2017 Annual Monitoring Report at the Former Fellows Gear Shaper, 100 River Street Springfield, Vermont – October 27, 2017
SMS #99-2235

PROJECT NO.

16-093

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Title and Approval Page

Document Title

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

Bette L Nowack 10/26/2017

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Executive Summary

Stone Environmental, Inc. (Stone) was retained by One Hundred River Street, LLC and the Southern Windsor County Regional Planning Commission to resume long-term monitoring and maintenance relative to remedial activities implemented to address polychlorinated biphenyl (PCB) and volatile organic compound (VOC) contamination at the former Fellow Gear Shaper facility located at 100 River Street in Springfield, Vermont (the Site; Figure 1). Long-term monitoring and maintenance at the Site was included as part of the selected remedy presented in the Corrective Action Plan (CAP) prepared by The Johnson Company, and dated October 20, 2009. This CAP was amended by Stone in February 2011. Tasks associated with the 2017 long-term monitoring and maintenance were completed in accordance to the *Long-Term Monitoring and Maintenance Implementation Plan (MMIP) for Risk-Based PCB Cleanup, SMS # 99-2235, Former Fellow Gear Shaper, 100 River Street, Springfield, Vermont*, dated August 16, 2012. Monitoring consisted of indoor air sampling, inspection of the sub-slab depressurization (SSD) system, groundwater sampling, and inspection of engineered barriers.

The Site consists of an approximately 6-acre parcel bordered to the east and northeast by the Black River, to the west by Pearl Street, to the north by the Vermont Machine tool property, the former Parks and Woolson machine tool Company to the south east, and private residents to the southwest. The property slopes to the east such that the eastern portion of the Site is at a lower floor level then that adjacent to Pearl Street. The main building on-Site, which measures approximately 255,000 square feet, was the former main production facility for the former Gear Shapers Facility (Figure 2a and Figure 2b). A majority of the main production facility was located across two floors, however, the northeast portion of the building, which was formerly offices, was three stories. Three outbuildings are also associated with the Property, a small building which was the former boiler house, a three story building with attached garage which served as the former cafeteria, and a sanitary sewer pump station.

Monitoring was completed between May 2017 and July 2017. The following list summarizes the activities completed:

- SSD system monitoring, which included checking the applied vacuum to system legs and differential pressure from monitoring ports throughout the physical therapy space;
- Collection of five indoor air samples to be analyzed for VOCs and assess the effectiveness of the SSD system;
- Collection of six groundwater samples, three samples from MW-6, MW-12, and MW-14 for VOC analysis and three samples from MW-15, MW-16R, and GMW-1DR for PCB analysis;
- Collection of nine indoor air PCB samples from occupied and unoccupied rooms within the building.

Based on the results of the monitoring event, Stone makes the following conclusions:

1. CVOCs continue to be present in soil gas beneath the physical therapy space in the southeast corner of the building. The SSD system is properly mitigating VI risk by collecting and removing contaminated soil gas below the building and discharging it above the building roofline. Vacuum pressures measured at the sub-slab pressure monitoring points indicate that the SSD is functioning as designed.
2. Exceedances of the VISV for VOC indoor air samples were limited to two chemicals (carbon tetrachloride in all indoor samples and 1,2-dichloroethane in the physical therapy work space). The ambient air sample also contained a similar concentration of carbon tetrachloride and therefore the carbon tetrachloride exceedance is likely due to elevated background levels outside the building and not the result of a poorly functioning SSD system.
   There is no obvious source for the exceedances of 1,2-Dichloroethane in indoor air in the physical therapy work space. Since this chemical is not a contaminant of concern at the Site, it is likely due to chemicals and other materials being used within the physical therapy work space.
3. PCBs were not detected during groundwater monitoring and have likely significantly attenuated since the previous sampling event in 2008.
4. CVOCs are still present in groundwater within the northwestern portion of the Site, predominantly below the main Site building. The VGES was exceeded for TCE in MW-14 (18 µg/L) and for vinyl chloride in MW-12 (8.1 µg/L) and MW-6 (11 µg/L). Naturally occurring reductive dechlorination and attenuation of contaminants is resulting in a decreasing trend of Site contaminants from the previous sampling event in 2008.
5. No action levels were exceeded for PCB indoor air sampling. Protective barriers, which include concrete and epoxy paint, are properly mitigating direct exposure to PCBs as well as aiding in the reduction of PCBs in indoor air. Indoor air PCB concentrations in Room 1 (0.12 µg/L) exceeded the occupied room action level, however, the room is currently unoccupied and undergoing remedial actions and renovations.

Based on these data, Stone makes the following recommendations:

1. Continue to perform proper operations and maintenance activities to ensure the SSD is properly working and mitigating VI within the physical therapy space of the building. In addition, continue to perform indoor air sampling for VOCs to identify any potential VI issues within the building.
2. Continue annual groundwater monitoring to assess groundwater flow and PCB and CVOC contamination. Collect geochemical parameters to determine if groundwater conditions are conducive for reductive dechlorination.
3. Continue annual PCB indoor air monitoring to ensure that protective barriers continue to properly mitigate exposure of Site users to PCB contamination.
4. Prior to the occupancy of Room 1, perform indoor air monitoring for PCBs to ensure indoor air concentrations are below the Site action level of 0.1 $\mu g/m^3$.
5. The exceedance of the carbon tetrachloride VISV in ambient air, as well as in indoor air is concerning. Even though it appears to be a background level, it presents a human health risk to the personnel in the building, as well as the local community. It is recommended that VT DEC look into this issue to determine what local facility is emitting this chemical.

6. The exceedance of the VISV for 1,2-dichloroethane in the physical therapy work space is also concerning. It is recommended that the building occupants in this area evaluate chemicals that are being used within the space to identify and control the source.
7. Access to portions of the building that have not been remediated for PCBs should be restricted to ensure that building occupants are not exposed to unacceptable levels.

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1. Introduction

Stone Environmental, Inc. (Stone) was retained by One Hundred River Street LLC and the Southern Windsor County Regional Planning Commission to resume long-term monitoring and maintenance relative to risk-based polychlorinated biphenyl (PCB) cleanup efforts that are ongoing at the former Fellow Gear Shaper facility located at 100 River Street in Springfield, Vermont (the Site; Figure 1). Long-term monitoring and maintenance at the Site was included as part of the selected remedy presented in the Corrective Action Plan (CAP) prepared by The Johnson Company, and dated October 20, 2009 and amended by Stone on February 24, 2011. Tasks associated with the 2017 long-term monitoring and maintenance were completed in accordance to the *Long-Term Monitoring and Maintenance Implementation Plan (MMIP) for Risk-Based PCB Cleanup, SMS # 99-2235, Former Fellow Gear Shaper, 100 River Street, Springfield, Vermont*, dated August 16, 2012. Monitoring consisted of indoor air sampling, inspection of the sub-slab depressurization (SSD) system, groundwater sampling, and inspection of engineered barriers.

1.1. Site Description

The Site consists of an approximately 6-acre parcel bordered to the east and northeast by the Black River, to the west by Pearl Street, to the north by the Vermont Machine tool property, the former Parks and Woolson machine tool Company to the south east, and private residents to the southwest. The property slopes to the east such that the eastern portion of the Site is at a lower floor level then that adjacent to Pearl Street. The main building on-Site, which measures approximately 255,000 square feet, was the former main production facility for the former Gear Shapers Facility (Figure 2a and Figure 2b). A majority of the main production facility was located across two floors, however, the northeast portion of the building which was formerly offices was three stories. Three outbuildings are also associated with the Property, a small building which was the former boiler house, a three story building with attached garage which served as the former cafeteria, and a sanitary sewer pump station.

1.2. Previous Site Work and Corrective Actions Completed

The first Environmental Site Assessment was completed in 1999 with follow-up Phase II and Phase III ESAs continuing through 2009. In October, 2009, a CAP was prepared by The Johnson Company for the redevelopment of the 100 River Street Site. In 2010, a notification of Self-Implementing PCB Cleanup was submitted to the Environmental Protection Agency (EPA) by the Johnson Company and later amended by Stone in Addendums dated 2010 and 2011.

1.2.1. Previous Site Investigations

In 1997, Dufresne-Henry over saw the removal of four fuel oil underground storage tanks (USTs). Soil and groundwater samples collected following the removal of the USTs identified elevated concentrations of total petroleum hydrocarbons (TPH), ethylbenzene, and xylenes. No contaminated material was removed and a new 10,000 gallon fuel oil UST was installed. A year later, in 1998, four monitoring wells

were installed and sampled for Volatile Organic Compounds (VOCs). Elevated levels of chlorinated volatile organic compounds (CVOCs), including tetrachloroethylene (PCE) and its byproducts, were identified in the groundwater samples.

Dufresne-Henry completed a Phase I ESA 1999. The Phase I ESA identified multiple recognized environmental conditions (RECs), which include the use of hazardous materials and 48 abandoned transformers that tested positive for PCBs. In 2001 Loueriro Engineering Associates (Loueriro) oversaw the removal of the PCB-containing transformers. The concrete floor of the transformer room, attached to the boiler house (T1; Figure 2), was washed and covered with three coats of epoxy paint.

In 2001, Marin Environmental updated the Phase I ESA and performed a follow-up Phase II ESA. Marin completed 22 soil borings during the Site assessment and half of those borings were completed as groundwater monitoring wells. Elevated concentrations of petroleum-hydrocarbons were detected in soil and groundwater in the vicinity of gasoline USTs. CVOCs were detected in groundwater in the vicinity of former fuel oil USTs, Machine Shop No. 4 (Part E), the metal chip shed, and the former garage.

Griffin International completed a Phase III ESA in 2002 as part of the continuing Site investigations being completed at the 100 River Street Property. The Phase II identified two petroleum-related VOC plumes, one related to USTs south of the boiler room and the other associated with a gasoline UST near the southern property boundary. Two CVOC plumes were also identified during the ESA, one originating from under Machine Room No 4. (Part E) and the second from the southern parking lot.

The Johnson Company oversaw the closure of five USTs on Site in 2006. The five tanks formerly held alcohol, turpentine, kerosene, fuel oil, and gasoline. The alcohol, kerosene, and turpentine USTs were all observed to be in poor condition upon removal with visible holes. The UST closure report, however, noted the USTs did not appear to have significantly impacted soil and/or groundwater in the vicinity of the USTs. The gasoline and fuel oil USTs were reported to be in good condition, however, The Johnson Company suggested that minor impacts to the Black River may exist as a result of impacts from the gasoline UST.

A second Phase III ESA was completed by the Johnson Company in 2006. During the Site investigation PCB concentrations exceeding drinking water standards were identified beneath the electrical room (T2). In addition CVOCs were identified above the Vermont Groundwater Enforcement Standards (VGES), with concentrations appearing to have increased since 2002. CVOC breakdown products were detected during groundwater sampling, indicating that reductive dechlorination is occurring. An approximate 120 cubic yards of petroleum impacted soil was also identified in the vicinity of the chip shed.

Further investigation was completed by The Johnson Company and URS Corporation inside the former Gear Shapers Building between 2008 and 2009 to assist in the preparation of a CAP. Concrete samples were collected throughout the Site and identified PCB concentrations ranging from non-detect to 96 parts per million (ppm). Soil vapor and indoor air was also assessed prior to the drafting of a CAP. TCE concentrations in all sub-slab soil vapor samples collected exceeded applicable Site screening levels. TCE was detected in indoor air at 1.8 micrograms per meter cubed ($\mu g/m^3$), which was right at the threshold for the Vermont Indoor Air Screening level.

In 2009, The Johnson Company prepared a CAP titled, *Corrective Action Plan for Remediation of Soil and Groundwater Contamination, PVDC Property (Former Fellow Gear Shaper) Site #97-2235, 100 River Street Springfield, Vermont*, dated October 20, 2009. Remedial Activities included in the CAP are listed below:

- Implementation of a risk-based cleanup of concrete in Main Building
- Removal of outdoor transformer pads and adjacent soils
- Cleanup of underground vault in transformer room
- Cleanup of cutting oil recycling tank
- Demolition of Chip Shed and Boiler House
- Closure of the Boiler House supply well
- Removal of fuel oil UST
- Removal of soils from Chip Shed area
- Removal of waste drums from building
- Design and construction of vapor intrusion mitigation system
- Establish and implement long-term maintenance schedules for:
  - Monitored natural attenuation of chlorinated solvents in groundwater
  - Vapor intrusion mitigation system
  - PCBs in main building
  - Monitoring for PCBs in groundwater downgradient of Chip Shed.

1.2.2. Corrective Action Plan Implementation

Remedial activities were initiated following the approval of the PCB Risked-Based Cleanup Plan for concrete in the main Site building from the EPA. Remedial activities completed during Site redevelopment are summarized in Table 1, below.

Table 1: Remedial Activity Summary

Location	Description	Remedial Work Completed	Remaining Remedial Work	Use/Occupancy
Part A	Upper Level, western side of main building	Demolished and redeveloped as a parking lot	None	N/A
Part B	Upper Level, western side of main building	Divider wall constructed to divide space in two (eastern and western). 4-inch concrete cap installed across all of Part B. Walls and ceiling of the eastern portion painted with 2 coats of epoxy paint.	Paint the ceiling and walls of the western half with 2 coats of epoxy paint	**Eastern Portion:** Trout River Brewing **Western Portion:** Vacant
Part C	Upper Level, northeastern corner	Divided wall constructed to divide the space into two sections (eastern and western). 4-inch concrete cap installed across all of Part C. Walls and ceiling of the eastern portion painted with 2 coats of epoxy paint	Paint the ceiling and walls of the western half with 2 coats of epoxy paint	**Eastern Portion:** Visiting Nurse Association **Western Portion:** Vacant
Part D/F	Upper and Lower level, former machine shop #2	Partial demolition, installation of asphalt cap, and application of 2 coats of epoxy paint on walls and ceiling	None	Parking Space
Part E	Lower level, machine shop #4, surrounding hallways, and transformer room T2	Hallways and eastern portion (including Room 1) sectioned off from main machine shop and transformer room. 4-inch concrete cap installed and walls and ceilings paint with 2 coats of epoxy paint throughout hallways and eastern portion of Part E.	Install 4-inch concrete cap and paint the ceilings and walls with 2 coats of epoxy paint in Room 1 and remaining sections of Part E.	**Hallways and Eastern Portion:** Bathrooms, Maintenance office, storage space, boiler room. **Unfinished Space:** Vacant
Part G	Upper level, former great hall loading and storage area	Installation of 4-inch concrete cap and application of 2 coats of epoxy paint on walls and ceiling	None	Meeting space

Part H	upper level, center of building	Divider walls constructed and sectioned off into 4 spaces (Room 1-4). 4-inch concrete cap installed and walls and ceiling painted with 2 coats of epoxy paint in Room 2	Install 4-inch concrete cap and paint the ceilings and walls with 2 coats of epoxy paint in Room 1, Room3, and Room 4	**Room 2:** Pharmacy **Room1, 3, & 4:** Vacant
Part J	upper level, northern side	None	Install 4-inch concrete cap and paint the ceiling and walls with 2 coats of epoxy paint	Vacant
Part LMN	upper level, smaller rooms on eastern side	Installation of 4-inch concrete cap and application of 2 coats of epoxy paint on walls and ceiling	None	Cuppity Kakes
Part NLD (includes Part I/K)	upper level, northern loading dock	None	Install 4-inch concrete cap and paint the ceiling and walls with 2 coats of epoxy paint	Vacant
Part O	Upper level, wooden floor storage area	Demolished	None	Data
Part P	lower level, below grade loading area	Demolished	None	N/A
Part Office	Upper and lower level, office space	SSD System Installed below the office space	None	Springfield Health Center
Boiler House	Upper and lower level, office space	Partially demolished	Waiting Phase II ESA	Vacant
Chip Shed	Upper and lower level, office space	Demolished	None	N/A

2. Conceptual Site Model

A Conceptual Site Model (CSM) is a set of working hypotheses which describe key aspects of the problem at a site. As with any hypothesis, the CSM is not conclusive and may require testing to arrive at desired levels of certainty. A CSM includes discussions of how chemicals were released at a site, their transport pathways and fate mechanisms as well as exposure routes for both ecological and human receptors. In general terms, a CSM provides the context for the Site Investigation, to ensure that investigation phases are developed to efficiently provide the information needed for making sound site management decisions.

The CSM presented herein is primarily based on results from the 2017 monitoring activities, but also takes into consideration data from other sources. As additional data is made available, the CSM will be modified accordingly.

2.1. Topography

The Site is situated approximately 489 feet above mean sea level. The Site slopes from its southwestern border (Pearl Street) down to the northeast border (the Black River). The top of bank is approximately 10-feet above the Black River in the northeast corner of the Site's lower parking lot.

2.2. Geology and Hydrology

Based on information published by the U.S Department of Agriculture (USDA) Soil Conservation Service, soil around the vicinity of the Site was classified as a very stony, fine, sandy loam that is well drained but provides slow infiltration. The Site is located in the Waits River-Gile Mountain Belt within the Connecticut Valley-Gaspe physiographic province. These are principally Devonian age variably-calcareous metasedimentary rocks in eastern Vermont and the northern Connecticut valley in Massachusetts, and may be intruded by Devonian granite. Previous Site investigation identified surficial soils as glaciolacustrine pebbly sand of recent origin underlain by a dense glacial till or bedrock. Depth to dense glacial till or bedrock was measured between 5 and 15 feet below ground surface (ft bgs).

Surface water from the Site flows overland toward the Black River to the northeast and east. A former catch basin located on-Site drained directly to the Black River, however, the catch basin was removed during Site redevelopment. A gravity fed wastewater pipe runs through the lower parking lot, with a spur pipe that appears to discharge to the Black River, however, workers from the Springfield Department of Public Works stated that a valve box may have closed off flow from the pipe. The depth to groundwater at the Site was measured between 4 and 10 ft bgs. Groundwater flows from the southwest to the northeast towards the Black River where it presumably discharges.

2.3. Release Mechanisms

Previous Site investigation identified PCBs in building materials, soils, and groundwater. PCBs are likely present due to the use of PCB-contaminated machining oils within the building and the storage of machining chips where machining fluids were allowed to drain into soils. Transformers which contained PCBs and were formerly stored on-Site may also have resulted in PCB contamination. CVOCs identified in groundwater, soil gas, and indoor air are likely the result of releases from the use and on-Site storage of chlorinated solvents used as degreasing agents.

2.4. Contaminant Distribution, Fate and Transport

PCBs are a mixture of up to 209 individual chlorinated compounds known as congeners that are used as coolants and lubricants in transformers, capacitors, and other electrical equipment. PCBs generally adsorb to soils, however they can also be present in groundwater and as a vapor in air. The extents of PCB contamination at the Site is known and remedial activities are on-going to mitigate human exposure to contaminated materials. PCBs have been identified in soils, groundwater, and building materials. Soils with high concentrations of PCBs have been removed from the site and protective barriers such as asphalt and concrete have been placed over areas where soils contain lower PCB concentrations. PCBs generally have a low mobility when present in groundwater and since there are no water supply wells present on-Site the mobility and transport of PCB contaminated groundwater is limited. PCBs have the potential to be released through direct contact with contaminated building materials. Though PCBs have a low volatilization, contaminated building materials can also release PCBs into the atmosphere and potentially impact indoor air concentrations. Barriers including concrete and epoxy paint can be and have been installed over contaminated building materials in occupied portions of the building to prevent direct contact and limit volatilization of the PCB impacted materials. However, some PCB-contaminated building materials, which include concrete floors, brick walls, and parts of the ceiling, remain in unoccupied areas of the facility.

Data collected from the 2017 monitoring event indicates that PCB contamination in groundwater has significantly attenuated from historical data, since PCBs were not detected in any of the groundwater samples. PCB barriers, which include epoxy paint and concrete caps, within the building are effectively mitigating exposure, including direct contact and inhalation, to PCB contamination. PCB air samples collected from rooms where protective barriers have been installed, detected PCBs well below applicable standards (0.1 $\mu g/m^3$). Rooms where protective barriers were not installed contained higher concentrations of PCBs in air samples, however, these concentrations were still below applicable standards (0.3 $\mu g/m^3$). Direct exposure and inhalation of PCBs remains a potential exposure risk in unoccupied areas of the building where remediation has yet to be completed. To continue to mitigate the risk of exposure, protective barriers will be monitored to ensure their proper integrity.

Chlorinated solvents are used in machine manufacturing as a degreasing agent and are regulated in the State of Vermont. These solvents can be present in soils as well as in a dissolved phase in groundwater. In addition, they are highly volatile and can be present in soil gas, which creates the potential risk for vapor intrusion (VI). Chlorinated solvents, specifically PCE and TCE, were present in groundwater underneath the southeastern portion of the building and are presumably moving with groundwater flow toward the Black River. There are no water supply wells located on-Site and only one water supply well has been identified within 0.25 miles of the Site. This private water supply well is a 240 foot deep bedrock well located on the other side of the Black River from the Site, approximately 1000 feet to the north. There is insufficient data regarding the bedrock aquifer to confirm that the well is upgradient of the Site, however, the low CVOC concentrations detected in the monitoring wells and the presence of a dense

glacial till approximately 10 to 15 feet bgs suggests that CVOC contamination has not penetrated the bedrock aquifer. Previous Site investigations also identified CVOCs present in soil gas below the building, creating the potential for VI within the building. Direct contact with soils impacted by CVOCs is limited since the area of concern is covered by the Site building and parking lot. Limited remediation has been done to remove or treat the CVOC contamination in soil and groundwater. However, a sub-slab depressurization (SSD) system was installed under the southeast portion of the building to mitigate the VI risk that is present due to CVOCs in soil gas and groundwater below the main Site building. Soil gas vapors below the building are collected in designated piping and vented above the roof of the building.

Data collected from the 2017 monitoring event identified exceedances of the VGES in all three wells that were sampled for VOCs. MW-14 exceeded the VGES for TCE (5 μg/L) at a concentration of 18 μg/L and TCE was detected in MW-6 (4.5 μg/L) just below the VGES. Vinyl Chloride was identified at concentrations exceeding the VGES (2 μg/L) in MW-12 and MW-6 (8.1 μg/L and 11 μg/L, respectively). Cis-1,2-Dichloroethylene (DCE) was detected in all three wells sampled for VOCs, however, concentrations were below the VGES. When compared to historical data, contaminant concentrations appear to be decreasing, which is likely the result of reductive dechlorination and attenuation.

2.5. Sensitive Receptor Evaluation

Based on the Current CSM, potential exposure pathways to human and/or ecological receptors are evaluated below:

- **Soil** – Soil with high levels of PCB contamination has been removed from the Site, however, lower concentrations PCB impacted soil remain. Impacted material is capped by the Site building, greenspaces, and parking lot to mitigate direct exposure to humans and the environment.
- **Groundwater** –PCBs have significantly attenuated in groundwater and were not detected during the 2017 monitoring event. Therefore, groundwater no longer provides a significant exposure pathway for PCBs to humans or ecological receptors. The dissolved CVOCs present on-Site are presumably moving in the direction of groundwater flow towards the Black River. Data suggests reductive dechlorination is occurring in groundwater resulting in a decrease in contamination concentrations. There are no water supply wells that are in use on-Site or nearby in the overburden aquifer.
- **Building Materials** – There is the potential for direct exposure to PCB contaminated building materials in portions of the building where remediation has yet to be completed. However, these areas have limited access to Site users. Concrete caps and epoxy paint are engineered barriers that are used throughout the finished, occupied portions of the building to prevent direct exposure to impacted building materials.
- **Indoor Air** – PCB concentrations in indoor air were detected at concentrations below applicable standards during the monitoring completed in 2017. Indoor air concentrations were the lowest in occupied portions of the building where remediation has been completed, indicating that the engineered barriers significantly reduce the indoor air exposure pathway. Since portions of the building are still undergoing remediation, the indoor air exposure pathway still presents a risk for human exposure to PCB contamination. However, these unfinished sections of the building are closed off from the occupied portions of the building and have limited access to Site users.

- **Vapor Intrusion** – CVOC impacted groundwater and soil gas below the office space of the building present the potential for VI within the building. An SSD system has been installed below this portion of the building to mitigate VI risk.

3. Work Completed

The 2017 long-term monitoring and maintenance event was performed by Stone between May 24, 2017 and August 4, 2017. Work was completed in accordance to the *Long-Term Monitoring and Maintenance Implementation Plan (MMIP) for Risk-Based PCB Cleanup, SMS # 99-2235, Former Fellow Gear Shaper, 100 River Street, Springfield, Vermont*, dated August 16, 2012.

Field notes are provided in Appendix C.

3.1. SSD System Monitoring and Inspection

On May 24, 2017 Stone deployed five laboratory supplied, 6-liter, stainless steel summa canisters equipped with 24-hour flow control valves at the 100 River Street Site in accordance to the MMIP. One canister was deployed upgradient of the building in the alley by the northern loading docks, to serve as a background ambient air sample (AA-1). Three canisters were deployed in the physical therapy space of the Springfield Medical Center. Two canisters were set up in the eastern hallway near the southern end of the building (IA-1 and IA-1Dup), and one canister was placed in the open physical therapy exercise space (IA-2). The fifth canister was set up on the roof of the building at the exhaust port of the SSD system. Polyethylene tubing was connected to the end of the flow control valve and extended into the SSD system effluent pipe. Prior to completing the sampling, all summa canisters and flow control valves were leak tested and initial vacuum pressures were recorded. Sampling techniques were performed in accordance to Stone Standard Operating Procedure (SOP) *SEI-6.49.0.* Sampling was performed over a 24-hour period and ended on May 25, 2017. At the conclusion of sampling the canisters were sealed, final vacuum pressures were recorded, and the samples were packed and shipped under chain of custody to Con-Test Analytical Laboratory in East Longmeadow, Massachusetts for VOC analysis by EPA method TO-15. Sampling locations are shown on Figure 3, analytical results are summarized in Table B-1, and laboratory reports are provided in Appendix D.

Stone returned to the Site on August 4, 2017 to complete the SSD system inspection. Prior to arriving on-Site, Ted Foster, the building manager installed new Magnehelic gauges in the SSD system header manifold. The original gauges were improperly sized for the pressure range of the system. The applied vacuum across the entire system and at each individual leg was recorded using the Magnehelic gauges. An anemometer was used to measure air flow and a photoionization detector (PID) was used to measure VOCs at each individual leg and through the whole system. Applied vacuum measurements were taken at monitoring points throughout the physical therapy space. Results from the SSD system inspection are summarized in Table 2 and 3, below.

Table 2: SSD System Inspection – System Manifold

System Leg ID	Description	Flow Rate (CFM)	Applied Vacuum ("WC)	PID (ppmv)
4	Zone 4	63.54	-0.80	0.0
5	Zone 5	31.44	-1.0	0.0

6	Zone 6	59.63	-1.05	0.0
7	Zone 7	54.13	-1.05	0.0
8	Zone 8	21.4	-1.05	0.0
8E	Entire System	227.24	-1.1	0.0

Source: Stone field notes, 08/04/17
Abbreviations: "WC – inches of water column, CFM – cubic feet per minute, ppm/v – parts per million by volume
Date and Author: bmd 08/16/17 QC: dtc 10/02/17

Table 3: SSD System Inspection – Monitoring Points

Monitoring Point	Description	Measured Vacuum ("WC)
4A	Zone 4	-0.23
4B	Zone 4	-0.24
4C	Zone 4	-0.23
5A	Zone 5	-0.26
6A	Zone 6	-0.104
6C	Zone 6	-0.038
8A	Zone 8	-0.29
8B	Zone 8	-0.31
8C	Zone 8	-0.27
8D	Zone 8	-0.28

Source: Stone field notes, 08/04/17
Abbreviations: "WC – inches of water column
Date and Author: bmd 08/16/17 QC: dtc 10/02/17

3.2. Well Installation and Development

Previous Site redevelopment activities resulted in two monitoring wells being destroyed, MW-16 and GMW-1D. On July 06, 2017 Stone oversaw the installation of two replacement monitoring wells, MW-16R and GMW-1DR. Well installation was performed by Cascade Technical Services. Prior to the well installation, Digsafe and utility mark-outs identified a gravity feed sewer line and possible abandoned sewer line spur in the vicinity of GMW-1DR. As a result, GMW-1DR was offset 5-feet to the northwest to avoid possibly hitting the abandoned sewer line.

A direct push drill rig with 3.5-inch outer casing was used to install GMW-1DR and MW-16. While drilling at each well location, a dense till layer resulted in refusal of the drill rods. GMW-1DR was advanced to 15-feet below ground surface (bgs) and was screened from 4 to 14-feet bgs. MW-16 reached refusal at 11-feet bgs and was screened from 6 to 11-feet bgs. Each well was finished as a 1.5-inch outer diameter prepacked well screen, with a filter sand pack extending 1.5-foot above the well screen, and a minimum 2-foot bentonite seal.

Following the installation of the monitoring wells, Stone attempted to develop the wells using a peristaltic pump and polyethylene tubing to pump water from and manually surge the well. However, an hour after installation neither well contained a measurable amount of water; no well development was attempted on July 06, 2017. Stone returned to the Site on July 13, 2017 to develop the newly installed wells. The water level meter used to measure depth to water was broken, but there was evidence of water in each well. It was estimated that GMW-1DR and MW-16R had a total of one foot and two feet of water, respectively. Each well was purged using a peristaltic pump and sample tubing was used to manually purge the wells. Approximately 2.25-gallons of water was removed from GMW-1DR and 0.5-gallons was removed from MW-16R prior to both wells running dry.

Following the completion of well development, Stone completed a top of casing survey for MW-6, MW-15, MW-16R, and GMW-1DR. The survey was completed using an auto level which was given an arbitrary elevation of 100.00 feet above sea level.

3.3. Groundwater Monitoring

Groundwater monitoring was completed on July 27, 2017, two weeks following the development of GMW-1DR and MW-16R. Upon arriving on-Site Stone opened all of the wells scheduled to be sampled prior to collecting depth to water measurements, to allow each well to equilibrate with atmospheric conditions. Stone used a water level meter to measure the depth to water in each monitoring well. Depth to water measurements were made from the top of PVC casing of each well and were used to determine the direction of groundwater flow at the Site.

In accordance to the MMIP, groundwater samples were collected from six wells during the groundwater monitoring event. Three wells were sampled for VOCs and three wells were sampled for PCBs. VOC samples were collected from MW-6, MW-12, and MW-14 and PCB samples were collected from MW-15, MW-16R, and GMW-1DR. Samples were collected following the Stone *SOP SEI-6.34.1 Procedure for Sampling Groundwater Monitoring Wells using Low Stress (Low Flow) Technique,* which is in general conformance with the United States Environmental Protection Agency (EPA) Region 1 SOP EQASOP-GW001, *Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells*, Revision 3, dated January 19, 2010.

Geochemical data, including temperature, specific conductance, dissolved oxygen (DO), pH, and oxidation reduction potential (ORP), were collected using a multi-parameter water quality sonde equipped with a flow through cell. Turbidity was collected using a turbidity meter. Following stabilization of geochemical parameters, Stone collected samples for PCB and VOC analysis. VOC samples were preserved with hydrochloric acid, and then all samples were placed on ice, and transported under chain of custody to Con-Test Analytical Laboratory in East Longmeadow, Massachusetts for VOC analysis by EPA method 8260 and PCB analysis by EPA method 8082. Sampling locations are shown on Figure 4, analytical results are summarized in Table B-2 and Table B-3, and laboratory reports are provided in Appendix D.

Quality assurance and quality control (QA/QC) measures included documentation of all sampling activities and the collection of the following QA/QC samples during each sampling event:

- One field duplicate per analyte; and
- One Trip Blank for VOC analysis.

MW-16R ran dry after purging approximately 1.5-liters of water from the well for 14-minutes. Geochemical parameters did not stabilize within the 14-minutes where low-flow sampling was being completed, so the geochemical data will be omitted from this report. MW-16 recharged for 1.5 hours before an attempt was made to collect a grab sample. Approximately 1-liter of water was collected for the sample after allowing the well to recharge, however, the laboratory supplies two 1-liter amber jars for PCB analysis. The well was allowed to recharge and a second liter of water was eventually collected from MW-16R.

3.4. PCB Air Monitoring

Air monitoring was completed by Stone at the Site between July 27, 2017 and July 28, 2017. Air samples were collected in accordance to the MMIP and the Stone Site Specific SOP, *SSP SEI 16093.1.0*. A total of nine air samples were collected through laboratory supplied polyurethane foam (PUF) samplers. PUF samplers were connected to personal air sampling pumps (SKC-224 with rechargeable batteries) that are capable of providing flow rates between 1 and 5 liters per minute. Each pump was left plugged into a wall electrical outlet to ensure the pump would remain in operation for the 24-hour sampling period. The pump associated with the ambient air sample was the only pump that did not remain in operation during the entire sampling period. However, the ambient air sample was collected over a period of approximately 19-hours, which was deemed to be an acceptable and representative time range. Prior to the start of sampling, the flow rate on each pump was checked using an external calibration device. Flowrates ranged between 2.0 and 2.4 liters per minute. Flow rates for each sampler and sampling durations were recorded on the chain of custody for the samples. Samples collected during the PCB air monitoring are provided in the list below with a brief description of the sample location:

- Part G & Part G DUP – Samples collected from window sill directly across the Great Hall from the pharmacy.
- Room 1 – Sample collected approximately 20-feet from the eastern door.
- Ambient – Sample collected outside the building near the northern loading dock.
- Pharmacy – Sample collected from the back work space near the storage closet.
- Part LMN – Sample collected from the back corner of Cuppity Kakes.
- Part J – Sample collected from a top the electrical box along the northwestern wall.
- Part B – Sample collected near the Pearl Street entrance way.
- Part C – Sample collected near the dividing wall between Part C and Part J.

Air samples were collected for a 24-hour period between July 27 and July 28, 2017. Following the 24-hour sample period, PUF cartridges were collected, wrapped in foil, placed in the appropriate containers, packed in coolers with ice, and transported under chain-of-custody to Con-Test in East Longmeadow, Massachusetts. Samples were be analyzed via EPA Method TO-10A and EPA Method 8270D modified for the detection of PCBs as homologues. Sampling locations are shown on Figure 5a and Figure 5b, analytical results are summarized in Table B-4, and laboratory reports are provided in Appendix D.

4. Results and Discussion

The 2017 annual long-term monitoring and maintenance occurred between May and August of 2017 in accordance to the *Long-Term Monitoring and Maintenance Implementation Plan (MMIP) for Risk-Based PCB Cleanup, SMS # 99-2235, Former Fellow Gear Shaper, 100 River Street, Springfield, Vermont*, dated August 16, 2012. A Site Specific Quality Assurance Plan (SSQAPP) was prepared by Stone and approved by VT DEC and EPA, and served as the guideline for quality assurance and quality control while sampling ensure that data produced during field and analytical efforts are of known and acceptable quality.

4.1. SSD System Monitoring

Indoor air sampling associated with SSD System monitoring was completed to ensure the SSD System was properly mitigating risk associated with soil and groundwater contamination beneath the building and the associated VI concerns. During sampling, an upgradient ambient air sample (AA-1) was collected to establish background concentrations for Site contaminants of concern. Background levels of Site contaminants were considered while assessing and reviewing the indoor air data.

PCE, TCE, and DCE, the main CVOC contaminants of concern, were not detected in any of the indoor air samples (IA-1, IA-1 DUP, and IA-2). However, PCE, TCE, and DCE were detected in the SSD system effluent sample at 1.4 µg/m^3, 25 µg/m^3, and 14 µg/m^3, respectively. The data suggests that CVOCs are present in soil gas below the building, however, the SSD system is properly mitigating VI risk within the Springfield Health Center.

Since AA-1 was collected to establish background levels and the effluent sample was collected at the exhaust port of the SSD System, these samples were not compared to the Vapor Intrusion Screening Values (VISV). Samples IA-1, IA-1 DUP, and IA-2, however, exceeded the VISV for ten analytes. Table 4, below, summarizes the exceedances of the VISV for indoor air. Complete analytical results are summarized in Table B-1, and laboratory reports are provided in Appendix D.

Table 4: Indoor Air Sampling VISV Exceedance Data, May 25, 2017

Analyte	VISV (µg/m^3)	AA-1 (µg/m^3)	IA-1 (µg/m^3)	IA-1 DUP (µg/m^3)	IA-2 (µg/m^3)
1,1,2,2-Tetrachloroethane	0.018	0.24 U	0.24 U	0.24 U	0.24 U
1,1,2-Trichloroethane	0.063	0.19 U	0.19 U	0.19 U	0.19 U
1,2-Dibromoethane (EDB)	0.0045	0.27 U	0.27 U	0.27 U	0.27 U
1,2-Dichloroethane	0.038	0.14 U	***0.16***	***0.16***	0.14 U
1,3-Butadiene	0.033	0.078 U	0.078 U	0.078 U	0.078 U
1,4-Dioxane	0.32	1.3 U	1.3 U	1.3 U	1.3 U
Bromodichloromethane	0.056	0.24 U	0.24 U	0.24 U	0.24 U
Carbon Tetrachloride	0.41	***0.44***	***0.43***	***0.44***	***0.43***
Dibromochloromethane	0.042	0.3 U	0.3 U	0.3 U	0.3 U
Hexachlorobutadiene	0.045	0.37 U	0.37 U	0.37 U	0.37 U

Source: Con-Test Laboratories Analytical Report, 05/25/17
Notes: All values are reported in micrograms per Liter (µg/m³); Values bolded and shaded indicate analyte detections
Date and Author: bmd 09/29/17 QC by: dtc 10/02/17

Carbon Tetrachloride concentrations, which exceeded the VISV for all three indoor air samples, was identified in the ambient air background sample at a concentration of 0.44 µg/m³. Indoor air and ambient background concentrations are nearly identical, indicating that the exceedance to the VISV is not the result of sub-slab soil gas contamination. 1,2-Dichloroethane (also known as ethylene dichloride) was detected at a concentration of 0.16 µg/m³ in IA-1 and IA-1 DUP. 1,2-Dichloroethane was not a contaminant of concern at the Site. There is no obvious source of this chemical at the Site and it is not known as a degradation product of the CVOCs that are present at the Site. EPA reports that it is primarily used as an intermediate in the production of polyvinyl chloride (PVC) and other chemical syntheses. The presence of this chemical in the indoor air is likely the result of materials inside the physical therapy space rather than from sub-slab soil gas contamination.

