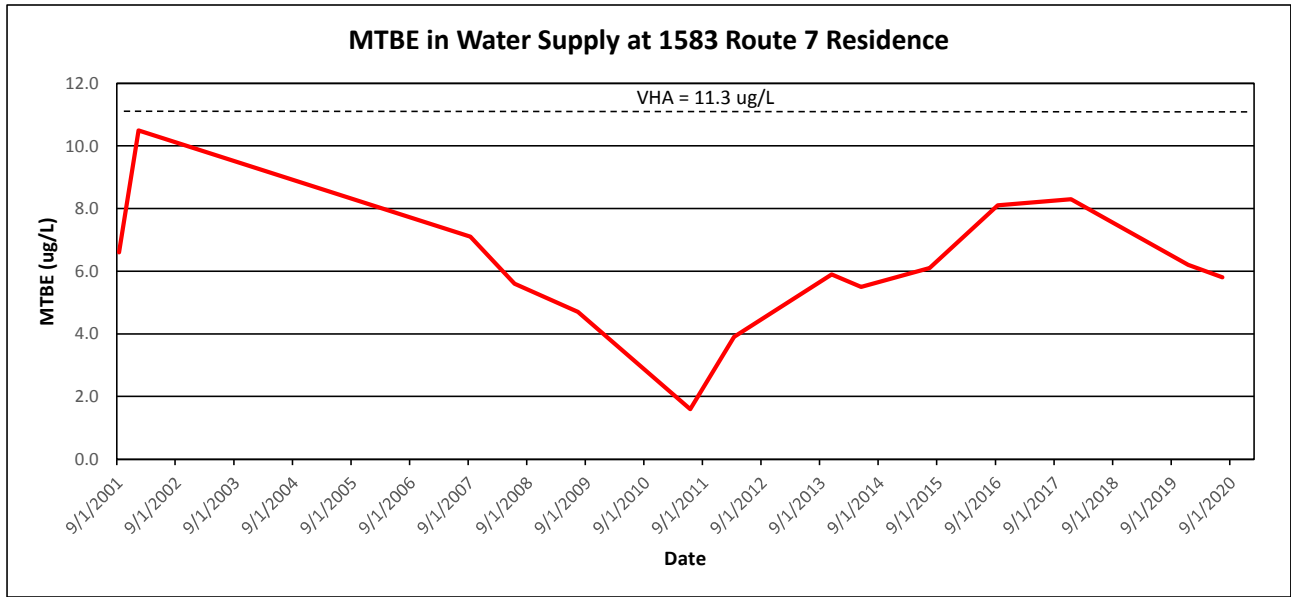
Appendix D

Drinking Water Quality Summary



Drinking Water Quality Summary Data

Leicester General Store
Leicester, Vermont



1583 Route 7 Residence

PARAMETER	Date of Sample Collection					DW Standards	
	9/20/2001	1/3/2002	9/18/2007	6/5/2008	7/24/2009	MCL	VHA
Benzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	5.0	---
Toluene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	1,000.0	---
Ethylbenzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	700.0	---
Xylenes	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	10,000.0	---
1,3,5 Trimethyl Benzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	5.0
1,2,4 Trimethyl Benzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	4.0
Naphthalene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.5)	---	20.0
MTBE	6.6	10.5	7.1	5.6	4.7	---	40.0
Total Targeted VOCs:	6.6	10.5	7.1	5.6	4.7		

PARAMETER	Date of Sample Collection					DW Standards	
	6/23/2011	3/28/2012	11/6/2013	5/9/2014	7/15/2015	MCL	VHA
Benzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	5.0	---
Toluene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	1,000.0	---
Ethylbenzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	700.0	---
Xylenes	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	10,000.0	---
1,3,5 Trimethyl Benzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	5.0
1,2,4 Trimethyl Benzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	4.0
Naphthalene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	20.0
MTBE	1.6	3.9	5.9	5.5	6.1	---	40.0
Total Targeted VOCs:	1.6	3.9	5.9	5.5	6.1		

PARAMETER	Date of Sample Collection				DW Standards	
	9/15/2016	12/15/2017	12/5/2019	7/28/2020	MCL	VHA/VAL
Benzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	5.0	0.5
Toluene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	1,000.0	---
Ethylbenzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	700.0	---
Xylenes	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	10,000.0	---
1,3,5 Trimethyl Benzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	23.2
1,2,4 Trimethyl Benzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	20.0
Naphthalene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	20.0
MTBE	8.1	8.3	6.2	5.8	---	11.3
Total Targeted VOCs:	8.1	8.3	6.2	5.8		

1583 Route 7 was formerly known as the "Scarborough Residence", who were the previous owners of the property.

All values reported in ug/L

ND - None Detected

VGES - Vermont Groundwater Enforcement Standard

VHA - Vermont Health Advisory, VAL - Vermont Action Levels

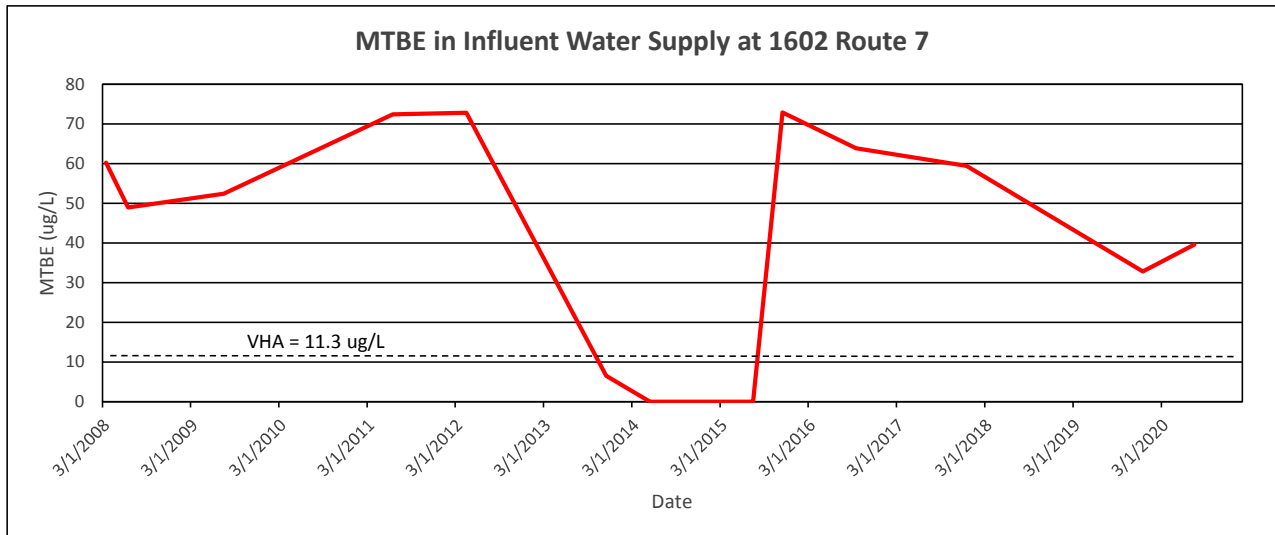
MCL - Maximum Contaminant Level

Shaded values meet or exceed VAL and/or VHA in place at the time of sampling



Drinking Water Quality Summary Data

Leicester General Store
Leicester, Vermont



1602 Route 7 Treatment System, Influent

PARAMETER	Date of Sample Collection					DW Standards	
	3/6/2008	6/5/2008	7/24/2009	6/23/2011	4/10/2012	MCL	VHA
Benzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(1.0)	ND(0.5)	5.0	---
Toluene	ND(0.5)	ND(0.5)	ND(0.5)	ND(1.0)	ND(0.5)	1,000.0	---
Ethylbenzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(1.0)	ND(0.5)	700.0	---
Xylenes	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	10,000.0	---
1,3,5-Trimethylbenzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(1.0)	ND(0.5)	---	5.0
1,2,4-Trimethylbenzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(1.0)	ND(0.5)	---	4.0
Naphthalene	ND(0.5)	ND(0.5)	ND(0.5)	ND(2.0)	ND(0.5)	---	20.0
1,2-Dichloroethane	2.0	1.2	1.1	-	1.2	5.0	---
MTBE	60.2	48.9	52.4	72.4	72.8	---	40.0
Total Targeted VOCs:	62.2	50.1	53.5	72.4	74.0		
Well Average Water Usage (gpd)	365.0	-	-	664	714.		

PARAMETER	Date of Sample Collection					DW Standards	
	11/6/2013	5/9/2014	7/15/2015	11/20/2015	9/15/2016	MCL	VHA
Benzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	5.0	---
Toluene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	1,000.0	---
Ethylbenzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	700.0	---
Xylenes	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	10,000.0	---
1,3,5-Trimethylbenzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	5.0
1,2,4-Trimethylbenzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	4.0
Naphthalene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	---	20.0
1,2-Dichloroethane	ND(0.5)	ND(0.5)	ND(0.5)	1.2	1.0	5.0	---
MTBE	6.5	ND(0.5)	ND(0.5)	72.9	63.8	---	40.0
Total Targeted VOCs:	6.5	ND	ND	74.1	64.8		

PARAMETER	Date of Sample Collection			DW Standards	
	12/15/2017	12/5/2019	7/28/2020	MCL	VHA
Benzene	ND(0.5)	ND(0.5)	ND(0.5)	5.0	0.5
Toluene	ND(0.5)	ND(0.5)	ND(0.5)	1,000.0	---
Ethylbenzene	ND(0.5)	ND(0.5)	ND(0.5)	700.0	---
Xylenes	ND(1.0)	ND(1.0)	ND(1.0)	10,000.0	---
1,3,5-Trimethylbenzene	ND(0.5)	ND(0.5)	ND(0.5)	---	
1,2,3-Trimethylbenzene	-	ND(0.5)	ND(0.5)	---	23.2
1,2,4-Trimethylbenzene	ND(0.5)	ND(0.5)	ND(0.5)	---	
Naphthalene	ND(0.5)	ND(0.5)	ND(0.5)	---	20.0
1,2-Dichloroethane	0.9	ND(0.5)	ND(0.5)	5.0	---
MTBE	59.4	32.8	39.6	---	11.3
Total Targeted VOCs:	60.3	32.8	39.6	-	-

Midpoint and effluent data continued on the next page...



Drinking Water Quality Summary Data

Leicester General Store
Leicester, Vermont

1602 Route 7 Treatment System, Midpoint

PARAMETER	Date of Sample Collection					DW Standards	
	4/10/2012	11/6/2013	5/9/2014	7/15/2015	11/20/2015	MCL	VHA
Benzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)		5.0	---
Toluene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	<i>Not</i>	1,000.0	---
Ethylbenzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	<i>Sampled</i>	700.0	---
Xylenes	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	<i>per</i>	10,000.0	---
1,3,5-Trimethylbenzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	<i>Approved</i>	---	5.0
1,2,4-Trimethylbenzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	<i>Work</i>	---	4.0
Naphthalene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	<i>Plan</i>	---	20.0
1,2-Dichloroethane	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)		5.0	---
MTBE	16.1	ND(0.5)	ND(0.5)	ND(0.5)		---	40.0
Total Targeted VOCs:	16.1	ND	ND	ND			

PARAMETER	Date of Sample Collection				DW Standards	
	9/15/2016	12/15/2017	12/5/2019	7/28/2020	MCL	VHA
Benzene		ND(0.5)	ND(0.5)	ND(0.5)	5.0	0.5
Toluene	<i>Not</i>	ND(0.5)	ND(0.5)	ND(0.5)	1,000.0	---
Ethylbenzene	<i>Sampled</i>	ND(0.5)	ND(0.5)	ND(0.5)	700.0	---
Xylenes	<i>(system was not operating)</i>	ND(1.0)	ND(1.0)	ND(1.0)	10,000.0	---
1,3,5-Trimethylbenzene		ND(0.5)	ND(0.5)	ND(0.5)	---	23.2
1,2,4-Trimethylbenzene		ND(0.5)	ND(0.5)	ND(0.5)	---	
Naphthalene		ND(0.5)	ND(0.5)	ND(0.5)	---	20.0
1,2-Dichloroethane		ND(0.5)	ND(0.5)	ND(0.5)	5.0	---
MTBE		9.9	ND(0.5)	ND(0.5)	---	11.3
Total Targeted VOCs:		9.9	ND	ND		

1602 Route 7 Treatment System, Effluent

PARAMETER	Date of Sample Collection					DW Standards	
	4/10/2012	11/6/2013	5/9/2014	7/15/2015	11/20/2015	MCL	VHA
Benzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)		5.0	---
Toluene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	<i>Not</i>	1,000.0	---
Ethylbenzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	<i>Sampled</i>	700.0	---
Xylenes	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	<i>per</i>	10,000.0	---
1,3,5-Trimethylbenzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	<i>Approved</i>	---	5.0
1,2,4-Trimethylbenzene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	<i>Work</i>	---	4.0
Naphthalene	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	<i>Plan</i>	---	20.0
1,2-Dichloroethane	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)		5.0	---
MTBE	0.6	ND(0.5)	ND(0.5)	2.8		---	40.0
Total Targeted VOCs:	0.6	ND	ND	ND			

PARAMETER	Date of Sample Collection				DW Standards	
	9/15/2016	12/15/2017	12/5/2019	7/28/2020	MCL	VHA/VAL
Benzene		ND(0.5)	ND(0.5)	ND(0.5)	5.0	0.5
Toluene	<i>Not</i>	ND(0.5)	ND(0.5)	ND(0.5)	1,000.0	---
Ethylbenzene	<i>Sampled</i>	ND(0.5)	ND(0.5)	ND(0.5)	700.0	---
Xylenes	<i>(system was not operating)</i>	ND(1.0)	ND(1.0)	ND(1.0)	10,000.0	---
1,3,5-Trimethylbenzene		ND(0.5)	ND(0.5)	ND(0.5)	---	23.2
1,2,3-Trimethylbenzene		-	ND(0.5)	ND(0.5)	---	
1,2,4-Trimethylbenzene		ND(0.5)	ND(0.5)	ND(0.5)	---	
Naphthalene		ND(0.5)	ND(0.5)	ND(0.5)	---	20.0
1,2-Dichloroethane		ND(0.5)	ND(0.5)	ND(0.5)	5.0	0.5
MTBE		ND(0.5)	ND(0.5)	ND(0.5)	---	11.3
Total Targeted VOCs:		ND	ND	ND	-	-

All values reported in ug/L
 ND - None Detected
 VGES - Vermont Groundwater Enforcement Standard
 VHA - Vermont Health Advisory, VAL - Vermont Action Levels
 MCL - Maximum Contaminant Level
 Shaded values meet or exceed VAL and/or VHA in place at the time of sampling



Appendix E

Analytical Laboratory Report



Laboratory Report

KAS, Inc.	100306
PO Box 787	
Williston, VT 05495	
Atten: Clare Santos	

PROJECT: 409070287 Leicester GS
WORK ORDER: **2007-19561**
DATE RECEIVED: July 29, 2020
DATE REPORTED: August 06, 2020
SAMPLER: Jolene Turner

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. All required method quality control elements including instrument calibration were performed in accordance with method requirements and determined to be acceptable unless otherwise noted.

The column labeled Lab/Tech in the accompanying report denotes the laboratory facility where the testing was performed and the technician who conducted the assay. A "W" designates the Williston, VT lab under NELAC certification ELAP 11263; "R" designates the Lebanon, NH facility under certification NH 2037 and "N" the Plattsburgh, NY lab under certification ELAP 11892. "Sub" indicates the testing was performed by a subcontracted laboratory. The accreditation status of the subcontracted lab is referenced in the corresponding NELAC and Qual fields.