Table B-1 lists eight analytes which had reporting limits which exceeded the VISV. However, these contaminants were not detected in the SSD emissions and there is no historical data indicating that these analytes were ever contaminants of concern at the Site. Since data indicates there is a negative pressure field below the physical therapy space and sub-slab soil gas is being transported through system piping and discharged above the roof of the building, there is no reason to believe that these eight analytes are present in the indoor air. Potential concerns for VI from sub-slab sources are being properly mitigated by the SSD system.

4.2. Groundwater Monitoring

Top of casing elevations were determined for the four monitoring wells that were located outside of the building, MW-6, MW-15, MW-16R, and GMW-1DR, following the survey completed on July 13, 2017. Table 5 below, summarizes the groundwater elevation data for the 2017 annual monitoring. Groundwater in the eastern portion of the Site flows in a northeasterly direction toward the Black River. There is no data to determine the flow of groundwater in the western portion of the Site, however, based on previous reports and Site topography it is assumed groundwater in the western portion of the Site also flows in a northeasterly direction towards the Black River. Groundwater at the Site has a steep hydraulic gradient, calculated as 0.05 feet per foot toward the northeast and presumably discharges to the Black River.

Table 5: Groundwater Elevation Data, July 13, 2017

		07/13/2017	
Monitoring Well ID	Top of Casing Elevation (Feet)	Depth to Water (Feet)	Water Elevation (Feet)
MW-6	88.20	6.85	81.35
MW-15	94.37	9.50	84.87
MW-16R	93.96	7.80	86.16
GMW-1DR	90.99	9.80	81.19

Source: Stone field notes 07/13/17
Top of Casing Elevations were determined from an arbitrary reference point of 100-feet during a survey completed on 07/13/2017;
Date and Author: bmd 07/18/17 QC by: dtc 10/02/17

Geochemical data for each well is provided in Table 6, below. Data collected from MW-16R may not be representative of the aquifer since the well was pumped dry prior to stabilization of the geochemical parameters. Dissolved oxygen (DO) levels ranged from 0.18 milligrams per liter (mg/L, MW-6) to 4.99

mg/L (MW-14). Oxidation Reduction Potential (ORP) ranged from -208.7 millivolts (mV, MW-6) to 57.9 mV (MW-14), In general, with the exception of MW-14, DO levels and ORP measurements are representative of anaerobic groundwater conditions and a reducing environment. Specific Conductance ranged from 2119.0 microsiemen per centimeter (µs/cm, MW-14) to 8634 µs/cm (MW-15). pH ranged from slightly acidic (6.40 s.u.; MW-15) to slightly basic (7.54 s.u.; MW-14).

Table 6: Geochemical Data, July 27, 2017

Well ID	Temperature (˚C)	Specific Conductance (µs/cm)	Dissolved Oxygen (mg/L)	pH (s.u.)	ORP (mV)	Turbidity (NTU)
GMW-1DR	14.4	6776.0	0.22	6.56	-138.7	6.43
MW-6	15.5	4336.0	0.18	7.34	-208.7	5.72
MW-12	17.2	2314.0	0.27	7.10	-103.9	24.20
MW-14	17.2	2119.0	4.99	7.54	57.9	23.50
MW-15	14.8	8634.0	0.35	6.40	-9.2	53.10
MW-16R*	14.3	2178.0	4.40	6.52	101.2	11.70

Source: Stone field notes 07/27/17
*Notes:*MW-16R ran dry before the geochemical parameters stabilized, values may not be representative of the aquifer*
Abbreviations: ˚C – degrees centigrade; µs/cm – micro Siemens per centimeter; mg/L – milligrams per Liter; s.u. – standard units; mV – millivolts; NTU – Nephelometric turbidity units; NC – Not Collected
Date and Author: bmd 08/18/17 QC by: dtc 10/02/17

Six groundwater monitoring wells were sampled on July 27, 2017, three were sampled for PCBs (GMW-1DR, MW-15, and MW-16R) and three were sampled for VOCs (MW-6, MW-12 and MW-14). PCBs were not detected in any of the groundwater samples that were collected. It is likely that PCBs have significantly attenuated in Site groundwater since sampling in 2008 when PCBs were detected in MW-15 at a concentration of 48 µg/L. Exceedances of VGES were identified for six analytes in the three wells that were sampled for VOCs. Table 7, below, provides a summary of VOC detections and exceedances. Complete analytical results are summarized in Table B-3, and laboratory reports are provided in Appendix D.

Table 7: Groundwater Data (Detections and Exceedances), July 27, 2017

Well ID	VGES (µg/L)	MW-6 (µg/L)	MW-12 (µg/L)	MW-14 (µg/L)
1,1-Dichloroethane	70	1 U	1 U	**1.3**
1,4 Dioxane	20	100 U	50 U	50 U
Carbon Tetrachloride	5	5 U	5 U	5 U
cis-1,2-Dichloroethylene	70	**10**	**5.9**	**2.2**
cis-1,3-Dichloropropene	0.5	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	5 U	5 U	5 U
sec-Butylbenzene	NE	**1.5**	1 U	1 U
trans-1,2-Dichloroethylene	100	**1.1**	1 U	1 U
Trichloroethylene	5	**4.5**	**1.7**	**18**
Vinyl Chloride	2	**11**	**8.1**	2 U

Source: Con-Test Laboratories Analytical Report, *07/27/17*
Notes: All values are reported in micrograms per Liter (µg/L); Values bolded indicate detections; Values bolded and shaded indicate analyte exceedances of VGES
Date and Author: bmd 09/29/17 QC by: dtc 10/02/17

TCE was detected in all three wells sampled, however, only exceeded VGES in MW-14 (18 µg/L). Vinyl Chloride (VC) was detected at concentrations exceeding VGES in MW-6 (11 µg/L) and MW-12 (8.1 µg/L). Data indicates that CVOCs, which include PCE, TCE, and their breakdown products, have decreased from previous sampling events in 2006 and 2008. The historical decrease in CVOC

contaminants is likely due to attenuation and naturally occurring reductive dechlorination in Site groundwater. 1,4-Dioxane, Carbon Tetrachloride, cis-1,3-Dichloropropene, and Methylene Chloride concentrations were non-detect, however, the detections limits exceeded the VGES.

4.3. PCB Air Monitoring

Eight PCB air samples were collected over a 24-hour period between July 27, 2017 and July 28, 2017. An ambient air sample was collected up wind of the building to establish PCB background concentrations. PCB homologues were not detected above laboratory reporting limits for the ambient air sample. With the acceptation of the ambient air sample, PCBs were detected in every air sample collected within the building. However, Site action levels, 0.1 µg/m^3 for occupied rooms and 0.3 µg/m^3 for unoccupied rooms, were not exceeded for any of the samples. Table 8, below, provides a summary of detections for the PCB air monitoring. Complete analytical results are summarized in Table B-4, and laboratory reports are provided in Appendix D.

Table 8: PCB Indoor Air Data (Detections Only), July 27, 2017

Well ID	Part B - Occupied (µg/m^3)	Part C - Occupied (µg/m^3)	Part G - Occupied (µg/m^3)	Part LMN - Occupied (µg/m^3)	Pharmacy - Occupied (µg/m^3)	Room 1 - Unoccupied (µg/m^3)	Part J - Unoccupied (µg/m^3)
Site Action Level	0.1 µg/m^3	0.1 µg/m^3	0.1 µg/m^3	0.1 µg/m^3	0.1 µg/m^3	0.3 µg/m^3	0.3 µg/m^3
Dichlorobiphenyls	0.00033 U	**0.0019**	0.00034 U	0.00032 U	0.00033 U	**0.0053**	0.00032 U
Heptachlorobiphenyls	0.00099 U	0.001 U	0.00097 U	0.00096 U	0.00099 U	**0.0024**	0.00095 U
Hexachlorobiphenyls	0.00066 U	**0.0093**	0.00065 U	**0.00083**	0.00066 U	**0.012**	**0.0058**
Monochlorobiphenyls	0.00033 U	0.00033 U	0.00034 U	0.00032 U	0.00033 U	**0.0027**	0.00032 U
Pentachlorobiphenyls	**0.0044**	**0.042**	**0.0035**	**0.0064**	0.00066 U	**0.037**	**0.025**
Tetrachlorobiphenyls	**0.0026**	**0.022**	**0.003**	**0.0042**	**0.00073**	**0.033**	**0.016**
Trichlorobiphenyls	0.00033 U	0.0078	0.0027	0.0054	0.00033 U	**0.027**	**0.013**
Total PCBs	**0.007**	**0.082**	**0.0092**	**0.017**	**0.00073**	**0.12**	**0.059**

Source: Con-Test Laboratories Analytical Report, *07/28/17*
Notes: All values are reported in micrograms per meter cubed (µg/m^3); Values bolded indicate detections;
Date and Author: bmd 09/29/17 *QC by:* dtc 10/02/17

The highest total PCB detection was in Room 1 (0.12 µg/m^3), which exceeds the occupied room action level of 0.1 µg/m^3 but is below the unoccupied room action level of 0.3 µg/m^3. Room 1 is currently undergoing renovations and remedial action, so additional air monitoring will be required prior to occupancy of the room. Data suggests that protective barriers in occupied rooms are mitigating direct exposure to PCBs and reducing the presence of PCBs in indoor air throughout the building.

4.4. Quality Control Summary

Field precision was monitored through the use of a field duplicate analyses. Field duplicates were performed for all parameters and relative percent difference (RPD) values were calculated for each field duplicate pair using the following formula:

$$RPD = \frac{(C_1 - C_2) \quad x \quad 100}{(C_1 + C_2)/2}$$

Where: C1 = Concentration of Original, C2 = Concentration of Field Duplicate

Table 9, below, provides sample results for the field duplicate pair, including RPD values and analytical results for the trip blank. Acceptable field precision between the field duplicate pair was discussed in the SSQAPP and acceptance criteria was set at 50% RPD for all parameters.

Acceptable precision was observed for all VOC compounds with the exception of vinyl chloride. Vinyl Chloride had a RPD value of 84% which was above the acceptable range of 50%. Typically, results at or less than 5 times the reporting limit will exhibit poor reproducibility. Vinyl Chloride was detected in MW-6 above the VGES in both samples and the field precision had no impact since on usability since both values were above the limits.

Table 9: Quality Control: VOCs in Groundwater

Sample ID	Sample Date	sec-Butylbenzene	cis-1,2-Dichloroethylene	trans-1,2-Dichloroethylene	Trichloroethylene	Vinyl Chloride
MW-6	7/27/2017	1.5	8.2	<1	4.5	4.5
	7/27/2017 (Duplicate)	1.4	10.0	1.1	4.5	11
RPD		7%	20%	NC	0%	84%
Trip Blank	5/23/2017	ND	ND	ND	ND	ND

Source: Con-Test Laboratories Analytical Report, 08/09/17
Notes: All values are reported in micrograms per Liter (µg/L); ND = Not Detected;
Date and Author: bmd 08/18/17 *QC by:* dtc 10/02/17

Field duplicate precision for PCBs in groundwater was not accessed since results between the pair were non-detect.

In addition, field precision for PCB concentrations in PUF air samplers are provided in Table 10, below. Field precision between the field duplicate pair was acceptable as outlined in the SSQAPP.

Table 10: Quality Control: PCBs in Air

Sample ID	Sample Date	Trichlorobiphenyls	Tetrachlorobiphenyls	Pentachlorobiphenyls	Total Polychlorinated biphenyls
Part G	7/28/2017	0.0025	0.0030	0.0035	0.0091
	7/28/2017 (Duplicate)	0.0027	0.0030	0.0035	0.0092
RPD		8%	0%	0%	1%

Source: Cont-Test Laboratories Analytical Report, 08/09/17
Notes: All values are reported in micrograms per Liter (µg/m³);
Date and Author: bmd 08/18/17 *QC by:* dtc 10/02/17

The following list provides a summary of calculated RPDs from VOC air sampling. All RPDs were within the applicable ranges with the exception of 2-Hexanone (65%RPD) which was just above the limit of 50%RPD. The detection of 2-hexanone was less than 5 times the reporting limit and results at or near the reporting limit often exhibit poor reproducibility.

5. Conclusions and Recommendations

Based on the results of the monitoring event, Stone makes the following conclusions:

1. CVOCs continue to be present in soil gas beneath the physical therapy space in the southeast corner of the building. The SSD system is properly mitigating VI risk by collecting and removing contaminated soil gas below the building and discharging it above the building roofline. Vacuum pressures measured at the sub-slab pressure monitoring points indicate that the SSD is functioning as designed.
2. Exceedances of the VISV for VOC indoor air samples were limited to two chemicals (carbon tetrachloride in all indoor samples and 1,2-dichloroethane in the physical therapy work space). The ambient air sample also contained a similar concentration of carbon tetrachloride and therefore the carbon tetrachloride exceedance is likely due to elevated background levels outside the building and not the result of a poorly functioning SSD system.
   There is no obvious source for the exceedances of 1,2-Dichloroethane in indoor air in the physical therapy work space. Since this chemical is not a contaminant of concern at the Site, it is likely due to chemicals and other materials being used within the physical therapy work space.
3. PCBs were not detected during groundwater monitoring and have likely significantly attenuated since the previous sampling event in 2008.
4. CVOCs are still present in groundwater within the northwestern portion of the Site, predominantly below the main Site building. The VGES was exceeded for TCE in MW-14 (18 µg/L) and for vinyl chloride in MW-12 (8.1 µg/L) and MW-6 (11 µg/L). Naturally occurring reductive dechlorination and attenuation of contaminants is resulting in a decreasing trend of Site contaminants from the previous sampling event in 2008.
5. No action levels were exceeded for PCB indoor air sampling. Protective barriers, which include concrete and epoxy paint, are properly mitigating direct exposure to PCBs as well as aiding in the reduction of PCBs in indoor air. Indoor air PCB concentrations in Room 1 (0.12 µg/L) exceeded the occupied room action level, however, the room is currently unoccupied and undergoing remedial actions and renovations.

Based on these data, Stone makes the following recommendations:

1. Continue to perform proper operations and maintenance activities to ensure the SSD is properly working and mitigating VI within the physical therapy space of the building. In addition, continue to perform indoor air sampling for VOCs to identify any potential VI issues within the building.
2. Continue annual groundwater monitoring to assess groundwater flow and PCB and CVOC contamination. Collect geochemical parameters to determine if groundwater conditions are conducive for reductive dechlorination.

3. Continue annual PCB indoor air monitoring to ensure that protective barriers continue to properly mitigate exposure of Site users to PCB contamination.
4. Prior to the occupancy of Room 1, perform indoor air monitoring for PCBs to ensure indoor air concentrations are below the Site action level of 0.1 $\mu g/m^3$.
5. The exceedance of the carbon tetrachloride VISV in ambient air, as well as in indoor air is concerning. Even though it appears to be a background level, it presents a human health risk to the personnel in the building, as well as the local community. It is recommended that VT DEC look into this issue to determine what local facility is emitting this chemical.
6. The exceedance of the VISV for 1,2-dichloroethane in the physical therapy work space is also concerning. It is recommended that the building occupants in this area evaluate chemicals that are being used within the space to identify and control the source.
7. Access to portions of the building that have not been remediated for PCBs should be restricted to ensure that building occupants are not exposed to unacceptable levels.

Appendix A: Figures

MAP LOCATION

0 0.5 1 2 Miles

Sources: ESRI: US Topo Map

Location Map

Figure 1

100 River Street
Springfield, Vermont

STONE ENVIRONMENTAL

O:\Proj-16\CSC\16-093 100 River Street Ongoing Monitoring\GIS\MapDocuments\Figure 1 Location Map.mxd; created on 6/13/16 by kml

Black River

Offices

Room 1

Mechanical Room 2

Mechanical Room 1

Mini Storage

Part E

Part F

Former Tank Vault

Scrap Metal Storage

Retaining Wall

Boiler House

T1

Chip Shed

T2

TP1

TP2

TP3

Transformer Room

Legend

- Redevelopment Area
- Transformer Pad (TP)
- Interior Walls
- Not part of the ground floor
- Former Structures
- Out House; Ground
- Road
- Springfield Parcels (2006)

N

0 25 50 100 Feet

1 inch = 60 feet

Notes:
1. Location of interior walls are approximate

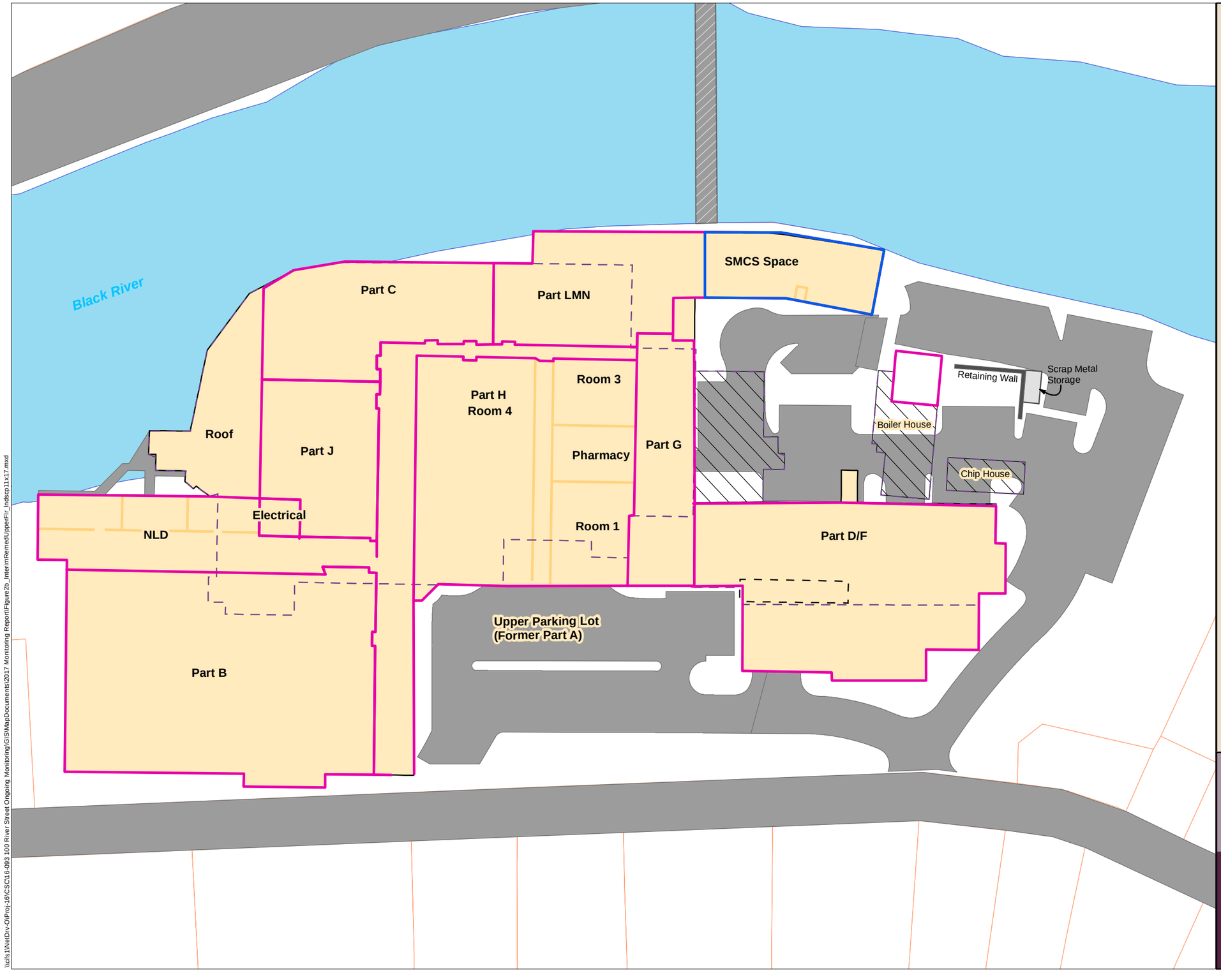
Sources: Building footprints and USTs digitized by Stone Environmental, Inc. based on the Johnson Company Site Map, Annotated 11/21/2009; Parking lot detail, Engineering Ventures; Springfield parcel boundaries, VCGI

Site Layout: Ground Floor

Figure 2a

100 River Street Springfield, VT

\\cifs1\WetDrv-01\Proj-16\CSC\16-093_100 River Street Ongoing Monitoring\GIS\MapDocuments\2017 Monitoring Report\Figure2a_InterimRemedGrndFlr_Indsept11x17.mxd



Legend

- SSD System
- Redevelopment Area
- Upper
- Interior Walls
- Former Structures
- Upper
- Road
- Springfield Parcels (2006)

N

0 25 50 100 Feet

1 inch = 60 feet

Notes:
1. Location of interior walls are approximate

Sources: Building footprints and USTs digitized by Stone Environmental, Inc. based on the Johnson Company Site Map, Annotated 11/21/2009; Parking lot detail, Engineering Ventures; Springfield parcel boundaries, VCGI

Site Layout: Upper Floor

Figure 2b

100 River Street
Springfield, VT

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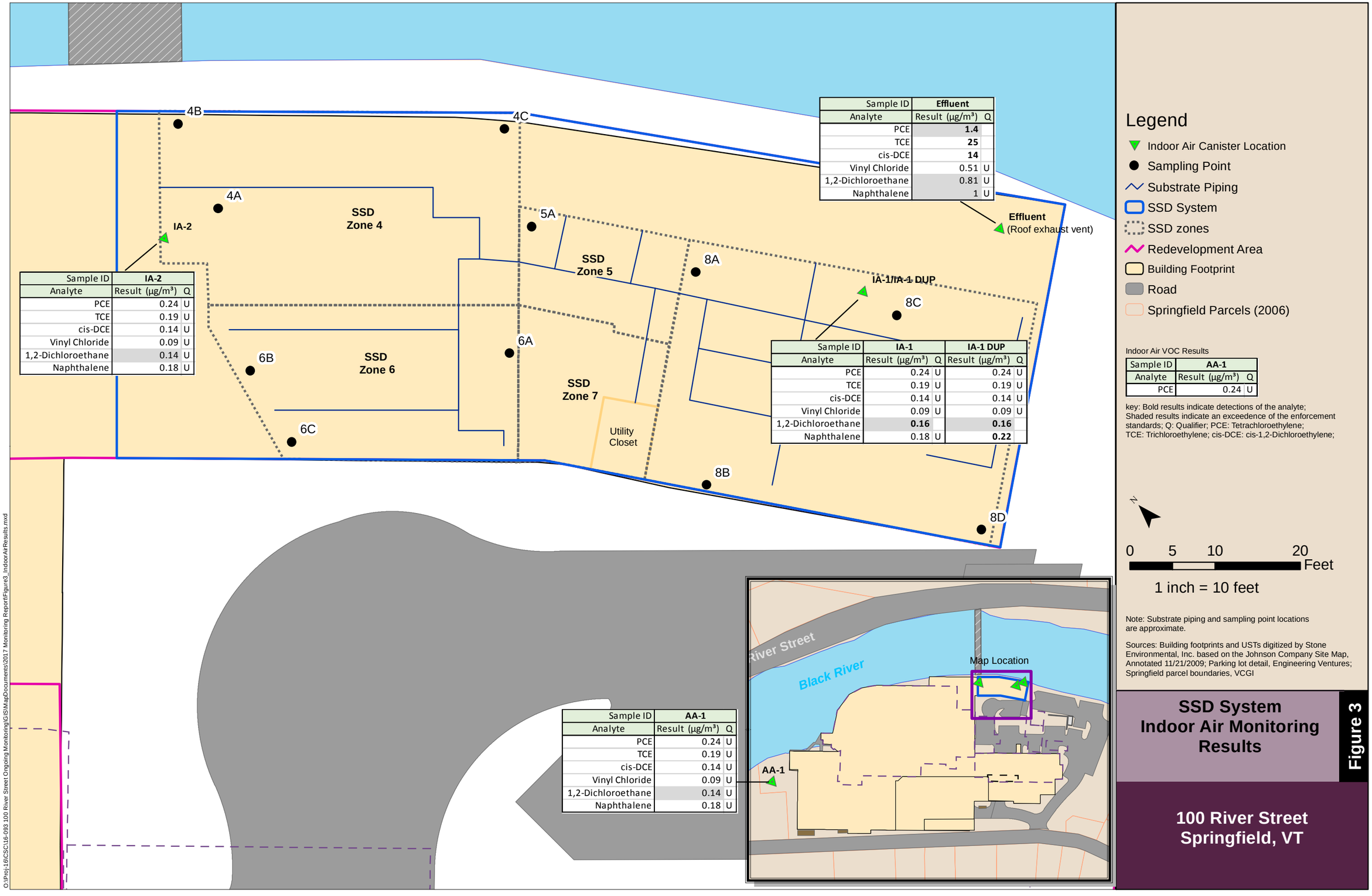


Sample ID	IA-2	
Analyte	Result (µg/m³)	Q
PCE	0.24	U
TCE	0.19	U
cis-DCE	0.14	U
Vinyl Chloride	0.09	U
1,2-Dichloroethane	0.14	U
Naphthalene	0.18	U

Sample ID	Effluent	
Analyte	Result (µg/m³)	Q
PCE	**1.4**	
TCE	**25**	
cis-DCE	**14**	
Vinyl Chloride	0.51	U
1,2-Dichloroethane	0.81	U
Naphthalene	1	U

Sample ID	IA-1		IA-1 DUP	
Analyte	Result (µg/m³)	Q	Result (µg/m³)	Q
PCE	0.24	U	0.24	U
TCE	0.19	U	0.19	U
cis-DCE	0.14	U	0.14	U
Vinyl Chloride	0.09	U	0.09	U
1,2-Dichloroethane	**0.16**		**0.16**	
Naphthalene	0.18	U	**0.22**	

Sample ID	AA-1	
Analyte	Result (µg/m³)	Q
PCE	0.24	U
TCE	0.19	U
cis-DCE	0.14	U
Vinyl Chloride	0.09	U
1,2-Dichloroethane	0.14	U
Naphthalene	0.18	U

Legend

- Indoor Air Canister Location
- Sampling Point
- Substrate Piping
- SSD System
- SSD zones
- Redevelopment Area
- Building Footprint
- Road
- Springfield Parcels (2006)

Indoor Air VOC Results

Sample ID	AA-1	
Analyte	Result (µg/m³)	Q
PCE	0.24	U

key: Bold results indicate detections of the analyte; Shaded results indicate an exceedence of the enforcement standards; Q: Qualifier; PCE: Tetrachloroethylene; TCE: Trichloroethylene; cis-DCE: cis-1,2-Dichloroethylene;

N

0 5 10 20 Feet

1 inch = 10 feet

Note: Substrate piping and sampling point locations are approximate.

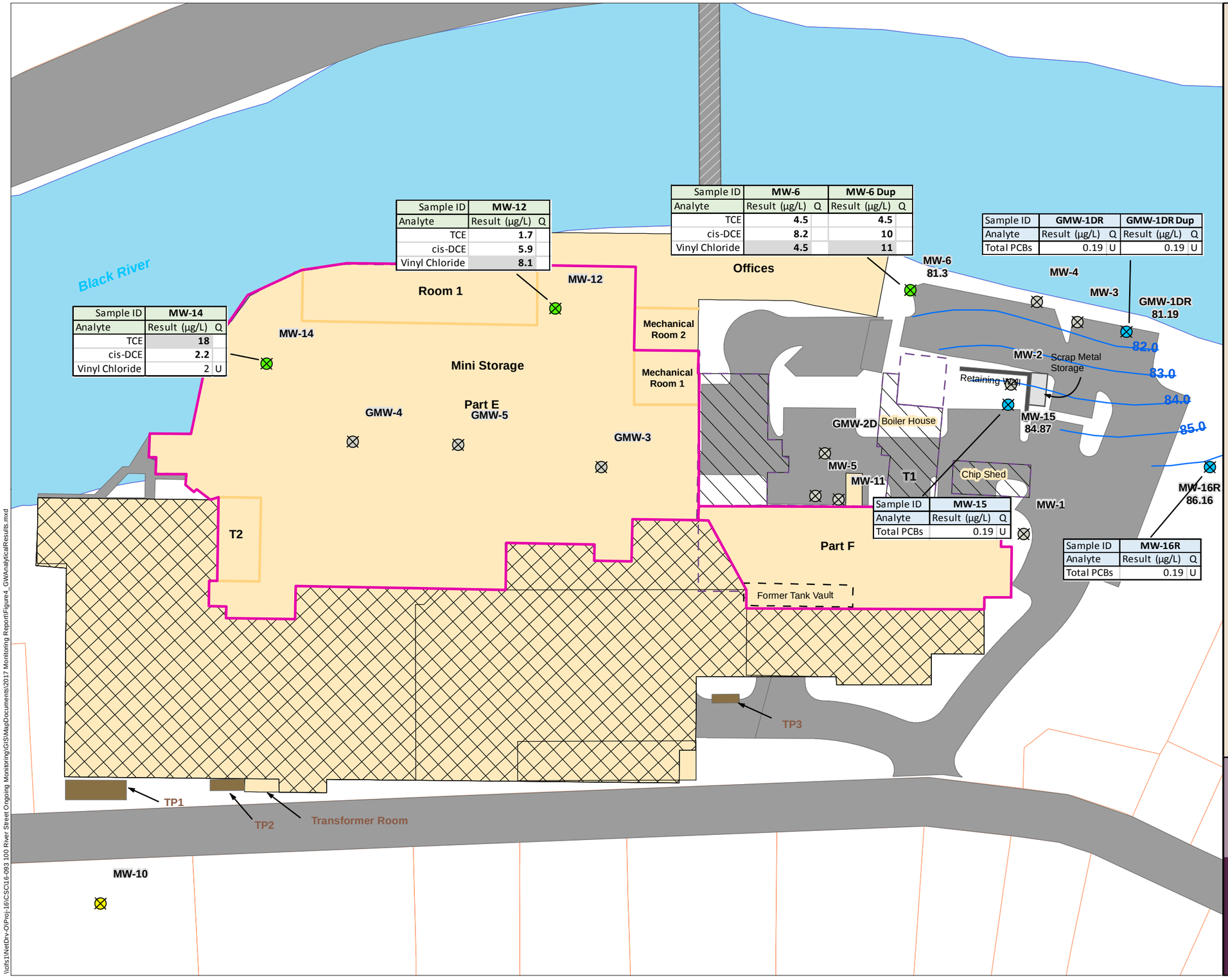
Sources: Building footprints and USTs digitized by Stone Environmental, Inc. based on the Johnson Company Site Map, Annotated 11/21/2009; Parking lot detail, Engineering Ventures; Springfield parcel boundaries, VCGI

SSD System Indoor Air Monitoring Results

Figure 3

100 River Street
Springfield, VT

O:\Proj-16\CSC\16-093 100 River Street Ongoing Monitoring\GIS\MapDocuments\2017 Monitoring Report\Figure3_IndoorAirResults.mxd



Legend

Monitoring Wells (Groundwater Elevation in feet)

- Destroyed
- No Sample
- PCB Sample
- VOC Sample
- Water Level Contours
- Redevelopment Area
- Not Basement
- Former Structures
- Road
- Springfield Parcels (2015)

Groundwater VOC Results

Sample ID	MW-12	
Analyte	Result (µg/L)	Q
TCE	1.7	
cis-DCE	5.9	
Vinyl Chloride	8.1	

Groundwater PCB Results

Sample ID	MW-16R	
Analyte	Result (µg/L)	Q
Total PCBs	0.19	U

key: Bold results indicate detections of the analyte; Shaded results indicate an exceedence of the enforcement standards; Q: Qualifier; TCE: Trichloroethylene; cis-DCE: cis-1,2-Dichloroethylene; PCBs: Polychlorinated Biphenyls;

N

0 25 50 100 Feet

1 inch = 60 feet

Notes:
1. Location of interior walls are approximate

Sources: Building footprints and USTs digitized by Stone Environmental, Inc. based on the Johnson Company Site Map, Annotated 11/21/2009; Parking lot detail, Engineering Ventures; Springfield parcel boundaries, VCGI

Groundwater Analytical Results

Figure 4

100 River Street Springfield, VT

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Sample ID	Room 1
Analyte	Result (µg/m3) Q
Total PCBs	0.12

Black River

Room 1

Offices

Mechanical Room 2

Mechanical Room 1

Mini Storage

Part E

Scrap Metal Storage

Retaining Wall

Boiler House

T1

Chip Shed

T2

Part F

Former Tank Vault

TP3

TP1

TP2

Transformer Room

O:\Proj-16\CSC\16-093 100 River Street Ongoing Monitoring\GIS\MapDocuments\2017 Monitoring Report\Figure5a_IndoorAirPCBResults_Ground.mxd

Legend

- Not Sampled (Rotating Air Sample)
- PCB Air Sample Location
- Redevelopment Area
- Transformer Pad (TP)
- Not Basement
- Former Structures
- Out House; Ground
- Road
- Springfield Parcels (2015)

Indoor Air PCB Results

Sample ID	Room 1
Analyte	Result (µg/m3) Q
Total PCBs	0.12

key: Bold results indicate detections of the analyte; Shaded results indicate an exceedence of the enforcement standards; Q: Qualifier; PCBs: Polychlorinated Biphenyls

N

0 25 50 100 Feet

1 inch = 60 feet

Notes:
1. Location of interior walls are approximate

Sources: Building footprints and USTs digitized by Stone Environmental, Inc. based on the Johnson Company Site Map, Annotated 11/21/2009; Parking lot detail, Engineering Ventures; Springfield parcel boundaries, VCGI

PCB Indoor Air Analytical Results: Ground Floor

Figure 5a

100 River Street Springfield, VT

Sample ID	Part LMN
Analyte	Result (µg/m3) Q
Total PCBs	**0.017**

Sample ID	Part C
Analyte	Result (µg/m3) Q
Total PCBs	**0.082**

Sample ID	Part G	Part G Dup
Analyte	Result (µg/m3) Q	Result (µg/m3) Q
Total PCBs	**0.0091**	**0.0092**

Sample ID	Part J
Analyte	Result (µg/m3) Q
Total PCBs	**0.059**

Sample ID	Pharmacy
Analyte	Result (µg/m3) Q
Total PCBs	**0.00073**

Sample ID	Ambient
Analyte	Result (µg/m3) Q
Total PCBs	U

Sample ID	Part B
Analyte	Result (µg/m3) Q
Total PCBs	**0.007**

Black River
SMCS Space
Part C
Part LMN
Part H
Room 4
Room 3
Part J
Roof
(Rotating Air Sample)
Part G
Pharmacy
Retaining Wall
Scrap Metal Storage
Boiler House
Chip House
Electrical
NLD
Room 1
Part D/F
Upper Parking Lot (Former Part A)
Part B

Legend

- Not Sampled (Rotating Air Sample)
- PCB Air Sample Location
- Redevelopment Area
- Interior Walls
- Former Structures
- Upper
- Road
- Springfield Parcels (2015)

Indoor Air PCB Results

Sample ID	Room 1
Analyte	Result (µg/m3) Q
Total PCBs	0.12

key: Bold results indicate detections of the analyte; Shaded results indicate an exceedence of the enforcement standards; Q: Qualifier; PCBs: Polychlorinated Biphenyls

N

0 25 50 100 Feet

1 inch = 60 feet

Notes:
1. Location of interior walls are approximate

Sources: Building footprints and USTs digitized by Stone Environmental, Inc. based on the Johnson Company Site Map, Annotated 11/21/2009; Parking lot detail, Engineering Ventures; Springfield parcel boundaries, VCGI

PC Indoor Air Analytical Results: Upper Floor

Figure 5b

100 River Street
Springfield, VT

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Appendix B: Field Notes

OBSERVATIONS AND REMARKS

Project Name/Description: 100 River Street	STONE ENVIRONMENTAL 535 Stone Cutters Way / Montpelier / VT / 05602 / USA 802.229.4541 / info@stone-env.com / www.stone-env.com
SEI Project #: 16-093	Client/Sponsor:

05/27/17

1030 BD esel & D Carlson onsite to set up Air Samples

DC shows BD how to set up the Summa canister & they consult L Rosbrug on completing a leak test