The NELAC column also denotes the accreditation status of each laboratory for each reported parameter. "A" indicates the referenced laboratory is NELAC accredited for the parameter reported. "N" indicates the laboratory is not accredited. "U" indicates that NELAC does not offer accreditation for that parameter in that specific matrix. Test results denoted with an "A" meet all National Environmental Laboratory Accreditation Program requirements except where denoted by pertinent data qualifiers. Test results are representative of the samples as they were received at the laboratory

Endyne, Inc. warrants, to the best of its knowledge and belief, the accuracy of the analytical test results contained in this report, but makes no other warranty, expressed or implied, especially no warranties of merchantability or fitness for a particular purpose.

Reviewed by:

Harry B. Locker, Ph.D.
Laboratory Director

www.endynelabs.com



160 James Brown Dr., Williston, VT 05495
Ph 802-879-4333 Fax 802-879-7103

56 Etna Road, Lebanon, NH 03766
Ph 603-678-4891 Fax 603-678-4893



CLIENT: KAS, Inc.
 PROJECT: 409070287 Leicester GS
 REPORT DATE: 8/6/2020

WORK ORDER: **2007-19561**
 DATE RECEIVED: 07/29/2020

TEST METHOD: EPA 8021B

001	Site: MLMW-2-1	Date Sampled: 7/28/20	11:35	Analysis Date: 8/4/20	W TRP
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<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Nelac</u>	<u>Qual</u>	<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Nelac</u>	<u>Qual</u>
Methyl-t-butyl ether (MTBE)	21.9	ug/L	N		Benzene	< 0.5	ug/L	N	
Toluene	< 1.0	ug/L	N		Ethylbenzene	< 1.0	ug/L	N	
Xylenes, Total	< 2.0	ug/L	N		1,3,5-Trimethylbenzene	< 1.0	ug/L	N	
1,2,4-Trimethylbenzene	< 1.0	ug/L	N		1,2,3-Trimethylbenzene	< 1.0	ug/L	U	
Naphthalene	< 0.5	ug/L	N		Surr. 1 (Bromobenzene)	111	%	N	
Unidentified Peaks	0		N						

CLIENT: KAS, Inc.
 PROJECT: 409070287 Leicester GS
 REPORT DATE: 8/6/2020

WORK ORDER: 2007-19561
 DATE RECEIVED: 07/29/2020

TEST METHOD: EPA 8260C

002 Site: MLMW-2-2 Date Sampled: 7/28/20 10:45 Analysis Date: 8/6/20 W TRP

Parameter	Result	Unit	Nelac	Qual	Parameter	Result	Unit	Nelac	Qual
Dichlorodifluoromethane	< 5.0	ug/L	A		Chloromethane	< 3.0	ug/L	A	
Vinyl chloride	< 0.5	ug/L	A		Bromomethane	< 0.5	ug/L	A	
Chloroethane	< 5.0	ug/L	A		Trichlorofluoromethane	< 2.0	ug/L	A	
Diethyl ether	< 5.0	ug/L	N		1,1-Dichloroethene	< 0.7	ug/L	A	
Acetone	< 10.0	ug/L	A		Carbon disulfide	< 5.0	ug/L	A	
Methylene chloride	< 5.0	ug/L	A		t-Butanol	< 20.0	ug/L	N	QA-
Methyl-t-butyl ether (MTBE)	2.6	ug/L	A		trans-1,2-Dichloroethene	< 1.0	ug/L	A	
Di-isopropyl ether (DIPE)	< 2.0	ug/L	N		1,1-Dichloroethane	< 1.0	ug/L	A	
Ethyl-t-butyl ether (ETBE)	< 2.0	ug/L	N		2-Butanone	< 10.0	ug/L	A	
2,2-Dichloropropane	< 1.0	ug/L	N		cis-1,2-Dichloroethene	< 1.0	ug/L	A	
Bromochloromethane	< 0.8	ug/L	A		Chloroform	< 1.0	ug/L	A	
Tetrahydrofuran	< 10.0	ug/L	N		1,1,1-Trichloroethane	< 1.0	ug/L	A	
Carbon tetrachloride	< 0.5	ug/L	A		1,1-Dichloropropene	< 1.0	ug/L	N	
Benzene	< 0.5	ug/L	A		t-Amylmethyl ether (TAME)	< 2.0	ug/L	N	
1,2-Dichloroethane	< 0.5	ug/L	A		Trichloroethene	< 0.5	ug/L	A	
1,2-Dichloropropane	< 0.5	ug/L	A		Dibromomethane	< 2.0	ug/L	A	
Bromodichloromethane	< 0.5	ug/L	A		cis-1,3-Dichloropropene	< 1.0	ug/L	A	
4-Methyl-2-pentanone (MIBK)	< 10.0	ug/L	A		Toluene	< 1.0	ug/L	A	
trans-1,3-Dichloropropene	< 1.0	ug/L	A		1,1,2-Trichloroethane	< 1.0	ug/L	A	
Tetrachloroethene	< 0.5	ug/L	A		1,3-Dichloropropane	< 1.0	ug/L	N	
2-Hexanone	< 10.0	ug/L	A		Dibromochloromethane	< 1.0	ug/L	A	
1,2-Dibromoethane	< 2.0	ug/L	A		Chlorobenzene	< 1.0	ug/L	A	
Ethylbenzene	< 1.0	ug/L	A		1,1,1,2-Tetrachloroethane	< 2.0	ug/L	A	
Xylenes, Total	< 2.0	ug/L	A		Styrene	< 1.0	ug/L	A	
Bromoform	< 2.0	ug/L	A		Isopropylbenzene	< 1.0	ug/L	A	
1,1,2,2-Tetrachloroethane	< 2.0	ug/L	A		Bromobenzene	< 1.0	ug/L	A	
n-Propylbenzene	< 1.0	ug/L	A		1,2,3-Trichloropropane	< 2.0	ug/L	A	
2-Chlorotoluene	< 1.0	ug/L	A		1,3,5-Trimethylbenzene	< 1.0	ug/L	A	
4-Chlorotoluene	< 1.0	ug/L	A		t-Butylbenzene	< 1.0	ug/L	A	
1,2,4-Trimethylbenzene	< 1.0	ug/L	A		s-Butylbenzene	< 1.0	ug/L	A	
4-Isopropyltoluene	< 1.0	ug/L	A		1,3-Dichlorobenzene	< 1.0	ug/L	A	
1,4-Dichlorobenzene	< 1.0	ug/L	A		1,2,3-Trimethylbenzene	< 1.0	ug/L	U	
n-Butylbenzene	< 1.0	ug/L	A		1,2-Dichlorobenzene	< 1.0	ug/L	A	
1,2-Dibromo-3-Chloropropane	< 2.0	ug/L	A		1,2,4-Trichlorobenzene	< 2.0	ug/L	A	
1,3,5-Trichlorobenzene	< 2.0	ug/L	N		Hexachlorobutadiene	< 0.5	ug/L	A	
Naphthalene	< 0.5	ug/L	A		1,2,3-Trichlorobenzene	< 0.5	ug/L	A	
Surr. 1 (Dibromofluoromethane)	99	%	A		Surr. 2 (Toluene d8)	99	%	A	
Surr. 3 (4-Bromofluorobenzene)	102	%	A		Unidentified Peaks	0		U	

CLIENT: KAS, Inc.
 PROJECT: 409070287 Leicester GS
 REPORT DATE: 8/6/2020

WORK ORDER: **2007-19561**
 DATE RECEIVED: 07/29/2020

TEST METHOD: EPA 8021B

003 Site: MLMW-2-3 Date Sampled: 7/28/20 11:00 Analysis Date: 8/4/20 W TRP

<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Nelac</u>	<u>Qual</u>	<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Nelac</u>	<u>Qual</u>
Methyl-t-butyl ether (MTBE)	64.2	ug/L	N		Benzene	< 0.5	ug/L	N	
Toluene	< 1.0	ug/L	N		Ethylbenzene	< 1.0	ug/L	N	
Xylenes, Total	< 2.0	ug/L	N		1,3,5-Trimethylbenzene	< 1.0	ug/L	N	
1,2,4-Trimethylbenzene	< 1.0	ug/L	N		1,2,3-Trimethylbenzene	< 1.0	ug/L	U	
Naphthalene	< 0.5	ug/L	N		Surr. 1 (Bromobenzene)	113	%	N	
Unidentified Peaks	0		N						

TEST METHOD: EPA 8021B

004 Site: MW-3 Date Sampled: 7/28/20 12:11 Analysis Date: 8/4/20 W TRP

<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Nelac</u>	<u>Qual</u>	<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Nelac</u>	<u>Qual</u>
Methyl-t-butyl ether (MTBE)	8.8	ug/L	N		Benzene	6.0	ug/L	N	
Toluene	< 1.0	ug/L	N		Ethylbenzene	3.1	ug/L	N	
Xylenes, Total	< 2.0	ug/L	N		1,3,5-Trimethylbenzene	< 1.0	ug/L	N	
1,2,4-Trimethylbenzene	1.1	ug/L	N		1,2,3-Trimethylbenzene	< 1.0	ug/L	U	
Naphthalene	< 0.5	ug/L	N		Surr. 1 (Bromobenzene)	107	%	N	
Unidentified Peaks	>10		N						

TEST METHOD: EPA 8021B

005 Site: MW-6 Date Sampled: 7/28/20 09:10 Analysis Date: 8/4/20 W TRP

<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Nelac</u>	<u>Qual</u>	<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Nelac</u>	<u>Qual</u>
Methyl-t-butyl ether (MTBE)	< 2.0	ug/L	N		Benzene	< 0.5	ug/L	N	
Toluene	< 1.0	ug/L	N		Ethylbenzene	< 1.0	ug/L	N	
Xylenes, Total	< 2.0	ug/L	N		1,3,5-Trimethylbenzene	< 1.0	ug/L	N	
1,2,4-Trimethylbenzene	< 1.0	ug/L	N		1,2,3-Trimethylbenzene	< 1.0	ug/L	U	
Naphthalene	< 0.5	ug/L	N		Surr. 1 (Bromobenzene)	115	%	N	
Unidentified Peaks	0		N						

CLIENT: KAS, Inc.
 PROJECT: 409070287 Leicester GS
 REPORT DATE: 8/6/2020

WORK ORDER: 2007-19561
 DATE RECEIVED: 07/29/2020

TEST METHOD: EPA 8260C

006	Site: MW-10	Date Sampled: 7/28/20	09:40	Analysis Date: 8/6/20	W TRP				
Parameter	Result	Unit	Nelac	Qual	Parameter	Result	Unit	Nelac	Qual
Dichlorodifluoromethane	< 5.0	ug/L	A		Chloromethane	< 3.0	ug/L	A	
Vinyl chloride	< 0.5	ug/L	A		Bromomethane	< 0.5	ug/L	A	
Chloroethane	< 5.0	ug/L	A		Trichlorofluoromethane	< 2.0	ug/L	A	
Diethyl ether	< 5.0	ug/L	N		1,1-Dichloroethene	< 0.7	ug/L	A	
Acetone	< 10.0	ug/L	A		Carbon disulfide	< 5.0	ug/L	A	
Methylene chloride	< 5.0	ug/L	A		t-Butanol	< 20.0	ug/L	N	QA-
Methyl-t-butyl ether (MTBE)	93.1	ug/L	A		trans-1,2-Dichloroethene	< 1.0	ug/L	A	
Di-isopropyl ether (DIPE)	< 2.0	ug/L	N		1,1-Dichloroethane	< 1.0	ug/L	A	
Ethyl-t-butyl ether (ETBE)	< 2.0	ug/L	N		2-Butanone	< 10.0	ug/L	A	
2,2-Dichloropropane	< 1.0	ug/L	N		cis-1,2-Dichloroethene	< 1.0	ug/L	A	
Bromochloromethane	< 0.8	ug/L	A		Chloroform	< 1.0	ug/L	A	
Tetrahydrofuran	< 10.0	ug/L	N		1,1,1-Trichloroethane	< 1.0	ug/L	A	
Carbon tetrachloride	< 0.5	ug/L	A		1,1-Dichloropropene	< 1.0	ug/L	N	
Benzene	< 0.5	ug/L	A		t-Amylmethyl ether (TAME)	< 2.0	ug/L	N	
1,2-Dichloroethane	< 0.5	ug/L	A		Trichloroethene	< 0.5	ug/L	A	
1,2-Dichloropropane	< 0.5	ug/L	A		Dibromomethane	< 2.0	ug/L	A	
Bromodichloromethane	< 0.5	ug/L	A		cis-1,3-Dichloropropene	< 1.0	ug/L	A	
4-Methyl-2-pentanone (MIBK)	< 10.0	ug/L	A		Toluene	< 1.0	ug/L	A	
trans-1,3-Dichloropropene	< 1.0	ug/L	A		1,1,2-Trichloroethane	< 1.0	ug/L	A	
Tetrachloroethene	< 0.5	ug/L	A		1,3-Dichloropropane	< 1.0	ug/L	N	
2-Hexanone	< 10.0	ug/L	A		Dibromochloromethane	< 1.0	ug/L	A	
1,2-Dibromoethane	< 2.0	ug/L	A		Chlorobenzene	< 1.0	ug/L	A	
Ethylbenzene	< 1.0	ug/L	A		1,1,1,2-Tetrachloroethane	< 2.0	ug/L	A	
Xylenes, Total	< 2.0	ug/L	A		Styrene	< 1.0	ug/L	A	
Bromoform	< 2.0	ug/L	A		Isopropylbenzene	< 1.0	ug/L	A	
1,1,2,2-Tetrachloroethane	< 2.0	ug/L	A		Bromobenzene	< 1.0	ug/L	A	
n-Propylbenzene	< 1.0	ug/L	A		1,2,3-Trichloropropane	< 2.0	ug/L	A	
2-Chlorotoluene	< 1.0	ug/L	A		1,3,5-Trimethylbenzene	< 1.0	ug/L	A	
4-Chlorotoluene	< 1.0	ug/L	A		t-Butylbenzene	< 1.0	ug/L	A	
1,2,4-Trimethylbenzene	< 1.0	ug/L	A		s-Butylbenzene	< 1.0	ug/L	A	
4-Isopropyltoluene	< 1.0	ug/L	A		1,3-Dichlorobenzene	< 1.0	ug/L	A	
1,4-Dichlorobenzene	< 1.0	ug/L	A		1,2,3-Trimethylbenzene	< 1.0	ug/L	U	
n-Butylbenzene	< 1.0	ug/L	A		1,2-Dichlorobenzene	< 1.0	ug/L	A	
1,2-Dibromo-3-Chloropropane	< 2.0	ug/L	A		1,2,4-Trichlorobenzene	< 2.0	ug/L	A	
1,3,5-Trichlorobenzene	< 2.0	ug/L	N		Hexachlorobutadiene	< 0.5	ug/L	A	
Naphthalene	< 0.5	ug/L	A		1,2,3-Trichlorobenzene	< 0.5	ug/L	A	
Surr. 1 (Dibromofluoromethane)	100	%	A		Surr. 2 (Toluene d8)	99	%	A	
Surr. 3 (4-Bromofluorobenzene)	101	%	A		Unidentified Peaks	0		U	

CLIENT: KAS, Inc.
 PROJECT: 409070287 Leicester GS
 REPORT DATE: 8/6/2020

WORK ORDER: **2007-19561**
 DATE RECEIVED: 07/29/2020

TEST METHOD: EPA 8021B

007 Site: MW15-11S Date Sampled: 7/28/20 09:57 Analysis Date: 8/4/20 W TRP

<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Nelac</u>	<u>Qual</u>	<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Nelac</u>	<u>Qual</u>
Methyl-t-butyl ether (MTBE)	< 2.0	ug/L	N		Benzene	< 0.5	ug/L	N	
Toluene	< 1.0	ug/L	N		Ethylbenzene	< 1.0	ug/L	N	
Xylenes, Total	< 2.0	ug/L	N		1,3,5-Trimethylbenzene	< 1.0	ug/L	N	
1,2,4-Trimethylbenzene	< 1.0	ug/L	N		1,2,3-Trimethylbenzene	< 1.0	ug/L	U	
Naphthalene	< 0.5	ug/L	N		Surr. 1 (Bromobenzene)	113	%	N	
Unidentified Peaks	0		N						