1112 AA-1 leak tested & set up in the alley north of the building
- Summa # 2165
- Valve # 3531
- Vac Start: -29" Hg

1150 Effluent Set up on the roof
- Summa # 1970
- Valve # 3467
- Vac Start: -28" Hg

1211 IA-2 set up in corner of the gym space
- Summa # 1658
- Valve # 3467
- Vac Start -28" Hg

1213 IA-1 Set up near hallway of PT Space
- Summa number 1505
- Valve # 3539
- Vac Start -29" Hg

1214 IA-1-D up set up
- Summa # 1725
- Valve # 3468
- Vac Start -28" Hg

Signed: [signature] Date: 05/27/17

5 squares = 1 inch

Indoor Air Sampling Form

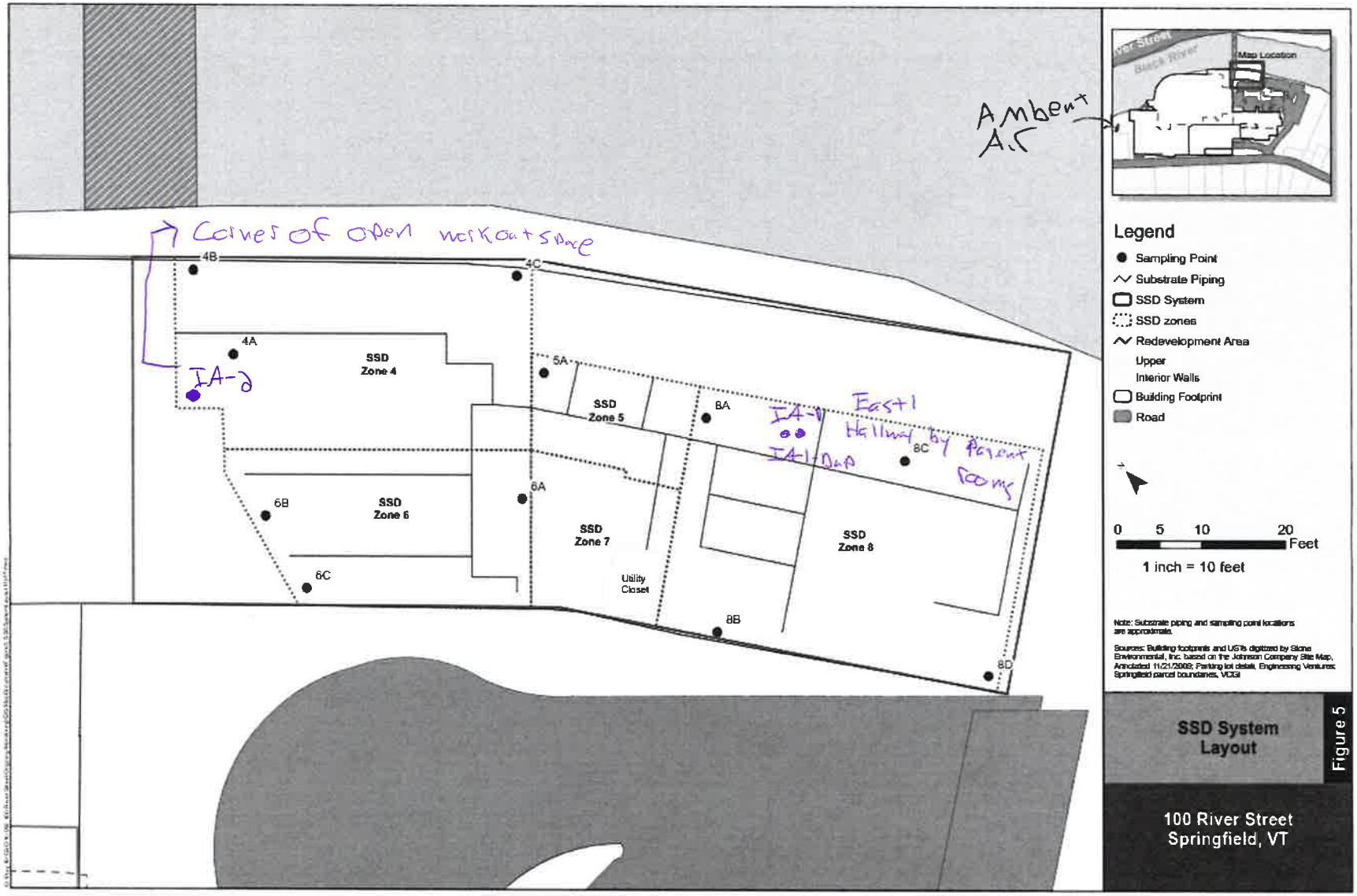
Sampler: Brian Diezel Method: Summa Canisters w/ 24-hr regulator Project #: 16-093

Sample ID	Date	Time Started	Time Ended	Sampling Height (ft)	Summa Canister #/Value	Vacuum at start	Vacuum at end	Sample Type	COC
AA-1	05/24/17	1112	1109	4'	3165/3531	-29 "Hg	-10" Hg	Ambient A.S	VOC's
IA-1-Dup	05/24/17	1214	1158	3'	1725/3468	-28" Hg	-7" Hg	Indoor A.S	VOC's
IA-1	05/24/17	1213	1154	3'	1508/3539	-29" Hg	-7" Hg	Indoor A.S	VOC's
IA-2	05/24/17	1211	1156	3'	1658/3538	-29" Hg	-9" Hg	Indoor A.S	VOC's
Effluent	05/24/17	1150	1130	Just above ground	1970/3467	-28" Hg	-6" Hg	SSA Effluent	VOC's

Notes: _____

Source: MaDEP Indoor Air Sampling and Evaluation Guide WSC Policy #02-430 (April 2002)

Figure 6: SSD Layout



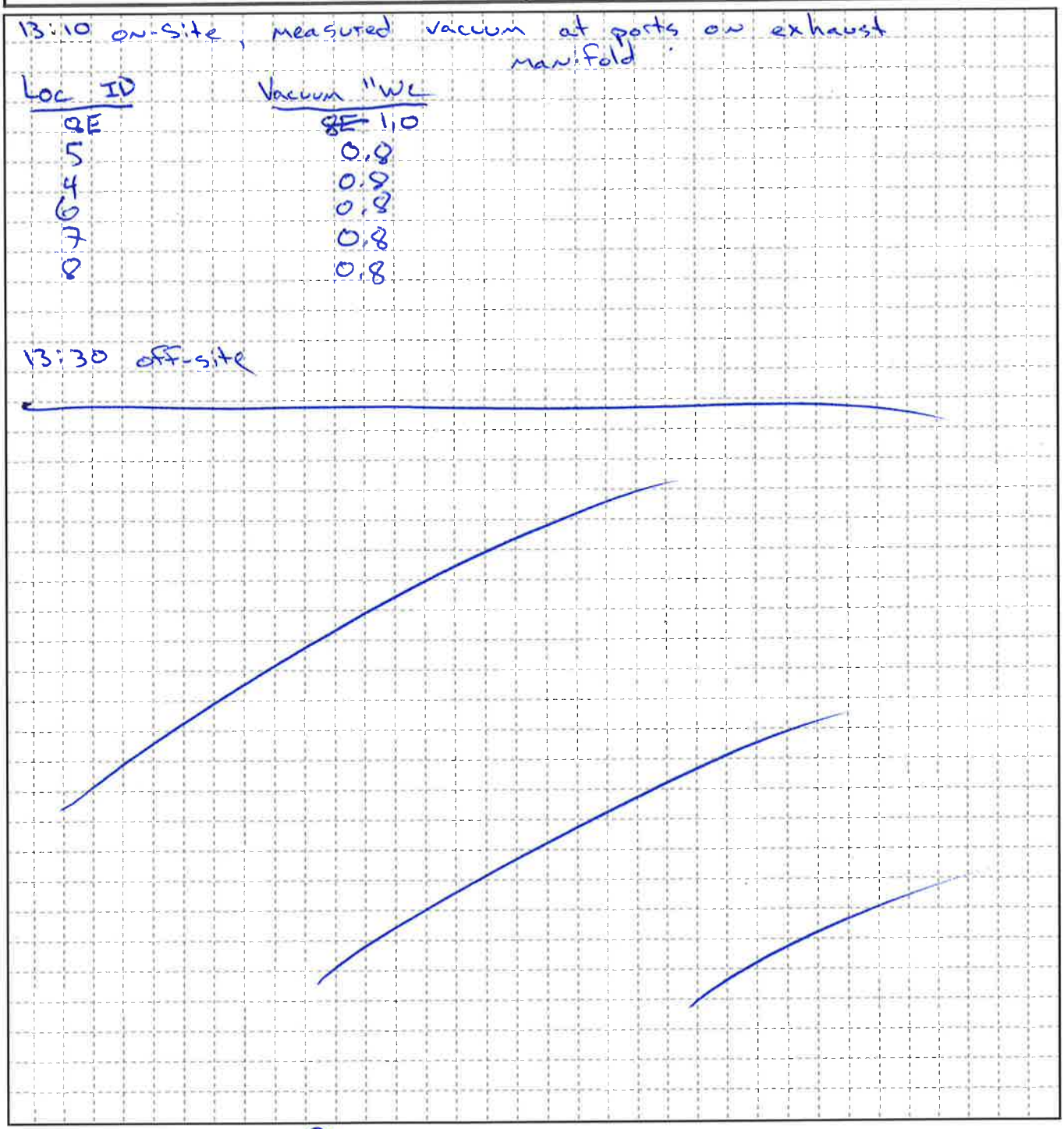
OBSERVATIONS AND REMARKS

Project Name/Description:	STONE ENVIRONMENTAL 535 Stone Cutters Way / Montpelier / VT / 05602 / USA 802.229.4541 / info@stone-env.com / www.stone-env.com
SEI Project #: 16-093	Client/Sponsor: 100 River St.

13:10 on-site, measured vacuum at ports on exhaust manifold.

Loc ID	Vacuum "WC
SE	SE 1.0
5	0.8
4	0.8
6	0.8
7	0.8
8	0.8

13:30 off-site



Signed: _____ Date: 6/15/17

Page: 1 of 1

5 squares = 1 inch

OBSERVATIONS AND REMARKS

Project Name/Description: 100 River Street, Springfield, VT	STONE ENVIRONMENTAL 535 Stone Cutters Way / Montpelier / VT / 05602 / USA 802.229.4541 / info@stone-env.com / www.stone-env.com
SEI Project #: 16-093	Client/Sponsor: 100 River Street

0830 RD onsite w/ Cascade. Meet w/ Ted Foster who says locations are clear of utilities, suggests offsetting GMW-1D away from river to avoid rock

0845 DO contacts Springfield DPW for utility markout

0930 Springfield water clears both locations Springfield Sewer clears MW-1C suggests offsetting GMW-1D to avoid an old abandonded sewer line that discharged to the river, offset ~5' to the northeast

0935 Begin drilling GMW-1DR

3.5" Casing could only be drilled to 15' before refusal on till

- well screened 4-14' bgs ; Filter Sand from 2.5'-15' ; Bentonite from 0.5' - 2.5'
- Flushmount roadbox

1145 Begin drilling MW-1CR

- 3.5" Casing could only be drilled to 11' before refusal on Till
  - well screened 6-11' bgs ; Filter Sand from 4.5-6' ; Bentonite from 0.5 (RD) 1.5-4.5'
  - Flushmount roadbox

1330 AF (RD) ~~No water~~ measurable water (RD) no measurable water in MW-1CR & GMW-1DR, however there was evidence of moisture within the well. Due to tight soils & slow infiltration of water into the well development was not completed

Signed: [signature] Date: 07/06/17

Page: 1 of 1

5 squares = 1 inch

SOIL BORING LOG

Project Name: 100 Rivers Street Site Name: 100 Rivers Street

Stone Project Number: 16-093 Client:

BORING/WELL ID:	Date Drilled: 07/06/17		Location:
SOP followed: GMW-1 (R3)	Borehole Diam. (in)	2.25 & then 3.5	~10' from top of river bank
Deviations:	Well Diameter (in):	1.5 in	
Drilling Method: Geo Probe	Screen Length (ft):	10'	
Driller's name: Casey Moore	Screen Slot Size:	0.010	
Sampling method: MCS	Sand Pack (ft):	2.5-15'	
Core Length: 5'	Well Seal (ft):	0.5-2.5'	

Comments: * wells are 1.5" pre-Packs

Depth Interval (ft bgs)	Recovery (feet)	PID Interval (ft)	PID Reading (ppm v/v)	Soil Description (color, texture, moisture, remarks)	Sample Collected (Depth, ID & Time)	Well Const. Details
0-5	1.3	-	-	0-6" Asphalt & Crushed Gravel 6"-4' Brown medium Sand trace fine sand trace Gravel 4-5' Brown fine silty Sand trace black fine sand		
5-10	2.8	-	-	5-6' Brown fine silty sand 6-7' layer of black coarse sand & gravel fill 7-10" Fine tan - Medium Sand Moist from 8-10" (Soil trending finer @ depth)		
10-15'	3.0	-	-	10-12 Grey Fine to Medium Sand trace wood Fill 12-13.5 Medium to Coarse sand w/ some Gravel (wet) 13.5-15' Dense Grey Fine silt (Till) -dry trace gravel		

Geoscientist: Brian Diezel	Signature: [signature]	Date: 07/06/17
Geoscientist:	Signature:	Date:

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SOIL BORING LOG

Project Name: 100 Rivers Street Site Name: 100 Rivers Street

Stone Project Number: 16-093 Client:

BORING/WELL ID: MW-6R	Date Drilled: 07/07/17		Location:
SOP followed: –	Borehole Diam. (in)	2.25 then 3.5	~25 feet to 35 feet from Plumb house
Deviations: –	Well Diameter (in):	1.5	
Drilling Method: GeoProbe	Screen Length (ft):	5'	
Driller's name: Casey Moore	Screen Slot Size:	0.010	
Sampling method: MCS	Sand Pack (ft):	4.5 - 11'	
Core Length: 5'	Well Seal (ft):	1.5 - 4.5'	

Comments: 1.5" Prepack wells

Depth Interval (ft bgs)	Recovery (feet)	PID Interval (ft)	PID Reading (ppm v/v)	Soil Description (color, texture, moisture, remarks)	Sample Collected (Depth, ID & Time)	Well Const. Details
0-5	2.5	–	–	0-1.5' Topsoil, Brown med. loamy fine sand w/ gravel & Brick fill 1.5-5' Brown medium to Fine Sand trace silt Moist		
5-6	4.0	–	–	5-7' Brown medium to fine Sand, trace silt, trace Gravel, trace coarse Sand (wet) 7-8 Coarse tan/Brown sand, some Gravel, Moist 8-6 tan medium Sand to fine Sand, trace silt, wet	@8' layer of dark Brown Fine to medium sand (wet)	
10-15	5.0	–	–	10-12' tan medium Sand, trace fine Sand, trace silt 12-15' Dense grey till, w/ Gravel. *Refusal @ 15' Large piece of quartz @ bottom of sleeve		

Geoscientist: Brian D. Petzel	Signature: [signature]	Date: 07/10/17	
Geoscientist:	Signature:	Date: (RD)	

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OBSERVATIONS AND REMARKS

Project Name/Description: 100 Rivers Street Monitoring	STONE ENVIRONMENTAL 535 Stone Cutters Way / Montpelier / VT / 05602 / USA 802.229.4541 / info@stone-env.com / www.stone-env.com
SEI Project #: 16-093	Client/Sponsor: 100 Rivers Street

1000 BD & DC arrive on-site to develop MW-16R & GMW-1DR & complete monitoring well survey

* The oil-water interface probe was damaged & not collecting depth to water measurements. However moisture on the tape indicated 0.5' to 1.0' of water in MW-16R & 1.0'-2.0' in GMW-1DR

* Both wells ran dry during redevelopment,
~0.5 gallons purged from MW-16R
~2.25 gallons purged from GMW-1DR

1100 well survey begins, total station had dead batteries, so the Auto level was used to obtain elevations of new wells.

Well ID	(+) BS	Elev	(-) FS	Elev
MW-6	11.80	88.2		
~~MW-15~~ (BD)				
GMW-1DR			9.01	90.99
MW-16R			6.04	93.96
MW-15	5.63	94.37		
GMW-1DR			9.01	
MW-16R			6.04	

*An arbitrary elevation was temporarily used as a base elevation.

Signed: [signature] Date: 07/13/17

5 squares = 1 inch

STONE ENVIRONMENTAL INC

MONITORING WELL DEVELOPMENT FORM

Project Title	100 River Street Monitoring
Client	100 River Street
Project Manager	Bette Nowack
SEI Study Number	16-093

WELL ID	MW-16		
Date	7/13/17		
Purge Method	Bladder Pump ___ Peri Pump ✓ Whale Pump___ Bailer ___ Other ___	Water Level Indicator SN	
Sampling Personnel	DTC	Water Quality Sonde SN	NA
Weather	60s, raining	Turbidimeter SN	NA

Calculate Purge Volumes

Time of water level measurement (military):

Total Well Depth (btoc)		Depth to Water (btoc)		Height of Water Column		One Well Volume
10.5' feet	-	_____ feet	=	_____ feet	X 0.041 gal/feet (1-inch well) X 0.163 gal/feet (2 inch well)	= _____ gallons

Final Well Depth		3 X One Well Volume	gallons
_____feet		5 X One Well Volume	gallons

Cumulative Volume Purged (gallons)	Time (Military)	Conductivity (mS or µS) Circle One	DO mg/L	pH	ORP (mV)	Turbidity (NTU)
- began purging w/ Peri Pump @ 10:15. Ended purge at 10:32 when well ran dry. DTW unknown before purging, water level meter did not indicate water although height of water column was estimated to be approx. 0.5'. Removed approx. 0.5 gallon before well ran dry.						
- After ~10min an additional 500 ml of water was removed from the well.						

Total Vol. Removed: 0.5 Gallons (√) ___Meters Calibrated (√) ___Min. 3 Well Vol. Purged

Well Condition: New	Comments:
Well Plug (y)/n) _____	
Well Lock (y/n) _____	
Condition of Flush Mount/Stickup: New	

Sampling Personnel Signature _____ Date 07/13/17

STONE ENVIRONMENTAL INC

MONITORING WELL DEVELOPMENT FORM

Project Title	100 River Street Monitoring
Client	100 River Street
Project Manager	Bette Nemark
SEI Study Number	16-093

WELL ID	GMW-1DR		
Date	7/13/17		
Purge Method	Bladder Pump ___ Peri Pump ✓ Whale Pump___ Bailer ___ Other ___	Water Level Indicator SN	
Sampling Personnel	DTC	Water Quality Sonde SN	
Weather	60s, Raining	Turbidimeter SN	

Calculate Purge Volumes

Time of water level measurement (military):

Total Well Depth (btoc)		Depth to Water (btoc)		Height of Water Column		One Well Volume
15* feet	-	_____ feet	=	_____ feet	X 0.041 gal/feet (1-inch well) X 0.163 gal/feet (2 inch well)	= _____ gallons

Final Well Depth		3 X One Well Volume	gallons
_____feet		5 X One Well Volume	gallons

Cumulative Volume Purged (gallons)	Time (Military)	Conductivity (mS or µS) Circle One	DO mg/L	pH	ORP (mV)	Turbidity (NTU)
-Began Purging at 350 RPM with Peri Pump at 10:23 Ended Purge at 10:35 when well ran dry. Removed approx. 2.25 gallons of ground water. DTW prior to Purge unknown as water level meter is not sounding at water surface.						
					Gradually	
-Water began to purge as very silty, but ↑ cleared as Purging Continued						

Total Vol. Removed: 2.25 Gallons (√) ___Meters Calibrated (√) ___Min. 3 Well Vol. Purged

Well Condition: New	Comments:
Well Plug (y/n) _____	*Slight sheen noticed in Purge water
Well Lock (y/n) _____	
Condition of Flush Mount/Stickup: New	

Sampling Personnel Signature [signature] Date 07/13/17

OBSERVATIONS AND REMARKS

Project Name/Description: 100 Rivers Street	STONE ENVIRONMENTAL 535 Stone Cutters Way / Montpelier / VT / 05602 / USA 802.229.4541 / info@stone-env.com / www.stone-env.com
SEI Project #: 16093	Client/Sponsor: 100 Rivers Street

0930 BD & DC on-Site to complete GW monitoring & PCB Air monitoring

0945 DC Calibrates equipement & BD completes GW Survey

well ID	DTW	DTB
MW-16	7.8'	10.1'
MW-15	9.50'	20.1'
GMW-10	9.8'	13.15'
MW-6	6.85'	14.1'
MW-12	9.05'	12.5'
MW-14	4.30'	8.0'

1020 BD & DC begin to ~~Collect~~ Purge GW wells GMW-10 & MW-16

* @ ~ 1010 a car (white Bmw) hit buckets & the pump @GMW-10. Only damage sustained was to the pump (big dent)

1230 DC continues to Sample GW, BD begins to deploy PCB PuF Samplers
↳ Samplers are SKC-224 personal air pumps attached to PUF Cartridges
*All flows were checked/Calibrated using the Defender 510-M
↳ All pumps were connected to Chargers to ensure the pumps lasted 24-hrs

1300 Pump Placed in room 1 has metal cutting taking place ~ 75 feet from intake

Dup taken @ Part G

Signed: BDL Date: 07/27/17

Page: 1 of 2

5 squares = 1 inch

OBSERVATIONS AND REMARKS

Project Name/Description:	STONE ENVIRONMENTAL 535 Stone Cutters Way / Montpelier / VT / 05602 / USA 802.229.4541 / info@stone-env.com / www.stone-env.com
SEI Project #:	Client/Sponsor:

Location	Description
Room 1	On Concrete ~ 30 feet from entrance
Part G	One eastern window sill across from the pharmacy
Ambient	Outside the Door/loading dock on northend of Building in alley way
Pharmacy	Place by filing cabinet in the back employee work space (not in the store area)
Part L/M/N	Placed in back corner right of Cappity Cakes
Part J	On northeastern wall closest to Part 'B' on an electrical box
Part B	By the front entrance door along pearl street
Part C	Placed in semi finished portion along southwestern wall ~150' from entrance

07/28/17

All pumps lasted 24-hrs w/ exception of Ambient pump. This pump lasted 1,139 minutes prior to shutting off (as shown by recording on pump).

↳ Ambient sample collected for ~19-hours

- Samples for PCB Air monitoring & GW Sampling were shipped on 07/28/17

Signed: [signature] Date: 07/28/17

5 squares = 1 inch

STONE ENVIRONMENTAL INC

MONITORING WELL SAMPLING FORM

Project Name:	100 River Street	Comments:
SEI Project Number:	~~16-101~~ 16-093	
Client:	100 River Street	
Project Manager:	Bette Nowack	

WELL ID	GMW-1D		Equipment ID / SN
Sample Date	07/27/16	Pump:	SET #13
SOP/SSP #'s Followed	SEI SOP 6.34.1	Water Level Indicator:	1036
Sampling Method	Bladder Pump ___ Peri Pump ✓ Impeller Pump__ Bailer Other	Water Quality Sonde:	5336
Sampling Personnel	B. Wetzel	Turbidity Meter:	5117
Weather	70's & cloudy	Other:	

Calculate Purge Volumes

Time of water level measurement (military): 1030 Depth of Pump/Intake: 12.0 feet Measuring Point Description: Well Screen Length: 10'

Total Well Depth (btoc)	Depth to Water (btoc)	Height of Water Column		One Well Volume
13.15 feet	9.8 feet	= 3.25 feet	X 0.155 liters/feet (1-inch well) X 0.347 liters/feet (1.5-inch well) X 0.617 liters/feet (2-inch well)	= 1.13 liters

Time purging began (military):	1035	3 X One Well Volume	3.38 liters
Time purging ended (military):	1105	5 X One Well Volume	5.65 liters

Water Level (ft btoc)	Cumulative Vol. Purged (mL)	Time (Military)	Flow Rate (mL/min)	Temp (°C) (± 3%)	ORP (mV) (± 10 mV)	pH (su) (± 0.1 su)	DO (mg/L) (± 10% or 3 consecutive readings < 0.5 mg/L))	Conductivity (µS) (± 3%)	Turbidity (NTU) (± 10% or 3 consecutive readings <5 NTU)
10.1	1000	1030	200	14.5	-6.5	6.33	0.78	6889	206
10.24	2000	1035	200	14.6	-36.0	6.30	0.50	6949	100.1
10.26	3000	1040	200	14.4	-70.8	6.40	0.32	6990	56.6
10.32	4000	1045	200	14.4	-99.9	6.48	0.26	6910	19.4
10.33	5000	1050	200	14.5	-118.9	6.50	0.25	6895	9.84
10.35	6000	1055	200	14.4	-130.0	6.51	0.23	6860	7.63
10.38	7000	1100	200	14.4	-138.8	6.55	0.23	6807	6.71
10.40	8000	1105	200	14.4	-138.7	6.56	0.22	6776	6.43

Total Vol. Removed: 8 Liters (√) ✓ Meters Calibrated (√) ✓ Min. 3 Well Vol. Purged (√) ✓ Parameters Stable for 3 consecutive measurements

Sample Identification	Time Collected (Military)	Container)	Sampled By (Initials)	Preservation	Analysis	Additional Comments
GMW-1D	1108	2x1L Amber		—	PCB's	
GMW-1D-Dup	1110	2x1L Amber		—	PCB's	

Sampling Personnel Signature BWL Date 07/27/17

STONE ENVIRONMENTAL INC

MONITORING WELL SAMPLING FORM

Project Name:	100 Rivers Street	Comments:
SEI Project Number:	16-093	
Client:	100 River Street	
Project Manager:	Bette Newman	

WELL ID	MW-6		Equipment ID / SN
Sample Date	07/27/17	Pump:	SEI #3
SOP/SSP #'s Followed	SEI SOP 6.34.1	Water Level Indicator:	1236
Sampling Method	Bladder Pump ___ Peri Pump ✓ Impeller Pump__ Bailer Other	Water Quality Sonde:	5326
Sampling Personnel	B. Nickel	Turbidity Meter:	5117
Weather	70's Cloudy	Other:	

Calculate Purge Volumes

Time of water level measurement (military): 1114 Depth of Pump/Intake: 13 feet Measuring Point Description: Well Screen Length: 10'

Total Well Depth (btoc)	Depth to Water (btoc)	Height of Water Column		One Well Volume
14.1 feet	6.85 feet	= 7.25 feet	X 0.155 liters/feet (1-inch well) X 0.347 liters/feet (1.5-inch well) X 0.617 liters/feet (2-inch well)	= 2.52 liters

Time purging began (military):	1135	3 X One Well Volume	7.54 liters
Time purging ended (military):	1205	5 X One Well Volume	12.6 liters

Water Level (ft btoc)	Cumulative Vol. Purged (mL)	Time (Military)	Flow Rate (mL/min)	Temp (°C) (± 3%)	ORP (mV) (± 10 mV)	pH (su) (± 0.1 su)	DO (mg/L) (± 10% or 3 consecutive readings < 0.5 mg/L))	Conductivity (µS) (± 3%)	Turbidity (NTU) (± 10% or 3 consecutive readings <5 NTU)
6.86	~~4000~~ NA	1140	200	15.2	-174.1	7.39	0.91	4169	22.6
7.00	2250	1145	250	15.4	-188.7	7.32	0.46	4321	7.47
7.07	3250	1150	200	15.5	-193.8	7.32	0.83	4339	6.11
7.08	4500	1155	250	15.5	-201.4	7.33	0.85	4327	6.01
7.11	5500	1200	200	15.5	-204.2	7.33	0.81	4331	5.91
7.14	6500	1205	200	15.5	-208.7	7.34	0.18	4336	5.72

Total Vol. Removed: 6.5 Liters (√) ✓ Meters Calibrated (√) ✓ Min. 3 Well Vol. Purged (√) ✓ Parameters Stable for 3 consecutive measurements

Sample Identification	Time Collected (Military)	Container)	Sampled By (Initials)	Preservation	Analysis	Additional Comments
MW-6	1205	3 x 40ml VOA		HCl	VOCs	
MW-6-Dup	1207	3 x 40ml VOA		HCl	VOCs	

Sampling Personnel Signature _____ Date 07/27/17

STONE ENVIRONMENTAL INC

MONITORING WELL SAMPLING FORM

Project Name:	100 River St.
SEI Project Number:	16-093
Client:	100 River St Corp
Project Manager:	BN

Comments:

WELL ID	MW-12		Equipment ID / SN
Sample Date	7/27/17	Pump:	SEI 4
SOP/SSP #'s Followed	SEI SOP 6.34.1	Water Level Indicator:	218
Sampling Method	Bladder Pump ___ Peri Pump X Impeller Pump__ Bailer Other	Water Quality Sonde:	5110
Sampling Personnel	DTC	Turbidity Meter:	4191
Weather	60s, overcast	Other:	

Calculate Purge Volumes

Time of water level measurement (military): 12:35 Depth of Pump/Intake: 11.0 feet Measuring Point Description: TOC Well Screen Length: 5'

Total Well Depth (btoc)	Depth to Water (btoc)	Height of Water Column		One Well Volume
12.50 feet	9.05 feet	= 3.45 feet	(X) 0.155 liters/feet (1-inch well) X 0.347 liters/feet (1.5-inch well) X 0.617 liters/feet (2-inch well)	= 0.53 liters

Time purging began (military):	12:42	3 X One Well Volume	1.59 liters
Time purging ended (military):	13:13	5 X One Well Volume	2.65 liters

Water Level (ft btoc)	Cumulative Vol. Purged (mL)	Time (Military)	Flow Rate (mL/min)	Temp (°C) (± 3%)	ORP (mV) (± 10 mV)	pH (su) (± 0.1 su)	DO (mg/L) (± 10% or 3 consecutive readings < 0.5 mg/L))	Conductivity (µS) (± 3%)	Turbidity (NTU) (± 10% or 3 consecutive readings <5 NTU)
9.53	500	12:47	100	17.3	-91.6	7.13	0.50	2235	56.1
9.55	1000	12:52	100	17.1	-99.0	7.11	0.33	2267	36.5
9.56	1600	12:57	120	17.1	-101.6	7.11	0.30	2291	28.7
9.52	2100	13:02	100	17.1	-103.2	7.10	0.27	2300	25.7
9.55	2700	13:07	120	17.2	-104.5	7.10	0.28	2310	25.4
9.56	3300	13:12	100	17.2	-103.9	7.10	0.27	2314	24.2

Total Vol. Removed: 3.5 Liters (√) √ Meters Calibrated (√) √ Min. 3 Well Vol. Purged (√) ___ Parameters Stable for 3 consecutive measurements

Sample Identification	Time Collected (Military)	Container)	Sampled By (Initials)	Preservation	Analysis	Additional Comments
MW-12	13:15	3x VOA	DTC	HCl	8260	

Sampling Personnel Signature Daniel J. Cuni Date 7/27/17

STONE ENVIRONMENTAL INC

MONITORING WELL SAMPLING FORM

Project Name:	100 River St.
SEI Project Number:	16-093
Client:	100 River St. Corp
Project Manager:	BN

Comments:

			Equipment ID / SN
WELL ID	MW-14		
Sample Date	7/27/17	Pump:	SEI4
SOP/SSP #'s Followed	SEI SOP 6.34.1	Water Level Indicator:	218
Sampling Method	Bladder Pump ___ Peri Pump X Impeller Pump__ Bailer Other	Water Quality Sonde:	5110
Sampling Personnel	DTC	Turbidity Meter:	4191
Weather	60s, raining	Other:	

Calculate Purge Volumes

Time of water level measurement (military): 13:35 Depth of Pump/Intake: 7.0 feet Measuring Point Description: TOC Well Screen Length: 5'

Total Well Depth (btoc): 8.0 feet − Depth to Water (btoc): 4.30 feet = Height of Water Column: 3.7 feet

(X) 0.155 liters/feet (1-inch well)
X 0.347 liters/feet (1.5-inch well)
X 0.617 liters/feet (2-inch well)

= One Well Volume: 0.57 liters

Time purging began (military):	13:38	3 X One Well Volume	1.71 liters
Time purging ended (military):	~~13:35~~ DTC 14:09	5 X One Well Volume	2.85 liters

Water Level (ft btoc)	Cumulative Vol. Purged (mL)	Time (Military)	Flow Rate (mL/min)	Temp (°C) (± 3%)	ORP (mV) (± 10 mV)	pH (su) (± 0.1 su)	DO (mg/L) (± 10% or 3 consecutive readings < 0.5 mg/L))	Conductivity (µS) (± 3%)	Turbidity (NTU) (± 10% or 3 consecutive readings <5 NTU)
6.30	500	13:42	100	17.9	44.3	7.41	4.20	2070	122
6.30	1100	13:47	120	17.4	47.0	7.47	4.99	2099	65.5
6.20	1700	13:52	120	17.3	50.7	7.53	4.98	2122	31.1
6.20	2300	13:57	120	17.3	53.3	7.53	4.96	2121	25.5
6.25	3000	14:02	140	17.2	56.2	7.53	4.98	2119	24.7
6.25	3700	14:07	140	17.2	57.9	7.54	4.99	2119	23.5

Total Vol. Removed: 4.0 Liters (√) ✓ Meters Calibrated (√) ✓ Min. 3 Well Vol. Purged (√) ___ Parameters Stable for 3 consecutive measurements

Sample Identification	Time Collected (Military)	Container)	Sampled By (Initials)	Preservation	Analysis	Additional Comments
MW-14	14:10	3x VOA	DTC	HCl	8260	

Sampling Personnel Signature Daniel T. [signature] Date 7/27/17

STONE ENVIRONMENTAL INC

MONITORING WELL SAMPLING FORM

Project Name:	100 River St.
SEI Project Number:	16-093
Client:	100 River St Corp
Project Manager:	BN

Comments: Purged 200 ml of sediment heavy water before running through flow-cell

WELL ID	MW-15		Equipment ID / SN
Sample Date	7/27/17	Pump:	SEI 4
SOP/SSP #'s Followed	SEI SOP 6.34.1	Water Level Indicator:	218
Sampling Method	Bladder Pump ____ Peri Pump ✓ Impeller Pump__ Bailer Other	Water Quality Sonde:	5110
Sampling Personnel	DTC	Turbidity Meter:	4191
Weather	60s, overcast	Other:	

Calculate Purge Volumes

Time of water level measurement (military): 10:48 Depth of Pump/Intake: 16.0 feet Measuring Point Description: TOC Well Screen Length: 5'

Total Well Depth (btoc)		Depth to Water (btoc)		Height of Water Column		One Well Volume
18.05 feet	-	7.67 feet	=	10.38 feet	X 0.155 liters/feet (1-inch well) X 0.347 liters/feet (1.5-inch well) X 0.617 liters/feet (2-inch well)	DTC = ~~6.4~~ 3.6 liters

Time purging began (military):	10:50	3 X One Well Volume	DTC ~~19.2~~ 10.8 liters
Time purging ended (military):	11:35	5 X One Well Volume	DTC ~~32~~ 18 liters

Water Level (ft btoc)	Cumulative Vol. Purged (mL)	Time (Military)	Flow Rate (mL/min)	Temp (°C) (± 3%)	ORP (mV) (± 10 mV)	pH (su) (± 0.1 su)	DO (mg/L) (± 10% or 3 consecutive readings < 0.5 mg/L))	Conductivity (µS) (± 3%)	Turbidity (NTU) (± 10% or 3 consecutive readings <5 NTU)
DTC ~~8.08~~ 8.37	300	10:55	60	15.2	1.3	6.35	0.63	7164	54.5
8.67	800	11:00	100	14.9	-4.1	6.37	0.62	7567	64.2
8.97	1300	11:05	100	14.8	-7.7	6.39	0.47	7543	57.1
9.26	2000	11:10	140	14.9	-7.6	6.39	0.45	7844	71.9
9.35	2700	11:15	140	15.0	-9.1	6.39	0.47	8168	65.5
9.47	3500	11:20	160	14.9	-8.3	6.39	0.44	8374	68.3
9.57	4200	11:25	140	15.0	-9.8	6.40	0.39	8475	52.4
9.77	4900	11:30	140	14.7	-8.1	6.40	0.36	8521	57.4
	5800	11:35	180	14.8	-9.2	6.40	0.35	8634	53.1

Total Vol. Removed: 6 Liters (√) ✓ Meters Calibrated (√) ___ Min. 3 Well Vol. Purged (√) ✓ Parameters Stable for 3 consecutive measurements

Sample Identification	Time Collected (Military)	Container)	Sampled By (Initials)	Preservation	Analysis	Additional Comments
MW-15	11:40	2x 1L	DTC	None	PCBs	

Sampling Personnel Signature Daniel T. Cue Date 7/27/17

STONE ENVIRONMENTAL INC

MONITORING WELL SAMPLING FORM

Project Name:	100 River St.
SEI Project Number:	~~16-101~~ 16-093
Client:	100 River St Corp
Project Manager:	BN

Comments: well ran dry @ 10:37 after removing 1.5L, let recharge until 11:53 and attempted to collect gas sample, well ran dry @ 12:00 after collecting 2.0L, let recharge and BD collected 2nd 1L amber @ 14:45

WELL ID	MW-16		Equipment ID / SN
Sample Date	~~7/28/17~~ 7/27/17	Pump:	SEI 1
SOP/SSP #'s Followed	SEI SOP 6.34.1	Water Level Indicator:	218
Sampling Method	Bladder Pump ___ Peri Pump X Impeller Pump__ Bailer Other	Water Quality Sonde:	5110
Sampling Personnel	DTC	Turbidity Meter:	4191
Weather	60s, overcast	Other:	

Calculate Purge Volumes

Time of water level measurement (military): 10:20 Depth of Pump/Intake: 9.0 feet Measuring Point Description: TOC Well Screen Length: 5'

Total Well Depth (btoc)	Depth to Water (btoc)	Height of Water Column		One Well Volume
100 feet	7.87 feet	= 2.13 feet	X 0.155 liters/feet (1-inch well) (X) 0.347 liters/feet (1.5-inch well) X 0.617 liters/feet (2-inch well)	= 0.74 liters

Time purging began (military): 10:23	3 X One Well Volume	2.22	liters
Time purging ended (military):	5 X One Well Volume	3.7	liters

Water Level (ft btoc)	Cumulative Vol. Purged (mL)	Time (Military)	Flow Rate (mL/min)	Temp (°C) (± 3%)	ORP (mV) (± 10 mV)	pH (su) (± 0.1 su)	DO (mg/L) (± 10% or 3 consecutive readings < 0.5 mg/L)	Specific Conductivity (µS) (± 3%)	Turbidity (NTU) (± 10% or 3 consecutive readings <5 NTU)
9.19	600	10:28	120	14.3	108.3	6.45	5.20	2154	11.1
9.85	1300	10:33	140	14.3	101.2	6.52	4.40	2178	11.7
~	well dry	at 10:37	after	removing	1550 mL				

Total Vol. Removed: 1.5 Liters (√) ✓ Meters Calibrated (√) ___Min. 3 Well Vol. Purged (√) ___Parameters Stable for 3 consecutive measurements

Sample Identification	Time Collected (Military)	Container)	Sampled By (Initials)	Preservation	Analysis	Additional Comments
MW-16	12:00	1x 1L	DTC	None	PCBs	
MW-16	14:45	1x 1L	BD	none	PCBs	

Sampling Personnel Signature Daniel S. Cummings Date 7/27/17

1.03

OBSERVATIONS AND REMARKS

Project Name/Description: 100 Rives Street Calibration Form

STONE ENVIRONMENTAL
535 Stone Cutters Way / Montpelier / VT / 05602 / USA
802.229.4541 / info@stone-env.com / www.stone-env.com

SEI Project #: 16-093

Client/Sponsor: 100 Rives Street

Begin Calibration @ 09:45

YSI Pro + #5326	Reading	cal'd?	EoD Cal check
• pH (4)	4.28	Yes	
• pH (7)	6.38	Yes	
• Conductivity (1413 µs/cm) 12SI 615	1156	Yes	
• ORP (223)	280	Yes	
• DO (%)	99.8	No	

YSI Pro + #5110			
• pH (4)	4.24	Yes	
• pH (7)	6.93	Yes	
• Conductivity (1413 µs/cm) 12SI	716	Yes	
• ORP (223 mV)	227.7	No	
• DO (%)	97.2	No	

Hach 2100 Q #5117 4191 BIC			
• Turb (<68)	5.72	No	
• Turb (<4.3)	57.8	No	
• Turb (<.65)	7.07	No	

Hach 2100 Q #4441 5117 BIC			
• Turb (<50)	567	No	
• Turb (<4.7)	60.5	No	
• Turb (<.64)	6.17	No	

Signed: _____ Date: _____

Page: ____ of ____

5 squares = 1 inch

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: 16-093 DATE(S) SAMPLED: 07/27/17 - 07/28/17
SITE: 100 Rivers Street TIME PERIOD SAMPLED: 24-hr
LOCATION: Springfield OPERATOR: RMN
INSTRUMENT MODEL NO.: SKC-224 CALIBRATED BY: RMN
PUMP SERIAL NO.: ~~738~~ (8D) 7777 (17987 RAIN: X YES _____ NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	PUF	PUF		
Adsorbent:	PUF	PUF		
Serial No.:	(06)	(09)		
Sample No.:	Part G	Part G-Dup		

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., •F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
	Part G	~73		2168		1337	1330	1433	3098
	Part G	~72		2085		1337	1330	1433	2988

III. FIELD AUDIT

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Audit Flow Check Within 10% of Set Point (Y/N)?	___	___	___	___
	pre-	pre-	pre-	pre-
	post-	post-	post-	post-

CHECKED BY: BDR

DATE: 07/28/17

Figure 5. Compendium Method TO-10A field test data sheet.

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: 16-093 DATE(S) SAMPLED: 07/27/17 - 07/28/17
SITE: 100 River Street TIME PERIOD SAMPLED: 24-hr
LOCATION: Springfield OPERATOR: BMN
INSTRUMENT MODEL NO.: SKC-224 CALIBRATED BY: BMN
PUMP SERIAL NO.: 013799 RAIN: X YES ____ NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	PUF			
Adsorbent:	PUF			
Serial No.:	(05)			
Sample No.:	Room 1			

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., •F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
	Room1	~73		2000		1849	1313	1467	2934

III. FIELD AUDIT

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Audit Flow Check Within 10% of Set Point (Y/N)?	___	___	___	___
	pre-	pre-	pre-	pre-
	post-	post-	post-	post-

CHECKED BY: BTL

DATE: 07/28/17

Figure 5. Compendium Method TO-10A field test data sheet.

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: 16-093 DATE(S) SAMPLED: 07/27/17 - 07/28/17
SITE: 100 River Street TIME PERIOD SAMPLED: 24-hr
LOCATION: Spring Field OPERATOR: BMN
INSTRUMENT MODEL NO.: SKC-224 CALIBRATED BY: BMN
PUMP SERIAL NO.: 133803 RAIN: X YES ____ NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	PuF			
Adsorbent:	PuF			
Serial No.:	(02)			
Sample No.:	Ambient			

II. SAMPLING DATA * Pump shut-off when sample checked @ 1230 on 07/28/17. Run time was 1139 min

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
	Ambient	~73		2340		1410	0909	1139	2665

III. FIELD AUDIT

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Audit Flow Check Within 10% of Set Point (Y/N)?	___	___	___	___
	pre-	pre-	pre-	pre-
	post-	post-	post-	post-

CHECKED BY: BDL

DATE: 07/28/17

Figure 5. Compendium Method TO-10A field test data sheet.

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: 16-093 DATE(S) SAMPLED: 07/27/17 - 07/28/17
SITE: 100 River Street TIME PERIOD SAMPLED: 24-hr
LOCATION: Springfield OPERATOR: RMD
INSTRUMENT MODEL NO.: SKC-224 CALIBRATED BY: RMD
PUMP SERIAL NO.: 13860 RAIN: X YES ____ NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	PuF			
Adsorbent:	PuF			
Serial No.:	(04)			
Sample No.:	Pharmacy			

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., •F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
	Pharmacy	~73		2114		1330	1328	1438	3040

III. FIELD AUDIT

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Audit Flow Check Within 10% of Set Point (Y/N)?	___	____	_____	_____
	pre- _____ post-	pre- _____ post-	pre- _____ post-	pre- _____ post-

CHECKED BY: [signature]

DATE: 07/28/17

Figure 5. Compendium Method TO-10A field test data sheet.

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: 16-093 DATE(S) SAMPLED: 07/27/17 - 07/28/17
SITE: 100 River Street TIME PERIOD SAMPLED: 24-hr
LOCATION: Springfield OPERATOR: RMD
INSTRUMENT MODEL NO.: SKC-224 CALIBRATED BY: RMD
PUMP SERIAL NO.: 13514 RAIN: X YES ____ NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	PUF			
Adsorbent:	PUF			
Serial No.:	(03)			
Sample No.:	Part LMW			

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
	Part LMW	~73		~~1342~~ 2180		1342	1948	1446	3138

III. FIELD AUDIT

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Audit Flow Check Within 10% of Set Point (Y/N)?	pre- ____ post-	pre- ____ post-	pre- ____ post-	pre- ____ post-

CHECKED BY: BDL

DATE: 07/28/17

Figure 5. Compendium Method TO-10A field test data sheet.

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: 160093 DATE(S) SAMPLED: 07/27/17 - 07/28/17
SITE: 100 River Street TIME PERIOD SAMPLED: 24-hr
LOCATION: Springfield OPERATOR: RMN
INSTRUMENT MODEL NO.: SKC-224 CALIBRATED BY: RMN
PUMP SERIAL NO.: ~~13514~~ 12823 (10) RAIN: X YES ____ NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	PuF			
Adsorbent:	PuF			
Serial No.:	(08)			
Sample No.:	Part J			

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., •F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
	Part J	~73		2190		1348	1343	1435	3143

III. FIELD AUDIT

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Audit Flow Check Within 10% of Set Point (Y/N)?	___ pre- ____ post-	____ pre- ____ post-	____ pre- ____ post-	____ pre- ____ post-

CHECKED BY: BDL

DATE: 07/28/17

Figure 5. Compendium Method TO-10A field test data sheet.

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: 16-093 DATE(S) SAMPLED: 07/27/17 -07/28/17
SITE: 100 River Street TIME PERIOD SAMPLED: 24-hr
LOCATION: Springfield OPERATOR: RMD
INSTRUMENT MODEL NO.: SKC-224 CALIBRATED BY: RMD
PUMP SERIAL NO.: 13803 RAIN: X YES _____NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	PUF			
Adsorbent:	PUF			
Serial No.:	(10)			
Sample No.:	Part B			

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., •F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
	Part B	~73		2142		1430	1410	1420	3042

III. FIELD AUDIT

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Audit Flow Check Within 10% of Set Point (Y/N)?	___	___	___	___
	pre-	pre-	pre-	pre-
	post-	post-	post-	post-

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: 16-093 DATE(S) SAMPLED: 07/27/17 - 07/28/17
SITE: 100 River Street TIME PERIOD SAMPLED: 24-hr
LOCATION: Springfield OPERATOR: RMN
INSTRUMENT MODEL NO.: SKC-224 CALIBRATED BY: RMN
PUMP SERIAL NO.: 013450 RAIN: X YES ____ NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	PUF			
Adsorbent:	PUF			
Serial No.:	(01)			
Sample No.:	Part C			

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
	Part C	~73		2051		1303	1316	1456	2986

III. FIELD AUDIT

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Audit Flow Check Within 10% of Set Point (Y/N)?	___	___	___	___
	pre-	pre-	pre-	pre-
	post-	post-	post-	post-

CHECKED BY: [signature]

DATE: 07/28/17

Figure 5. Compendium Method TO-10A field test data sheet.

OBSERVATIONS AND REMARKS

Project Name/Description: 100 River Street	STONE ENVIRONMENTAL 535 Stone Cutters Way / Montpelier / VT / 05602 / USA 802.229.4541 / info@stone-env.com / www.stone-env.com
SEI Project #: 16-093	Client/Sponsor: 100 River Street

1330 BD onsite for SSD system monitoring.

Spoke to Ted & who installed pressure gauges in SSD header/manifold room.
Ted had zeroed gauges to 4.0 inches of water

BD re zeroed gauges to "0". Pin valves connected to pressure gauges are now 100% open. BD told Ted, if flow needs to be changed, to only use the big red ball valves

System Leg	Flow Rate (CFM)	Sealed Vaccum
4	63.54	-0.95" of water
5	31.44	-1.0" of water
6	59.63	-1.0" of water
7	54.13	-1.05" of water
8	21.4	-0.95" of water
8E (all legs)	227.24	-1.1" of water

*Flow rates taken from pin valve holes (right next to elbows)

Monitoring Point	Measured Vaccum
4A	-0.23" of water
4B	-0.24" of water
4C	-0.23" of water
5A	-0.06" of water
6A	-0.104" of water
6C	-0.038" of water
8A	-0.29" of water
8B	-0.31" of water
8C	-0.27" of water
8D	-0.28" of water

Signed: BDL Date: 08/04/17

Page: 1 of 2

5 squares = 1 inch

OBSERVATIONS AND REMARKS

Project Name/Description: 100 River Street	STONE ENVIRONMENTAL 535 Stone Cutters Way / Montpelier / VT / 05602 / USA 802.229.4541 / info@stone-env.com / www.stone-env.com
SEI Project #: 16-093	Client/Sponsor: 100 Rivers Street

* System leg 4 & 7 reduced by closing ball valve 25% to better balance flow rates

System leg	Applied vacuum
4	-0.8" of water
5	-1.0" of water
6	-1.05" of water
7	-1.05" of water
8	-1.05" of water

BPD

Signed: BPD Date: 08/04/17

5 squares = 1 inch

Appendix C: Analytical Summary Tables

Table B-1
Indoor Air VOLATILE ORGANIC COMPOUNDS Sample Analytical Results

Sample ID	VISV Indoor Air ()		AA-1		IA-1		IA-1 DUP		IA-2		Effluent	
Sample Date	CAS#		5/25/2017	Q	5/25/2017	Q	5/25/2017	Q	5/25/2017	Q	5/25/2017	Q
		(µg/m³)	(µg/m³)		(µg/m³)		(µg/m³)		(µg/m³)		(µg/m³)	
1,1,1-Trichloroethane	71-55-6	1000	0.19	U	0.19	U	0.19	U	0.19	U	1.1	U
1,1,2,2-Tetrachloroethane	79-34-5	0.018	0.24	U	0.24	U	0.24	U	0.24	U	1.4	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	76-13-1	30000	1.1	U	1.1	U	1.1	U	1.1	U	6.1	U
1,1,2-Trichloroethane	79-00-5	0.063	0.19	U	0.19	U	0.19	U	0.19	U	1.1	U
1,1-Dichloroethane	75-34-3	50	0.14	U	0.14	U	0.14	U	0.14	U	**1.5**	
1,1-Dichloroethylene	75-35-4	20	0.14	U	0.14	U	0.14	U	0.14	U	0.79	U
1,2,4-Trichlorobenzene	120-82-1	NE	0.26	U	0.26	U	0.26	U	0.26	U	1.5	U
1,2,4-Trimethylbenzene	95-63-6	NE	**0.31**		0.17	U	0.17	U	0.17	U	0.98	U
1,2-Dibromoethane (EDB)	106-93-4	0.0045	0.27	U	0.27	U	0.27	U	0.27	U	1.5	U
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	76-14-2	NE	0.25	U	0.25	U	0.25	U	0.25	U	1.4	U
1,2-Dichlorobenzene	95-50-1	200	0.21	U	0.21	U	0.21	U	0.21	U	1.2	U
1,2-Dichloroethane	107-06-2	0.038	0.14	U	***0.16***		***0.16***		0.14	U	0.81	U
1,2-Dichloropropane	78-87-5	NE	0.16	U	0.16	U	0.16	U	0.16	U	**1**	
1,3,5-Trimethylbenzene	108-67-8	NE	0.17	U	0.17	U	0.17	U	0.17	U	0.98	U
1,3-Butadiene	106-99-0	0.033	0.078	U	0.078	U	0.078	U	0.078	U	0.44	U
1,3-Dichlorobenzene	541-73-1	NE	0.21	U	0.21	U	0.21	U	0.21	U	**3.5**	
1,4-Dichlorobenzene	106-46-7	NE	0.21	U	0.21	U	0.21	U	0.21	U	1.2	U
1,4-Dioxane	123-91-1	0.32	1.3	U	1.3	U	1.3	U	1.3	U	7.2	U
2-Butanone (MEK)	78-93-3	5000	4.1	U	4.1	U	4.1	U	4.1	U	24	U
2-Hexanone (MBK)	591-78-6	NE	**0.41**		**0.53**		**0.27**		**0.22**		**1.2**	
4-Ethyltoluene	622-96-8	NE	0.17	U	0.17	U	0.17	U	0.17	U	0.98	U
4-Methyl-2-pentanone (MIBK)	108-10-1	NE	0.14	U	0.14	U	0.14	U	0.14	U	**1.9**	
Acetone	67-64-1	315	**44**		**42**		**37**		**23**		**76**	
Benzene	71-43-2	1.18	**0.2**		**0.3**		**0.3**		**0.26**		***1.4***	
Benzyl chloride	100-44-7	NE	0.18	U	0.18	U	0.18	U	0.18	U	1	U
Bromodichloromethane	75-27-4	0.056	0.24	U	0.24	U	0.24	U	0.24	U	1.3	U
Bromoform	75-25-2	0.9	0.36	U	0.36	U	0.36	U	0.36	U	2.1	U
Bromomethane	74-83-9	5	0.14	U	0.14	U	0.14	U	0.14	U	0.78	U
Carbon Disulfide	75-15-0	657	1.1	U	1.1	U	1.1	U	1.1	U	6.2	U
Carbon Tetrachloride	56-23-5	0.41	***0.44***		***0.43***		***0.44***		***0.43***		1.3	U
Chlorobenzene	108-90-7	2	0.16	U	0.16	U	0.16	U	0.16	U	0.92	U
Chloroethane	75-00-3	NE	0.093	U	0.093	U	0.093	U	0.093	U	0.53	U
Chloroform	67-66-3	0.38	**0.35**		**0.23**		**0.28**		**0.25**		***3.4***	
Chloromethane	74-87-3	90	**1.1**		**1.3**		**1.4**		**1.2**		0.83	U
cis-1,2-Dichloroethylene	156-59-2	NE	0.14	U	0.14	U	0.14	U	0.14	U	**14**	
cis-1,3-Dichloropropene	10061-01-5	NE	0.16	U	0.16	U	0.16	U	0.16	U	0.91	U
Cyclohexane	110-82-7	82	0.12	U	**0.44**		**0.44**		0.12	U	0.69	U
Dibromochloromethane	124-48-1	0.042	0.3	U	0.3	U	0.3	U	0.3	U	1.7	U
Dichlorodifluoromethane (Freon 12)	75-71-8	200	**0.9**		**0.86**		**0.85**		**0.88**		0.99	U
Ethanol	64-17-5	NE	**7.5**		**320**		**330**		**170**		**130**	
Ethyl Acetate	141-78-6	NE	**2.2**		**3.2**		**2.8**		**6.9**		**18**	
Ethylbenzene	100-41-4	100	**0.48**		0.15	U	0.15	U	0.15	U	**1.1**	

Heptane	142-82-5	NE	0.14	U	**0.16**		**0.14**		0.14	U	**2**	
Hexachlorobutadiene	87-68-3	0.045	0.37	U	0.37	U	0.37	U	0.37	U	2.1	U
Hexane	110-54-3	7000	4.9	U	4.9	U	4.9	U	4.9	U	28	U
Isopropanol	67-63-0	NE	3.4	U	**160**		**170**		**76**		**340**	
m&p-Xylene	1330-20-7P/M	NE	**1.8**		**0.36**		**0.36**		**0.35**		**4.1**	
Methyl tert-Butyl Ether (MTBE)	1634-04-4	NE	0.13	U	0.13	U	0.13	U	0.13	U	0.72	U
Methylene Chloride	75-09-2	2.1	1.2	U	1.2	U	1.2	U	1.2	U	6.9	U
Naphthalene	91-20-3	0.3	0.18	U	0.18	U	**0.22**		0.18	U	1	U
o-Xylene	95-47-6	100	**0.59**		0.15	U	**0.16**		0.15	U	**2**	
Propene	115-07-1	NE	2.4	U	2.4	U	2.4	U	2.4	U	14	U
Styrene	100-42-5	100	0.15	U	**0.18**		**0.2**		**0.17**		**0.95**	
Tetrachloroethylene	127-18-4	0.57	0.24	U	0.24	U	0.24	U	0.24	U	***1.4***	
Tetrahydrofuran	109-99-9	NE	**0.43**		**0.25**		**0.34**		**0.25**		**43**	
Toluene	108-88-3	300	**12**		**1.2**		**1.2**		**1.4**		**11**	
trans-1,2-Dichloroethylene	156-60-5	NE	0.14	U	**22**		**22**		**9**		**21**	
trans-1,3-Dichloropropene	10061-02-6	NE	0.16	U	0.16	U	0.16	U	0.16	U	0.91	U
Trichloroethylene	79-01-6	0.5	0.19	U	0.19	U	0.19	U	0.19	U	**25**	
Trichlorofluoromethane (Freon 11)	75-69-4	562	**1.5**		**1.5**		**1.5**		**1.6**		4.5	U
Vinyl Acetate	108-05-4	20	2.5	U	2.5	U	2.5	U	2.5	U	14	U
Vinyl Chloride	75-01-4	0.11	0.09	U	0.09	U	0.09	U	0.09	U	0.51	U

Key:
VISV - Vapor Intrusion Screening Values
RSL - US Environmental Protection Agency, Regional Screening Levels for Residential (Res) and Industrial (Ind) settings.
mg/kg - milligrams per kilogram (parts per million)
µg/kg - micrograms per kilogram (parts per billion)
µg/L - micrograms per liter (parts per billion)
Bold results indicate detections of the analyte
Shaded results indicate an exceedence of the enforcement standard(s)
NE - screening level not established
Created by: BMD 09/18/17 QC by: DTV 10/02/17

Table B-2
Groundwater POLYCHLORINATED BIPHENYLS Sample Analytical Results

Sample ID		VGES ()	GMW-1D		GMW-1D Dup		MW-15		MW-16	
Sample Date	CAS#		7/27/2017	Q	7/27/2017	Q	7/27/2017	Q	7/27/2017	Q
		(µg/L)	(µg/L)		(µg/L)		(µg/L)		(µg/L)	
Aroclor-1016	12674-11-2	0.5	0.19	U	0.19	U	0.19	U	0.19	U
Aroclor-1221	11104-28-2	0.5	0.19	U	0.19	U	0.19	U	0.19	U
Aroclor-1232	11141-16-5	0.5	0.19	U	0.19	U	0.19	U	0.19	U
Aroclor-1242	53469-21-9	0.5	0.19	U	0.19	U	0.19	U	0.19	U
Aroclor-1248	12672-29-6	0.5	0.19	U	0.19	U	0.19	U	0.19	U
Aroclor-1254	11097-69-1	0.5	0.19	U	0.19	U	0.19	U	0.19	U
Aroclor-1260	11096-82-5	0.5	0.19	U	0.19	U	0.19	U	0.19	U
Aroclor-1262	37324-23-5	NE	0.19	U	0.19	U	0.19	U	0.19	U
Aroclor-1268	11100-14-4	NE	0.19	U	0.19	U	0.19	U	0.19	U
Total PCBs		0.5	0.19	U	0.19	U	0.19	U	0.19	U

Key:
VDH SSL - VT Department of Health Residential Soil Screening Levels
RSL - US Environmental Protection Agency, Regional Screening Levels for Residential (Res) and Industrial (Ind) settings.
mg/kg - milligrams per kilogram (parts per million)
µg/kg - micrograms per kilogram (parts per billion)
µg/L - micrograms per liter (parts per billion)
Bold results indicate detections of the analyte
Shaded results indicate an exceedence of the enforcement standard(s)
NE - screening level not established
Created by: BMD 09/18/17 QC by: DTV 10/02/17

Table B-3
Groundwater VOLATILE ORGANIC COMPOUNDS Sample Analytical Results

SampleID		VGES ()	MW-12		MW-14		MW-6		MW-6 Dup		Trip Blank	
Sample Date	CAS#		7/27/2017	Q	7/27/2017	Q	7/27/2017	Q	7/27/2017	Q	7/27/2017	Q
		(µg/L)	(µg/L)		(µg/L)		(µg/L)		(µg/L)		(µg/L)	
1,1,1,2-Tetrachloroethane	630-20-6	70	1	U	1	U	1	U	1	U	1	U
1,1,1-Trichloroethane	71-55-6	200	1	U	1	U	1	U	1	U	1	U
1,1,2,2-Tetrachloroethane	79-34-5	NE	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	76-13-1	NE	1	U	1	U	1	U	1	U	1	U
1,1,2-Trichloroethane	79-00-5	5	1	U	1	U	1	U	1	U	1	U
1,1-Dichloroethane	75-34-3	70	1	U	**1.3**		1	U	1	U	1	U
1,1-Dichloroethylene	75-35-4	7	1	U	1	U	1	U	1	U	1	U
1,1-Dichloropropene	563-58-6	NE	2	U	2	U	2	U	2	U	2	U
1,2,3-Trichlorobenzene	87-61-6	NE	5	U	5	U	5	U	5	U	5	U
1,2,3-Trichloropropane	96-18-4	5	2	U	2	U	2	U	2	U	2	U
1,2,4-Trichlorobenzene	120-82-1	70	1	U	1	U	1	U	1	U	1	U
1,2,4-Trimethylbenzene	95-63-6	350	1	U	1	U	1	U	1	U	1	U
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	NE	5	U	5	U	5	U	5	U	5	U
1,2-Dibromoethane (EDB)	106-93-4	NE	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichlorobenzene	95-50-1	600	1	U	1	U	1	U	1	U	1	U
1,2-Dichloroethane	107-06-2	5	1	U	1	U	1	U	1	U	1	U
1,2-Dichloropropane	78-87-5	5	1	U	1	U	1	U	1	U	1	U
1,3,5-Trichlorobenzene	108-70-3	40	1	U	1	U	1	U	1	U	1	U
1,3,5-Trimethylbenzene	108-67-8	350	1	U	1	U	1	U	1	U	1	U
1,3-Dichlorobenzene	541-73-1	600	1	U	1	U	1	U	1	U	1	U
1,3-Dichloropropane	142-28-9	NE	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,4-Dichlorobenzene	106-46-7	75	1	U	1	U	1	U	1	U	1	U
1,4-Dioxane	123-91-1	20	50	U	50	U	100	U	100	U	50	U
2,2-Dichloropropane	594-20-7	NE	1	U	1	U	1	U	1	U	1	U
2-Butanone (MEK)	78-93-3	4200	20	U	20	U	20	U	20	U	20	U
2-Chlorotoluene	95-49-8	100	1	U	1	U	1	U	1	U	1	U
2-Hexanone (MBK)	591-78-6	NE	10	U	10	U	10	U	10	U	10	U
4-Chlorotoluene	106-43-4	100	1	U	1	U	1	U	1	U	1	U
4-Methyl-2-pentanone (MIBK)	108-10-1	560	10	U	10	U	10	U	10	U	10	U
Acetone	67-64-1	700	50	U	50	U	50	U	50	U	50	U
Acrylonitrile	107-13-1	NE	5	U	5	U	5	U	5	U	5	U
Benzene	71-43-2	5	1	U	1	U	1	U	1	U	1	U
Bromobenzene	108-86-1	NE	1	U	1	U	1	U	1	U	1	U
Bromochloromethane	74-97-5	90	1	U	1	U	1	U	1	U	1	U
Bromodichloromethane	75-27-4	80	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromoform	75-25-2	80	1	U	1	U	1	U	1	U	1	U
Bromomethane	74-83-9	10	5	U	5	U	5	U	5	U	5	U
Carbon Disulfide	75-15-0	NE	4	U	4	U	4	U	4	U	4	U
Carbon Tetrachloride	56-23-5	5	5	U	5	U	5	U	5	U	5	U
Chlorobenzene	108-90-7	100	1	U	1	U	1	U	1	U	1	U
Chlorodibromomethane	124-48-1	80	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Chloroethane	75-00-3	NE	2	U	2	U	2	U	2	U	2	U

Chloroform	67-66-3	80	2	U	2	U	2	U	2	U	2	U
Chloromethane	74-87-3	30	2	U	2	U	2	U	2	U	2	U
cis-1,2-Dichloroethylene	156-59-2	70	**5.9**		**2.2**		**8.2**		**10**		1	U
cis-1,3-Dichloropropene	10061-01-5	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Dibromomethane	74-95-3	NE	1	U	1	U	1	U	1	U	1	U
Dichlorodifluoromethane (Freon 12)	75-71-8	1000	2	U	2	U	2	U	2	U	2	U
Diethyl Ether	60-29-7	NE	2	U	2	U	2	U	2	U	2	U
Diisopropyl Ether (DIPE)	108-20-3	NE	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Ethylbenzene	100-41-4	700	1	U	1	U	1	U	1	U	1	U
Hexachlorobutadiene	87-68-3	1	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U
Isopropylbenzene (Cumene)	98-82-8	NE	1	U	1	U	1	U	1	U	1	U
m+p Xylene	108383/106423	NE	2	U	2	U	2	U	2	U	2	U
Methyl Acetate	79-20-9	NE	1	U	1	U	1	U	1	U	1	U
Methyl Cyclohexane	108-87-2	NE	1	U	1	U	1	U	1	U	1	U
Methyl tert-Butyl Ether (MTBE)	1634-04-4	40	1	U	1	U	1	U	1	U	1	U
Methylene Chloride	75-09-2	5	5	U	5	U	5	U	5	U	5	U
Naphthalene	91-20-3	20	2	U	2	U	2	U	2	U	2	U
n-Butylbenzene	104-51-8	NE	1	U	1	U	1	U	1	U	1	U
n-Propylbenzene	103-65-1	NE	1	U	1	U	1	U	1	U	1	U
o-Xylene	95-47-6	10000	1	U	1	U	1	U	1	U	1	U
p-Isopropyltoluene (p-Cymene)	99-87-6	NE	1	U	1	U	1	U	1	U	1	U
sec-Butylbenzene	135-98-8	NE	1	U	1	U	**1.5**		**1.4**		1	U
Styrene	100-42-5	100	1	U	1	U	1	U	1	U	1	U
tert-Amyl Methyl Ether (TAME)	994-05-8	NE	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
tert-Butyl Alcohol (TBA)	75-65-0	NE	20	U	20	U	20	U	20	U	20	U
tert-Butyl Ethyl Ether (TBEE)	637-92-3	NE	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
tert-Butylbenzene	98-06-6	NE	1	U	1	U	1	U	1	U	1	U
Tetrachloroethylene	127-18-4	5	1	U	1	U	1	U	1	U	1	U
Tetrahydrofuran	109-99-9	NE	10	U	10	U	10	U	10	U	10	U
Toluene	108-88-3	1000	1	U	1	U	1	U	1	U	1	U
Total Xylene		10000	1	U	1	U	1	U	1	U	1	U
trans-1,2-Dichloroethylene	156-60-5	100	1	U	1	U	1	U	**1.1**		1	U
trans-1,3-Dichloropropene	10061-02-6	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
trans-1,4-Dichloro-2-butene	110-57-6	NE	2	U	2	U	2	U	2	U	2	U
Trichloroethylene	79-01-6	5	**1.7**		**18**		**4.5**		**4.5**		1	U
Trichlorofluoromethane (Freon 11)	75-69-4	2100	2	U	2	U	2	U	2	U	2	U
Vinyl Chloride	75-01-4	2	**8.1**		2	U	**4.5**		**11**		2	U

Key:
VDH SSL - VT Department of Health Residential Soil Screening Levels
RSL - US Environmental Protection Agency, Regional Screening Levels for Residential (Res) and Industrial (Ind) settings.
mg/kg - milligrams per kilogram (parts per million)
µg/kg - micrograms per kilogram (parts per billion)
µg/L - micrograms per liter (parts per billion)
Bold results indicate detections of the analyte
Shaded results indicate an exceedence of the enforcement standard(s)
NE - screening level not established
Created by: BMD 09/18/17 QC by: DTV 10/02/17

Table B-4
Indoor Air POLYCHLORINATED BIPHENYLS Sample Analytical Results

Sample ID		Non-occupied Indoor	Occupied Indoor	Ambient		Part B		Part C		Part G		Part G Dup	
Sample Date	CAS#	Air Action Level	Air Action Level	7/28/2017	Q	7/28/2017	Q	7/28/2017	Q	7/28/2017	Q	7/28/2017	Q
		(µg/m3)	(µg/m3)										
Decachlorobiphenyl	2051-24-3	NE	NE	0.0019	U	0.0016	U	0.0017	U	0.0016	U	0.0017	U
Dichlorobiphenyls	25512-42-9	NE	NE	0.00038	U	0.00033	U	**0.0019**		0.00032	U	0.00034	U
Heptachlorobiphenyls	28655-71-2	NE	NE	0.0011	U	0.00099	U	0.001	U	0.00097	U	0.001	U
Hexachlorobiphenyls	26601-64-9	NE	NE	0.00075	U	0.00066	U	**0.0093**		0.00065	U	0.00069	U
Monochlorobiphenyls	27323-18-8	NE	NE	0.00038	U	0.00033	U	0.00033	U	0.00032	U	0.00034	U
Nonachlorobiphenyls	53742-07-7	NE	NE	0.0019	U	0.0016	U	0.0017	U	0.0016	U	0.0017	U
Octachlorobiphenyls	55722-26-4	NE	NE	0.0011	U	0.00099	U	0.001	U	0.00097	U	0.001	U
Pentachlorobiphenyls	25429-29-2	NE	NE	0.00075	U	**0.0044**		**0.042**		**0.0035**		**0.0035**	
Tetrachlorobiphenyls	26914-33-0	NE	NE	0.00075	U	**0.0026**		**0.022**		**0.003**		**0.003**	
Trichlorobiphenyls	25323-68-6	NE	NE	0.00038	U	0.00033	U	**0.0078**		**0.0025**		**0.0027**	
Total Polychlorinated biphenyls	1336-36-3	0.3	0.1			**0.007**		**0.082**		**0.0091**		**0.0092**	
Sample ID		**Non-occupied Indoor**	**Occupied Indoor**	**Part LMN**		**Pharmacy**		**Room 1**		**Part J**			
Sample Date	**CAS#**	**Air Action Level**	**Air Action Level**	**7/28/2017**	**Q**	**7/28/2017**	**Q**	**7/28/2017**	**Q**	**7/28/2017**	**Q**		
		(µg/m3)	**(µg/m3)**										
Decachlorobiphenyl	2051-24-3	NE	NE	0.0016	U	0.0016	U	0.0017	U	0.0016	U		
Dichlorobiphenyls	25512-42-9	NE	NE	0.00032	U	0.00033	U	**0.0053**		0.00032	U		
Heptachlorobiphenyls	28655-71-2	NE	NE	0.00096	U	0.00099	U	**0.0024**		0.00095	U		
Hexachlorobiphenyls	26601-64-9	NE	NE	**0.00083**		0.00066	U	**0.012**		**0.0058**			
Monochlorobiphenyls	27323-18-8	NE	NE	0.00032	U	0.00033	U	**0.0027**		0.00032	U		
Nonachlorobiphenyls	53742-07-7	NE	NE	0.0016	U	0.0016	U	0.0017	U	0.0016	U		
Octachlorobiphenyls	55722-26-4	NE	NE	0.00096	U	0.00099	U	0.001	U	0.00095	U		
Pentachlorobiphenyls	25429-29-2	NE	NE	**0.0064**		0.00066	U	**0.037**		**0.025**			
Tetrachlorobiphenyls	26914-33-0	NE	NE	**0.0042**		**0.00073**		**0.033**		**0.016**			
Trichlorobiphenyls	25323-68-6	NE	NE	**0.0054**		0.00033	U	**0.027**		**0.013**			
Total Polychlorinated biphenyls	1336-36-3	0.3	0.1	**0.017**		**0.00073**		**0.12**		**0.059**			

Key:
VDH SSL - VT Department of Health Residential Soil Screening Levels
RSL - US Environmental Protection Agency, Regional Screening Levels for Residential (Res) and Industrial (Ind) settings.
mg/kg - milligrams per kilogram (parts per million)
µg/kg - micrograms per kilogram (parts per billion)
µg/L - micrograms per liter (parts per billion)
Bold results indicate detections of the analyte
Shaded results indicate an exceedence of the enforcement standard(s)
NE - screening level not established
Created by: BMD 09/28/2017 QC by: DTV 10/02/17

Appendix D: Laboratory Reports

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

June 9, 2017

Bette Nowack
Stone Environmental
535 Stone Cutters Ways
Montpelier, VT 05602

Project Location: 100 River Street, Springfield, VT
Client Job Number:
Project Number: 16-093
Laboratory Work Order Number: 17E1536

Enclosed are results of analyses for samples received by the laboratory on May 31, 2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Steven M. Case
Project Manager

Table of Contents

con-test® ANALYTICAL LABORATORY

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Stone Environmental
535 Stone Cutters Ways
Montpelier, VT 05602
ATTN: Bette Nowack

REPORT DATE: 6/9/2017

PURCHASE ORDER NUMBER: 16-093

PROJECT NUMBER: 16-093

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 17E1536

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 100 River Street, Springfield, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
AA-1	17E1536-01	Ambient Air		EPA TO-15	
IA-1 DUP	17E1536-02	Indoor air		EPA TO-15	
IA-1	17E1536-03	Indoor air		EPA TO-15	
IA-2	17E1536-04	Indoor air		EPA TO-15	
Effluent	17E1536-05	Air		EPA TO-15	

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA TO-15

Qualifications:

L-01

Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.

Analyte & Samples(s) Qualified:

Benzyl chloride
B178873-BS1

L-03

Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Heptane
17E1536-01[AA-1], 17E1536-02[IA-1 DUP], 17E1536-03[IA-1], 17E1536-04[IA-2], 17E1536-05[Effluent], B178873-BLK1, B178873-BS1

Z-01

Compound fails the method requirement of 70-130% recovery for the LCS. Is classified by the lab as a difficult compound and passes the in house limits of 50-150%.