TEST METHOD: EPA 8021B

008 Site: MW15-11D Date Sampled: 7/28/20 10:14 Analysis Date: 8/4/20 W TRP

<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Nelac</u>	<u>Qual</u>	<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Nelac</u>	<u>Qual</u>
Methyl-t-butyl ether (MTBE)	29.8	ug/L	N		Benzene	< 0.5	ug/L	N	
Toluene	< 1.0	ug/L	N		Ethylbenzene	< 1.0	ug/L	N	
Xylenes, Total	< 2.0	ug/L	N		1,3,5-Trimethylbenzene	< 1.0	ug/L	N	
1,2,4-Trimethylbenzene	< 1.0	ug/L	N		1,2,3-Trimethylbenzene	< 1.0	ug/L	U	
Naphthalene	< 0.5	ug/L	N		Surr. 1 (Bromobenzene)	112	%	N	
Unidentified Peaks	0		N						

CLIENT: KAS, Inc.
 PROJECT: 409070287 Leicester GS
 REPORT DATE: 8/6/2020

WORK ORDER: 2007-19561
 DATE RECEIVED: 07/29/2020

TEST METHOD: EPA 524.2

009 Site: 1602- In Date Sampled: 7/28/20 12:28 Analysis Date: 7/31/20 W EEP

Parameter	Result	Unit	Nelac	Qual	Parameter	Result	Unit	Nelac	Qual
Dichlorodifluoromethane	< 0.5	ug/L	A		Chloromethane	< 0.5	ug/L	A	
Vinyl chloride	< 0.5	ug/L	A		Bromomethane	< 0.5	ug/L	A	
Chloroethane	< 0.5	ug/L	A		Trichlorofluoromethane	< 0.5	ug/L	A	
1,1-Dichloroethene	< 0.5	ug/L	A		Methylene chloride	< 0.5	ug/L	A	
Methyl-t-butyl ether (MTBE)	39.6	ug/L	A		trans-1,2-Dichloroethene	< 0.5	ug/L	A	
1,1-Dichloroethane	< 0.5	ug/L	A		2,2-Dichloropropane	< 0.5	ug/L	A	
cis-1,2-Dichloroethene	< 0.5	ug/L	A		Bromochloromethane	< 0.5	ug/L	A	
Chloroform	< 0.5	ug/L	A		1,1,1-Trichloroethane	< 0.5	ug/L	A	
Carbon tetrachloride	< 0.5	ug/L	A		1,1-Dichloropropene	< 0.5	ug/L	A	
Benzene	< 0.5	ug/L	A		1,2-Dichloroethane	< 0.5	ug/L	A	
Trichloroethene	< 0.5	ug/L	A		1,2-Dichloropropane	< 0.5	ug/L	A	
Dibromomethane	< 0.5	ug/L	A		Bromodichloromethane	< 0.5	ug/L	A	
cis-1,3-Dichloropropene	< 0.5	ug/L	A		Toluene	< 0.5	ug/L	A	
trans-1,3-Dichloropropene	< 0.5	ug/L	A		1,1,2-Trichloroethane	< 0.5	ug/L	A	
Tetrachloroethene	< 0.5	ug/L	A		1,3-Dichloropropane	< 0.5	ug/L	A	
Dibromochloromethane	< 0.5	ug/L	A		Chlorobenzene	< 0.5	ug/L	A	
Ethylbenzene	< 0.5	ug/L	A		1,1,1,2-Tetrachloroethane	< 0.5	ug/L	A	
Xylenes, Total	< 1.0	ug/L	A		Styrene	< 0.5	ug/L	A	
Bromoform	< 0.5	ug/L	A		Isopropylbenzene	< 0.5	ug/L	A	
1,1,2,2-Tetrachloroethane	< 0.5	ug/L	A		Bromobenzene	< 0.5	ug/L	A	
n-Propylbenzene	< 0.5	ug/L	A		1,2,3-Trichloropropane	< 0.5	ug/L	A	
2-Chlorotoluene	< 0.5	ug/L	A		1,3,5-Trimethylbenzene	< 0.5	ug/L	A	
4-Chlorotoluene	< 0.5	ug/L	A		t-Butylbenzene	< 0.5	ug/L	A	
1,2,4-Trimethylbenzene	< 0.5	ug/L	A		s-Butylbenzene	< 0.5	ug/L	A	
4-Isopropyltoluene	< 0.5	ug/L	A		1,3-Dichlorobenzene	< 0.5	ug/L	A	
1,4-Dichlorobenzene	< 0.5	ug/L	A		1,2,3-Trimethylbenzene	< 0.5	ug/L	U	
n-Butylbenzene	< 0.5	ug/L	A		1,2-Dichlorobenzene	< 0.5	ug/L	A	
1,2,4-Trichlorobenzene	< 0.5	ug/L	A		Hexachlorobutadiene	< 0.5	ug/L	A	
Naphthalene	< 0.5	ug/L	A		1,2,3-Trichlorobenzene	< 0.5	ug/L	A	
Surr. 1 (4-Bromofluorobenzene)	93	%	A		Surr. 2 (1,2-Dichlorobenzene d4)	94	%	A	

CLIENT: KAS, Inc.
 PROJECT: 409070287 Leicester GS
 REPORT DATE: 8/6/2020

WORK ORDER: 2007-19561
 DATE RECEIVED: 07/29/2020

TEST METHOD: EPA 524.2

010	Site: 1602- Out	Date Sampled: 7/28/20 12:24	Analysis Date: 7/31/20	W EEP					
Parameter	Result	Unit	Nelac	Qual	Parameter	Result	Unit	Nelac	Qual
Dichlorodifluoromethane	< 0.5	ug/L	A		Chloromethane	< 0.5	ug/L	A	
Vinyl chloride	< 0.5	ug/L	A		Bromomethane	< 0.5	ug/L	A	
Chloroethane	< 0.5	ug/L	A		Trichlorofluoromethane	< 0.5	ug/L	A	
1,1-Dichloroethene	< 0.5	ug/L	A		Methylene chloride	< 0.5	ug/L	A	
Methyl-t-butyl ether (MTBE)	< 0.5	ug/L	A		trans-1,2-Dichloroethene	< 0.5	ug/L	A	
1,1-Dichloroethane	< 0.5	ug/L	A		2,2-Dichloropropane	< 0.5	ug/L	A	
cis-1,2-Dichloroethene	< 0.5	ug/L	A		Bromochloromethane	< 0.5	ug/L	A	
Chloroform	< 0.5	ug/L	A		1,1,1-Trichloroethane	< 0.5	ug/L	A	
Carbon tetrachloride	< 0.5	ug/L	A		1,1-Dichloropropene	< 0.5	ug/L	A	
Benzene	< 0.5	ug/L	A		1,2-Dichloroethane	< 0.5	ug/L	A	
Trichloroethene	< 0.5	ug/L	A		1,2-Dichloropropane	< 0.5	ug/L	A	
Dibromomethane	< 0.5	ug/L	A		Bromodichloromethane	< 0.5	ug/L	A	
cis-1,3-Dichloropropene	< 0.5	ug/L	A		Toluene	< 0.5	ug/L	A	
trans-1,3-Dichloropropene	< 0.5	ug/L	A		1,1,2-Trichloroethane	< 0.5	ug/L	A	
Tetrachloroethene	< 0.5	ug/L	A		1,3-Dichloropropane	< 0.5	ug/L	A	
Dibromochloromethane	< 0.5	ug/L	A		Chlorobenzene	< 0.5	ug/L	A	
Ethylbenzene	< 0.5	ug/L	A		1,1,1,2-Tetrachloroethane	< 0.5	ug/L	A	
Xylenes, Total	< 1.0	ug/L	A		Styrene	< 0.5	ug/L	A	
Bromoform	< 0.5	ug/L	A		Isopropylbenzene	< 0.5	ug/L	A	
1,1,2,2-Tetrachloroethane	< 0.5	ug/L	A		Bromobenzene	< 0.5	ug/L	A	
n-Propylbenzene	< 0.5	ug/L	A		1,2,3-Trichloropropane	< 0.5	ug/L	A	
2-Chlorotoluene	< 0.5	ug/L	A		1,3,5-Trimethylbenzene	< 0.5	ug/L	A	
4-Chlorotoluene	< 0.5	ug/L	A		t-Butylbenzene	< 0.5	ug/L	A	
1,2,4-Trimethylbenzene	< 0.5	ug/L	A		s-Butylbenzene	< 0.5	ug/L	A	
4-Isopropyltoluene	< 0.5	ug/L	A		1,3-Dichlorobenzene	< 0.5	ug/L	A	
1,4-Dichlorobenzene	< 0.5	ug/L	A		1,2,3-Trimethylbenzene	< 0.5	ug/L	U	
n-Butylbenzene	< 0.5	ug/L	A		1,2-Dichlorobenzene	< 0.5	ug/L	A	
1,2,4-Trichlorobenzene	< 0.5	ug/L	A		Hexachlorobutadiene	< 0.5	ug/L	A	
Naphthalene	< 0.5	ug/L	A		1,2,3-Trichlorobenzene	< 0.5	ug/L	A	
Surr. 1 (4-Bromofluorobenzene)	93	%	A		Surr. 2 (1,2-Dichlorobenzene d4)	92	%	A	

CLIENT: KAS, Inc.
 PROJECT: 409070287 Leicester GS
 REPORT DATE: 8/6/2020

WORK ORDER: 2007-19561
 DATE RECEIVED: 07/29/2020

TEST METHOD: EPA 524.2

011 Site: 1602- Mid Date Sampled: 7/28/20 12:26 Analysis Date: 7/31/20 W EEP

Parameter	Result	Unit	Nelac	Qual	Parameter	Result	Unit	Nelac	Qual
Dichlorodifluoromethane	< 0.5	ug/L	A		Chloromethane	< 0.5	ug/L	A	
Vinyl chloride	< 0.5	ug/L	A		Bromomethane	< 0.5	ug/L	A	
Chloroethane	< 0.5	ug/L	A		Trichlorofluoromethane	< 0.5	ug/L	A	
1,1-Dichloroethene	< 0.5	ug/L	A		Methylene chloride	< 0.5	ug/L	A	
Methyl-t-butyl ether (MTBE)	< 0.5	ug/L	A		trans-1,2-Dichloroethene	< 0.5	ug/L	A	
1,1-Dichloroethane	< 0.5	ug/L	A		2,2-Dichloropropane	< 0.5	ug/L	A	
cis-1,2-Dichloroethene	< 0.5	ug/L	A		Bromochloromethane	< 0.5	ug/L	A	
Chloroform	< 0.5	ug/L	A		1,1,1-Trichloroethane	< 0.5	ug/L	A	
Carbon tetrachloride	< 0.5	ug/L	A		1,1-Dichloropropene	< 0.5	ug/L	A	
Benzene	< 0.5	ug/L	A		1,2-Dichloroethane	< 0.5	ug/L	A	
Trichloroethene	< 0.5	ug/L	A		1,2-Dichloropropane	< 0.5	ug/L	A	
Dibromomethane	< 0.5	ug/L	A		Bromodichloromethane	< 0.5	ug/L	A	
cis-1,3-Dichloropropene	< 0.5	ug/L	A		Toluene	< 0.5	ug/L	A	
trans-1,3-Dichloropropene	< 0.5	ug/L	A		1,1,2-Trichloroethane	< 0.5	ug/L	A	
Tetrachloroethene	< 0.5	ug/L	A		1,3-Dichloropropane	< 0.5	ug/L	A	
Dibromochloromethane	< 0.5	ug/L	A		Chlorobenzene	< 0.5	ug/L	A	
Ethylbenzene	< 0.5	ug/L	A		1,1,1,2-Tetrachloroethane	< 0.5	ug/L	A	
Xylenes, Total	< 1.0	ug/L	A		Styrene	< 0.5	ug/L	A	
Bromoform	< 0.5	ug/L	A		Isopropylbenzene	< 0.5	ug/L	A	
1,1,2,2-Tetrachloroethane	< 0.5	ug/L	A		Bromobenzene	< 0.5	ug/L	A	
n-Propylbenzene	< 0.5	ug/L	A		1,2,3-Trichloropropane	< 0.5	ug/L	A	
2-Chlorotoluene	< 0.5	ug/L	A		1,3,5-Trimethylbenzene	< 0.5	ug/L	A	
4-Chlorotoluene	< 0.5	ug/L	A		t-Butylbenzene	< 0.5	ug/L	A	
1,2,4-Trimethylbenzene	< 0.5	ug/L	A		s-Butylbenzene	< 0.5	ug/L	A	
4-Isopropyltoluene	< 0.5	ug/L	A		1,3-Dichlorobenzene	< 0.5	ug/L	A	
1,4-Dichlorobenzene	< 0.5	ug/L	A		1,2,3-Trimethylbenzene	< 0.5	ug/L	U	
n-Butylbenzene	< 0.5	ug/L	A		1,2-Dichlorobenzene	< 0.5	ug/L	A	
1,2,4-Trichlorobenzene	< 0.5	ug/L	A		Hexachlorobutadiene	< 0.5	ug/L	A	
Naphthalene	< 0.5	ug/L	A		1,2,3-Trichlorobenzene	< 0.5	ug/L	A	
Surr. 1 (4-Bromofluorobenzene)	88	%	A		Surr. 2 (1,2-Dichlorobenzene d4)	92	%	A	

CLIENT: KAS, Inc.
 PROJECT: 409070287 Leicester GS
 REPORT DATE: 8/6/2020

WORK ORDER: 2007-19561
 DATE RECEIVED: 07/29/2020

TEST METHOD: EPA 524.2

012 Site: 1583 Date Sampled: 7/28/20 08:45 Analysis Date: 7/31/20 W EEP

Parameter	Result	Unit	Nelac	Qual	Parameter	Result	Unit	Nelac	Qual
Dichlorodifluoromethane	< 0.5	ug/L	A		Chloromethane	< 0.5	ug/L	A	
Vinyl chloride	< 0.5	ug/L	A		Bromomethane	< 0.5	ug/L	A	
Chloroethane	< 0.5	ug/L	A		Trichlorofluoromethane	< 0.5	ug/L	A	
1,1-Dichloroethene	< 0.5	ug/L	A		Methylene chloride	< 0.5	ug/L	A	
Methyl-t-butyl ether (MTBE)	5.8	ug/L	A		trans-1,2-Dichloroethene	< 0.5	ug/L	A	
1,1-Dichloroethane	< 0.5	ug/L	A		2,2-Dichloropropane	< 0.5	ug/L	A	
cis-1,2-Dichloroethene	< 0.5	ug/L	A		Bromochloromethane	< 0.5	ug/L	A	
Chloroform	< 0.5	ug/L	A		1,1,1-Trichloroethane	< 0.5	ug/L	A	
Carbon tetrachloride	< 0.5	ug/L	A		1,1-Dichloropropene	< 0.5	ug/L	A	
Benzene	< 0.5	ug/L	A		1,2-Dichloroethane	< 0.5	ug/L	A	
Trichloroethene	< 0.5	ug/L	A		1,2-Dichloropropane	< 0.5	ug/L	A	
Dibromomethane	< 0.5	ug/L	A		Bromodichloromethane	< 0.5	ug/L	A	
cis-1,3-Dichloropropene	< 0.5	ug/L	A		Toluene	< 0.5	ug/L	A	
trans-1,3-Dichloropropene	< 0.5	ug/L	A		1,1,2-Trichloroethane	< 0.5	ug/L	A	
Tetrachloroethene	< 0.5	ug/L	A		1,3-Dichloropropane	< 0.5	ug/L	A	
Dibromochloromethane	< 0.5	ug/L	A		Chlorobenzene	< 0.5	ug/L	A	
Ethylbenzene	< 0.5	ug/L	A		1,1,1,2-Tetrachloroethane	< 0.5	ug/L	A	
Xylenes, Total	< 1.0	ug/L	A		Styrene	< 0.5	ug/L	A	
Bromoform	< 0.5	ug/L	A		Isopropylbenzene	< 0.5	ug/L	A	
1,1,2,2-Tetrachloroethane	< 0.5	ug/L	A		Bromobenzene	< 0.5	ug/L	A	
n-Propylbenzene	< 0.5	ug/L	A		1,2,3-Trichloropropane	< 0.5	ug/L	A	
2-Chlorotoluene	< 0.5	ug/L	A		1,3,5-Trimethylbenzene	< 0.5	ug/L	A	
4-Chlorotoluene	< 0.5	ug/L	A		t-Butylbenzene	< 0.5	ug/L	A	
1,2,4-Trimethylbenzene	< 0.5	ug/L	A		s-Butylbenzene	< 0.5	ug/L	A	
4-Isopropyltoluene	< 0.5	ug/L	A		1,3-Dichlorobenzene	< 0.5	ug/L	A	
1,4-Dichlorobenzene	< 0.5	ug/L	A		1,2,3-Trimethylbenzene	< 0.5	ug/L	U	
n-Butylbenzene	< 0.5	ug/L	A		1,2-Dichlorobenzene	< 0.5	ug/L	A	
1,2,4-Trichlorobenzene	< 0.5	ug/L	A		Hexachlorobutadiene	< 0.5	ug/L	A	
Naphthalene	< 0.5	ug/L	A		1,2,3-Trichlorobenzene	< 0.5	ug/L	A	
Surr. 1 (4-Bromofluorobenzene)	88	%	A		Surr. 2 (1,2-Dichlorobenzene d4)	88	%	A	