Analyte & Samples(s) Qualified:

1,2,4-Trichlorobenzene
B178873-BS1

Hexachlorobutadiene
B178873-BS1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Lisa A. Worthington
Project Manager

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: 100 River Street, Springfield, VT
Date Received: 5/31/2017
Field Sample #: AA-1
Sample ID: 17E1536-01
Sample Matrix: Ambient Air
Sampled: 5/25/2017 11:09

Sample Description/Location:
Sub Description/Location:
Canister ID: 2165
Canister Size: 6 liter
Flow Controller ID: 3531
Sample Type: 24 hr

Work Order: 17E1536
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -10
Receipt Vacuum(in Hg): -9.2
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv			ug/m3			Date/Time	
Analyte	Results	RL	Flag/Qual	Results	RL	Dilution	Analyzed	Analyst
Acetone	18	1.4		44	3.3	0.702	6/6/17 19:58	TPH
Benzene	0.064	0.035		0.20	0.11	0.702	6/6/17 19:58	TPH
Benzyl chloride	ND	0.035		ND	0.18	0.702	6/6/17 19:58	TPH
Bromodichloromethane	ND	0.035		ND	0.24	0.702	6/6/17 19:58	TPH
Bromoform	ND	0.035		ND	0.36	0.702	6/6/17 19:58	TPH
Bromomethane	ND	0.035		ND	0.14	0.702	6/6/17 19:58	TPH
1,3-Butadiene	ND	0.035		ND	0.078	0.702	6/6/17 19:58	TPH
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	6/6/17 19:58	TPH
Carbon Disulfide	ND	0.35		ND	1.1	0.702	6/6/17 19:58	TPH
Carbon Tetrachloride	0.070	0.035		0.44	0.22	0.702	6/6/17 19:58	TPH
Chlorobenzene	ND	0.035		ND	0.16	0.702	6/6/17 19:58	TPH
Chloroethane	ND	0.035		ND	0.093	0.702	6/6/17 19:58	TPH
Chloroform	0.071	0.035		0.35	0.17	0.702	6/6/17 19:58	TPH
Chloromethane	0.55	0.070		1.1	0.14	0.702	6/6/17 19:58	TPH
Cyclohexane	ND	0.035		ND	0.12	0.702	6/6/17 19:58	TPH
Dibromochloromethane	ND	0.035		ND	0.30	0.702	6/6/17 19:58	TPH
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	6/6/17 19:58	TPH
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	6/6/17 19:58	TPH
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	6/6/17 19:58	TPH
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	6/6/17 19:58	TPH
Dichlorodifluoromethane (Freon 12)	0.18	0.035		0.90	0.17	0.702	6/6/17 19:58	TPH
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	6/6/17 19:58	TPH
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	6/6/17 19:58	TPH
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	6/6/17 19:58	TPH
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	6/6/17 19:58	TPH
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	6/6/17 19:58	TPH
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	6/6/17 19:58	TPH
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	6/6/17 19:58	TPH
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	6/6/17 19:58	TPH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.25	0.702	6/6/17 19:58	TPH
1,4-Dioxane	ND	0.35		ND	1.3	0.702	6/6/17 19:58	TPH
Ethanol	4.0	1.4		7.5	2.6	0.702	6/6/17 19:58	TPH
Ethyl Acetate	0.61	0.035		2.2	0.13	0.702	6/6/17 19:58	TPH
Ethylbenzene	0.11	0.035		0.48	0.15	0.702	6/6/17 19:58	TPH
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	6/6/17 19:58	TPH
Heptane	ND	0.035	L-03	ND	0.14	0.702	6/6/17 19:58	TPH
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	6/6/17 19:58	TPH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: 100 River Street, Springfield, VT
Date Received: 5/31/2017
Field Sample #: AA-1
Sample ID: 17E1536-01
Sample Matrix: Ambient Air
Sampled: 5/25/2017 11:09

Sample Description/Location:
Sub Description/Location:
Canister ID: 2165
Canister Size: 6 liter
Flow Controller ID: 3531
Sample Type: 24 hr

Work Order: 17E1536
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -10
Receipt Vacuum(in Hg): -9.2
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv			ug/m3			Date/Time	
Analyte	**Results**	**RL**	**Flag/Qual**	**Results**	**RL**	**Dilution**	**Analyzed**	**Analyst**
Hexane	ND	1.4		ND	4.9	0.702	6/6/17 19:58	TPH
2-Hexanone (MBK)	0.099	0.035		0.41	0.14	0.702	6/6/17 19:58	TPH
Isopropanol	ND	1.4		ND	3.4	0.702	6/6/17 19:58	TPH
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.702	6/6/17 19:58	TPH
Methylene Chloride	ND	0.35		ND	1.2	0.702	6/6/17 19:58	TPH
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.702	6/6/17 19:58	TPH
Naphthalene	ND	0.035		ND	0.18	0.702	6/6/17 19:58	TPH
Propene	ND	1.4		ND	2.4	0.702	6/6/17 19:58	TPH
Styrene	ND	0.035		ND	0.15	0.702	6/6/17 19:58	TPH
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.702	6/6/17 19:58	TPH
Tetrachloroethylene	ND	0.035		ND	0.24	0.702	6/6/17 19:58	TPH
Tetrahydrofuran	0.15	0.035		0.43	0.10	0.702	6/6/17 19:58	TPH
Toluene	3.2	0.035		12	0.13	0.702	6/6/17 19:58	TPH
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.702	6/6/17 19:58	TPH
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.702	6/6/17 19:58	TPH
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.702	6/6/17 19:58	TPH
Trichloroethylene	ND	0.035		ND	0.19	0.702	6/6/17 19:58	TPH
Trichlorofluoromethane (Freon 11)	0.27	0.14		1.5	0.79	0.702	6/6/17 19:58	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.702	6/6/17 19:58	TPH
1,2,4-Trimethylbenzene	0.062	0.035		0.31	0.17	0.702	6/6/17 19:58	TPH
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.702	6/6/17 19:58	TPH
Vinyl Acetate	ND	0.70		ND	2.5	0.702	6/6/17 19:58	TPH
Vinyl Chloride	ND	0.035		ND	0.090	0.702	6/6/17 19:58	TPH
m&p-Xylene	0.42	0.070		1.8	0.30	0.702	6/6/17 19:58	TPH
o-Xylene	0.14	0.035		0.59	0.15	0.702	6/6/17 19:58	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	111	70-130	6/6/17 19:58

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: 100 River Street, Springfield, VT
Date Received: 5/31/2017
Field Sample #: IA-1 DUP
Sample ID: 17E1536-02
Sample Matrix: Indoor air
Sampled: 5/25/2017 11:58

Sample Description/Location:
Sub Description/Location:
Canister ID: 1725
Canister Size: 6 liter
Flow Controller ID: 3468
Sample Type: 24 hr

Work Order: 17E1536
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -7
Receipt Vacuum(in Hg): -8.4
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv			ug/m3			Date/Time	
Analyte	Results	RL	Flag/Qual	Results	RL	Dilution	Analyzed	Analyst
Acetone	15	1.4		37	3.3	0.702	6/6/17 20:47	TPH
Benzene	0.093	0.035		0.30	0.11	0.702	6/6/17 20:47	TPH
Benzyl chloride	ND	0.035		ND	0.18	0.702	6/6/17 20:47	TPH
Bromodichloromethane	ND	0.035		ND	0.24	0.702	6/6/17 20:47	TPH
Bromoform	ND	0.035		ND	0.36	0.702	6/6/17 20:47	TPH
Bromomethane	ND	0.035		ND	0.14	0.702	6/6/17 20:47	TPH
1,3-Butadiene	ND	0.035		ND	0.078	0.702	6/6/17 20:47	TPH
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	6/6/17 20:47	TPH
Carbon Disulfide	ND	0.35		ND	1.1	0.702	6/6/17 20:47	TPH
Carbon Tetrachloride	0.069	0.035		0.44	0.22	0.702	6/6/17 20:47	TPH
Chlorobenzene	ND	0.035		ND	0.16	0.702	6/6/17 20:47	TPH
Chloroethane	ND	0.035		ND	0.093	0.702	6/6/17 20:47	TPH
Chloroform	0.057	0.035		0.28	0.17	0.702	6/6/17 20:47	TPH
Chloromethane	0.68	0.070		1.4	0.14	0.702	6/6/17 20:47	TPH
Cyclohexane	0.13	0.035		0.44	0.12	0.702	6/6/17 20:47	TPH
Dibromochloromethane	ND	0.035		ND	0.30	0.702	6/6/17 20:47	TPH
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	6/6/17 20:47	TPH
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	6/6/17 20:47	TPH
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	6/6/17 20:47	TPH
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	6/6/17 20:47	TPH
Dichlorodifluoromethane (Freon 12)	0.17	0.035		0.85	0.17	0.702	6/6/17 20:47	TPH
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	6/6/17 20:47	TPH
1,2-Dichloroethane	0.039	0.035		0.16	0.14	0.702	6/6/17 20:47	TPH
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	6/6/17 20:47	TPH
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	6/6/17 20:47	TPH
trans-1,2-Dichloroethylene	5.6	0.035		22	0.14	0.702	6/6/17 20:47	TPH
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	6/6/17 20:47	TPH
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	6/6/17 20:47	TPH
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	6/6/17 20:47	TPH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.25	0.702	6/6/17 20:47	TPH
1,4-Dioxane	ND	0.35		ND	1.3	0.702	6/6/17 20:47	TPH
Ethanol	170	8.0		330	15	4	6/6/17 21:30	TPH
Ethyl Acetate	0.78	0.035		2.8	0.13	0.702	6/6/17 20:47	TPH
Ethylbenzene	ND	0.035		ND	0.15	0.702	6/6/17 20:47	TPH
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	6/6/17 20:47	TPH
Heptane	0.035	0.035	L-03	0.14	0.14	0.702	6/6/17 20:47	TPH
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	6/6/17 20:47	TPH

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: 100 River Street, Springfield, VT
Date Received: 5/31/2017
Field Sample #: IA-1 DUP
Sample ID: 17E1536-02
Sample Matrix: Indoor air
Sampled: 5/25/2017 11:58

Sample Description/Location:
Sub Description/Location:
Canister ID: 1725
Canister Size: 6 liter
Flow Controller ID: 3468
Sample Type: 24 hr

Work Order: 17E1536
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -7
Receipt Vacuum(in Hg): -8.4
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv Results	ppbv RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Hexane	ND	1.4		ND	4.9	0.702	6/6/17 20:47	TPH
2-Hexanone (MBK)	0.066	0.035		0.27	0.14	0.702	6/6/17 20:47	TPH
Isopropanol	68	8.0		170	20	4	6/6/17 21:30	TPH
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.702	6/6/17 20:47	TPH
Methylene Chloride	ND	0.35		ND	1.2	0.702	6/6/17 20:47	TPH
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.702	6/6/17 20:47	TPH
Naphthalene	0.041	0.035		0.22	0.18	0.702	6/6/17 20:47	TPH
Propene	ND	1.4		ND	2.4	0.702	6/6/17 20:47	TPH
Styrene	0.047	0.035		0.20	0.15	0.702	6/6/17 20:47	TPH
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.702	6/6/17 20:47	TPH
Tetrachloroethylene	ND	0.035		ND	0.24	0.702	6/6/17 20:47	TPH
Tetrahydrofuran	0.11	0.035		0.34	0.10	0.702	6/6/17 20:47	TPH
Toluene	0.32	0.035		1.2	0.13	0.702	6/6/17 20:47	TPH
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.702	6/6/17 20:47	TPH
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.702	6/6/17 20:47	TPH
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.702	6/6/17 20:47	TPH
Trichloroethylene	ND	0.035		ND	0.19	0.702	6/6/17 20:47	TPH
Trichlorofluoromethane (Freon 11)	0.27	0.14		1.5	0.79	0.702	6/6/17 20:47	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.702	6/6/17 20:47	TPH
1,2,4-Trimethylbenzene	ND	0.035		ND	0.17	0.702	6/6/17 20:47	TPH
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.702	6/6/17 20:47	TPH
Vinyl Acetate	ND	0.70		ND	2.5	0.702	6/6/17 20:47	TPH
Vinyl Chloride	ND	0.035		ND	0.090	0.702	6/6/17 20:47	TPH
m&p-Xylene	0.082	0.070		0.36	0.30	0.702	6/6/17 20:47	TPH
o-Xylene	0.036	0.035		0.16	0.15	0.702	6/6/17 20:47	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	111	70-130	6/6/17 21:30
4-Bromofluorobenzene (1)	111	70-130	6/6/17 20:47

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: 100 River Street, Springfield, VT
Date Received: 5/31/2017
Field Sample #: IA-1
Sample ID: 17E1536-03
Sample Matrix: Indoor air
Sampled: 5/25/2017 11:59

Sample Description/Location:
Sub Description/Location:
Canister ID: 1508
Canister Size: 6 liter
Flow Controller ID: 3539
Sample Type: 24 hr

Work Order: 17E1536
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -7
Receipt Vacuum(in Hg): -7.2
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv			ug/m3			Date/Time	
Analyte	Results	RL	Flag/Qual	Results	RL	Dilution	Analyzed	Analyst
Acetone	18	1.4		42	3.3	0.702	6/6/17 22:17	TPH
Benzene	0.093	0.035		0.30	0.11	0.702	6/6/17 22:17	TPH
Benzyl chloride	ND	0.035		ND	0.18	0.702	6/6/17 22:17	TPH
Bromodichloromethane	ND	0.035		ND	0.24	0.702	6/6/17 22:17	TPH
Bromoform	ND	0.035		ND	0.36	0.702	6/6/17 22:17	TPH
Bromomethane	ND	0.035		ND	0.14	0.702	6/6/17 22:17	TPH
1,3-Butadiene	ND	0.035		ND	0.078	0.702	6/6/17 22:17	TPH
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	6/6/17 22:17	TPH
Carbon Disulfide	ND	0.35		ND	1.1	0.702	6/6/17 22:17	TPH
Carbon Tetrachloride	0.068	0.035		0.43	0.22	0.702	6/6/17 22:17	TPH
Chlorobenzene	ND	0.035		ND	0.16	0.702	6/6/17 22:17	TPH
Chloroethane	ND	0.035		ND	0.093	0.702	6/6/17 22:17	TPH
Chloroform	0.047	0.035		0.23	0.17	0.702	6/6/17 22:17	TPH
Chloromethane	0.64	0.070		1.3	0.14	0.702	6/6/17 22:17	TPH
Cyclohexane	0.13	0.035		0.44	0.12	0.702	6/6/17 22:17	TPH
Dibromochloromethane	ND	0.035		ND	0.30	0.702	6/6/17 22:17	TPH
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	6/6/17 22:17	TPH
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	6/6/17 22:17	TPH
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	6/6/17 22:17	TPH
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	6/6/17 22:17	TPH
Dichlorodifluoromethane (Freon 12)	0.17	0.035		0.86	0.17	0.702	6/6/17 22:17	TPH
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	6/6/17 22:17	TPH
1,2-Dichloroethane	0.039	0.035		0.16	0.14	0.702	6/6/17 22:17	TPH
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	6/6/17 22:17	TPH
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	6/6/17 22:17	TPH
trans-1,2-Dichloroethylene	5.5	0.035		22	0.14	0.702	6/6/17 22:17	TPH
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	6/6/17 22:17	TPH
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	6/6/17 22:17	TPH
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	6/6/17 22:17	TPH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.25	0.702	6/6/17 22:17	TPH
1,4-Dioxane	ND	0.35		ND	1.3	0.702	6/6/17 22:17	TPH
Ethanol	170	8.0		320	15	4	6/6/17 22:58	TPH
Ethyl Acetate	0.90	0.035		3.2	0.13	0.702	6/6/17 22:17	TPH
Ethylbenzene	ND	0.035		ND	0.15	0.702	6/6/17 22:17	TPH
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	6/6/17 22:17	TPH
Heptane	0.039	0.035	L-03	0.16	0.14	0.702	6/6/17 22:17	TPH
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	6/6/17 22:17	TPH

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: 100 River Street, Springfield, VT
Date Received: 5/31/2017
Field Sample #: IA-1
Sample ID: 17E1536-03
Sample Matrix: Indoor air
Sampled: 5/25/2017 11:59

Sample Description/Location:
Sub Description/Location:
Canister ID: 1508
Canister Size: 6 liter
Flow Controller ID: 3539
Sample Type: 24 hr

Work Order: 17E1536
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -7
Receipt Vacuum(in Hg): -7.2
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv			ug/m3			Date/Time	
Analyte	**Results**	**RL**	**Flag/Qual**	**Results**	**RL**	**Dilution**	**Analyzed**	**Analyst**
Hexane	ND	1.4		ND	4.9	0.702	6/6/17 22:17	TPH
2-Hexanone (MBK)	0.13	0.035		0.53	0.14	0.702	6/6/17 22:17	TPH
Isopropanol	66	8.0		160	20	4	6/6/17 22:58	TPH
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.702	6/6/17 22:17	TPH
Methylene Chloride	ND	0.35		ND	1.2	0.702	6/6/17 22:17	TPH
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.702	6/6/17 22:17	TPH
Naphthalene	ND	0.035		ND	0.18	0.702	6/6/17 22:17	TPH
Propene	ND	1.4		ND	2.4	0.702	6/6/17 22:17	TPH
Styrene	0.043	0.035		0.18	0.15	0.702	6/6/17 22:17	TPH
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.702	6/6/17 22:17	TPH
Tetrachloroethylene	ND	0.035		ND	0.24	0.702	6/6/17 22:17	TPH
Tetrahydrofuran	0.085	0.035		0.25	0.10	0.702	6/6/17 22:17	TPH
Toluene	0.33	0.035		1.2	0.13	0.702	6/6/17 22:17	TPH
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.702	6/6/17 22:17	TPH
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.702	6/6/17 22:17	TPH
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.702	6/6/17 22:17	TPH
Trichloroethylene	ND	0.035		ND	0.19	0.702	6/6/17 22:17	TPH
Trichlorofluoromethane (Freon 11)	0.27	0.14		1.5	0.79	0.702	6/6/17 22:17	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.702	6/6/17 22:17	TPH
1,2,4-Trimethylbenzene	ND	0.035		ND	0.17	0.702	6/6/17 22:17	TPH
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.702	6/6/17 22:17	TPH
Vinyl Acetate	ND	0.70		ND	2.5	0.702	6/6/17 22:17	TPH
Vinyl Chloride	ND	0.035		ND	0.090	0.702	6/6/17 22:17	TPH
m&p-Xylene	0.084	0.070		0.36	0.30	0.702	6/6/17 22:17	TPH
o-Xylene	ND	0.035		ND	0.15	0.702	6/6/17 22:17	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	112	70-130	6/6/17 22:17
4-Bromofluorobenzene (1)	111	70-130	6/6/17 22:58

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ANALYTICAL RESULTS

Project Location: 100 River Street, Springfield, VT
Date Received: 5/31/2017
Field Sample #: IA-2
Sample ID: 17E1536-04
Sample Matrix: Indoor air
Sampled: 5/25/2017 11:56

Sample Description/Location:
Sub Description/Location:
Canister ID: 1658
Canister Size: 6 liter
Flow Controller ID: 3538
Sample Type: 24 hr

Work Order: 17E1536
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -9
Receipt Vacuum(in Hg): -8
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv			ug/m3			Date/Time	
Analyte	Results	RL	Flag/Qual	Results	RL	Dilution	Analyzed	Analyst
Acetone	9.8	1.4		23	3.3	0.702	6/6/17 23:46	TPH
Benzene	0.083	0.035		0.26	0.11	0.702	6/6/17 23:46	TPH
Benzyl chloride	ND	0.035		ND	0.18	0.702	6/6/17 23:46	TPH
Bromodichloromethane	ND	0.035		ND	0.24	0.702	6/6/17 23:46	TPH
Bromoform	ND	0.035		ND	0.36	0.702	6/6/17 23:46	TPH
Bromomethane	ND	0.035		ND	0.14	0.702	6/6/17 23:46	TPH
1,3-Butadiene	ND	0.035		ND	0.078	0.702	6/6/17 23:46	TPH
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	6/6/17 23:46	TPH
Carbon Disulfide	ND	0.35		ND	1.1	0.702	6/6/17 23:46	TPH
Carbon Tetrachloride	0.068	0.035		0.43	0.22	0.702	6/6/17 23:46	TPH
Chlorobenzene	ND	0.035		ND	0.16	0.702	6/6/17 23:46	TPH
Chloroethane	ND	0.035		ND	0.093	0.702	6/6/17 23:46	TPH
Chloroform	0.051	0.035		0.25	0.17	0.702	6/6/17 23:46	TPH
Chloromethane	0.58	0.070		1.2	0.14	0.702	6/6/17 23:46	TPH
Cyclohexane	ND	0.035		ND	0.12	0.702	6/6/17 23:46	TPH
Dibromochloromethane	ND	0.035		ND	0.30	0.702	6/6/17 23:46	TPH
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	6/6/17 23:46	TPH
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	6/6/17 23:46	TPH
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	6/6/17 23:46	TPH
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	6/6/17 23:46	TPH
Dichlorodifluoromethane (Freon 12)	0.18	0.035		0.88	0.17	0.702	6/6/17 23:46	TPH
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	6/6/17 23:46	TPH
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	6/6/17 23:46	TPH
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	6/6/17 23:46	TPH
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	6/6/17 23:46	TPH
trans-1,2-Dichloroethylene	2.3	0.035		9.0	0.14	0.702	6/6/17 23:46	TPH
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	6/6/17 23:46	TPH
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	6/6/17 23:46	TPH
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	6/6/17 23:46	TPH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.25	0.702	6/6/17 23:46	TPH
1,4-Dioxane	ND	0.35		ND	1.3	0.702	6/6/17 23:46	TPH
Ethanol	88	4.0		170	7.5	2	6/7/17 0:28	TPH
Ethyl Acetate	1.9	0.035		6.9	0.13	0.702	6/6/17 23:46	TPH
Ethylbenzene	ND	0.035		ND	0.15	0.702	6/6/17 23:46	TPH
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	6/6/17 23:46	TPH
Heptane	ND	0.035	L-03	ND	0.14	0.702	6/6/17 23:46	TPH
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	6/6/17 23:46	TPH

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ANALYTICAL RESULTS

Project Location: 100 River Street, Springfield, VT
Date Received: 5/31/2017
Field Sample #: IA-2
Sample ID: 17E1536-04
Sample Matrix: Indoor air
Sampled: 5/25/2017 11:56

Sample Description/Location:
Sub Description/Location:
Canister ID: 1658
Canister Size: 6 liter
Flow Controller ID: 3538
Sample Type: 24 hr

Work Order: 17E1536
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -9
Receipt Vacuum(in Hg): -8
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv			ug/m3			Date/Time	
Analyte	**Results**	**RL**	**Flag/Qual**	**Results**	**RL**	**Dilution**	**Analyzed**	**Analyst**
Hexane	ND	1.4		ND	4.9	0.702	6/6/17 23:46	TPH
2-Hexanone (MBK)	0.055	0.035		0.22	0.14	0.702	6/6/17 23:46	TPH
Isopropanol	31	1.4		76	3.4	0.702	6/6/17 23:46	TPH
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.702	6/6/17 23:46	TPH
Methylene Chloride	ND	0.35		ND	1.2	0.702	6/6/17 23:46	TPH
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.702	6/6/17 23:46	TPH
Naphthalene	ND	0.035		ND	0.18	0.702	6/6/17 23:46	TPH
Propene	ND	1.4		ND	2.4	0.702	6/6/17 23:46	TPH
Styrene	0.039	0.035		0.17	0.15	0.702	6/6/17 23:46	TPH
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.702	6/6/17 23:46	TPH
Tetrachloroethylene	ND	0.035		ND	0.24	0.702	6/6/17 23:46	TPH
Tetrahydrofuran	0.086	0.035		0.25	0.10	0.702	6/6/17 23:46	TPH
Toluene	0.37	0.035		1.4	0.13	0.702	6/6/17 23:46	TPH
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.702	6/6/17 23:46	TPH
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.702	6/6/17 23:46	TPH
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.702	6/6/17 23:46	TPH
Trichloroethylene	ND	0.035		ND	0.19	0.702	6/6/17 23:46	TPH
Trichlorofluoromethane (Freon 11)	0.28	0.14		1.6	0.79	0.702	6/6/17 23:46	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.702	6/6/17 23:46	TPH
1,2,4-Trimethylbenzene	ND	0.035		ND	0.17	0.702	6/6/17 23:46	TPH
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.702	6/6/17 23:46	TPH
Vinyl Acetate	ND	0.70		ND	2.5	0.702	6/6/17 23:46	TPH
Vinyl Chloride	ND	0.035		ND	0.090	0.702	6/6/17 23:46	TPH
m&p-Xylene	0.081	0.070		0.35	0.30	0.702	6/6/17 23:46	TPH
o-Xylene	ND	0.035		ND	0.15	0.702	6/6/17 23:46	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	111	70-130	6/7/17 0:28
4-Bromofluorobenzene (1)	112	70-130	6/6/17 23:46

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ANALYTICAL RESULTS

Project Location: 100 River Street, Springfield, VT
Date Received: 5/31/2017
Field Sample #: Effluent
Sample ID: 17E1536-05
Sample Matrix: Air
Sampled: 5/25/2017 11:30

Sample Description/Location:
Sub Description/Location:
Canister ID: 1970
Canister Size: 6 liter
Flow Controller ID: 3467
Sample Type: 24 hr

Work Order: 17E1536
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -8
Receipt Vacuum(in Hg): -6.8
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv Results	ppbv RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Acetone	32	8.0		76	19	4	6/7/17 1:09	TPH
Benzene	0.43	0.20		1.4	0.64	4	6/7/17 1:09	TPH
Benzyl chloride	ND	0.20		ND	1.0	4	6/7/17 1:09	TPH
Bromodichloromethane	ND	0.20		ND	1.3	4	6/7/17 1:09	TPH
Bromoform	ND	0.20		ND	2.1	4	6/7/17 1:09	TPH
Bromomethane	ND	0.20		ND	0.78	4	6/7/17 1:09	TPH
1,3-Butadiene	ND	0.20		ND	0.44	4	6/7/17 1:09	TPH
2-Butanone (MEK)	ND	8.0		ND	24	4	6/7/17 1:09	TPH
Carbon Disulfide	ND	2.0		ND	6.2	4	6/7/17 1:09	TPH
Carbon Tetrachloride	ND	0.20		ND	1.3	4	6/7/17 1:09	TPH
Chlorobenzene	ND	0.20		ND	0.92	4	6/7/17 1:09	TPH
Chloroethane	ND	0.20		ND	0.53	4	6/7/17 1:09	TPH
Chloroform	0.69	0.20		3.4	0.98	4	6/7/17 1:09	TPH
Chloromethane	ND	0.40		ND	0.83	4	6/7/17 1:09	TPH
Cyclohexane	ND	0.20		ND	0.69	4	6/7/17 1:09	TPH
Dibromochloromethane	ND	0.20		ND	1.7	4	6/7/17 1:09	TPH
1,2-Dibromoethane (EDB)	ND	0.20		ND	1.5	4	6/7/17 1:09	TPH
1,2-Dichlorobenzene	ND	0.20		ND	1.2	4	6/7/17 1:09	TPH
1,3-Dichlorobenzene	0.59	0.20		3.5	1.2	4	6/7/17 1:09	TPH
1,4-Dichlorobenzene	ND	0.20		ND	1.2	4	6/7/17 1:09	TPH
Dichlorodifluoromethane (Freon 12)	ND	0.20		ND	0.99	4	6/7/17 1:09	TPH
1,1-Dichloroethane	0.38	0.20		1.5	0.81	4	6/7/17 1:09	TPH
1,2-Dichloroethane	ND	0.20		ND	0.81	4	6/7/17 1:09	TPH
1,1-Dichloroethylene	ND	0.20		ND	0.79	4	6/7/17 1:09	TPH
cis-1,2-Dichloroethylene	3.6	0.20		14	0.79	4	6/7/17 1:09	TPH
trans-1,2-Dichloroethylene	5.3	0.20		21	0.79	4	6/7/17 1:09	TPH
1,2-Dichloropropane	0.22	0.20		1.0	0.92	4	6/7/17 1:09	TPH
cis-1,3-Dichloropropene	ND	0.20		ND	0.91	4	6/7/17 1:09	TPH
trans-1,3-Dichloropropene	ND	0.20		ND	0.91	4	6/7/17 1:09	TPH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.20		ND	1.4	4	6/7/17 1:09	TPH
1,4-Dioxane	ND	2.0		ND	7.2	4	6/7/17 1:09	TPH
Ethanol	71	8.0		130	15	4	6/7/17 1:09	TPH
Ethyl Acetate	5.0	0.20		18	0.72	4	6/7/17 1:09	TPH
Ethylbenzene	0.26	0.20		1.1	0.87	4	6/7/17 1:09	TPH
4-Ethyltoluene	ND	0.20		ND	0.98	4	6/7/17 1:09	TPH
Heptane	0.48	0.20	L-03	2.0	0.82	4	6/7/17 1:09	TPH
Hexachlorobutadiene	ND	0.20		ND	2.1	4	6/7/17 1:09	TPH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: 100 River Street, Springfield, VT
Date Received: 5/31/2017
Field Sample #: Effluent
Sample ID: 17E1536-05
Sample Matrix: Air
Sampled: 5/25/2017 11:30

Sample Description/Location:
Sub Description/Location:
Canister ID: 1970
Canister Size: 6 liter
Flow Controller ID: 3467
Sample Type: 24 hr

Work Order: 17E1536
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -8
Receipt Vacuum(in Hg): -6.8
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv Results	ppbv RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Hexane	ND	8.0		ND	28	4	6/7/17 1:09	TPH
2-Hexanone (MBK)	0.30	0.20		1.2	0.82	4	6/7/17 1:09	TPH
Isopropanol	140	8.0		340	20	4	6/7/17 1:09	TPH
Methyl tert-Butyl Ether (MTBE)	ND	0.20		ND	0.72	4	6/7/17 1:09	TPH
Methylene Chloride	ND	2.0		ND	6.9	4	6/7/17 1:09	TPH
4-Methyl-2-pentanone (MIBK)	0.46	0.20		1.9	0.82	4	6/7/17 1:09	TPH
Naphthalene	ND	0.20		ND	1.0	4	6/7/17 1:09	TPH
Propene	ND	8.0		ND	14	4	6/7/17 1:09	TPH
Styrene	0.22	0.20		0.95	0.85	4	6/7/17 1:09	TPH
1,1,2,2-Tetrachloroethane	ND	0.20		ND	1.4	4	6/7/17 1:09	TPH
Tetrachloroethylene	0.21	0.20		1.4	1.4	4	6/7/17 1:09	TPH
Tetrahydrofuran	15	0.20		43	0.59	4	6/7/17 1:09	TPH
Toluene	2.9	0.20		11	0.75	4	6/7/17 1:09	TPH
1,2,4-Trichlorobenzene	ND	0.20		ND	1.5	4	6/7/17 1:09	TPH
1,1,1-Trichloroethane	ND	0.20		ND	1.1	4	6/7/17 1:09	TPH
1,1,2-Trichloroethane	ND	0.20		ND	1.1	4	6/7/17 1:09	TPH
Trichloroethylene	4.6	0.20		25	1.1	4	6/7/17 1:09	TPH
Trichlorofluoromethane (Freon 11)	ND	0.80		ND	4.5	4	6/7/17 1:09	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.80		ND	6.1	4	6/7/17 1:09	TPH
1,2,4-Trimethylbenzene	ND	0.20		ND	0.98	4	6/7/17 1:09	TPH
1,3,5-Trimethylbenzene	ND	0.20		ND	0.98	4	6/7/17 1:09	TPH
Vinyl Acetate	ND	4.0		ND	14	4	6/7/17 1:09	TPH
Vinyl Chloride	ND	0.20		ND	0.51	4	6/7/17 1:09	TPH
m&p-Xylene	0.95	0.40		4.1	1.7	4	6/7/17 1:09	TPH
o-Xylene	0.47	0.20		2.0	0.87	4	6/7/17 1:09	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	112	70-130	6/7/17 1:09

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Sample Extraction Data

Prep Method: TO-15 Prep-EPA TO-15

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
17E1536-01 [AA-1]	B178873	1.5	1	N/A	1000	400	855	06/06/17
17E1536-02 [IA-1 DUP]	B178873	1.5	1	N/A	1000	400	855	06/06/17
17E1536-02RE1 [IA-1 DUP]	B178873	1.5	1	N/A	1000	400	150	06/06/17
17E1536-03 [IA-1]	B178873	1.5	1	N/A	1000	400	855	06/06/17
17E1536-03RE1 [IA-1]	B178873	1.5	1	N/A	1000	400	150	06/06/17
17E1536-04 [IA-2]	B178873	1.5	1	N/A	1000	400	855	06/06/17
17E1536-04RE1 [IA-2]	B178873	1.5	1	N/A	1000	400	300	06/06/17
17E1536-05 [Effluent]	B178873	1.5	1	N/A	1000	400	150	06/06/17

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QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B178873 - TO-15 Prep											
Blank (B178873-BLK1)					Prepared & Analyzed: 06/06/17						
Acetone	ND	1.4									
Benzene	ND	0.035									
Benzyl chloride	ND	0.035									
Bromodichloromethane	ND	0.035									
Bromoform	ND	0.035									
Bromomethane	ND	0.035									
1,3-Butadiene	ND	0.035									
2-Butanone (MEK)	ND	1.4									
Carbon Disulfide	ND	0.35									
Carbon Tetrachloride	ND	0.035									
Chlorobenzene	ND	0.035									
Chloroethane	ND	0.035									
Chloroform	ND	0.035									
Chloromethane	ND	0.070									
Cyclohexane	ND	0.035									
Dibromochloromethane	ND	0.035									
1,2-Dibromoethane (EDB)	ND	0.035									
1,2-Dichlorobenzene	ND	0.035									
1,3-Dichlorobenzene	ND	0.035									
1,4-Dichlorobenzene	ND	0.035									
Dichlorodifluoromethane (Freon 12)	ND	0.035									
1,1-Dichloroethane	ND	0.035									
1,2-Dichloroethane	ND	0.035									
1,1-Dichloroethylene	ND	0.035									
cis-1,2-Dichloroethylene	ND	0.035									
trans-1,2-Dichloroethylene	ND	0.035									
1,2-Dichloropropane	ND	0.035									
cis-1,3-Dichloropropene	ND	0.035									
trans-1,3-Dichloropropene	ND	0.035									
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035									
1,4-Dioxane	ND	0.35									
Ethanol	ND	1.4									
Ethyl Acetate	ND	0.035									
Ethylbenzene	ND	0.035									
4-Ethyltoluene	ND	0.035									
Heptane	ND	0.035									L-03
Hexachlorobutadiene	ND	0.035									
Hexane	ND	1.4									
2-Hexanone (MBK)	ND	0.035									
Isopropanol	ND	1.4									
Methyl tert-Butyl Ether (MTBE)	ND	0.035									
Methylene Chloride	ND	0.35									
4-Methyl-2-pentanone (MIBK)	ND	0.035									
Naphthalene	ND	0.035									
Propene	ND	1.4									
Styrene	ND	0.035									

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QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC		%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B178873 - TO-15 Prep												
Blank (B178873-BLK1)					Prepared & Analyzed: 06/06/17							
1,1,2,2-Tetrachloroethane	ND	0.035										
Tetrachloroethylene	ND	0.035										
Tetrahydrofuran	ND	0.035										
Toluene	ND	0.035										
1,2,4-Trichlorobenzene	ND	0.035										
1,1,1-Trichloroethane	ND	0.035										
1,1,2-Trichloroethane	ND	0.035										
Trichloroethylene	ND	0.035										
Trichlorofluoromethane (Freon 11)	ND	0.14										
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14										
1,2,4-Trimethylbenzene	ND	0.035										
1,3,5-Trimethylbenzene	ND	0.035										
Vinyl Acetate	ND	0.70										
Vinyl Chloride	ND	0.035										
m&p-Xylene	ND	0.070										
o-Xylene	ND	0.035										
Surrogate: 4-Bromofluorobenzene (1)	*8.82*				*8.00*		*110*		*70-130*			
LCS (B178873-BS1)					Prepared & Analyzed: 06/06/17							
Acetone	4.64				5.00		92.7		70-130			
Benzene	3.83				5.00		76.5		70-130			
Benzyl chloride	6.83				5.00		**137**	*	70-130			L-01
Bromodichloromethane	3.92				5.00		78.3		70-130			
Bromoform	5.43				5.00		109		70-130			
Bromomethane	5.90				5.00		118		70-130			
1,3-Butadiene	5.04				5.00		101		70-130			
2-Butanone (MEK)	3.93				5.00		78.7		70-130			
Carbon Disulfide	6.29				5.00		126		70-130			
Carbon Tetrachloride	4.31				5.00		86.2		70-130			
Chlorobenzene	4.98				5.00		99.6		70-130			
Chloroethane	5.59				5.00		112		70-130			
Chloroform	5.53				5.00		111		70-130			
Chloromethane	4.97				5.00		99.5		70-130			
Cyclohexane	3.63				5.00		72.6		70-130			
Dibromochloromethane	4.68				5.00		93.6		70-130			
1,2-Dibromoethane (EDB)	4.49				5.00		89.7		70-130			
1,2-Dichlorobenzene	6.02				5.00		120		70-130			
1,3-Dichlorobenzene	6.30				5.00		126		70-130			
1,4-Dichlorobenzene	6.16				5.00		123		70-130			
Dichlorodifluoromethane (Freon 12)	4.72				5.00		94.4		70-130			
1,1-Dichloroethane	4.94				5.00		98.9		70-130			
1,2-Dichloroethane	5.01				5.00		100		70-130			
1,1-Dichloroethylene	4.92				5.00		98.4		70-130			
cis-1,2-Dichloroethylene	4.70				5.00		94.0		70-130			
trans-1,2-Dichloroethylene	4.77				5.00		95.4		70-130			
1,2-Dichloropropane	3.51				5.00		70.2		70-130			