CLIENT: KAS, Inc.
 PROJECT: 409070287 Leicester GS
 REPORT DATE: 8/6/2020

WORK ORDER: 2007-19561
 DATE RECEIVED: 07/29/2020

TEST METHOD: EPA 8260C

013	Site: Duplicate	Date Sampled: 7/28/20	09:40	Analysis Date: 8/6/20	W TRP				
Parameter	Result	Unit	Nelac	Qual	Parameter	Result	Unit	Nelac	Qual
Dichlorodifluoromethane	< 5.0	ug/L	A		Chloromethane	< 3.0	ug/L	A	
Vinyl chloride	< 0.5	ug/L	A		Bromomethane	< 0.5	ug/L	A	
Chloroethane	< 5.0	ug/L	A		Trichlorofluoromethane	< 2.0	ug/L	A	
Diethyl ether	< 5.0	ug/L	N		1,1-Dichloroethene	< 0.7	ug/L	A	
Acetone	< 10.0	ug/L	A		Carbon disulfide	< 5.0	ug/L	A	
Methylene chloride	< 5.0	ug/L	A		t-Butanol	< 20.0	ug/L	N	QA-
Methyl-t-butyl ether (MTBE)	93.9	ug/L	A		trans-1,2-Dichloroethene	< 1.0	ug/L	A	
Di-isopropyl ether (DIPE)	< 2.0	ug/L	N		1,1-Dichloroethane	< 1.0	ug/L	A	
Ethyl-t-butyl ether (ETBE)	< 2.0	ug/L	N		2-Butanone	< 10.0	ug/L	A	
2,2-Dichloropropane	< 1.0	ug/L	N		cis-1,2-Dichloroethene	< 1.0	ug/L	A	
Bromochloromethane	< 0.8	ug/L	A		Chloroform	< 1.0	ug/L	A	
Tetrahydrofuran	< 10.0	ug/L	N		1,1,1-Trichloroethane	< 1.0	ug/L	A	
Carbon tetrachloride	< 0.5	ug/L	A		1,1-Dichloropropene	< 1.0	ug/L	N	
Benzene	< 0.5	ug/L	A		t-Amylmethyl ether (TAME)	< 2.0	ug/L	N	
1,2-Dichloroethane	< 0.5	ug/L	A		Trichloroethene	< 0.5	ug/L	A	
1,2-Dichloropropane	< 0.5	ug/L	A		Dibromomethane	< 2.0	ug/L	A	
Bromodichloromethane	< 0.5	ug/L	A		cis-1,3-Dichloropropene	< 1.0	ug/L	A	
4-Methyl-2-pentanone (MIBK)	< 10.0	ug/L	A		Toluene	< 1.0	ug/L	A	
trans-1,3-Dichloropropene	< 1.0	ug/L	A		1,1,2-Trichloroethane	< 1.0	ug/L	A	
Tetrachloroethene	< 0.5	ug/L	A		1,3-Dichloropropane	< 1.0	ug/L	N	
2-Hexanone	< 10.0	ug/L	A		Dibromochloromethane	< 1.0	ug/L	A	
1,2-Dibromoethane	< 2.0	ug/L	A		Chlorobenzene	< 1.0	ug/L	A	
Ethylbenzene	< 1.0	ug/L	A		1,1,1,2-Tetrachloroethane	< 2.0	ug/L	A	
Xylenes, Total	< 2.0	ug/L	A		Styrene	< 1.0	ug/L	A	
Bromoform	< 2.0	ug/L	A		Isopropylbenzene	< 1.0	ug/L	A	
1,1,2,2-Tetrachloroethane	< 2.0	ug/L	A		Bromobenzene	< 1.0	ug/L	A	
n-Propylbenzene	< 1.0	ug/L	A		1,2,3-Trichloropropane	< 2.0	ug/L	A	
2-Chlorotoluene	< 1.0	ug/L	A		1,3,5-Trimethylbenzene	< 1.0	ug/L	A	
4-Chlorotoluene	< 1.0	ug/L	A		t-Butylbenzene	< 1.0	ug/L	A	
1,2,4-Trimethylbenzene	< 1.0	ug/L	A		s-Butylbenzene	< 1.0	ug/L	A	
4-Isopropyltoluene	< 1.0	ug/L	A		1,3-Dichlorobenzene	< 1.0	ug/L	A	
1,4-Dichlorobenzene	< 1.0	ug/L	A		1,2,3-Trimethylbenzene	< 1.0	ug/L	U	
n-Butylbenzene	< 1.0	ug/L	A		1,2-Dichlorobenzene	< 1.0	ug/L	A	
1,2-Dibromo-3-Chloropropane	< 2.0	ug/L	A		1,2,4-Trichlorobenzene	< 2.0	ug/L	A	
1,3,5-Trichlorobenzene	< 2.0	ug/L	N		Hexachlorobutadiene	< 0.5	ug/L	A	
Naphthalene	< 0.5	ug/L	A		1,2,3-Trichlorobenzene	< 0.5	ug/L	A	
Surr. 1 (Dibromofluoromethane)	100	%	A		Surr. 2 (Toluene d8)	98	%	A	
Surr. 3 (4-Bromofluorobenzene)	98	%	A		Unidentified Peaks	0		U	

CLIENT: KAS, Inc.
 PROJECT: 409070287 Leicester GS
 REPORT DATE: 8/6/2020

WORK ORDER: 2007-19561
 DATE RECEIVED: 07/29/2020

TEST METHOD: EPA 524.2

014	Site: Trip Blank	Date Sampled: 7/28/20	Analysis Date: 7/31/20	W	EEP				
Parameter	Result	Unit	Nelac	Qual	Parameter	Result	Unit	Nelac	Qual
Dichlorodifluoromethane	< 0.5	ug/L	A		Chloromethane	< 0.5	ug/L	A	
Vinyl chloride	< 0.5	ug/L	A		Bromomethane	< 0.5	ug/L	A	
Chloroethane	< 0.5	ug/L	A		Trichlorofluoromethane	< 0.5	ug/L	A	
1,1-Dichloroethene	< 0.5	ug/L	A		Methylene chloride	< 0.5	ug/L	A	
Methyl-t-butyl ether (MTBE)	< 0.5	ug/L	A		trans-1,2-Dichloroethene	< 0.5	ug/L	A	
1,1-Dichloroethane	< 0.5	ug/L	A		2,2-Dichloropropane	< 0.5	ug/L	A	
cis-1,2-Dichloroethene	< 0.5	ug/L	A		Bromochloromethane	< 0.5	ug/L	A	
Chloroform	< 0.5	ug/L	A		1,1,1-Trichloroethane	< 0.5	ug/L	A	
Carbon tetrachloride	< 0.5	ug/L	A		1,1-Dichloropropene	< 0.5	ug/L	A	
Benzene	< 0.5	ug/L	A		1,2-Dichloroethane	< 0.5	ug/L	A	
Trichloroethene	< 0.5	ug/L	A		1,2-Dichloropropane	< 0.5	ug/L	A	
Dibromomethane	< 0.5	ug/L	A		Bromodichloromethane	< 0.5	ug/L	A	
cis-1,3-Dichloropropene	< 0.5	ug/L	A		Toluene	< 0.5	ug/L	A	
trans-1,3-Dichloropropene	< 0.5	ug/L	A		1,1,2-Trichloroethane	< 0.5	ug/L	A	
Tetrachloroethene	< 0.5	ug/L	A		1,3-Dichloropropane	< 0.5	ug/L	A	
Dibromochloromethane	< 0.5	ug/L	A		Chlorobenzene	< 0.5	ug/L	A	
Ethylbenzene	< 0.5	ug/L	A		1,1,1,2-Tetrachloroethane	< 0.5	ug/L	A	
Xylenes, Total	< 1.0	ug/L	A		Styrene	< 0.5	ug/L	A	
Bromoform	< 0.5	ug/L	A		Isopropylbenzene	< 0.5	ug/L	A	
1,1,2,2-Tetrachloroethane	< 0.5	ug/L	A		Bromobenzene	< 0.5	ug/L	A	
n-Propylbenzene	< 0.5	ug/L	A		1,2,3-Trichloropropane	< 0.5	ug/L	A	
2-Chlorotoluene	< 0.5	ug/L	A		1,3,5-Trimethylbenzene	< 0.5	ug/L	A	
4-Chlorotoluene	< 0.5	ug/L	A		t-Butylbenzene	< 0.5	ug/L	A	
1,2,4-Trimethylbenzene	< 0.5	ug/L	A		s-Butylbenzene	< 0.5	ug/L	A	
4-Isopropyltoluene	< 0.5	ug/L	A		1,3-Dichlorobenzene	< 0.5	ug/L	A	
1,4-Dichlorobenzene	< 0.5	ug/L	A		1,2,3-Trimethylbenzene	< 0.5	ug/L	U	
n-Butylbenzene	< 0.5	ug/L	A		1,2-Dichlorobenzene	< 0.5	ug/L	A	
1,2,4-Trichlorobenzene	< 0.5	ug/L	A		Hexachlorobutadiene	< 0.5	ug/L	A	
Naphthalene	< 0.5	ug/L	A		1,2,3-Trichlorobenzene	< 0.5	ug/L	A	
Surr. 1 (4-Bromofluorobenzene)	91	%	A		Surr. 2 (1,2-Dichlorobenzene d4)	94	%	A	

Report Summary of Qualifiers and Notes

Samples were received at the laboratory with a temperature of 6.7 degrees Celsius. Samples must be received in a cooler with sufficient ice to attain a temperature of 6 degrees Celsius or below. Samples must not be frozen.

QA-: QA/QC associated with this analysis did not meet laboratory acceptance limits indicating the results may be biased low.

409070287 Leicester GS

Endyne Inc. COC

2007-19561

Prepared: 11/13/17



2007-19561

Bill to:
Accts Payable
KAS, Inc.
PO Box 787
Williston VT 05495
Ph: (802) 383-0486

Report to:
Clare Santos
KAS, Inc.
PO Box 787
Williston VT 05495
info@kas-consulting.com;clares

Customer # 1

CSA KAS, Inc.
409070287 Leicester 85

W-100:

MLMW-2-1	Sampled Date/Time: 7/28/2020 @ 1135	Sampler: JT
VOC Vt Petroleum List	2 - 40ml vials	<6C, HCl
MLMW-2-2	Sampled Date/Time: 7/28/2020 @ 1045	Sampler: JT
VOC Vt Petroleum List 8260 Full VOC	2 - 40ml vials	<6C, HCl
MLMW-2-3	Sampled Date/Time: 7/28/2020 @ 1100	Sampler: JT
VOC Vt Petroleum List	2 - 40ml vials	<6C, HCl
MW-3	Sampled Date/Time: 7/28/2020 @ 1211	Sampler: JT
VOC Vt Petroleum List	2 - 40ml vials	<6C, HCl
MW-6	Sampled Date/Time: 7/28/2020 @ 910	Sampler: JT
VOC Vt Petroleum List	2 - 40ml vials	<6C, HCl
MW-10	Sampled Date/Time: 7/28/2020 @ 940	Sampler: JT
VOC Vt Petroleum List 8260 Full VOC	2 - 40ml vials	<6C, HCl
MW15-11S	Sampled Date/Time: 7/28/2020 @ 957	Sampler: JT
VOC Vt Petroleum List	2 - 40ml vials	<6C, HCl
MW15-11D	Sampled Date/Time: 7/28/2020 @ 1014	Sampler: JT
VOC Vt Petroleum List	2 - 40ml vials	<6C, HCl
1602- In	Sampled Date/Time: 7/28/2020 @ 1228	Sampler: JT
VOC Potable Regulated	2 - 40ml vials	<6C, HCl
1602- Out	Sampled Date/Time: 7/28/2020 @ 1224	Sampler: JT
VOC Potable Regulated	2 - 40ml vials	<6C, HCl
1602- Mid	Sampled Date/Time: 7/28/2020 @ 1226	Sampler: JT
VOC Potable Regulated	2 - 40ml vials	<6C, HCl
1583	Sampled Date/Time: 7/28/2020 @ 845	Sampler: JT
VOC Potable Regulated	2 - 40ml vials	<6C, HCl
Trip Blank	Sampled Date/Time: Lab prepared @	Sampler: Lab
VOC Potable Regulated	2 - 40ml vials	<6C, HCl

Relinquished by: John M. [Signature] 7/28/2020 1511 Date Time
 Accepted by: Eileen [Signature] 7/29/20 @ 1051 Date Time
 Relinquished by: [Signature] 7/29/20 1511 Date Time
 Received by: _____ Date Time

Sites/Parameters correct as listed. Client Initials _____
 Client Authorization to use Subcontract lab Client Initials _____
 Sample origin: VT NH NY Other
 Special reporting instructions: (PO#) _____
 Requested Turnaround Time: Routine: _____ Rush Due Date _____

Delv Client	Temp C: 67	Temp Ck	Lab use Only
Comment:		Log by	



Appendix F

I-Rule Long Term Monitoring Report Checklist

**Vermont Department of Environmental Conservation
Waste Management and Prevention Division
Sites Management Section
I-Rule LONG TERM MONITORING Report Checklist**

Site Number: 89-0429

Site Name: Leicester General Store

Site Address: 1620 US Route 7

Site City/Town: Leicester

Report Title: July 2020 Groundwater/Drinking Water Monitoring Report

Report Date: September 8, 2020

Consultant: KAS, Inc.

Report Author: Clare Santos

Deliverable	YES	N/A	Comments	WMPD Use Only	
				Adequate	Inadequate
Subchapter 5. Corrective Action					
§35-509. Long Term Monitoring					
Updated Executive Summary	X				
Updated CSM	X				
Contaminated media characterization	X				
Updated site maps	X				
Sample locations, methods and SOPs used	X				
Work plan deviations	X		No water supply sample collected from 1657 Route 7 residence		
Analysis of how data gathered supports CSM	X				
Data presentation (narrative, tabular, and graphical)	X				
NAPL recovery results		X	No NAPL present at Site		
Screening results from stockpiled soil		X	No soil stockpile present at Site		
Current condition of monitoring network	X				
Changes in site and neighboring properties		X	No changes observed		
Changes in site which conflict with ICs		X			
Handling investigation and remediation derived wastes		X	No waste generated during routine monitoring		
Discussion of findings	X				
Signature and certification	X				