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QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC		%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B178873 - TO-15 Prep												
LCS (B178873-BS1)					Prepared & Analyzed: 06/06/17							
cis-1,3-Dichloropropene	3.93				5.00		78.7		70-130			
trans-1,3-Dichloropropene	4.02				5.00		80.4		70-130			
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	5.60				5.00		112		70-130			
1,4-Dioxane	3.88				5.00		77.6		70-130			
Ethanol	5.88				5.00		118		70-130			
Ethyl Acetate	4.96				5.00		99.2		70-130			
Ethylbenzene	4.38				5.00		87.5		70-130			
4-Ethyltoluene	5.27				5.00		105		70-130			
Heptane	3.47				5.00		**69.4**	*	70-130			L-03
Hexachlorobutadiene	7.19				5.00		**144**	*	70-130			Z-01
Hexane	4.35				5.00		87.0		70-130			
2-Hexanone (MBK)	3.84				5.00		76.9		70-130			
Isopropanol	4.14				5.00		82.9		70-130			
Methyl tert-Butyl Ether (MTBE)	5.02				5.00		100		70-130			
Methylene Chloride	4.53				5.00		90.6		70-130			
4-Methyl-2-pentanone (MIBK)	3.89				5.00		77.7		70-130			
Naphthalene	5.82				5.00		116		70-130			
Propene	4.28				5.00		85.5		70-130			
Styrene	5.18				5.00		104		70-130			
1,1,2,2-Tetrachloroethane	4.85				5.00		97.1		70-130			
Tetrachloroethylene	4.82				5.00		96.4		70-130			
Tetrahydrofuran	4.06				5.00		81.2		70-130			
Toluene	4.22				5.00		84.4		70-130			
1,2,4-Trichlorobenzene	6.88				5.00		**138**	*	70-130			Z-01
1,1,1-Trichloroethane	3.80				5.00		75.9		70-130			
1,1,2-Trichloroethane	4.36				5.00		87.2		70-130			
Trichloroethylene	4.20				5.00		84.0		70-130			
Trichlorofluoromethane (Freon 11)	6.05				5.00		121		70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	6.40				5.00		128		70-130			
1,2,4-Trimethylbenzene	5.40				5.00		108		70-130			
1,3,5-Trimethylbenzene	5.23				5.00		105		70-130			
Vinyl Acetate	3.81				5.00		76.2		70-130			
Vinyl Chloride	5.59				5.00		112		70-130			
m&p-Xylene	9.42				10.0		94.2		70-130			
o-Xylene	4.88				5.00		97.7		70-130			
Surrogate: 4-Bromofluorobenzene (1)	*9.03*				*8.00*		*113*		*70-130*			

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit
DL	Method Detection Limit
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
L-01	Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.
L-03	Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.
Z-01	Compound fails the method requirement of 70-130% recovery for the LCS. Is classified by the lab as a difficult compound and passes the in house limits of 50-150%.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA TO-15 in Air	
Acetone	AIHA,NY,ME
Benzene	AIHA,FL,NJ,NY,VA,ME
Benzyl chloride	AIHA,FL,NJ,NY,VA,ME
Bromodichloromethane	AIHA,NJ,NY,VA,ME
Bromoform	AIHA,NJ,NY,VA,ME
Bromomethane	AIHA,FL,NJ,NY,ME
1,3-Butadiene	AIHA,NJ,NY,VA,ME
2-Butanone (MEK)	AIHA,FL,NJ,NY,VA,ME
Carbon Disulfide	AIHA,NJ,NY,VA,ME
Carbon Tetrachloride	AIHA,FL,NJ,NY,VA,ME
Chlorobenzene	AIHA,FL,NJ,NY,VA,ME
Chloroethane	AIHA,FL,NJ,NY,VA,ME
Chloroform	AIHA,FL,NJ,NY,VA,ME
Chloromethane	AIHA,FL,NJ,NY,VA,ME
Cyclohexane	AIHA,NJ,NY,VA,ME
Dibromochloromethane	AIHA,NY,ME
1,2-Dibromoethane (EDB)	AIHA,NJ,NY,ME
1,2-Dichlorobenzene	AIHA,FL,NJ,NY,VA,ME
1,3-Dichlorobenzene	AIHA,NJ,NY,ME
1,4-Dichlorobenzene	AIHA,FL,NJ,NY,VA,ME
Dichlorodifluoromethane (Freon 12)	AIHA,NY,ME
1,1-Dichloroethane	AIHA,FL,NJ,NY,VA,ME
1,2-Dichloroethane	AIHA,FL,NJ,NY,VA,ME
1,1-Dichloroethylene	AIHA,FL,NJ,NY,VA,ME
cis-1,2-Dichloroethylene	AIHA,FL,NY,VA,ME
trans-1,2-Dichloroethylene	AIHA,NJ,NY,VA,ME
1,2-Dichloropropane	AIHA,FL,NJ,NY,VA,ME
cis-1,3-Dichloropropene	AIHA,FL,NJ,NY,VA,ME
trans-1,3-Dichloropropene	AIHA,NY,ME
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	AIHA,NJ,NY,VA,ME
1,4-Dioxane	AIHA,NJ,NY,VA,ME
Ethanol	AIHA
Ethyl Acetate	AIHA
Ethylbenzene	AIHA,FL,NJ,NY,VA,ME
4-Ethyltoluene	AIHA,NJ
Heptane	AIHA,NJ,NY,VA,ME
Hexachlorobutadiene	AIHA,NJ,NY,VA,ME
Hexane	AIHA,FL,NJ,NY,VA,ME
2-Hexanone (MBK)	AIHA
Isopropanol	AIHA,NY,ME
Methyl tert-Butyl Ether (MTBE)	AIHA,FL,NJ,NY,VA,ME
Methylene Chloride	AIHA,FL,NJ,NY,VA,ME
4-Methyl-2-pentanone (MIBK)	AIHA,FL,NJ,NY,ME
Naphthalene	NY,ME
Propene	AIHA
Styrene	AIHA,FL,NJ,NY,VA,ME
1,1,2,2-Tetrachloroethane	AIHA,FL,NJ,NY,VA,ME

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA TO-15 in Air	
Tetrachloroethylene	AIHA,FL,NJ,NY,VA,ME
Tetrahydrofuran	AIHA
Toluene	AIHA,FL,NJ,NY,VA,ME
1,2,4-Trichlorobenzene	AIHA,NJ,NY,VA,ME
1,1,1-Trichloroethane	AIHA,FL,NJ,NY,VA,ME
1,1,2-Trichloroethane	AIHA,FL,NJ,NY,VA,ME
Trichloroethylene	AIHA,FL,NJ,NY,VA,ME
Trichlorofluoromethane (Freon 11)	AIHA,NY,ME
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	AIHA,NJ,NY,VA,ME
1,2,4-Trimethylbenzene	AIHA,NJ,NY,ME
1,3,5-Trimethylbenzene	AIHA,NJ,NY,ME
Vinyl Acetate	AIHA,FL,NJ,NY,VA,ME
Vinyl Chloride	AIHA,FL,NJ,NY,VA,ME
m&p-Xylene	AIHA,FL,NJ,NY,VA,ME
o-Xylene	AIHA,FL,NJ,NY,VA,ME

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2017
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2018
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2018
RI	Rhode Island Department of Health	LAO00112	12/30/2017
NC	North Carolina Div. of Water Quality	652	12/31/2017
NJ	New Jersey DEP	MA007 NELAP	06/30/2017
FL	Florida Department of Health	E871027 NELAP	06/30/2017
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2017
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2017
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2017

con-test ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

17E1536

http://www.contestlabs.com Doc #378 Rev 0 5/8/15

CHAIN OF CUSTODY RECORD (AIR)

39 Spruce Street
East Longmeadow, MA 01028

Page 1 of 1

Company Name:	Stone Environmental
Address:	535 Stone Cutters Way
Phone:	
Project Name:	100 Rivers Street
Project Location:	Springfield, VT
Project Number:	16-093
Project Manager:	Bette Nowack
Con-Test Bid:	
Invoice Recipient:	Bette Nowack
Sampled By:	Brian Niezel

Requested Turnaround Time
7-Day ☐ 10-Day ☑ (5D)
Other:

Rush Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other:
Enhanced Data Package Required: ☐
Email To: bniezel@stone-env.com
bnowack@stone-env.com
Fax To #:

ANALYSIS REQUESTED

Lab Use	Client Use	Collection Data		Duration	Flow Rate	Matrix	Volume	(TO-15) VOCs			" Hg			Please fill out completely, sign, date and retain the yellow copy for your records	Summa canisters and flow controllers must be returned within 15 days of receipt or rental fees will apply	For summa canister and flow controller information please refer to Con-Test's Air Media Agreement	
Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Total Minutes Sampled	☐ m³/min ☐ L/min	Code	☐ Liters ☐ m³				Initial Pressure	Final Pressure	Lab Receipt Pressure			Summa Can ID	Flow Controller ID
01	AA-1	05/24/17 1118	05/25/17 1109	1437		AMB		X			-29	-10	9.2			2165	3531
02	IA-1-Dup	05/24/17 1214	05/25/17 1158	1424		IA(Dup)		X			-28	-7	8.4			1725	3468
03	IA-1	05/24/17 1213	05/25/17 1159	1426		IA		X			-29	-7	7.2			1508	3539
04	IA-2	05/24/17 1211	05/25/17 1156	1425		IA		X			-29	-9	8			1658	3538
05	Effluent	05/24/17 1150	05/25/17 1130	1420		O		X			-28	-8	10.8			1970	3467

Comments:

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Matrix Codes:
SG = SOIL GAS
IA = INDOOR AIR
AMB = AMBIENT
SS = SUB SLAB
D = DUP
BL = BLANK
O = Other Effluent

Relinquished by: (signature)	Date/Time: 05/30/17 0800
Received by: (signature) Fedex	Date/Time:
Relinquished by: (signature) Fedex	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time: 13:24 5.31.17
Received by: (signature)	Date/Time:

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
☐ CT RCP Required
☐ Enhanced Data Package Required

NELAC and AIHA-LAP, LLC Accredited

TURNAROUND TIME (BUSINESS DAYS) STARTS AT 9:00 AM THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON THIS CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME CANNOT START UNTIL ALL QUESTIONS HAVE BEEN ANSWERED.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

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IMPORTANT!
Hurricane Season Readiness. Learn More

FedEx ® Tracking

779238218168

Ship date:
Tue 5/30/2017

Montpelier, VT US

Delivered
Signed for by: MGARCIA

Actual delivery:
Wed 5/31/2017 1:24 pm

EAST LONGMEADOW, MA US

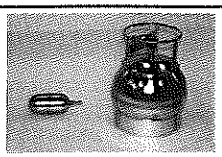
2 Piece shipment

Travel History

Date/Time	Activity	Location
5/31/2017 - Wednesday		
1:24 pm	Delivered	East Longmeadow, MA
7:11 am	On FedEx vehicle for delivery	CHICOPEE, MA
7:00 am	At local FedEx facility	CHICOPEE, MA
4:02 am	Departed FedEx location	SOUTH WINDSOR, CT
2:28 am	Arrived at FedEx location	SOUTH WINDSOR, CT
5/30/2017 - Tuesday		
9:12 pm	Left FedEx origin facility	WILLISTON, VT
4:58 pm	Arrived at FedEx location	WILLISTON, VT
12:01 pm	Picked up	WILLISTON, VT
5/26/2017 - Friday		
11:22 am	Shipment information sent to FedEx	

Shipment Facts

Tracking number	779238218168	**Service**	FedEx Ground
Reference	16-093	**Master tracking number**	779238218260
Weight	9.1 lbs / 4.13 kgs	**Signature services**	Direct signature required
Total pieces	2	**Total shipment weight**	40 lbs / 18.14 kgs
Terms	Shipper	**Packaging**	Package
Special handling section	Direct Signature Required	**Standard transit**	5/31/2017



www.contestlabs.com

con-test® ANALYTICAL LABORATORY

AIR Only Receipt Checklist

39 Spruce St.
East Longmeadow, MA.
01028
P: 413-525-2332
F: 413-525-6405

CLIENT NAME Stone Env. RECEIVED BY: PB DATE: 5·31·17

1) Was the chain(s) of custody relinquished and signed? Yes ✓ No ____

2) Does the chain agree with the samples? Yes ✓ No ____
If not, explain:

3) Are all the samples in good condition? Yes ✓ No ____
If not, explain:

4) Are there any samples "On Hold"? Yes ____ No ✓ Stored where: ____

5) Are there any RUSH or SHORT HOLDING TIME samples? Yes ____ No ✓
Who was notified ____ Date ____ Time ____

6) Location where samples are stored: Air lab

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: ____

7) Number of cans Individually Certified or Batch Certified? 5 Certified cans

Containers received at Con-Test

		# of Containers	Types (Size, Duration)
Summa Cans (TO-14/TO-15/APH)		5	6 L
Tedlar Bags			
TO-17 Tubes			
Regulators		5	24 hr
Restrictors			
Hg/Hopcalite Tube (NIOSH 6009)			
(TO-4A/ TO-10A/TO-13) PUFs			
PCB Florisil Tubes (NIOSH 5503)			
Air cassette			
PM 2.5/PM 10			
TO-11A Cartridges			
Other			

Unused Summas/PUF Media:

Unused Regulators:

1) Was all media (used & unused) checked into the WASP?

2) Were all returned summa cans, Restrictors & Regulators and PUF's documented as returned in the Air Lab Inbound/Outbound Excel Spreadsheet?

Laboratory Comments:																			
						2165	1970		3538	3531									
						1725			3539										
						1508			3461										
						1658			3468										

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)

Any False statement will be brought to the attention of Client

Question	Answer (True/False) T/F/NA	Comment
1) The coolers'/boxes' custody seal, if present, is intact.	NA	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	NA	
4) Cooler Temperature is acceptable.	NA	
5) Cooler Temperature is recorded.	NA	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) Samples are received within Holding Time.	T	
10) Sample containers have legible labels.	T	
11) Containers/media are not broken or leaking and valves and caps are closed tightly.	T	
12) Sample collection date/times are provided.	T	
13) Appropriate sample/media containers are used.	T	
14) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	T	
15) Trip blanks provided if applicable.	NA	

Who notified of False statements? **Date/Time:**

Doc #278 Rev. 5 October 2014 **Log-In Technician Initials:** PB **Date/Time:** 5.31.17 13:24

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

August 9, 2017

Bette Nowack
Stone Environmental
535 Stone Cutters Ways
Montpelier, VT 05602

Project Location: 100 River St, Springfield, VT
Client Job Number:
Project Number: 16-093
Laboratory Work Order Number: 17G1339

Enclosed are results of analyses for samples received by the laboratory on July 29, 2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Aaron L. Benoit
Project Manager

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con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Stone Environmental
535 Stone Cutters Ways
Montpelier, VT 05602
ATTN: Bette Nowack

REPORT DATE: 8/9/2017

PURCHASE ORDER NUMBER: 14-024

PROJECT NUMBER: 16-093

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 17G1339

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 100 River St, Springfield, VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-14	17G1339-01	Ground Water		SW-846 8260C	
MW-15	17G1339-02	Ground Water		SW-846 8082A	
MW-12	17G1339-03	Ground Water		SW-846 8260C	
MW-16	17G1339-04	Ground Water		SW-846 8082A	
MW-6	17G1339-05	Ground Water		SW-846 8260C	
MW-6 Dup	17G1339-06	Ground Water		SW-846 8260C	
GMW-1D	17G1339-07	Ground Water		SW-846 8082A	
GMW-1D Dup	17G1339-08	Ground Water		SW-846 8082A	
Trip Blank	17G1339-09	Trip Blank Water		SW-846 8260C	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

SW-846 8260C

Qualifications:

L-01

Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.

Analyte & Samples(s) Qualified:

Methyl Acetate

B183409-BS1, B183409-BSD1

L-04

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Dichlorodifluoromethane (Freon 1

17G1339-01[MW-14], 17G1339-03[MW-12], 17G1339-05[MW-6], 17G1339-06[MW-6 Dup], 17G1339-09[Trip Blank], B183409-BLK1, B183409-BS1, B183409-BSD1, B183487-BLK1, B183487-BS1, B183487-BSD1

Methyl Acetate

17G1339-05[MW-6], 17G1339-06[MW-6 Dup], B183487-BLK1, B183487-BS1, B183487-BSD1

L-07

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

1,4-Dioxane

B183409-BS1

Chloroethane

B183487-BS1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

2,2-Dichloropropane

17G1339-01[MW-14], 17G1339-03[MW-12], 17G1339-09[Trip Blank], B183409-BLK1, B183409-BS1, B183409-BSD1

trans-1,4-Dichloro-2-butene

17G1339-01[MW-14], 17G1339-03[MW-12], 17G1339-09[Trip Blank], B183409-BLK1, B183409-BS1, B183409-BSD1

V-06

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

Bromomethane

B183409-BS1, B183409-BSD1

V-16

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:

1,4-Dioxane

17G1339-01[MW-14], 17G1339-03[MW-12], 17G1339-09[Trip Blank], B183409-BLK1, B183409-BS1, B183409-BSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

1,4-Dioxane

B183409-BS1, B183409-BSD1

Bromomethane

B183487-BS1, B183487-BSD1

Methyl Acetate

B183409-BS1, B183409-BSD1

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Tod E. Kopyscinski
Laboratory Director

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 100 River St, Springfield, VT | Sample Description: | Work Order: 17G1339

Date Received: 7/29/2017

Field Sample #: MW-14 | Sampled: 7/27/2017 14:10

Sample ID: 17G1339-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Benzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Bromoform	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Bromomethane	ND	5.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Carbon Disulfide	ND	4.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1	V-05	SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1	L-04	SW-846 8260C	8/5/17	8/7/17 12:17	LBD
1,1-Dichloroethane	1.3	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
cis-1,2-Dichloroethylene	2.2	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
2,2-Dichloropropane	ND	1.0	µg/L	1	V-05	SW-846 8260C	8/5/17	8/7/17 12:17	LBD
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 100 River St, Springfield, VT | Sample Description: | Work Order: 17G1339

Date Received: 7/29/2017

Field Sample #: MW-14 | Sampled: 7/27/2017 14:10

Sample ID: 17G1339-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Hexachlorobutadiene	ND	0.60	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Methyl Acetate	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Methyl Cyclohexane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Styrene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Toluene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Trichloroethylene	18	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:17	LBD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	98.5	70-130		8/7/17 12:17
Toluene-d8	101	70-130		8/7/17 12:17
4-Bromofluorobenzene	102	70-130		8/7/17 12:17

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 100 River St, Springfield, VT | Sample Description: | Work Order: 17G1339

Date Received: 7/29/2017

Field Sample #: MW-15 | Sampled: 7/27/2017 11:40

Sample ID: 17G1339-02

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:06	KAL
Aroclor-1221 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:06	KAL
Aroclor-1232 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:06	KAL
Aroclor-1242 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:06	KAL
Aroclor-1248 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:06	KAL
Aroclor-1254 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:06	KAL
Aroclor-1260 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:06	KAL
Aroclor-1262 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:06	KAL
Aroclor-1268 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:06	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	61.9	30-150		8/7/17 15:06
Decachlorobiphenyl [2]	66.8	30-150		8/7/17 15:06
Tetrachloro-m-xylene [1]	78.7	30-150		8/7/17 15:06
Tetrachloro-m-xylene [2]	66.1	30-150		8/7/17 15:06

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 100 River St, Springfield, VT | Sample Description: | Work Order: 17G1339

Date Received: 7/29/2017

Field Sample #: MW-12 | Sampled: 7/27/2017 13:15

Sample ID: 17G1339-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Benzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Bromoform	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Bromomethane	ND	5.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Carbon Disulfide	ND	4.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1	V-05	SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1	L-04	SW-846 8260C	8/5/17	8/7/17 12:48	LBD
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
cis-1,2-Dichloroethylene	5.9	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
2,2-Dichloropropane	ND	1.0	µg/L	1	V-05	SW-846 8260C	8/5/17	8/7/17 12:48	LBD
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 100 River St, Springfield, VT | Sample Description: | Work Order: 17G1339

Date Received: 7/29/2017

Field Sample #: MW-12 | Sampled: 7/27/2017 13:15

Sample ID: 17G1339-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Hexachlorobutadiene	ND	0.60	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Methyl Acetate	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Methyl Cyclohexane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Styrene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Toluene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Trichloroethylene	1.7	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
Vinyl Chloride	8.1	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 12:48	LBD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	96.0	70-130		8/7/17 12:48
Toluene-d8	100	70-130		8/7/17 12:48
4-Bromofluorobenzene	101	70-130		8/7/17 12:48

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 100 River St, Springfield, VT | Sample Description: | Work Order: 17G1339

Date Received: 7/29/2017

Field Sample #: MW-16 | Sampled: 7/27/2017 12:00

Sample ID: 17G1339-04

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:19	KAL
Aroclor-1221 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:19	KAL
Aroclor-1232 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:19	KAL
Aroclor-1242 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:19	KAL
Aroclor-1248 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:19	KAL
Aroclor-1254 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:19	KAL
Aroclor-1260 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:19	KAL
Aroclor-1262 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:19	KAL
Aroclor-1268 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:19	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	72.8	30-150		8/7/17 15:19
Decachlorobiphenyl [2]	71.7	30-150		8/7/17 15:19
Tetrachloro-m-xylene [1]	76.8	30-150		8/7/17 15:19
Tetrachloro-m-xylene [2]	74.7	30-150		8/7/17 15:19

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 100 River St, Springfield, VT | Sample Description: | Work Order: 17G1339

Date Received: 7/29/2017

Field Sample #: MW-6 | Sampled: 7/27/2017 12:15

Sample ID: 17G1339-05

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Benzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Bromoform	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Bromomethane	ND	5.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
sec-Butylbenzene	1.5	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Carbon Disulfide	ND	4.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1	L-04	SW-846 8260C	8/7/17	8/8/17 12:29	LBD
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
cis-1,2-Dichloroethylene	8.2	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 100 River St, Springfield, VT | Sample Description: | Work Order: 17G1339

Date Received: 7/29/2017

Field Sample #: MW-6 | Sampled: 7/27/2017 12:15

Sample ID: 17G1339-05

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
1,4-Dioxane	ND	100	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Hexachlorobutadiene	ND	0.60	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Methyl Acetate	ND	1.0	µg/L	1	L-04	SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Methyl Cyclohexane	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Styrene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Toluene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Trichloroethylene	4.5	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
Vinyl Chloride	4.5	2.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 12:29	LBD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	90.8	70-130		8/8/17 12:29
Toluene-d8	96.0	70-130		8/8/17 12:29
4-Bromofluorobenzene	93.8	70-130		8/8/17 12:29

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 100 River St, Springfield, VT | Sample Description: | Work Order: 17G1339

Date Received: 7/29/2017

Field Sample #: MW-6 Dup | Sampled: 7/27/2017 12:17

Sample ID: 17G1339-06

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Benzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Bromoform	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Bromomethane	ND	5.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
sec-Butylbenzene	1.4	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Carbon Disulfide	ND	4.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1	L-04	SW-846 8260C	8/7/17	8/8/17 13:00	LBD
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
cis-1,2-Dichloroethylene	10	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
trans-1,2-Dichloroethylene	1.1	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 100 River St, Springfield, VT | Sample Description: | Work Order: 17G1339

Date Received: 7/29/2017

Field Sample #: MW-6 Dup | Sampled: 7/27/2017 12:17

Sample ID: 17G1339-06

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
1,4-Dioxane	ND	100	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Hexachlorobutadiene	ND	0.60	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Methyl Acetate	ND	1.0	µg/L	1	L-04	SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Methyl Cyclohexane	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Styrene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Toluene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Trichloroethylene	4.5	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
Vinyl Chloride	11	2.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	8/7/17	8/8/17 13:00	LBD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	91.3	70-130		8/8/17 13:00
Toluene-d8	96.5	70-130		8/8/17 13:00
4-Bromofluorobenzene	94.9	70-130		8/8/17 13:00

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 100 River St, Springfield, VT | Sample Description: | Work Order: 17G1339

Date Received: 7/29/2017

Field Sample #: GMW-1D | Sampled: 7/27/2017 11:08

Sample ID: 17G1339-07

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:31	KAL
Aroclor-1221 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:31	KAL
Aroclor-1232 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:31	KAL
Aroclor-1242 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:31	KAL
Aroclor-1248 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:31	KAL
Aroclor-1254 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:31	KAL
Aroclor-1260 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:31	KAL
Aroclor-1262 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:31	KAL
Aroclor-1268 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:31	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	81.1	30-150		8/7/17 15:31
Decachlorobiphenyl [2]	78.3	30-150		8/7/17 15:31
Tetrachloro-m-xylene [1]	85.5	30-150		8/7/17 15:31
Tetrachloro-m-xylene [2]	77.3	30-150		8/7/17 15:31

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 100 River St, Springfield, VT | Sample Description: | Work Order: 17G1339

Date Received: 7/29/2017

Field Sample #: GMW-1D Dup | Sampled: 7/27/2017 11:10

Sample ID: 17G1339-08

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:44	KAL
Aroclor-1221 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:44	KAL
Aroclor-1232 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:44	KAL
Aroclor-1242 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:44	KAL
Aroclor-1248 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:44	KAL
Aroclor-1254 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:44	KAL
Aroclor-1260 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:44	KAL
Aroclor-1262 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:44	KAL
Aroclor-1268 [1]	ND	0.19	µg/L	1		SW-846 8082A	8/3/17	8/7/17 15:44	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	82.9	30-150		8/7/17 15:44
Decachlorobiphenyl [2]	81.0	30-150		8/7/17 15:44
Tetrachloro-m-xylene [1]	85.9	30-150		8/7/17 15:44
Tetrachloro-m-xylene [2]	77.4	30-150		8/7/17 15:44

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 100 River St, Springfield, VT | Sample Description: | Work Order: 17G1339

Date Received: 7/29/2017

Field Sample #: Trip Blank | Sampled: 7/27/2017 00:00

Sample ID: 17G1339-09

Sample Matrix: Trip Blank Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Benzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Bromoform	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Bromomethane	ND	5.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Carbon Disulfide	ND	4.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1	V-05	SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1	L-04	SW-846 8260C	8/5/17	8/7/17 9:43	LBD
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
2,2-Dichloropropane	ND	1.0	µg/L	1	V-05	SW-846 8260C	8/5/17	8/7/17 9:43	LBD
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 100 River St, Springfield, VT | Sample Description: | Work Order: 17G1339

Date Received: 7/29/2017

Field Sample #: Trip Blank | Sampled: 7/27/2017 00:00

Sample ID: 17G1339-09

Sample Matrix: Trip Blank Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Hexachlorobutadiene	ND	0.60	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Methyl Acetate	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Methyl Cyclohexane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Styrene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Toluene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	8/5/17	8/7/17 9:43	LBD

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
1,2-Dichloroethane-d4	97.9	70-130			8/7/17 9:43
Toluene-d8	100	70-130			8/7/17 9:43
4-Bromofluorobenzene	105	70-130			8/7/17 9:43

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Sample Extraction Data

Prep Method: SW-846 3510C-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17G1339-02 [MW-15]	B183192	1040	10.0	08/03/17
17G1339-04 [MW-16]	B183192	980	9.50	08/03/17
17G1339-07 [GMW-1D]	B183192	980	9.50	08/03/17
17G1339-08 [GMW-1D Dup]	B183192	990	9.50	08/03/17

Prep Method: SW-846 5035-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17G1339-01 [MW-14]	B183409	5	5.00	08/05/17
17G1339-03 [MW-12]	B183409	5	5.00	08/05/17
17G1339-09 [Trip Blank]	B183409	5	5.00	08/05/17

Prep Method: SW-846 5035-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17G1339-05 [MW-6]	B183487	5	5.00	08/07/17
17G1339-06 [MW-6 Dup]	B183487	5	5.00	08/07/17

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B183409 - SW-846 5035										
Blank (B183409-BLK1)				Prepared: 08/05/17 Analyzed: 08/07/17						
Acetone	ND	50	µg/L							
Acrylonitrile	ND	5.0	µg/L							
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L							
Benzene	ND	1.0	µg/L							
Bromobenzene	ND	1.0	µg/L							
Bromochloromethane	ND	1.0	µg/L							
Bromodichloromethane	ND	0.50	µg/L							
Bromoform	ND	1.0	µg/L							
Bromomethane	ND	2.0	µg/L							
2-Butanone (MEK)	ND	20	µg/L							
tert-Butyl Alcohol (TBA)	ND	20	µg/L							
n-Butylbenzene	ND	1.0	µg/L							
sec-Butylbenzene	ND	1.0	µg/L							
tert-Butylbenzene	ND	1.0	µg/L							
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L							
Carbon Disulfide	ND	4.0	µg/L							
Carbon Tetrachloride	ND	5.0	µg/L							
Chlorobenzene	ND	1.0	µg/L							
Chlorodibromomethane	ND	0.50	µg/L							
Chloroethane	ND	2.0	µg/L							
Chloroform	ND	2.0	µg/L							
Chloromethane	ND	2.0	µg/L							
2-Chlorotoluene	ND	1.0	µg/L							
4-Chlorotoluene	ND	1.0	µg/L							
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L							
1,2-Dibromoethane (EDB)	ND	0.50	µg/L							
Dibromomethane	ND	1.0	µg/L							
1,2-Dichlorobenzene	ND	1.0	µg/L							
1,3-Dichlorobenzene	ND	1.0	µg/L							
1,4-Dichlorobenzene	ND	1.0	µg/L							
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L							V-05
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L							L-04
1,1-Dichloroethane	ND	1.0	µg/L							
1,2-Dichloroethane	ND	1.0	µg/L							
1,1-Dichloroethylene	ND	1.0	µg/L							
cis-1,2-Dichloroethylene	ND	1.0	µg/L							
trans-1,2-Dichloroethylene	ND	1.0	µg/L							
1,2-Dichloropropane	ND	1.0	µg/L							
1,3-Dichloropropane	ND	0.50	µg/L							
2,2-Dichloropropane	ND	1.0	µg/L							V-05
1,1-Dichloropropene	ND	2.0	µg/L							
cis-1,3-Dichloropropene	ND	0.50	µg/L							
trans-1,3-Dichloropropene	ND	0.50	µg/L							
Diethyl Ether	ND	2.0	µg/L							
Diisopropyl Ether (DIPE)	ND	0.50	µg/L							
1,4-Dioxane	ND	50	µg/L							V-16
Ethylbenzene	ND	1.0	µg/L							
Hexachlorobutadiene	ND	0.60	µg/L							
2-Hexanone (MBK)	ND	10	µg/L							
Isopropylbenzene (Cumene)	ND	1.0	µg/L							
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L							
Methyl Acetate	ND	1.0	µg/L							

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B183409 - SW-846 5035											
Blank (B183409-BLK1)				Prepared: 08/05/17 Analyzed: 08/07/17							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L								
Methyl Cyclohexane	ND	1.0	µg/L								
Methylene Chloride	ND	5.0	µg/L								
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L								
Naphthalene	ND	2.0	µg/L								
n-Propylbenzene	ND	1.0	µg/L								
Styrene	ND	1.0	µg/L								
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L								
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L								
Tetrachloroethylene	ND	1.0	µg/L								
Tetrahydrofuran	ND	10	µg/L								
Toluene	ND	1.0	µg/L								
1,2,3-Trichlorobenzene	ND	5.0	µg/L								
1,2,4-Trichlorobenzene	ND	1.0	µg/L								
1,3,5-Trichlorobenzene	ND	1.0	µg/L								
1,1,1-Trichloroethane	ND	1.0	µg/L								
1,1,2-Trichloroethane	ND	1.0	µg/L								
Trichloroethylene	ND	1.0	µg/L								
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L								
1,2,3-Trichloropropane	ND	2.0	µg/L								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L								
1,2,4-Trimethylbenzene	ND	1.0	µg/L								
1,3,5-Trimethylbenzene	ND	1.0	µg/L								
Vinyl Chloride	ND	2.0	µg/L								
m+p Xylene	ND	2.0	µg/L								
o-Xylene	ND	1.0	µg/L								
Surrogate: 1,2-Dichloroethane-d4	*24.5*		µg/L	25.0		98.0	70-130				
Surrogate: Toluene-d8	*25.2*		µg/L	25.0		101	70-130				
Surrogate: 4-Bromofluorobenzene	*25.5*		µg/L	25.0		102	70-130				
LCS (B183409-BS1)				Prepared: 08/05/17 Analyzed: 08/07/17							
Acetone	97.7	50	µg/L	100		97.7	70-160				†
Acrylonitrile	7.67	5.0	µg/L	10.0		76.7	70-130				
tert-Amyl Methyl Ether (TAME)	9.67	0.50	µg/L	10.0		96.7	70-130				
Benzene	9.81	1.0	µg/L	10.0		98.1	70-130				
Bromobenzene	9.68	1.0	µg/L	10.0		96.8	70-130				
Bromochloromethane	11.3	1.0	µg/L	10.0		113	70-130				
Bromodichloromethane	9.50	0.50	µg/L	10.0		95.0	70-130				
Bromoform	10.1	1.0	µg/L	10.0		101	70-130				
Bromomethane	9.92	2.0	µg/L	10.0		99.2	40-160			V-06	†
2-Butanone (MEK)	96.7	20	µg/L	100		96.7	40-160				†
tert-Butyl Alcohol (TBA)	93.8	20	µg/L	100		93.8	40-160				†
n-Butylbenzene	8.28	1.0	µg/L	10.0		82.8	70-130				
sec-Butylbenzene	9.13	1.0	µg/L	10.0		91.3	70-130				
tert-Butylbenzene	9.11	1.0	µg/L	10.0		91.1	70-130				
tert-Butyl Ethyl Ether (TBEE)	9.29	0.50	µg/L	10.0		92.9	70-130				
Carbon Disulfide	8.90	4.0	µg/L	10.0		89.0	70-130				
Carbon Tetrachloride	10.7	5.0	µg/L	10.0		107	70-130				
Chlorobenzene	10.2	1.0	µg/L	10.0		102	70-130				
Chlorodibromomethane	10.2	0.50	µg/L	10.0		102	70-130				
Chloroethane	8.84	2.0	µg/L	10.0		88.4	70-130				
Chloroform	9.91	2.0	µg/L	10.0		99.1	70-130				

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B183409 - SW-846 5035												
LCS (B183409-BS1)				Prepared: 08/05/17 Analyzed: 08/07/17								
Chloromethane	6.59	2.0	µg/L	10.0		65.9		40-160				†
2-Chlorotoluene	9.89	1.0	µg/L	10.0		98.9		70-130				
4-Chlorotoluene	9.82	1.0	µg/L	10.0		98.2		70-130				
1,2-Dibromo-3-chloropropane (DBCP)	8.94	5.0	µg/L	10.0		89.4		70-130				
1,2-Dibromoethane (EDB)	10.3	0.50	µg/L	10.0		103		70-130				
Dibromomethane	10.6	1.0	µg/L	10.0		106		70-130				
1,2-Dichlorobenzene	9.37	1.0	µg/L	10.0		93.7		70-130				
1,3-Dichlorobenzene	9.63	1.0	µg/L	10.0		96.3		70-130				
1,4-Dichlorobenzene	9.43	1.0	µg/L	10.0		94.3		70-130				
trans-1,4-Dichloro-2-butene	7.52	2.0	µg/L	10.0		75.2		70-130			V-05	
Dichlorodifluoromethane (Freon 12)	3.68	2.0	µg/L	10.0		**36.8**	*	40-160			L-04	†
1,1-Dichloroethane	10.4	1.0	µg/L	10.0		104		70-130				
1,2-Dichloroethane	10.3	1.0	µg/L	10.0		103		70-130				
1,1-Dichloroethylene	9.68	1.0	µg/L	10.0		96.8		70-130				
cis-1,2-Dichloroethylene	9.14	1.0	µg/L	10.0		91.4		70-130				
trans-1,2-Dichloroethylene	9.88	1.0	µg/L	10.0		98.8		70-130				
1,2-Dichloropropane	9.73	1.0	µg/L	10.0		97.3		70-130				
1,3-Dichloropropane	9.84	0.50	µg/L	10.0		98.4		70-130				
2,2-Dichloropropane	5.32	1.0	µg/L	10.0		53.2		40-130			V-05	†
1,1-Dichloropropene	10.2	2.0	µg/L	10.0		102		70-130				
cis-1,3-Dichloropropene	8.23	0.50	µg/L	10.0		82.3		70-130				
trans-1,3-Dichloropropene	8.93	0.50	µg/L	10.0		89.3		70-130				
Diethyl Ether	9.40	2.0	µg/L	10.0		94.0		70-130				
Diisopropyl Ether (DIPE)	9.11	0.50	µg/L	10.0		91.1		70-130				
1,4-Dioxane	132	50	µg/L	100		**132**	*	40-130			L-07, V-16, V-20	†
Ethylbenzene	9.91	1.0	µg/L	10.0		99.1		70-130				
Hexachlorobutadiene	10.4	0.60	µg/L	10.0		104		70-130				
2-Hexanone (MBK)	98.0	10	µg/L	100		98.0		70-160				†
Isopropylbenzene (Cumene)	10.4	1.0	µg/L	10.0		104		70-130				
p-Isopropyltoluene (p-Cymene)	9.04	1.0	µg/L	10.0		90.4		70-130				
Methyl Acetate	14.1	1.0	µg/L	10.0		**141**	*	70-130			L-01, V-20	
Methyl tert-Butyl Ether (MTBE)	10.1	1.0	µg/L	10.0		101		70-130				
Methyl Cyclohexane	8.56	1.0	µg/L	10.0		85.6		70-130				
Methylene Chloride	9.42	5.0	µg/L	10.0		94.2		70-130				
4-Methyl-2-pentanone (MIBK)	96.9	10	µg/L	100		96.9		70-160				†
Naphthalene	9.26	2.0	µg/L	10.0		92.6		40-130				†
n-Propylbenzene	9.68	1.0	µg/L	10.0		96.8		70-130				
Styrene	10.0	1.0	µg/L	10.0		100		70-130				
1,1,1,2-Tetrachloroethane	10.1	1.0	µg/L	10.0		101		70-130				
1,1,2,2-Tetrachloroethane	9.89	0.50	µg/L	10.0		98.9		70-130				
Tetrachloroethylene	10.9	1.0	µg/L	10.0		109		70-130				
Tetrahydrofuran	8.76	10	µg/L	10.0		87.6		70-130				
Toluene	9.88	1.0	µg/L	10.0		98.8		70-130				
1,2,3-Trichlorobenzene	10.3	5.0	µg/L	10.0		103		70-130				
1,2,4-Trichlorobenzene	10.2	1.0	µg/L	10.0		102		70-130				
1,3,5-Trichlorobenzene	9.32	1.0	µg/L	10.0		93.2		70-130				
1,1,1-Trichloroethane	9.80	1.0	µg/L	10.0		98.0		70-130				
1,1,2-Trichloroethane	10.1	1.0	µg/L	10.0		101		70-130				
Trichloroethylene	9.80	1.0	µg/L	10.0		98.0		70-130				
Trichlorofluoromethane (Freon 11)	8.48	2.0	µg/L	10.0		84.8		70-130				
1,2,3-Trichloropropane	10.6	2.0	µg/L	10.0		106		70-130				

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B183409 - SW-846 5035												
LCS (B183409-BS1)				Prepared: 08/05/17 Analyzed: 08/07/17								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	9.05	1.0	µg/L	10.0		90.5		70-130				
1,2,4-Trimethylbenzene	8.66	1.0	µg/L	10.0		86.6		70-130				
1,3,5-Trimethylbenzene	9.63	1.0	µg/L	10.0		96.3		70-130				
Vinyl Chloride	7.57	2.0	µg/L	10.0		75.7		40-160				†
m+p Xylene	19.8	2.0	µg/L	20.0		99.0		70-130				
o-Xylene	9.91	1.0	µg/L	10.0		99.1		70-130				
Surrogate: 1,2-Dichloroethane-d4	*24.1*		µg/L	25.0		96.6		70-130				
Surrogate: Toluene-d8	*24.6*		µg/L	25.0		98.4		70-130				
Surrogate: 4-Bromofluorobenzene	*26.1*		µg/L	25.0		105		70-130				
LCS Dup (B183409-BSD1)				Prepared: 08/05/17 Analyzed: 08/07/17								
Acetone	93.8	50	µg/L	100		93.8		70-160	4.12	25		†
Acrylonitrile	7.32	5.0	µg/L	10.0		73.2		70-130	4.67	25		
tert-Amyl Methyl Ether (TAME)	9.41	0.50	µg/L	10.0		94.1		70-130	2.73	25		
Benzene	9.50	1.0	µg/L	10.0		95.0		70-130	3.21	25		
Bromobenzene	9.30	1.0	µg/L	10.0		93.0		70-130	4.00	25		
Bromochloromethane	11.0	1.0	µg/L	10.0		110		70-130	2.42	25		
Bromodichloromethane	9.59	0.50	µg/L	10.0		95.9		70-130	0.943	25		
Bromoform	10.0	1.0	µg/L	10.0		100		70-130	0.794	25		
Bromomethane	10.8	2.0	µg/L	10.0		108		40-160	8.68	25	V-06	†
2-Butanone (MEK)	95.3	20	µg/L	100		95.3		40-160	1.46	25		†
tert-Butyl Alcohol (TBA)	89.8	20	µg/L	100		89.8		40-160	4.31	25		†
n-Butylbenzene	7.92	1.0	µg/L	10.0		79.2		70-130	4.44	25		
sec-Butylbenzene	8.63	1.0	µg/L	10.0		86.3		70-130	5.63	25		
tert-Butylbenzene	8.78	1.0	µg/L	10.0		87.8		70-130	3.69	25		
tert-Butyl Ethyl Ether (TBEE)	9.00	0.50	µg/L	10.0		90.0		70-130	3.17	25		
Carbon Disulfide	8.12	4.0	µg/L	10.0		81.2		70-130	9.17	25		
Carbon Tetrachloride	10.0	5.0	µg/L	10.0		100		70-130	6.18	25		
Chlorobenzene	9.87	1.0	µg/L	10.0		98.7		70-130	2.80	25		
Chlorodibromomethane	10.2	0.50	µg/L	10.0		102		70-130	0.785	25		
Chloroethane	8.50	2.0	µg/L	10.0		85.0		70-130	3.92	25		
Chloroform	9.74	2.0	µg/L	10.0		97.4		70-130	1.73	25		
Chloromethane	6.33	2.0	µg/L	10.0		63.3		40-160	4.02	25		†
2-Chlorotoluene	9.42	1.0	µg/L	10.0		94.2		70-130	4.87	25		
4-Chlorotoluene	9.04	1.0	µg/L	10.0		90.4		70-130	8.27	25		
1,2-Dibromo-3-chloropropane (DBCP)	9.00	5.0	µg/L	10.0		90.0		70-130	0.669	25		
1,2-Dibromoethane (EDB)	10.3	0.50	µg/L	10.0		103		70-130	0.0968	25		
Dibromomethane	10.5	1.0	µg/L	10.0		105		70-130	0.0948	25		
1,2-Dichlorobenzene	9.22	1.0	µg/L	10.0		92.2		70-130	1.61	25		
1,3-Dichlorobenzene	9.33	1.0	µg/L	10.0		93.3		70-130	3.16	25		
1,4-Dichlorobenzene	9.03	1.0	µg/L	10.0		90.3		70-130	4.33	25		
trans-1,4-Dichloro-2-butene	7.20	2.0	µg/L	10.0		72.0		70-130	4.35	25	V-05	
Dichlorodifluoromethane (Freon 12)	3.37	2.0	µg/L	10.0		**33.7**	*	40-160	8.79	25	L-04	†
1,1-Dichloroethane	9.82	1.0	µg/L	10.0		98.2		70-130	5.93	25		
1,2-Dichloroethane	10.2	1.0	µg/L	10.0		102		70-130	1.46	25		
1,1-Dichloroethylene	9.15	1.0	µg/L	10.0		91.5		70-130	5.63	25		
cis-1,2-Dichloroethylene	9.07	1.0	µg/L	10.0		90.7		70-130	0.769	25		
trans-1,2-Dichloroethylene	9.23	1.0	µg/L	10.0		92.3		70-130	6.80	25		
1,2-Dichloropropane	9.76	1.0	µg/L	10.0		97.6		70-130	0.308	25		
1,3-Dichloropropane	10.0	0.50	µg/L	10.0		100		70-130	1.61	25		
2,2-Dichloropropane	5.11	1.0	µg/L	10.0		51.1		40-130	4.03	25	V-05	†
1,1-Dichloropropene	9.64	2.0	µg/L	10.0		96.4		70-130	5.74	25		

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B183409 - SW-846 5035												
LCS Dup (B183409-BSD1)				Prepared: 08/05/17 Analyzed: 08/07/17								
cis-1,3-Dichloropropene	8.10	0.50	µg/L	10.0		81.0		70-130	1.59	25		
trans-1,3-Dichloropropene	8.80	0.50	µg/L	10.0		88.0		70-130	1.47	25		
Diethyl Ether	8.97	2.0	µg/L	10.0		89.7		70-130	4.68	25		
Diisopropyl Ether (DIPE)	8.86	0.50	µg/L	10.0		88.6		70-130	2.78	25		
1,4-Dioxane	125	50	µg/L	100		125		40-130	4.95	50	V-16, V-20	† ‡
Ethylbenzene	9.44	1.0	µg/L	10.0		94.4		70-130	4.86	25		
Hexachlorobutadiene	10.2	0.60	µg/L	10.0		102		70-130	1.45	25		
2-Hexanone (MBK)	96.3	10	µg/L	100		96.3		70-160	1.81	25		†
Isopropylbenzene (Cumene)	9.76	1.0	µg/L	10.0		97.6		70-130	6.06	25		
p-Isopropyltoluene (p-Cymene)	8.70	1.0	µg/L	10.0		87.0		70-130	3.83	25		
Methyl Acetate	14.4	1.0	µg/L	10.0		**144**	*	70-130	2.39	25	L-01, V-20	
Methyl tert-Butyl Ether (MTBE)	9.87	1.0	µg/L	10.0		98.7		70-130	2.50	25		
Methyl Cyclohexane	8.22	1.0	µg/L	10.0		82.2		70-130	4.05	25		
Methylene Chloride	9.06	5.0	µg/L	10.0		90.6		70-130	3.90	25		
4-Methyl-2-pentanone (MIBK)	96.4	10	µg/L	100		96.4		70-160	0.538	25		†
Naphthalene	8.91	2.0	µg/L	10.0		89.1		40-130	3.85	25		†
n-Propylbenzene	9.14	1.0	µg/L	10.0		91.4		70-130	5.74	25		
Styrene	9.43	1.0	µg/L	10.0		94.3		70-130	6.27	25		
1,1,1,2-Tetrachloroethane	9.58	1.0	µg/L	10.0		95.8		70-130	4.89	25		
1,1,2,2-Tetrachloroethane	9.76	0.50	µg/L	10.0		97.6		70-130	1.32	25		
Tetrachloroethylene	10.4	1.0	µg/L	10.0		104		70-130	4.70	25		
Tetrahydrofuran	8.82	10	µg/L	10.0		88.2		70-130	0.683	25		
Toluene	9.80	1.0	µg/L	10.0		98.0		70-130	0.813	25		
1,2,3-Trichlorobenzene	10.2	5.0	µg/L	10.0		102		70-130	1.56	25		
1,2,4-Trichlorobenzene	10.0	1.0	µg/L	10.0		100		70-130	1.68	25		
1,3,5-Trichlorobenzene	8.99	1.0	µg/L	10.0		89.9		70-130	3.60	25		
1,1,1-Trichloroethane	9.64	1.0	µg/L	10.0		96.4		70-130	1.65	25		
1,1,2-Trichloroethane	9.93	1.0	µg/L	10.0		99.3		70-130	1.40	25		
Trichloroethylene	9.41	1.0	µg/L	10.0		94.1		70-130	4.06	25		
Trichlorofluoromethane (Freon 11)	8.13	2.0	µg/L	10.0		81.3		70-130	4.21	25		
1,2,3-Trichloropropane	10.1	2.0	µg/L	10.0		101		70-130	4.84	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	8.11	1.0	µg/L	10.0		81.1		70-130	11.0	25		
1,2,4-Trimethylbenzene	8.30	1.0	µg/L	10.0		83.0		70-130	4.25	25		
1,3,5-Trimethylbenzene	9.27	1.0	µg/L	10.0		92.7		70-130	3.81	25		
Vinyl Chloride	6.96	2.0	µg/L	10.0		69.6		40-160	8.40	25		†
m+p Xylene	19.2	2.0	µg/L	20.0		95.8		70-130	3.34	25		
o-Xylene	9.43	1.0	µg/L	10.0		94.3		70-130	4.96	25		
Surrogate: 1,2-Dichloroethane-d4	*24.2*		µg/L	25.0		96.9		70-130				
Surrogate: Toluene-d8	*25.1*		µg/L	25.0		100		70-130				
Surrogate: 4-Bromofluorobenzene	*25.8*		µg/L	25.0		103		70-130				
Batch B183487 - SW-846 5035												
Blank (B183487-BLK1)				Prepared: 08/07/17 Analyzed: 08/08/17								
Acetone	ND	50	µg/L									
Acrylonitrile	ND	5.0	µg/L									
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L									
Benzene	ND	1.0	µg/L									
Bromobenzene	ND	1.0	µg/L									
Bromochloromethane	ND	1.0	µg/L									
Bromodichloromethane	ND	0.50	µg/L									
Bromoform	ND	1.0	µg/L									

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B183487 - SW-846 5035										
Blank (B183487-BLK1)				Prepared: 08/07/17 Analyzed: 08/08/17						
Bromomethane	ND	5.0	µg/L							
2-Butanone (MEK)	ND	20	µg/L							
tert-Butyl Alcohol (TBA)	ND	20	µg/L							
n-Butylbenzene	ND	1.0	µg/L							
sec-Butylbenzene	ND	1.0	µg/L							
tert-Butylbenzene	ND	1.0	µg/L							
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L							
Carbon Disulfide	ND	4.0	µg/L							
Carbon Tetrachloride	ND	5.0	µg/L							
Chlorobenzene	ND	1.0	µg/L							
Chlorodibromomethane	ND	0.50	µg/L							
Chloroethane	ND	2.0	µg/L							
Chloroform	ND	2.0	µg/L							
Chloromethane	ND	2.0	µg/L							
2-Chlorotoluene	ND	1.0	µg/L							
4-Chlorotoluene	ND	1.0	µg/L							
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L							
1,2-Dibromoethane (EDB)	ND	0.50	µg/L							
Dibromomethane	ND	1.0	µg/L							
1,2-Dichlorobenzene	ND	1.0	µg/L							
1,3-Dichlorobenzene	ND	1.0	µg/L							
1,4-Dichlorobenzene	ND	1.0	µg/L							
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L							
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L							L-04
1,1-Dichloroethane	ND	1.0	µg/L							
1,2-Dichloroethane	ND	1.0	µg/L							
1,1-Dichloroethylene	ND	1.0	µg/L							
cis-1,2-Dichloroethylene	ND	1.0	µg/L							
trans-1,2-Dichloroethylene	ND	1.0	µg/L							
1,2-Dichloropropane	ND	1.0	µg/L							
1,3-Dichloropropane	ND	0.50	µg/L							
2,2-Dichloropropane	ND	1.0	µg/L							
1,1-Dichloropropene	ND	2.0	µg/L							
cis-1,3-Dichloropropene	ND	0.50	µg/L							
trans-1,3-Dichloropropene	ND	0.50	µg/L							
Diethyl Ether	ND	2.0	µg/L							
Diisopropyl Ether (DIPE)	ND	0.50	µg/L							
1,4-Dioxane	ND	100	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Hexachlorobutadiene	ND	0.60	µg/L							
2-Hexanone (MBK)	ND	10	µg/L							
Isopropylbenzene (Cumene)	ND	1.0	µg/L							
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L							
Methyl Acetate	ND	1.0	µg/L							L-04
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
Methyl Cyclohexane	ND	1.0	µg/L							
Methylene Chloride	ND	5.0	µg/L							
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L							
Naphthalene	ND	2.0	µg/L							
n-Propylbenzene	ND	1.0	µg/L							
Styrene	ND	1.0	µg/L							
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L							

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B183487 - SW-846 5035												
Blank (B183487-BLK1)				Prepared: 08/07/17 Analyzed: 08/08/17								
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L									
Tetrachloroethylene	ND	1.0	µg/L									
Tetrahydrofuran	ND	10	µg/L									
Toluene	ND	1.0	µg/L									
1,2,3-Trichlorobenzene	ND	5.0	µg/L									
1,2,4-Trichlorobenzene	ND	1.0	µg/L									
1,3,5-Trichlorobenzene	ND	1.0	µg/L									
1,1,1-Trichloroethane	ND	1.0	µg/L									
1,1,2-Trichloroethane	ND	1.0	µg/L									
Trichloroethylene	ND	1.0	µg/L									
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L									
1,2,3-Trichloropropane	ND	2.0	µg/L									
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L									
1,2,4-Trimethylbenzene	ND	1.0	µg/L									
1,3,5-Trimethylbenzene	ND	1.0	µg/L									
Vinyl Chloride	ND	2.0	µg/L									
m+p Xylene	ND	2.0	µg/L									
o-Xylene	ND	1.0	µg/L									
Surrogate: 1,2-Dichloroethane-d4	*22.1*		µg/L	25.0		88.3		70-130				
Surrogate: Toluene-d8	*23.8*		µg/L	25.0		95.3		70-130				
Surrogate: 4-Bromofluorobenzene	*22.9*		µg/L	25.0		91.7		70-130				
LCS (B183487-BS1)				Prepared: 08/07/17 Analyzed: 08/08/17								
Acetone	113	50	µg/L	100		113		70-160				†
Acrylonitrile	8.25	5.0	µg/L	10.0		82.5		70-130				
tert-Amyl Methyl Ether (TAME)	7.72	0.50	µg/L	10.0		77.2		70-130				
Benzene	8.22	1.0	µg/L	10.0		82.2		70-130				
Bromobenzene	9.79	1.0	µg/L	10.0		97.9		70-130				
Bromochloromethane	9.18	1.0	µg/L	10.0		91.8		70-130				
Bromodichloromethane	8.51	0.50	µg/L	10.0		85.1		70-130				
Bromoform	10.1	1.0	µg/L	10.0		101		70-130				
Bromomethane	8.09	5.0	µg/L	10.0		80.9		40-160			V-20	†
2-Butanone (MEK)	97.2	20	µg/L	100		97.2		40-160				†
tert-Butyl Alcohol (TBA)	77.2	20	µg/L	100		77.2		40-160				†
n-Butylbenzene	10.0	1.0	µg/L	10.0		100		70-130				
sec-Butylbenzene	9.78	1.0	µg/L	10.0		97.8		70-130				
tert-Butylbenzene	9.72	1.0	µg/L	10.0		97.2		70-130				
tert-Butyl Ethyl Ether (TBEE)	7.62	0.50	µg/L	10.0		76.2		70-130				
Carbon Disulfide	7.86	4.0	µg/L	10.0		78.6		70-130				
Carbon Tetrachloride	8.61	5.0	µg/L	10.0		86.1		70-130				
Chlorobenzene	10.4	1.0	µg/L	10.0		104		70-130				
Chlorodibromomethane	9.24	0.50	µg/L	10.0		92.4		70-130				
Chloroethane	6.95	2.0	µg/L	10.0		**69.5**	*	70-130			L-07	
Chloroform	8.15	2.0	µg/L	10.0		81.5		70-130				
Chloromethane	6.22	2.0	µg/L	10.0		62.2		40-160				†
2-Chlorotoluene	10.0	1.0	µg/L	10.0		100		70-130				
4-Chlorotoluene	9.73	1.0	µg/L	10.0		97.3		70-130				
1,2-Dibromo-3-chloropropane (DBCP)	8.89	5.0	µg/L	10.0		88.9		70-130				
1,2-Dibromoethane (EDB)	9.37	0.50	µg/L	10.0		93.7		70-130				
Dibromomethane	9.78	1.0	µg/L	10.0		97.8		70-130				
1,2-Dichlorobenzene	10.2	1.0	µg/L	10.0		102		70-130				
1,3-Dichlorobenzene	10.5	1.0	µg/L	10.0		105		70-130				

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B183487 - SW-846 5035												
LCS (B183487-BS1)				Prepared: 08/07/17 Analyzed: 08/08/17								
1,4-Dichlorobenzene	10.2	1.0	µg/L	10.0		102		70-130				
trans-1,4-Dichloro-2-butene	10.4	2.0	µg/L	10.0		104		70-130				
Dichlorodifluoromethane (Freon 12)	2.69	2.0	µg/L	10.0		**26.9**	*	40-160			L-04	†
1,1-Dichloroethane	8.65	1.0	µg/L	10.0		86.5		70-130				
1,2-Dichloroethane	8.71	1.0	µg/L	10.0		87.1		70-130				
1,1-Dichloroethylene	8.52	1.0	µg/L	10.0		85.2		70-130				
cis-1,2-Dichloroethylene	8.05	1.0	µg/L	10.0		80.5		70-130				
trans-1,2-Dichloroethylene	8.05	1.0	µg/L	10.0		80.5		70-130				
1,2-Dichloropropane	8.99	1.0	µg/L	10.0		89.9		70-130				
1,3-Dichloropropane	9.39	0.50	µg/L	10.0		93.9		70-130				
2,2-Dichloropropane	9.21	1.0	µg/L	10.0		92.1		40-130				†
1,1-Dichloropropene	8.76	2.0	µg/L	10.0		87.6		70-130				
cis-1,3-Dichloropropene	8.27	0.50	µg/L	10.0		82.7		70-130				
trans-1,3-Dichloropropene	8.79	0.50	µg/L	10.0		87.9		70-130				
Diethyl Ether	8.14	2.0	µg/L	10.0		81.4		70-130				
Diisopropyl Ether (DIPE)	9.11	0.50	µg/L	10.0		91.1		70-130				
1,4-Dioxane	124	100	µg/L	100		124		40-130				†
Ethylbenzene	10.1	1.0	µg/L	10.0		101		70-130				
Hexachlorobutadiene	11.0	0.60	µg/L	10.0		110		70-130				
2-Hexanone (MBK)	105	10	µg/L	100		105		70-160				†
Isopropylbenzene (Cumene)	10.3	1.0	µg/L	10.0		103		70-130				
p-Isopropyltoluene (p-Cymene)	9.99	1.0	µg/L	10.0		99.9		70-130				
Methyl Acetate	6.85	1.0	µg/L	10.0		**68.5**	*	70-130			L-04	
Methyl tert-Butyl Ether (MTBE)	8.12	1.0	µg/L	10.0		81.2		70-130				
Methyl Cyclohexane	8.16	1.0	µg/L	10.0		81.6		70-130				
Methylene Chloride	9.06	5.0	µg/L	10.0		90.6		70-130				
4-Methyl-2-pentanone (MIBK)	105	10	µg/L	100		105		70-160				†
Naphthalene	9.55	2.0	µg/L	10.0		95.5		40-130				†
n-Propylbenzene	10.3	1.0	µg/L	10.0		103		70-130				
Styrene	10.2	1.0	µg/L	10.0		102		70-130				
1,1,1,2-Tetrachloroethane	10.0	1.0	µg/L	10.0		100		70-130				
1,1,2,2-Tetrachloroethane	10.5	0.50	µg/L	10.0		105		70-130				
Tetrachloroethylene	10.0	1.0	µg/L	10.0		100		70-130				
Tetrahydrofuran	8.35	10	µg/L	10.0		83.5		70-130				
Toluene	9.07	1.0	µg/L	10.0		90.7		70-130				
1,2,3-Trichlorobenzene	10.6	5.0	µg/L	10.0		106		70-130				
1,2,4-Trichlorobenzene	10.6	1.0	µg/L	10.0		106		70-130				
1,3,5-Trichlorobenzene	9.98	1.0	µg/L	10.0		99.8		70-130				
1,1,1-Trichloroethane	7.53	1.0	µg/L	10.0		75.3		70-130				
1,1,2-Trichloroethane	8.95	1.0	µg/L	10.0		89.5		70-130				
Trichloroethylene	9.00	1.0	µg/L	10.0		90.0		70-130				
Trichlorofluoromethane (Freon 11)	7.59	2.0	µg/L	10.0		75.9		70-130				
1,2,3-Trichloropropane	10.8	2.0	µg/L	10.0		108		70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	7.54	1.0	µg/L	10.0		75.4		70-130				
1,2,4-Trimethylbenzene	8.94	1.0	µg/L	10.0		89.4		70-130				
1,3,5-Trimethylbenzene	9.43	1.0	µg/L	10.0		94.3		70-130				
Vinyl Chloride	5.68	2.0	µg/L	10.0		56.8		40-160				†
m+p Xylene	20.0	2.0	µg/L	20.0		100		70-130				
o-Xylene	9.96	1.0	µg/L	10.0		99.6		70-130				
Surrogate: 1,2-Dichloroethane-d4	*21.9*		µg/L	25.0		87.7		70-130				
Surrogate: Toluene-d8	*23.5*		µg/L	25.0		93.9		70-130				

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B183487 - SW-846 5035												
LCS (B183487-BS1)				Prepared: 08/07/17 Analyzed: 08/08/17								
Surrogate: 4-Bromofluorobenzene	*23.4*		µg/L	25.0		93.7		70-130				
LCS Dup (B183487-BSD1)				Prepared: 08/07/17 Analyzed: 08/08/17								
Acetone	112	50	µg/L	100		112		70-160	1.03	25		†
Acrylonitrile	8.50	5.0	µg/L	10.0		85.0		70-130	2.99	25		
tert-Amyl Methyl Ether (TAME)	7.94	0.50	µg/L	10.0		79.4		70-130	2.81	25		
Benzene	8.07	1.0	µg/L	10.0		80.7		70-130	1.84	25		
Bromobenzene	9.84	1.0	µg/L	10.0		98.4		70-130	0.509	25		
Bromochloromethane	9.12	1.0	µg/L	10.0		91.2		70-130	0.656	25		
Bromodichloromethane	8.64	0.50	µg/L	10.0		86.4		70-130	1.52	25		
Bromoform	10.1	1.0	µg/L	10.0		101		70-130	0.693	25		
Bromomethane	10.3	5.0	µg/L	10.0		103		40-160	24.4	25	V-20	†
2-Butanone (MEK)	99.1	20	µg/L	100		99.1		40-160	2.00	25		†
tert-Butyl Alcohol (TBA)	81.2	20	µg/L	100		81.2		40-160	5.09	25		†
n-Butylbenzene	9.60	1.0	µg/L	10.0		96.0		70-130	4.28	25		
sec-Butylbenzene	9.57	1.0	µg/L	10.0		95.7		70-130	2.17	25		
tert-Butylbenzene	9.43	1.0	µg/L	10.0		94.3		70-130	3.03	25		
tert-Butyl Ethyl Ether (TBEE)	7.67	0.50	µg/L	10.0		76.7		70-130	0.654	25		
Carbon Disulfide	7.81	4.0	µg/L	10.0		78.1		70-130	0.638	25		
Carbon Tetrachloride	8.48	5.0	µg/L	10.0		84.8		70-130	1.52	25		
Chlorobenzene	10.3	1.0	µg/L	10.0		103		70-130	0.290	25		
Chlorodibromomethane	9.05	0.50	µg/L	10.0		90.5		70-130	2.08	25		
Chloroethane	7.22	2.0	µg/L	10.0		72.2		70-130	3.81	25		
Chloroform	8.22	2.0	µg/L	10.0		82.2		70-130	0.855	25		
Chloromethane	6.43	2.0	µg/L	10.0		64.3		40-160	3.32	25		†
2-Chlorotoluene	9.84	1.0	µg/L	10.0		98.4		70-130	1.61	25		
4-Chlorotoluene	9.59	1.0	µg/L	10.0		95.9		70-130	1.45	25		
1,2-Dibromo-3-chloropropane (DBCP)	9.28	5.0	µg/L	10.0		92.8		70-130	4.29	25		
1,2-Dibromoethane (EDB)	9.21	0.50	µg/L	10.0		92.1		70-130	1.72	25		
Dibromomethane	9.44	1.0	µg/L	10.0		94.4		70-130	3.54	25		
1,2-Dichlorobenzene	9.92	1.0	µg/L	10.0		99.2		70-130	2.59	25		
1,3-Dichlorobenzene	10.3	1.0	µg/L	10.0		103		70-130	1.73	25		
1,4-Dichlorobenzene	10.0	1.0	µg/L	10.0		100		70-130	1.09	25		
trans-1,4-Dichloro-2-butene	10.3	2.0	µg/L	10.0		103		70-130	1.16	25		
Dichlorodifluoromethane (Freon 12)	2.60	2.0	µg/L	10.0		**26.0**	*	40-160	3.40	25	L-04	†
1,1-Dichloroethane	8.55	1.0	µg/L	10.0		85.5		70-130	1.16	25		
1,2-Dichloroethane	8.81	1.0	µg/L	10.0		88.1		70-130	1.14	25		
1,1-Dichloroethylene	8.29	1.0	µg/L	10.0		82.9		70-130	2.74	25		
cis-1,2-Dichloroethylene	7.97	1.0	µg/L	10.0		79.7		70-130	0.999	25		
trans-1,2-Dichloroethylene	7.75	1.0	µg/L	10.0		77.5		70-130	3.80	25		
1,2-Dichloropropane	8.87	1.0	µg/L	10.0		88.7		70-130	1.34	25		
1,3-Dichloropropane	9.28	0.50	µg/L	10.0		92.8		70-130	1.18	25		
2,2-Dichloropropane	9.12	1.0	µg/L	10.0		91.2		40-130	0.982	25		†
1,1-Dichloropropene	8.61	2.0	µg/L	10.0		86.1		70-130	1.73	25		
cis-1,3-Dichloropropene	8.26	0.50	µg/L	10.0		82.6		70-130	0.121	25		
trans-1,3-Dichloropropene	8.71	0.50	µg/L	10.0		87.1		70-130	0.914	25		
Diethyl Ether	8.28	2.0	µg/L	10.0		82.8		70-130	1.71	25		
Diisopropyl Ether (DIPE)	9.06	0.50	µg/L	10.0		90.6		70-130	0.550	25		
1,4-Dioxane	117	100	µg/L	100		117		40-130	5.99	50		† ‡
Ethylbenzene	9.82	1.0	µg/L	10.0		98.2		70-130	2.81	25		
Hexachlorobutadiene	10.8	0.60	µg/L	10.0		108		70-130	1.56	25		
2-Hexanone (MBK)	108	10	µg/L	100		108		70-160	3.22	25		†

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B183487 - SW-846 5035												
LCS Dup (B183487-BSD1)				Prepared: 08/07/17 Analyzed: 08/08/17								
Isopropylbenzene (Cumene)	10.1	1.0	µg/L	10.0		101		70-130	2.25	25		
p-Isopropyltoluene (p-Cymene)	9.68	1.0	µg/L	10.0		96.8		70-130	3.15	25		
Methyl Acetate	6.95	1.0	µg/L	10.0		**69.5**	*	70-130	1.45	25	L-04	
Methyl tert-Butyl Ether (MTBE)	8.13	1.0	µg/L	10.0		81.3		70-130	0.123	25		
Methyl Cyclohexane	8.06	1.0	µg/L	10.0		80.6		70-130	1.23	25		
Methylene Chloride	9.25	5.0	µg/L	10.0		92.5		70-130	2.08	25		
4-Methyl-2-pentanone (MIBK)	108	10	µg/L	100		108		70-160	2.61	25		†
Naphthalene	9.65	2.0	µg/L	10.0		96.5		40-130	1.04	25		†
n-Propylbenzene	9.95	1.0	µg/L	10.0		99.5		70-130	3.17	25		
Styrene	10.3	1.0	µg/L	10.0		103		70-130	1.27	25		
1,1,1,2-Tetrachloroethane	9.67	1.0	µg/L	10.0		96.7		70-130	3.65	25		
1,1,2,2-Tetrachloroethane	10.6	0.50	µg/L	10.0		106		70-130	1.24	25		
Tetrachloroethylene	9.52	1.0	µg/L	10.0		95.2		70-130	5.02	25		
Tetrahydrofuran	9.83	10	µg/L	10.0		98.3		70-130	16.3	25		
Toluene	9.20	1.0	µg/L	10.0		92.0		70-130	1.42	25		
1,2,3-Trichlorobenzene	10.3	5.0	µg/L	10.0		103		70-130	2.20	25		
1,2,4-Trichlorobenzene	10.6	1.0	µg/L	10.0		106		70-130	0.00	25		
1,3,5-Trichlorobenzene	9.94	1.0	µg/L	10.0		99.4		70-130	0.402	25		
1,1,1-Trichloroethane	7.74	1.0	µg/L	10.0		77.4		70-130	2.75	25		
1,1,2-Trichloroethane	8.95	1.0	µg/L	10.0		89.5		70-130	0.00	25		
Trichloroethylene	9.16	1.0	µg/L	10.0		91.6		70-130	1.76	25		
Trichlorofluoromethane (Freon 11)	7.37	2.0	µg/L	10.0		73.7		70-130	2.94	25		
1,2,3-Trichloropropane	10.4	2.0	µg/L	10.0		104		70-130	3.69	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	7.64	1.0	µg/L	10.0		76.4		70-130	1.32	25		
1,2,4-Trimethylbenzene	8.76	1.0	µg/L	10.0		87.6		70-130	2.03	25		
1,3,5-Trimethylbenzene	9.37	1.0	µg/L	10.0		93.7		70-130	0.638	25		
Vinyl Chloride	5.80	2.0	µg/L	10.0		58.0		40-160	2.09	25		†
m+p Xylene	20.0	2.0	µg/L	20.0		100		70-130	0.100	25		
o-Xylene	9.93	1.0	µg/L	10.0		99.3		70-130	0.302	25		
Surrogate: 1,2-Dichloroethane-d4	*22.2*		µg/L	25.0		88.7		70-130				
Surrogate: Toluene-d8	*23.8*		µg/L	25.0		95.4		70-130				
Surrogate: 4-Bromofluorobenzene	*23.8*		µg/L	25.0		95.2		70-130				

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B183192 - SW-846 3510C										
Blank (B183192-BLK1)				Prepared & Analyzed: 08/03/17						
Aroclor-1016	ND	0.20	µg/L							
Aroclor-1016 [2C]	ND	0.20	µg/L							
Aroclor-1221	ND	0.20	µg/L							
Aroclor-1221 [2C]	ND	0.20	µg/L							
Aroclor-1232	ND	0.20	µg/L							
Aroclor-1232 [2C]	ND	0.20	µg/L							
Aroclor-1242	ND	0.20	µg/L							
Aroclor-1242 [2C]	ND	0.20	µg/L							
Aroclor-1248	ND	0.20	µg/L							
Aroclor-1248 [2C]	ND	0.20	µg/L							
Aroclor-1254	ND	0.20	µg/L							
Aroclor-1254 [2C]	ND	0.20	µg/L							
Aroclor-1260	ND	0.20	µg/L							
Aroclor-1260 [2C]	ND	0.20	µg/L							
Aroclor-1262	ND	0.20	µg/L							
Aroclor-1262 [2C]	ND	0.20	µg/L							
Aroclor-1268	ND	0.20	µg/L							
Aroclor-1268 [2C]	ND	0.20	µg/L							
Surrogate: Decachlorobiphenyl	*2.15*		µg/L	2.00		107	30-150			
Surrogate: Decachlorobiphenyl [2C]	*2.31*		µg/L	2.00		116	30-150			
Surrogate: Tetrachloro-m-xylene	*1.89*		µg/L	2.00		94.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.98*		µg/L	2.00		99.2	30-150			
LCS (B183192-BS1)				Prepared & Analyzed: 08/03/17						
Aroclor-1016	0.55	0.20	µg/L	0.500		110	40-140			
Aroclor-1016 [2C]	0.64	0.20	µg/L	0.500		128	40-140			
Aroclor-1260	0.52	0.20	µg/L	0.500		103	40-140			
Aroclor-1260 [2C]	0.61	0.20	µg/L	0.500		121	40-140			
Surrogate: Decachlorobiphenyl	*2.16*		µg/L	2.00		108	30-150			
Surrogate: Decachlorobiphenyl [2C]	*2.33*		µg/L	2.00		116	30-150			
Surrogate: Tetrachloro-m-xylene	*1.85*		µg/L	2.00		92.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*2.00*		µg/L	2.00		100	30-150			
LCS Dup (B183192-BSD1)				Prepared & Analyzed: 08/03/17						
Aroclor-1016	0.58	0.20	µg/L	0.500		115	40-140	4.87	20	
Aroclor-1016 [2C]	0.68	0.20	µg/L	0.500		137	40-140	6.39	20	
Aroclor-1260	0.53	0.20	µg/L	0.500		105	40-140	1.89	20	
Aroclor-1260 [2C]	0.64	0.20	µg/L	0.500		129	40-140	6.02	20	
Surrogate: Decachlorobiphenyl	*2.14*		µg/L	2.00		107	30-150			
Surrogate: Decachlorobiphenyl [2C]	*2.32*		µg/L	2.00		116	30-150			
Surrogate: Tetrachloro-m-xylene	*1.87*		µg/L	2.00		93.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.99*		µg/L	2.00		99.6	30-150			

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit
DL	Method Detection Limit
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.

L-01	Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
V-06	Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Water	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
SW-846 8260C in Water	
Acetone	CT,NY,ME,NH,VA
Acrylonitrile	CT,NY,ME,NH,VA
tert-Amyl Methyl Ether (TAME)	NY,ME,NH,VA
Benzene	CT,NY,ME,NH,VA
Bromobenzene	NY
Bromochloromethane	NY,ME,NH,VA
Bromodichloromethane	CT,NY,ME,NH,VA
Bromoform	CT,NY,ME,NH,VA
Bromomethane	CT,NY,ME,NH,VA
2-Butanone (MEK)	CT,NY,ME,NH,VA
tert-Butyl Alcohol (TBA)	NY,ME,NH,VA
n-Butylbenzene	NY,ME,VA
sec-Butylbenzene	NY,ME,VA
tert-Butylbenzene	NY,ME,VA
tert-Butyl Ethyl Ether (TBEE)	NY,ME,NH,VA
Carbon Disulfide	CT,NY,ME,NH,VA
Carbon Tetrachloride	CT,NY,ME,NH,VA
Chlorobenzene	CT,NY,ME,NH,VA
Chlorodibromomethane	CT,NY,ME,NH,VA
Chloroethane	CT,NY,ME,NH,VA
Chloroform	CT,NY,ME,NH,VA
Chloromethane	CT,NY,ME,NH,VA
2-Chlorotoluene	NY,ME,NH,VA
4-Chlorotoluene	NY,ME,NH,VA
Dibromomethane	NY,ME,NH,VA
1,2-Dichlorobenzene	CT,NY,ME,NH,VA
1,3-Dichlorobenzene	CT,NY,ME,NH,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260C in Water	
1,4-Dichlorobenzene	CT,NY,ME,NH,VA
trans-1,4-Dichloro-2-butene	NY,ME,NH,VA
Dichlorodifluoromethane (Freon 12)	NY,ME,NH,VA
1,1-Dichloroethane	CT,NY,ME,NH,VA
1,2-Dichloroethane	CT,NY,ME,NH,VA
1,1-Dichloroethylene	CT,NY,ME,NH,VA
cis-1,2-Dichloroethylene	NY,ME
trans-1,2-Dichloroethylene	CT,NY,ME,NH,VA
1,2-Dichloropropane	CT,NY,ME,NH,VA
1,3-Dichloropropane	NY,ME,VA
2,2-Dichloropropane	NY,ME,NH,VA
1,1-Dichloropropene	NY,ME,NH,VA
cis-1,3-Dichloropropene	CT,NY,ME,NH,VA
trans-1,3-Dichloropropene	CT,NY,ME,NH,VA
Diethyl Ether	NY
Diisopropyl Ether (DIPE)	NY,ME,NH,VA
1,4-Dioxane	NY
Ethylbenzene	CT,NY,ME,NH,VA
Hexachlorobutadiene	CT,NY,ME,NH,VA
2-Hexanone (MBK)	CT,NY,ME,NH,VA
Isopropylbenzene (Cumene)	NY,ME,VA
p-Isopropyltoluene (p-Cymene)	CT,NY,ME,NH,VA
Methyl Acetate	NY
Methyl tert-Butyl Ether (MTBE)	CT,NY,ME,NH,VA
Methyl Cyclohexane	NY
Methylene Chloride	CT,NY,ME,NH,VA
4-Methyl-2-pentanone (MIBK)	CT,NY,ME,NH,VA
Naphthalene	NY,ME,NH,VA
n-Propylbenzene	CT,NY,ME,NH,VA
Styrene	CT,NY,ME,NH,VA
1,1,1,2-Tetrachloroethane	CT,NY,ME,NH,VA
1,1,2,2-Tetrachloroethane	CT,NY,ME,NH,VA
Tetrachloroethylene	CT,NY,ME,NH,VA
Toluene	CT,NY,ME,NH,VA
1,2,3-Trichlorobenzene	NY,ME,NH,VA
1,2,4-Trichlorobenzene	CT,NY,ME,NH,VA
1,3,5-Trichlorobenzene	ME
1,1,1-Trichloroethane	CT,NY,ME,NH,VA
1,1,2-Trichloroethane	CT,NY,ME,NH,VA
Trichloroethylene	CT,NY,ME,NH,VA
Trichlorofluoromethane (Freon 11)	CT,NY,ME,NH,VA
1,2,3-Trichloropropane	NY,ME,NH,VA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NY,VA
1,2,4-Trimethylbenzene	NY,ME,VA
1,3,5-Trimethylbenzene	NY,ME,VA
Vinyl Chloride	CT,NY,ME,NH,VA
m+p Xylene	CT,ME,NH,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260C in Water	
o-Xylene	CT,ME,NH,VA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2018
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2018
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2018
RI	Rhode Island Department of Health	LAO00112	12/30/2017
NC	North Carolina Div. of Water Quality	652	12/31/2017
NJ	New Jersey DEP	MA007 NELAP	06/30/2018
FL	Florida Department of Health	E871027 NELAP	06/30/2018
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2018
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2017
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2017
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2018
NC-DW	North Carolina Department of Health	25703	07/31/2018

STONE ENVIRONMENTAL INC

17G-13359

Project Number: 16-093

Client Name and Address: Stone Env
535 Stone Cutters Way
Montpelier, VT 05602

Client Contact: Bette Nowack

Site Name/Location:
100
Rivers
Street

Samplers (Signature(s)):

Results and Invoice to:
Stone Environmental, Inc.
535 Stone Cutters Way
Montpelier, VT 05602

Telephone #: 802-229-4541
Fax: 802-229-5417
Project Manager: Bette Nowack
PM Direct Phone # 603-273-9250

ANALYSES REQUESTED

	Sample Identification	Date	Time	Matrix[1]	No. of Containers[2] Composite	No. of Containers[2] Grab	VOC's (8260)	PCB's (4083)							Remarks or Sample Location	Shipped with ice, dry ice, ambient, (circle one)	Preservative added and final pH, if known[3]
01	MW-14	07/27/17	1410	GW		X	X									Ice	HCl
02	MW-15	07/27/17	1140	GW		X		X									
03	MW-12	07/27/17	1315	GW		X	X										
04	MW-16	07/27/17	1200	GW		X		X									
05	MW-6	07/27/17	1215	GW			X										
06	MW-6-Dup	07/27/17	1217	GW			X										
07	GMW-10	07/27/17	1108	GW				X									
08	GMW-10-Dup	07/27/17	1110	GW				X									
09	Trip Blank																

Sampling Bottles/ Preservative Requirements

[1]Matrix: SL-Soil, SG-Soil Gas, GW-Groundwater, SD-Sediment, SW-Surface Water, WW-wastewater, L-liquid, Wipe, Solid, Other-specify_____(i.e., oil, concrete)

[2]Container(s): VOA-40mL vials, T-Tedlar Airbag
A/G - Amber/ Or Glass, 1 liter
250 mL-Glass Wide Mouth P/O poly/plastic or other, specify_____

Metals, check one: ___8RCRA, ___13 PP, ___23 TAL, ___ 14MCP. Method: ___6010, ___ 6020, ___200.7 Other:_____
Dissolved Metals Field Filtered? ___Yes ___No

[3]Preservative: HCL, MeOH, HNO3, H2SO4, NaOH, O-Other, Specify_____

Relinquished by: (Signature)	Date/Time 07/28/17 1600	Received by: (Signature) Capitol Copy	Date/Time 07/28/17 1600	Shipped Via: Fedex	Ticket Number: 7797 5702 7155
Relinquished by: (Signature)	Date/Time	Received by: (Signature) 3.0°C 7/29/17 1033	Date/Time	**Turnaround Time Requirements:** <14days must have Pre-Authorization. Standard	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time		

Notes/Comments: Analyze Trip Blank for VOC's

Custody Seal Intact?: Y N N/A Sample Temp at Lab.

EDD Required: Specify Type? _____, (i.e., Equis EZLoad, Excel spreadsheet, Other)

Report Package level needed: ___Level II (results, SS recoveries), ___ Level III (results, all QC), ____Level IV (FULL, CLP-like)

STONE ENVIRONMENTAL INC
CHAIN-OF-CUSTODY RECORD

Page 1 of 1

white copy: original yellow copy: laboratory pink copy: Stone

Revised 6/3/2011
L:\RASC\Forms\2011COCFORM.xls2011COCFORM.xls

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IMPORTANT!
FedEx is closely monitoring the wildfires in California. Learn More

FedEx ® Tracking

779757026950

Ship date:		Actual delivery:
Fri 7/28/2017	**Delivered**	**Sat 7/29/2017 10:31 am**
Montpelier, VT US	*Signed for by: M.MAYLES*	EAST LONGMEADOW, MA US

2 Piece shipment

Travel History

Date/Time	Activity	Location
7/29/2017 - Saturday		
10:31 am	Delivered	EAST LONGMEADOW, MA
8:43 am	On FedEx vehicle for delivery	WINDSOR LOCKS, CT
8:08 am	At local FedEx facility	WINDSOR LOCKS, CT
6:58 am	At destination sort facility	EAST GRANBY, CT
3:41 am	Departed FedEx location	MEMPHIS, TN
7/28/2017 - Friday		
11:40 pm	Arrived at FedEx location	MEMPHIS, TN
7:44 pm	Left FedEx origin facility	WILLISTON, VT
4:54 pm	Picked up	WILLISTON, VT
7:46 am	Shipment information sent to FedEx	

Shipment Facts

Tracking number	779757026950	**Service**	FedEx Priority Overnight
Master tracking number	779757027155	**Weight**	25 lbs / 11.34 kgs
		Delivered To	Receptionist/Front Desk
Dimensions	18x12x12 in.	**Total shipment weight**	25 lbs / 11.34 kgs
Total pieces	2	**Shipper reference**	16-122
Terms	Shipper	**Special handling section**	For Saturday Delivery
Packaging	Your Packaging		
Standard transit	7/29/2017 by 12:00 pm		

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.contestlabs.com

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Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Stone Environmental

Received By RLF Date 7/29/17 Time 1031

How were the samples received? In Cooler T No Cooler ____ On Ice T No Ice ____ Direct from Sampling ____ Ambient ____ Melted Ice ____

Were samples within Temperature? 2-6°C T By Gun # 7 Actual Temp - 3.2°C By Blank # ____ Actual Temp - ____

Was Custody Seal Intact? NA Were Samples Tampered with? F

Was COC Relinquished ? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? ____

Are there Rushes? F Who was notified? ____

Are there Short Holds? F Who was notified? ____

Is there enough Volume? T

Is there Headspace where applicable? F MS/MSD? NA

Proper Media/Containers Used? T Is splitting samples required? F

Were trip blanks received? T On COC? T

Do all samples have the proper pH? Acid NA Base NA

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.	8	1 Liter Plastic		16 oz Amb.	
HCL-	14	500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

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August 14, 2017

Bette Nowack
Stone Environmental
535 Stone Cutters Ways
Montpelier, VT 05602

Project Location: 100 River St, Springfield VT
Client Job Number:
Project Number: 16-093
Laboratory Work Order Number: 17G1340

Enclosed are results of analyses for samples received by the laboratory on July 29, 2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Aaron L. Benoit
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Stone Environmental
535 Stone Cutters Ways
Montpelier, VT 05602
ATTN: Bette Nowack

REPORT DATE: 8/14/2017

PURCHASE ORDER NUMBER: 14-024

PROJECT NUMBER: 16-093

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 17G1340

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 100 River St, Springfield VT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
Part B	17G1340-01	Air		TO-10A/EPA 680 Modified	
Part J	17G1340-02	Air		TO-10A/EPA 680 Modified	
Part LMN	17G1340-03	Air		TO-10A/EPA 680 Modified	
Pharmacy	17G1340-04	Air		TO-10A/EPA 680 Modified	
Ambient	17G1340-05	Air		TO-10A/EPA 680 Modified	
Room 1	17G1340-06	Air		TO-10A/EPA 680 Modified	
Part C	17G1340-07	Air		TO-10A/EPA 680 Modified	
Part G	17G1340-08	Air		TO-10A/EPA 680 Modified	
Part G Dup	17G1340-09	Air		TO-10A/EPA 680 Modified	

con-test® ANALYTICAL LABORATORY

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

TO-10A/EPA 680 Modified

Qualifications:

V-06

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

Monochlorobiphenyls

17G1340-06[Room 1], B183170-BS1, B183170-BSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Monochlorobiphenyls

17G1340-01[Part B], 17G1340-02[Part J], 17G1340-03[Part LMN], 17G1340-04[Pharmacy], 17G1340-05[Ambient], 17G1340-07[Part C], 17G1340-08[Part G], 17G1340-09[Part G Dup], B183170-BLK1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Lisa A. Worthington
Project Manager

con-test® ANALYTICAL LABORATORY
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ANALYTICAL RESULTS

Project Location: 100 River St, Springfield VT
Date Received: 7/29/2017
Field Sample #: Part B
Sample ID: 17G1340-01
Sample Matrix: Air
Sampled: 7/28/2017 14:10

Sample Description/Location:
Sub Description/Location:
Flow Controller ID:
Sample Type:
Air Volume L: 3041.64

Work Order: 17G1340

TO-10A/EPA 680 Modified

	Total µg			ug/m3			Date/Time	
Analyte	**Results**	**RL**	**Flag/Qual**	**Results**	**RL**	**Dilution**	**Analyzed**	**Analyst**
Monochlorobiphenyls	ND	0.0010	V-20	ND	0.00033	1	8/10/17 9:35	CJM
Dichlorobiphenyls	ND	0.0010		ND	0.00033	1	8/10/17 9:35	CJM
Trichlorobiphenyls	ND	0.0010		ND	0.00033	1	8/10/17 9:35	CJM
Tetrachlorobiphenyls	0.0078	0.0020		0.0026	0.00066	1	8/10/17 9:35	CJM
Pentachlorobiphenyls	0.013	0.0020		0.0044	0.00066	1	8/10/17 9:35	CJM
Hexachlorobiphenyls	ND	0.0020		ND	0.00066	1	8/10/17 9:35	CJM
Heptachlorobiphenyls	ND	0.0030		ND	0.00099	1	8/10/17 9:35	CJM
Octachlorobiphenyls	ND	0.0030		ND	0.00099	1	8/10/17 9:35	CJM
Nonachlorobiphenyls	ND	0.0050		ND	0.0016	1	8/10/17 9:35	CJM
Decachlorobiphenyl	ND	0.0050		ND	0.0016	1	8/10/17 9:35	CJM
Total Polychlorinated biphenyls	0.021			0.007		1	8/10/17 9:35	CJM

Surrogates	% Recovery	% REC Limits	
Tetrachloro-m-xylene	61.8	50-125	8/10/17 9:35

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ANALYTICAL RESULTS

Project Location: 100 River St, Springfield VT
Date Received: 7/29/2017
Field Sample #: Part J
Sample ID: 17G1340-02
Sample Matrix: Air
Sampled: 7/28/2017 13:43

Sample Description/Location:
Sub Description/Location: 3142.65
Flow Controller ID:
Sample Type:

Work Order: 17G1340

TO-10A/EPA 680 Modified

Analyte	Total µg Results	RL	Flag/Qual	Dilution	Date/Time Analyzed	Analyst
Monochlorobiphenyls	ND	0.0010	V-20	1	8/10/17 10:13	CJM
Dichlorobiphenyls	ND	0.0010		1	8/10/17 10:13	CJM
Trichlorobiphenyls	0.040	0.0010		1	8/10/17 10:13	CJM
Tetrachlorobiphenyls	0.050	0.0020		1	8/10/17 10:13	CJM
Pentachlorobiphenyls	0.077	0.0020		1	8/10/17 10:13	CJM
Hexachlorobiphenyls	0.018	0.0020		1	8/10/17 10:13	CJM
Heptachlorobiphenyls	ND	0.0030		1	8/10/17 10:13	CJM
Octachlorobiphenyls	ND	0.0030		1	8/10/17 10:13	CJM
Nonachlorobiphenyls	ND	0.0050		1	8/10/17 10:13	CJM
Decachlorobiphenyl	ND	0.0050		1	8/10/17 10:13	CJM
Total Polychlorinated biphenyls	0.19			1	8/10/17 10:13	CJM

Surrogates	% Recovery	% REC Limits	
Tetrachloro-m-xylene	52.5	50-125	8/10/17 10:13

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ANALYTICAL RESULTS

Project Location: 100 River St, Springfield VT
Date Received: 7/29/2017
Field Sample #: Part LMN
Sample ID: 17G1340-03
Sample Matrix: Air
Sampled: 7/28/2017 13:48

Sample Description/Location:
Sub Description/Location:
Flow Controller ID:
Sample Type:
Air Volume L: 3137.82

Work Order: 17G1340

TO-10A/EPA 680 Modified

Analyte	Total µg Results	Total µg RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Monochlorobiphenyls	ND	0.0010	V-20	ND	0.00032	1	8/10/17 10:50	CJM
Dichlorobiphenyls	ND	0.0010		ND	0.00032	1	8/10/17 10:50	CJM
Trichlorobiphenyls	0.017	0.0010		0.0054	0.00032	1	8/10/17 10:50	CJM
Tetrachlorobiphenyls	0.013	0.0020		0.0042	0.00064	1	8/10/17 10:50	CJM
Pentachlorobiphenyls	0.020	0.0020		0.0064	0.00064	1	8/10/17 10:50	CJM
Hexachlorobiphenyls	0.0026	0.0020		0.00083	0.00064	1	8/10/17 10:50	CJM
Heptachlorobiphenyls	ND	0.0030		ND	0.00096	1	8/10/17 10:50	CJM
Octachlorobiphenyls	ND	0.0030		ND	0.00096	1	8/10/17 10:50	CJM
Nonachlorobiphenyls	ND	0.0050		ND	0.0016	1	8/10/17 10:50	CJM
Decachlorobiphenyl	ND	0.0050		ND	0.0016	1	8/10/17 10:50	CJM
Total Polychlorinated biphenyls	0.053			0.017		1	8/10/17 10:50	CJM

Surrogates	% Recovery	% REC Limits	
Tetrachloro-m-xylene	58.7	50-125	8/10/17 10:50

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ANALYTICAL RESULTS

Project Location: 100 River St, Springfield VT
Date Received: 7/29/2017
Field Sample #: Pharmacy
Sample ID: 17G1340-04
Sample Matrix: Air
Sampled: 7/28/2017 13:28

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:
Air Volume L: 3039.93

Work Order: 17G1340

TO-10A/EPA 680 Modified

	Total µg			ug/m3			Date/Time	
Analyte	**Results**	**RL**	**Flag/Qual**	**Results**	**RL**	**Dilution**	**Analyzed**	**Analyst**
Monochlorobiphenyls	ND	0.0010	V-20	ND	0.00033	1	8/10/17 11:28	CJM
Dichlorobiphenyls	ND	0.0010		ND	0.00033	1	8/10/17 11:28	CJM
Trichlorobiphenyls	ND	0.0010		ND	0.00033	1	8/10/17 11:28	CJM
Tetrachlorobiphenyls	0.0022	0.0020		0.00073	0.00066	1	8/10/17 11:28	CJM
Pentachlorobiphenyls	ND	0.0020		ND	0.00066	1	8/10/17 11:28	CJM
Hexachlorobiphenyls	ND	0.0020		ND	0.00066	1	8/10/17 11:28	CJM
Heptachlorobiphenyls	ND	0.0030		ND	0.00099	1	8/10/17 11:28	CJM
Octachlorobiphenyls	ND	0.0030		ND	0.00099	1	8/10/17 11:28	CJM
Nonachlorobiphenyls	ND	0.0050		ND	0.0016	1	8/10/17 11:28	CJM
Decachlorobiphenyl	ND	0.0050		ND	0.0016	1	8/10/17 11:28	CJM
Total Polychlorinated biphenyls	0.0022			0.00073		1	8/10/17 11:28	CJM

Surrogates	% Recovery	% REC Limits	
Tetrachloro-m-xylene	51.2	50-125	8/10/17 11:28

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ANALYTICAL RESULTS

Project Location: 100 River St, Springfield VT
Date Received: 7/29/2017
Field Sample #: Ambient
Sample ID: 17G1340-05
Sample Matrix: Air
Sampled: 7/28/2017 09:09

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:
Air Volume L: 2665.26

Work Order: 17G1340

TO-10A/EPA 680 Modified

Analyte	Total µg Results	Total µg RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Monochlorobiphenyls	ND	0.0010	V-20	ND	0.00038	1	8/10/17 12:05	CJM
Dichlorobiphenyls	ND	0.0010		ND	0.00038	1	8/10/17 12:05	CJM
Trichlorobiphenyls	ND	0.0010		ND	0.00038	1	8/10/17 12:05	CJM
Tetrachlorobiphenyls	ND	0.0020		ND	0.00075	1	8/10/17 12:05	CJM
Pentachlorobiphenyls	ND	0.0020		ND	0.00075	1	8/10/17 12:05	CJM
Hexachlorobiphenyls	ND	0.0020		ND	0.00075	1	8/10/17 12:05	CJM
Heptachlorobiphenyls	ND	0.0030		ND	0.0011	1	8/10/17 12:05	CJM
Octachlorobiphenyls	ND	0.0030		ND	0.0011	1	8/10/17 12:05	CJM
Nonachlorobiphenyls	ND	0.0050		ND	0.0019	1	8/10/17 12:05	CJM
Decachlorobiphenyl	ND	0.0050		ND	0.0019	1	8/10/17 12:05	CJM
Total Polychlorinated biphenyls	0.0			0		1	8/10/17 12:05	CJM

Surrogates	% Recovery	% REC Limits	
Tetrachloro-m-xylene	65.0	50-125	8/10/17 12:05

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: 100 River St, Springfield VT
Date Received: 7/29/2017
Field Sample #: Room 1
Sample ID: 17G1340-06
Sample Matrix: Air
Sampled: 7/28/2017 13:13

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:
Air Volume L: 2934

Work Order: 17G1340

TO-10A/EPA 680 Modified

Analyte	Total µg Results	Total µg RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Monochlorobiphenyls	0.0079	0.0010	V-06	0.0027	0.00034	1	8/10/17 12:43	CJM
Dichlorobiphenyls	0.016	0.0010		0.0053	0.00034	1	8/10/17 12:43	CJM
Trichlorobiphenyls	0.080	0.0010		0.027	0.00034	1	8/10/17 12:43	CJM
Tetrachlorobiphenyls	0.097	0.0020		0.033	0.00068	1	8/10/17 12:43	CJM
Pentachlorobiphenyls	0.11	0.0020		0.037	0.00068	1	8/10/17 12:43	CJM
Hexachlorobiphenyls	0.036	0.0020		0.012	0.00068	1	8/10/17 12:43	CJM
Heptachlorobiphenyls	0.0069	0.0030		0.0024	0.001	1	8/10/17 12:43	CJM
Octachlorobiphenyls	ND	0.0030		ND	0.001	1	8/10/17 12:43	CJM
Nonachlorobiphenyls	ND	0.0050		ND	0.0017	1	8/10/17 12:43	CJM
Decachlorobiphenyl	ND	0.0050		ND	0.0017	1	8/10/17 12:43	CJM
Total Polychlorinated biphenyls	0.36			0.12		1	8/10/17 12:43	CJM

Surrogates	% Recovery	% REC Limits	
Tetrachloro-m-xylene	60.0	50-125	8/10/17 12:43

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ANALYTICAL RESULTS

Project Location: 100 River St, Springfield VT
Date Received: 7/29/2017
Field Sample #: Part C
Sample ID: 17G1340-07
Sample Matrix: Air
Sampled: 7/28/2017 13:16

Sample Description/Location:
Sub Description/Location:
Flow Controller ID:
Sample Type:
Air Volume L: 2986.256

Work Order: 17G1340

TO-10A/EPA 680 Modified

Analyte	Total µg Results	RL	Flag/Qual	ug/m3 Results	RL	Dilution	Date/Time Analyzed	Analyst
Monochlorobiphenyls	ND	0.0010	V-20	ND	0.00033	1	8/10/17 13:20	CJM
Dichlorobiphenyls	0.0058	0.0010		0.0019	0.00033	1	8/10/17 13:20	CJM
Trichlorobiphenyls	0.023	0.0010		0.0078	0.00033	1	8/10/17 13:20	CJM
Tetrachlorobiphenyls	0.065	0.0020		0.022	0.00067	1	8/10/17 13:20	CJM
Pentachlorobiphenyls	0.12	0.0020		0.042	0.00067	1	8/10/17 13:20	CJM
Hexachlorobiphenyls	0.028	0.0020		0.0093	0.00067	1	8/10/17 13:20	CJM
Heptachlorobiphenyls	ND	0.0030		ND	0.001	1	8/10/17 13:20	CJM
Octachlorobiphenyls	ND	0.0030		ND	0.001	1	8/10/17 13:20	CJM
Nonachlorobiphenyls	ND	0.0050		ND	0.0017	1	8/10/17 13:20	CJM
Decachlorobiphenyl	ND	0.0050		ND	0.0017	1	8/10/17 13:20	CJM
Total Polychlorinated biphenyls	0.25			0.082		1	8/10/17 13:20	CJM

Surrogates	% Recovery	% REC Limits	
Tetrachloro-m-xylene	53.3	50-125	8/10/17 13:20

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ANALYTICAL RESULTS

Project Location: 100 River St, Springfield VT
Date Received: 7/29/2017
Field Sample #: Part G
Sample ID: 17G1340-08
Sample Matrix: Air
Sampled: 7/28/2017 13:30

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:
Air Volume L: 3098.146

Work Order: 17G1340

TO-10A/EPA 680 Modified

Analyte	Total µg Results	RL	Flag/Qual	ug/m3 Results	RL	Dilution	Date/Time Analyzed	Analyst
Monochlorobiphenyls	ND	0.0010	V-20	ND	0.00032	1	8/10/17 13:58	CJM
Dichlorobiphenyls	ND	0.0010		ND	0.00032	1	8/10/17 13:58	CJM
Trichlorobiphenyls	0.0078	0.0010		0.0025	0.00032	1	8/10/17 13:58	CJM
Tetrachlorobiphenyls	0.0094	0.0020		0.003	0.00065	1	8/10/17 13:58	CJM
Pentachlorobiphenyls	0.011	0.0020		0.0035	0.00065	1	8/10/17 13:58	CJM
Hexachlorobiphenyls	ND	0.0020		ND	0.00065	1	8/10/17 13:58	CJM
Heptachlorobiphenyls	ND	0.0030		ND	0.00097	1	8/10/17 13:58	CJM
Octachlorobiphenyls	ND	0.0030		ND	0.00097	1	8/10/17 13:58	CJM
Nonachlorobiphenyls	ND	0.0050		ND	0.0016	1	8/10/17 13:58	CJM
Decachlorobiphenyl	ND	0.0050		ND	0.0016	1	8/10/17 13:58	CJM
Total Polychlorinated biphenyls	0.028			0.0091		1	8/10/17 13:58	CJM

Surrogates	% Recovery	% REC Limits	
Tetrachloro-m-xylene	69.3	50-125	8/10/17 13:58

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: 100 River St, Springfield VT
Date Received: 7/29/2017
Field Sample #: Part G Dup
Sample ID: 17G1340-09
Sample Matrix: Air
Sampled: 7/28/2017 13:30

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:
Air Volume L: 2901.825

Work Order: 17G1340

TO-10A/EPA 680 Modified

Analyte	Total µg Results	RL	Flag/Qual	ug/m3 Results	RL	Dilution	Date/Time Analyzed	Analyst
Monochlorobiphenyls	ND	0.0010	V-20	ND	0.00034	1	8/10/17 14:35	CJM
Dichlorobiphenyls	ND	0.0010		ND	0.00034	1	8/10/17 14:35	CJM
Trichlorobiphenyls	0.0079	0.0010		0.0027	0.00034	1	8/10/17 14:35	CJM
Tetrachlorobiphenyls	0.0087	0.0020		0.003	0.00069	1	8/10/17 14:35	CJM
Pentachlorobiphenyls	0.010	0.0020		0.0035	0.00069	1	8/10/17 14:35	CJM
Hexachlorobiphenyls	ND	0.0020		ND	0.00069	1	8/10/17 14:35	CJM
Heptachlorobiphenyls	ND	0.0030		ND	0.001	1	8/10/17 14:35	CJM
Octachlorobiphenyls	ND	0.0030		ND	0.001	1	8/10/17 14:35	CJM
Nonachlorobiphenyls	ND	0.0050		ND	0.0017	1	8/10/17 14:35	CJM
Decachlorobiphenyl	ND	0.0050		ND	0.0017	1	8/10/17 14:35	CJM
Total Polychlorinated biphenyls	0.027			0.0092		1	8/10/17 14:35	CJM

Surrogates	% Recovery	% REC Limits	
Tetrachloro-m-xylene	65.2	50-125	8/10/17 14:35

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: SW-846 3540C-TO-10A/EPA 680 Modified

Lab Number [Field ID]	Batch	Initial [Cartridge	Final [mL]	Date
17G1340-01 [Part B]	B183170	1.00	1.00	08/02/17
17G1340-02 [Part J]	B183170	1.00	1.00	08/02/17
17G1340-03 [Part LMN]	B183170	1.00	1.00	08/02/17
17G1340-04 [Pharmacy]	B183170	1.00	1.00	08/02/17
17G1340-05 [Ambient]	B183170	1.00	1.00	08/02/17
17G1340-06 [Room 1]	B183170	1.00	1.00	08/02/17
17G1340-07 [Part C]	B183170	1.00	1.00	08/02/17
17G1340-08 [Part G]	B183170	1.00	1.00	08/02/17
17G1340-09 [Part G Dup]	B183170	1.00	1.00	08/02/17

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QUALITY CONTROL

PCB Homologues by GC/MS with Soxhlet Extraction - Quality Control

Analyte	Total µg Results	Total µg RL	ug/m3 Results	ug/m3 RL	Spike Level Total µg	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B183170 - SW-846 3540C											
Blank (B183170-BLK1)					Prepared: 08/02/17 Analyzed: 08/09/17						
Monochlorobiphenyls	ND	0.0010									V-20
Dichlorobiphenyls	ND	0.0010									
Trichlorobiphenyls	ND	0.0010									
Tetrachlorobiphenyls	ND	0.0020									
Pentachlorobiphenyls	ND	0.0020									
Hexachlorobiphenyls	ND	0.0020									
Heptachlorobiphenyls	ND	0.0030									
Octachlorobiphenyls	ND	0.0030									
Nonachlorobiphenyls	ND	0.0050									
Decachlorobiphenyl	ND	0.0050									
Total Polychlorinated biphenyls	0.0										
Surrogate: Tetrachloro-m-xylene	*0.137*				*0.200*		*68.4*	*50-125*			
LCS (B183170-BS1)					Prepared: 08/02/17 Analyzed: 08/09/17						
Monochlorobiphenyls	0.17	0.0010			0.200		83.9	40-140			V-06
Dichlorobiphenyls	0.15	0.0010			0.200		77.2	40-140			
Trichlorobiphenyls	0.14	0.0010			0.200		69.9	40-140			
Tetrachlorobiphenyls	0.29	0.0020			0.400		72.4	40-140			
Pentachlorobiphenyls	0.29	0.0020			0.400		72.7	40-140			
Hexachlorobiphenyls	0.35	0.0020			0.400		86.6	40-140			
Heptachlorobiphenyls	0.51	0.0030			0.600		85.4	40-140			
Octachlorobiphenyls	0.49	0.0030			0.600		82.5	40-140			
Nonachlorobiphenyls	0.82	0.0050			1.00		81.9	40-140			
Decachlorobiphenyl	0.83	0.0050			1.00		83.1	40-140			
Surrogate: Tetrachloro-m-xylene	*0.157*				*0.200*		*78.6*	*50-125*			
LCS Dup (B183170-BSD1)					Prepared: 08/02/17 Analyzed: 08/09/17						
Monochlorobiphenyls	0.15	0.0010			0.200		76.5	40-140	9.31	50	V-06
Dichlorobiphenyls	0.14	0.0010			0.200		70.8	40-140	8.67	50	
Trichlorobiphenyls	0.13	0.0010			0.200		66.0	40-140	5.79	50	
Tetrachlorobiphenyls	0.27	0.0020			0.400		68.7	40-140	5.32	50	
Pentachlorobiphenyls	0.28	0.0020			0.400		69.9	40-140	3.93	50	
Hexachlorobiphenyls	0.33	0.0020			0.400		81.9	40-140	5.51	50	
Heptachlorobiphenyls	0.48	0.0030			0.600		80.7	40-140	5.57	50	
Octachlorobiphenyls	0.47	0.0030			0.600		78.5	40-140	4.94	50	
Nonachlorobiphenyls	0.78	0.0050			1.00		78.4	40-140	4.30	50	
Decachlorobiphenyl	0.80	0.0050			1.00		79.9	40-140	3.90	50	
Surrogate: Tetrachloro-m-xylene	*0.135*				*0.200*		*67.3*	*50-125*			

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit
DL	Method Detection Limit
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
V-06	Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
TO-10A/EPA 680 Modified in Air	
Total Polychlorinated biphenyls	AIHA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2018
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2018
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2018
RI	Rhode Island Department of Health	LAO00112	12/30/2017
NC	North Carolina Div. of Water Quality	652	12/31/2017
NJ	New Jersey DEP	MA007 NELAP	06/30/2018
FL	Florida Department of Health	E871027 NELAP	06/30/2018
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2018
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2017
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2017
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2018
NC-DW	North Carolina Department of Health	25703	07/31/2018

con-test ANALYTICAL LABORATORY

17G-1340

http://www.contestlabs.com

Doc #378 Rev 1_03242017

Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

CHAIN OF CUSTODY RECORD (AIR)

39 Spruce Street
East Longmeadow, MA 01028

Company Name: Stone Env
Address: 535 Stonecutters way
Phone:
Project Name: Bolivar Street
Project Location: Springfield
Project Number: 16-093
Project Manager: Bette Nowack
Con-Test Quote Name/Number:
Invoice Recipient:
Sampled By: Brian Diezel

Requested Turnaround Time
7-Day ☐ 10-Day ☑
Due Date:

Rush Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☐ EXCEL ☐
Other:
CLP Like Data Pkg Required: ☐
Email To:
Fax To #:

ANALYSIS REQUESTED

Lab Use	Client Use	Collection Data		Duration	Flow Rate	Matrix	Volume	PCB's (TO-10A) Homologues				" Hg			Summa Can ID	Flow Controller ID
Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Total Minutes Sampled	☐ m³/min ☑ L/min	Code	☐ Liters ☐ m³					Initial Pressure	Final Pressure	Lab Receipt Pressure		
01	Part B	07/27/17 1430	07/28/17 1410	1420	2.142	PuF		X								
02	Part J	07/27/17 1348	07/28/17 1343	1435	2.190			X								
03	Part L/N	07/27/17 1342	07/28/17 1348	1446	2.170			X								
04	Pharmacy	07/27/17 1330	07/28/17 1328	1438	2.114			X								
05	Ambient	07/27/17 1410	07/28/17 0909	1139	2.340			X								
06	Room 1	07/27/17 1249	07/28/17 1313	1467	2.000			X								
07	Part C	07/27/17 1303	07/28/17 1316	1456	2.051			X								
08	Part G	07/27/17 1337	07/28/17 1330	1433	2.162			X								
09	Part G-Dup	07/27/17 1337	07/28/17 1330	1433	2.035	↓		X								

Please fill out completely, sign, date and retain the yellow copy for your records

Summa canisters and flow controllers must be returned within 15 days of receipt or rental fees will apply

For summa canister and flow controller information please refer to Con-Test's Air Media Agreement

Comments: PCB Homologues

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Matrix Codes:
SG = SOIL GAS
IA = INDOOR AIR
AMB = AMBIENT
SS = SUB SLAB
D = DUP
BL = BLANK
O = Other PuF

Relinquished by: (signature)	Date/Time: 07/28/17 1600	Detection Limit Requirements	Special Requirements
Received by: (signature) Capitol Copy	Date/Time: 07/28/17 1600	MA	☐ MA MCP Required
Relinquished by: (signature)	Date/Time:		☐ MCP Certification Form Required
Received by: (signature) 4.8C	Date/Time: 7/29/17 1081	RCP	☐ CT RCP Required
Relinquished by: (signature)	Date/Time:	Other:	☐ RCP Certification Form Required
Received by: (signature)	Date/Time:		☐ Other

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NELAC and AIHA-LAP, LLC Accredited

Project Entity
☐ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

Table of Contents

IMPORTANT!
FedEx is closely monitoring the wildfires in California. Learn More

FedEx ® Tracking

779757027155

Ship date:		Actual delivery:
Fri 7/28/2017	**Delivered**	**Sat 7/29/2017 10:31 am**
Montpelier, VT US	*Signed for by: M.MAYLES*	EAST LONGMEADOW, MA US

2 Piece shipment

Travel History

▲ Date/Time	Activity	Location
▪ 7/29/2017 - Saturday		
10:31 am	Delivered Damaged, delivery completed	EAST LONGMEADOW, MA
8:43 am	On FedEx vehicle for delivery	WINDSOR LOCKS, CT
8:15 am	At local FedEx facility	WINDSOR LOCKS, CT
6:58 am	At destination sort facility	EAST GRANBY, CT
3:41 am	Departed FedEx location	MEMPHIS, TN
▪ 7/28/2017 - Friday		
11:40 pm	Arrived at FedEx location	MEMPHIS, TN
7:44 pm	Left FedEx origin facility	WILLISTON, VT
4:54 pm	Picked up	WILLISTON, VT
7:47 am	Shipment information sent to FedEx	

Shipment Facts

Tracking number	779757027155	**Service**	FedEx Priority Overnight
Master tracking number	779757027155	**Weight**	8 lbs / 3.63 kgs
		Delivered To	Receptionist/Front Desk
Dimensions	12x9x11 in.	**Total shipment weight**	33 lbs / 14.97 kgs
Total pieces	2	**Shipper reference**	16-122
Terms	Shipper	**Special handling section**	For Saturday Delivery, Additional Handling Surcharge
Packaging	Your Packaging		
Standard transit	7/29/2017 by 12:00 pm		

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
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Doc# 278 Rev 6 2017

Air Media Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Stone Environmental

Received By RLF Date 7/29/17 Time 1031

How were the samples received? In Cooler ____ On Ice ____ No Ice ____ In Box ____ Ambient ____ Melted Ice ____

Were samples within Temperature Compliance? 2-6°C T By Gun # 7 Actual Temp - 4.8°C By Blank # ____ Actual Temp - ____

Was Custody Seal Intact? NA Were Samples Tampered with? F

Was COC Relinquished ? T Does Chain Agree With Samples? T

Are there any loose caps/valves on any samples? F

Is COC in ink/ Legible? T

Did COC Include all Pertinent Information? Client T Project T Analysis T ID's T Sampler Name T Collection Dates/Times T

Are Sample Labels filled out and legible? T

Are there Rushes? F Who was notified? NA

Samples are received within holding time? T

Proper Media Used? T Individually Certified Cans? F

Are there Trip Blanks? F Is there enough Volume? T

Containers:	#	Size	Regulator	Duration	Accessories:			
Summa Cans					Nut/Ferrule		IC Train	
Tedlar Bags					Tubing			
TO-17 Tubes					T-Connector		Shipping Charges	
Radiello					Syringe			
Pufs/TO-11s	9	Low Volume			Tedlar			

Can #'s					Reg #'s				
Unused Media					**Pufs/TO-17's**				
					071317-10		071317-05		
					071317-08		071317-01		
					071317-03		071317-06		
					071317-04		071317-09		
					071317-02				

Comments: