

Appendix L - Part 1

EPA Comment Responses – Amendment 1

**RESPONSE TO EPA COMMENTS
BHS CORRECTIVE ACTION AND SELF-IMPLEMENTATING PLAN – AMENDMENT 1**

RE: Burlington High School Abatement, Demolition, and Soil Remediation Project
Burlington, VT

FROM: Fuss & O'Neill, Inc.
205 Billings Farm Road
Suite 6B
White River Junction, VT 05001

TO: Ms. Claire Willscher, EPA

DATE: December 16th, 2022

This document provides additional project specific details as discussed via a virtual meeting held with Ms. Claire Willscher from EPA, and Mr. Shawn Donovan from VTDEC on December 15th. The meeting was held to further discuss the EPA and VTDEC comments regarding the November 2, 2022, Corrective Action and Self-Implementing On-Site Cleanup and Disposal Plan. Fuss & O'Neill provided additional information to EPA and VTDEC as further described below.

Discussion Topics / EPA Comments

- 1. Frequency of Soil Samples** – Fuss & O'Neill presented and provided rationale for the sampling frequency for PCB soil samples collected and analyzed at the site. The EPA comment was why there appeared to be deviation from 40 CFR § 761.61 Subpart N sampling frequency (3-meter grid) to pre-characterize soils at the site in limited locations. As depicted on the sampling plan with called out photos of building elevations (*Attachment 1*) there were several locations where there was hardscape along the building edge, limited PCB containing building products, or the absence of PCB containing building products in those locations.

EPA requested explanation of the northwest corner of Building C. The information was not available during the December 15th meeting but is included below to specifically address EPA's questions. The samples identified as C-01-B, C-02-B, and C-03-B were soil samples collected at depths of 2 inches below grade. Soil samples were not collected from the northwest corner of Building C adjacent to the connector (*Attachment 1*) due to the absence of PCB containing building products in that area of Building C.

- 2. Data Usability** – Several samples collected at the site in 2020 were determined to have reporting limits that were just below 1 mg/kg. EPA commented on the usability of the data and asked for a rationale for the elevated reporting limits. Fuss & O'Neill reviewed the analytical data analyzed by EMSL Analytical, Inc. of Cinnaminson, New Jersey. The samples with elevated reporting limits were collected from hardscape media (concrete/asphalt). The samples were flagged in the laboratory report with a "D" denoting that the elevated reporting limits were due to dilution. Therefore, the analytical data is usable. A copy of the November 2020 Soils Interim Control Evaluation Revision 1 is included as *Attachment 2*.

The approach to handling of hardscape adjacent to the building and concrete is to saw cut and remove the first 12-inches of hard scape adjacent to the buildings as PCB Bulk Product waste.

3. **Stormwater Protection** – There is an existing stormwater drainage system at the site that includes several inlets at the site. The existing stormwater inlets and system will be protected from stormwater runoff during the course of the abatement and demolition activities by the remediation contractor. The stormwater inlets and system will be capped and decommissioned (removed) during the soil excavation activities in locations that are within the work area. The locations are highlighted in the attached Sheet Plan *CP-101* included as *Attachment 3*.
4. **Sub-Slab Soil Protection** – The building demolition will be completed so that the building debris during demolition activities will be stockpiled and managed on the existing ground level building slabs. The building debris on the ground level slabs will be cleaned off prior to removal of the slabs to prevent building debris contaminating soils beneath the slabs. An environmental professional will oversee the demolition work and will direct the remediation contractor as needed.

Additional EPA Comments

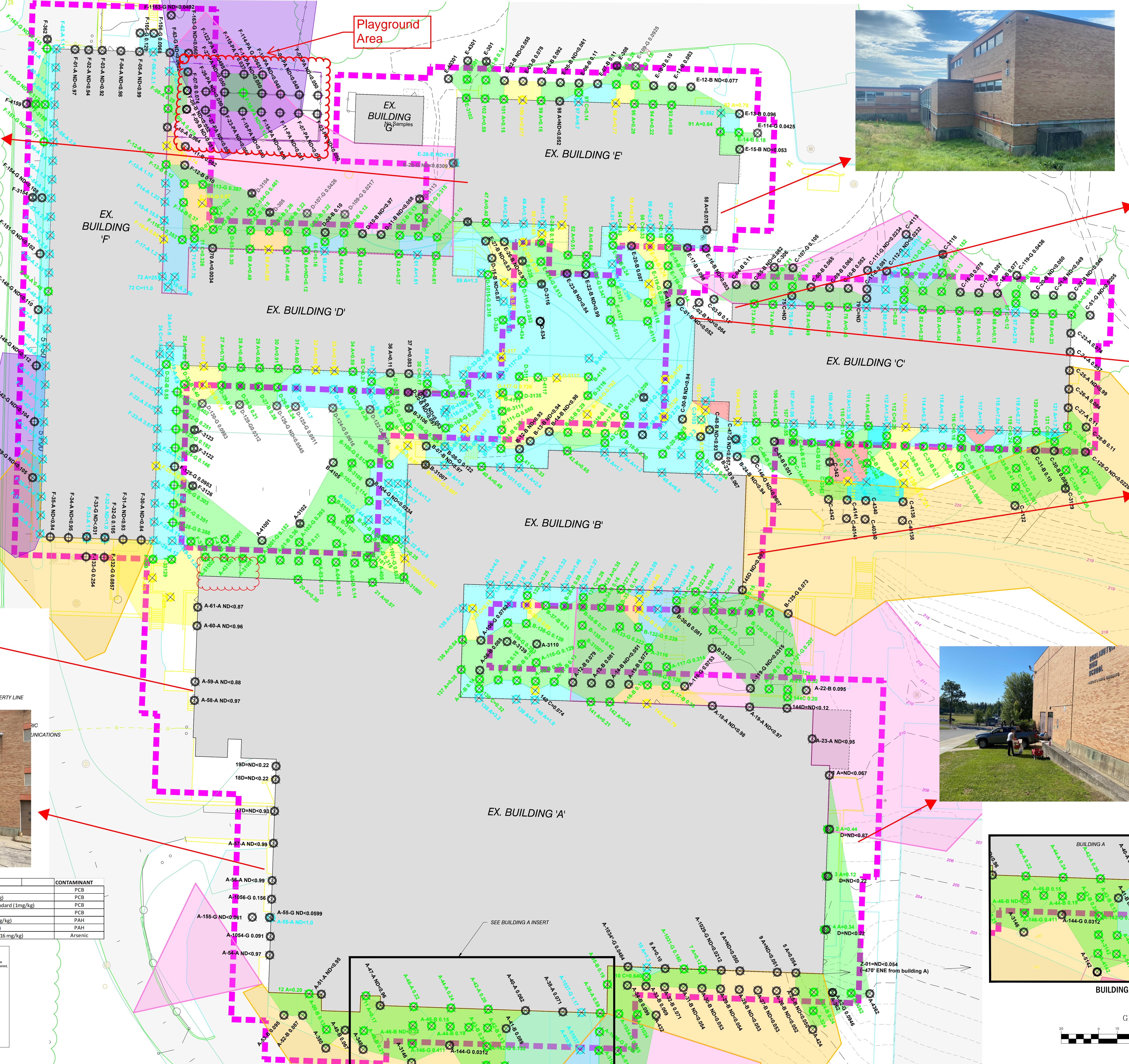
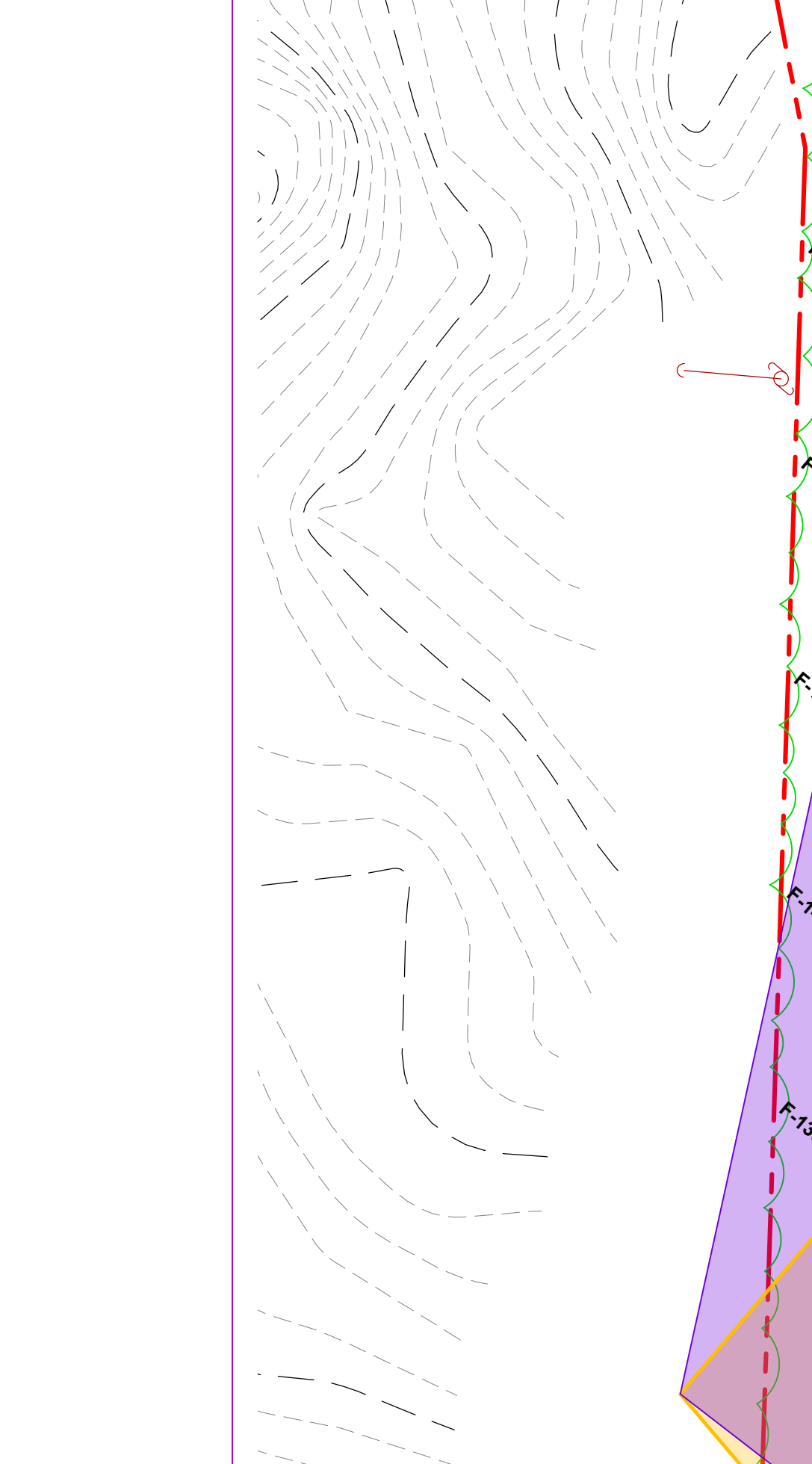
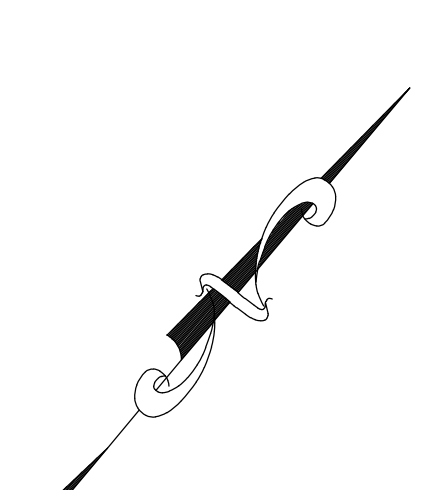
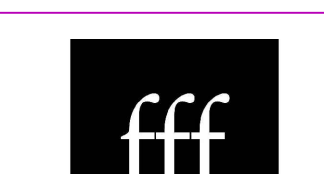
1. **Question:** Section 4.3 of the plan identifies the January 2021 report, but the end of the first paragraph seems to reference data collected through August 2021. Are these dates accurate?

Answer: The date was incorrect and was updated to August 6, 2020. The CAP/SIP was updated as *Amendment 3*. The updated CAP/SIP will be sent to the agencies.

2. **Question:** Section 4.7 – The discussion regarding AOC#9 identified PCB contaminated soils around the buildings and in the Building F Play Area. I do not see the Play Area identified on the figures. Can you please clarify where this is located and concentrations found? I assume this area falls into what is proposed for excavation and disposal?

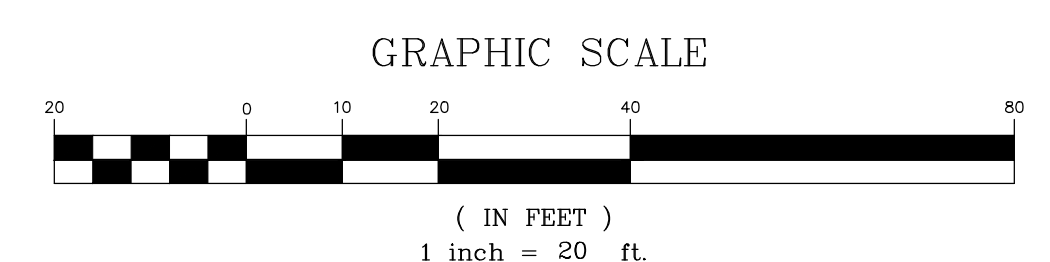
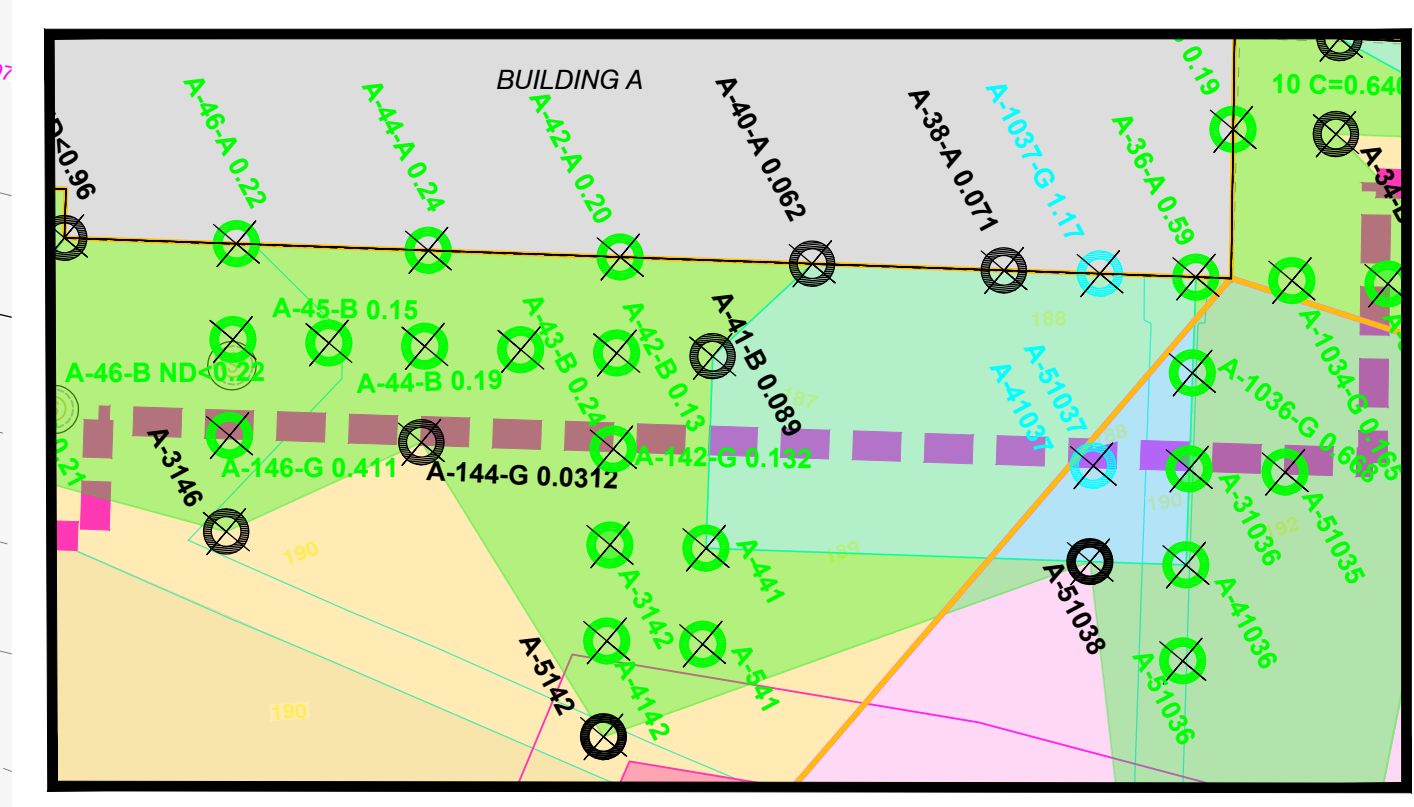
Answer: The play area is called out on the attached Figure CAP-2 (*Attachment 1*). One soil sample identified as F-18-PA was determined to exceed the Vermont Residential Soil Standard (0.114 mg/kg) due to a reporting limit of 0.12 mg/kg. No other soil samples from the play area exceeded applicable VTDEC or EPA soil standards.

Attachment 1 - Figure CAP-2



COLOR	SOIL DESCRIPTION	CONTAMINANT
Green	Exceeds VSS-Resident (0.114 mg/kg)	PCB
Yellow	Exceeds VSS-Non Resident (0.680 mg/kg)	PCB
Blue	Exceeds EPS High Occupancy Cleanup Standard (1mg/kg)	PCB
Red	Exceeds 50 mg/kg	PCB
Orange	Exceeds VSS-Urban Background (0.58 mg/kg)	PAH
Pink	Exceeds VSS-Non Resident (1.54 mg/kg)	PAH
Purple	Exceeds VSS-Resident / Non-Resident (16 mg/kg)	Arsenic

- Legend:**
- SB-101 Soil Boring - December 2020 (NW: series borings were anticipated to be completed as monitoring wells. However, no groundwater was encountered, so no wells were installed)
 - SB-219 Soil Boring - May/July 2021
 - SB-04 Soil Boring - June 2019 and December 2020
 - PCB Soil Sample Location. Result below all standards or none detected above indicated detection limit (e.g. <0.051 mg/kg)
 - Exceeds VT Residential Soil Standard (0.114 mg/kg)
 - Exceeds VT Non-Residential Soil Standard (0.68 mg/kg)
 - Exceeds EPA High Occupancy Clean Up Standard (1.0 mg/kg)
 - Heritage: ND & 2' Below Grade Surface
 - ND = None Detected above detection limit
 - NA = Not Analyzed



BURLINGTON, VT

PROJECT NO: 21255
ORIGINATOR DATE: 10/18/2022
SCALE: 1" = 20'
DRAWN BY: MAB
CHECKED BY: DSM
ISSUE LOG: Updated Borings
12/08/22

SHEET CONTENTS:

CONTAMINATED SOIL MANAGEMENT AREAS - PCB BORINGS -

SHEET NO: CAP-2
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Attachment 2 – November 2020 Soils Interim Control Evaluation Revision 1



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November 5, 2020

Mr. Marty Spaulding
Director of Property Services
Burlington School District
287 Shelburne Road
Burlington, VT 05401

Transmitted via electronic mail to: mspauldi@bsdvt.org

Re: Soils Interim Control Evaluation Revision 1
Burlington High School / Burlington Technical Center
52 Institute Road - Burlington, Vermont
VTDEC SMS Site #2020-4964

Dear Marty:

ATC Group Services LLC (ATC) was contracted by the Burlington School District (BSD) to conduct an interim control evaluation of soils at the property referenced above (site). The objective of the evaluation was to further delineate the horizontal extent of PCB contamination in near surface soils and hardscapes which had been previously identified within the drip edge and 5 feet from building perimeters at the site and to characterize perimeter and play area soils associated with Building F. The goal of the evaluation was to utilize the data generated to support the placement of a barrier which will remain in-place until corrective action implementation, to aid in the development of a Site Investigation Work Plan as outlined in §35,303 of Vermont Department of Environmental Conservation's (VT DEC) Investigation and Remediation of Contaminated Properties Rule (IRULE), July 2019 as well as a Self-Implementing PCB Remediation Plan to be prepared in accordance with the Toxic Substance Control Act (TSCA) (40 CFR Part 761).

ATC conducted evaluation activities in September 2020, in accordance with the proposal dated September 8, 2020 and with ATC's Standard Operating Procedures (SOPs).

The site property owner is the Burlington Supervisory District (BSD), 287 Shelburne Road, Burlington, Vermont 05401. The Director of Property Services is Mr. Marty Spaulding, mspauldi@bsdvt.org, (802) 673-7783. Refer to **Figure 1** for a vicinity map and **Figure 2** for a site plan. The site coordinates are 44.496341, -73.235017.

CONCEPTUAL SITE MODEL

The following conceptual site model (CSM) is formulated in accordance with §35-302 of IRULE which outlines potential source(s) of release(s), infrastructure considerations, historical land use, geology, hydrogeology, contaminant fate and transport, sensitive receptors and potential exposure pathways. This CSM is generated based on limited desktop research and review of a previous Phase I Environmental Site Assessment (ESA), completion of a limited Phase II ESA, completion of a Pre-Renovation Survey Report, and data generated during completion of the evaluation reported herein.

Source(s), Release(s) & Prior Investigations

ATC completed a Phase I ESA, dated April 26, 2019, which identified the following Recognized Environmental Conditions (RECs):

- Two (2) USTs (reportedly installed in 1988) are present beneath the concrete slab associated with Building G. One (1) UST is specified as 1,000-gallons of No.2 fuel oil and is constructed of fiberglass. The second UST is also specified as 1,000-gallon yet construction material is unknown. The second UST was utilized to contain boiler leakage.
- A hydraulic lift associated with the Building A Autobody Shop was equipped with a hydraulic lift UST. This UST was reportedly abandoned in-place and filled with sand.
- A hydraulic lift associated with the Building F Auto Shop was equipped with a hydraulic lift UST. This UST was reportedly abandoned in-place and filled with sand. The fill port associated with the UST was observed during site activities.
- The presence of a pre-1980 elevator was observed in Building F. Indications of staining and signs of corrosion were also observed. Pre-1980 elevators often used PCB-containing hydraulic fluid.

The April 26, 2019 ESA also identified the following Business Environmental Risks (BERs):

- Due to the proximity of the property to an urban center, the presence of “development soils” should be considered and evaluated.
- Due to the former agricultural site uses, the potential impact of historically applied pesticides should be considered and evaluated.
- The potential impact of an oil/water separator associated with Building F should be considered and evaluated.

ATC completed a Limited Phase II ESA, dated July 15, 2019, which revealed the following:

- ATC confirmed the presence of one (1) UST beneath the Building G slab. A dip stick was advanced into the UST and four (4) inches of water was measured. No odor or visual indication of fuel oil or a release of any kind was observed.
- ATC advanced a coring tool through the concrete slab within the Building F elevator pit. No visual or olfactory evidence of contamination was noted and all photoionization detector (PID) readings were 0.0 parts per million volume (ppmv). A soil sample collected from beneath the slab was analyzed for PCBs and reported concentrations exceeded the Resident Vermont Soil Standard (VSS).
- ATC collected 15 near surface (0.5 – 1.5' below grade surface) soil samples in accessible locations throughout the proposed development area on site which were analyzed for polycyclic aromatic hydrocarbons (PAHs), Arsenic, and Lead. No visual or olfactory evidence of contamination was noted and all PID readings were 0.0 ppmv. The Toxic Equivalent Quotient (TEQ) formula was applied to the PAHs. Soils which meet the IRULE definition of “development soils” were reported within the proposed redevelopment footprint.

ATC completed a Pre-Renovation Survey Report detailing inspection and sampling of potential hazardous building materials (asbestos, lead paint, and PCBs), dated April 20, 2020 which revealed the following:

- Asbestos containing building materials were identified within the interior and on the exterior of Buildings A – F.

- Lead Containing and Lead Based Paint were identified on interior building components associated with Buildings A – F. Lead Containing Paint was identified on exterior building components associated with Buildings A and B.
- The presence of PCBs in caulking and glazing compounds in excess of 50 ppm was reported in several interior and exterior areas associated with Buildings A – F.

The BSD retained a third party consultant (Fuss & O'Neill) in April 2020 to provide a peer review of findings and determine any potential data gaps. Fuss & O'Neill prepared a final recommendation summary to address data gaps (dated June 8, 2020). ATC conducted supplemental building material and soil sampling for PCBs as recommended by Fuss & O'Neill beginning on June 17, 2020. A final report Revision 2 (dated September 29, 2020), prepared by ATC incorporating supplemental testing of building materials, as well as soil sampling, revealed the following:

- The presence of porous substrate (concrete, concrete masonry unit (CMU) and brick) building materials impacted by PCB containing building materials (caulking and glazing) were identified on the interior and exterior of Buildings A – F.
- Soil samples in excess of Resident VSS, Non-Resident VSS, and the EPA TSCA High Occupancy Standard were reported in surficial soils in several areas at the drip line, 6" below grade at the drip line, and surficial soils at 5' from the drip line.

Site Infrastructure, Historical Land Uses and Adjacent Properties

According to the Phase I ESA, the site consists of 32.43 acres and is developed with eight (8) buildings – A, B, C, D, E, F, G, and a wood chip plant. Original construction of Buildings A – E occurred in 1963-1964 with Building F in 1965, Building G in 1988, and the wood chip plant in 2002. The buildings are currently occupied by Burlington High School. Exterior areas consist of a mix of paved, concrete, and landscaped surfaces. Site topography is generally rolling with a slope toward the south and west. Prior to development, the property was used for agricultural purposes. One (1) hazardous site is located in proximity to the site as outlined in the Phase I ESA and illustrated on **Figure 1**.

Site Geology and Hydrogeology

According to the Phase I ESA, bedrock geology consist of dunham dolostone of the chipman formation with several bedrock outcrops at the site. The site is located with an Urban Soil Background Area as illustrated on the Natural Resources Atlas (NRA). Groundwater in the site vicinity reportedly flows in a north/northeast direction and has been encountered at 8 to 12 feet below ground surface (bgs).

Contaminant Fate and Transport

Extensive sampling of soil and building materials has been conducted to date. PCBs have been detected in site soils in excess of VSS (0.114 ppm) and the EPA TSCA High Occupancy Standard (1 ppm). PAHs have been detected in site soils in excess of VSS. PCBs have been confirmed in building materials associated with Buildings A - F dating back to original construction. Sampling conducted to date suggests that PCBs have leached from building materials (The Source) and impacted soils around the perimeter of Buildings A - F. PCBs have also been confirmed in soils beneath the Building F elevator pit.

No known source of PAHs has been identified on-site, therefore, the presence of PAHs in site soils appears to be related to atmospheric deposition.

In general, PCBs and PAHs will tend to adsorb to near surface soil particles under typical site conditions. Additional sampling will help determine the extent of horizontal and vertical transport of these compounds on the site.

Additional potential contaminants, based on the RECs outlined above, include volatile organic compounds (VOCs), chlorinated VOCs (CVOCs), and metals related to USTs and an oil-water separator on site. These contaminants will be addressed in a Site Investigation Work Plan, to be prepared under separate cover, as outlined in §35,303 of the VT DEC IRULE.

Sensitive Receptors and Exposure Pathways

Impacted sensitive receptors at the site include soil and indoor air. Groundwater will be evaluated, if encountered, during the forthcoming site investigation. The direct contact exposure risk to soils is high based on current site conditions; additionally, future excavations could be at an increased risk. The site and surrounding area are served by municipal drinking water and therefore the risk of ingestion of contaminated groundwater is low. Indoor air has been affected via off-gassing from PCB containing building materials, which presents an inhalation risk to building occupants. PCBs in air sampling was conducted within site buildings on September 2, 2020. Elevated PCB in air sampling results were received which resulted in closure of the BHS campus until PCB remediation is completed.

SOILS INTERIM CONTROL EVALUATION ACTIVITIES

Property Preparation

Prior to the initiation of the evaluation activities, ATC updated a site-specific Health and Safety Plan (HASP) in accordance with the Occupational Safety and Health Administration (OSHA) Final Rule for Hazardous Waste Site Operations and Emergency Response (29 CFR 1910.120). The HASP was reviewed and signed by ATC personnel prior to performing work at the site. The HASP detailed the potential exposures and risks associated with site activities and the actions necessary to minimize potential exposure.

ATC marked out proposed sampling locations on September 15, 2020.

Soil Sampling

On September 16 and 18, 2020, ATC collected 248 discrete surficial soil samples (0-2") and 48 discrete hardscape (concrete or asphalt) samples to support the placement of a barrier around the perimeters of Building A – E and to provide initial characterization of surficial soils and hardscapes at the Perimeter of Building F and the associated play area. Additionally, this data will provide further site characterization to aid in the development of a site investigation work plan. Sampling was conducted in a 3-meter grid pattern as specified under 40 CFR 761 Subpart N in an attempt to characterize the horizontal extent of contamination using the same strategy necessary to verify completion of a Self-Implementing PCB Remediation Plan. Because drip edge sampling had previously occurred at the perimeter of Buildings A – E, samples reported herein were collected 3 meters from the building perimeters in an attempt to delineate the horizontal extent of contamination associated with these buildings.

Surficial soil samples were collected utilizing core sampling hand tools following removal of organic materials. Hardscape samples were collected utilizing a rotary hammer drill powered via portable generator which advanced a ½ inch drill bit to a depth of 2". A minimum of 10 grams of soil or hardscape, per sample, was then placed in a 4 ounce glass jar and immediately put on ice.

All core sampling hand tools and drill bits were thoroughly decontaminated between sampled areas using the decontamination method presented below.

ATC collected 74 soil samples and 8 hardscape samples at 3-meters from the Building A/B perimeter and 6 soil samples and 13 hardscape samples at the drip edge associated with the Building A/B perimeter.

ATC collected 42 soil samples and 3 hardscape samples at 3-meters from the Building C perimeter and 5 soil samples and 1 hardscape sample at the drip edge associated with the Building C perimeter.

ATC collected 30 soil samples and 2 hardscape samples at 3-meters from the Building D perimeter.

ATC collected 23 soil samples and 5 hardscape samples at 3-meters from the Building E perimeter.

Because soils and hardscapes associated with Building F had not been characterized as Building F is not part of the planned renovation scope, ATC collected 46 surficial soil samples and 16 hardscape samples from the Building F drip line and an additional 7 soil samples at 3-meters from the Building F perimeter to inform the placement of a barrier and guide further site investigation efforts

ATC collected 14 surficial soil samples in a 3-meter grid pattern within the exterior play area associated with the on-site child care facility located within Building F.

Lastly, ATC collected 1 background sample from a landscaped area to the east of the site buildings for comparison.

All soil samples were placed on ice and transported under chain of custody for analysis of PCBs by EMSL Analytical, Inc. of Cinnaminson, NJ via EPA Method 8082 with soxhlet extraction.

Decontamination Method

Tools and equipment were decontaminated between each sample collected. Decontamination supplies included, but were not limited to, hexane, 2 small buckets, multiple scrub brushes, detergent, deionized water, spray bottles, paper towels, and a HEPA vacuum cleaner.

2 decontamination buckets were assembled. The first spray bottle and decontamination bucket contained a detergent and deionized water solution. All used drill bits, hand tools and utensils were placed in the detergent and water bucket. Each piece was scrubbed thoroughly using the scrub brush. Next, each piece was rinsed with deionized water followed by a hexane scrub and/or rinse. Decontaminated pieces were placed on clean paper towels, individually dried and inspected prior to the next use.

Soil Sampling Results & Discussion

The results of soil and hardscape sampling conducted on September 16 and 18, 2020 indicated detectable PCBs in 175 of 296 samples. Soil samples were compared to VT Soil Standards and US EPA standards. Hardscape samples were compared to US EPA standards since the VT DEC does not regulate hardscapes.

Analytical summaries are included in **Table 1** and illustrated on **Figure 3 – 9**. A hardcopy of analytical results is included as **Appendix A**.

Building and elevation specific data compared to VT DEC and EPA standards is presented in the following table:

Building	Elevation	# of samples >VSS Res	# of samples >VSS NR	# of samples >EPA HOC
A	North	14	ND	ND
	East	No samples as extent previously delineated. Presence limited to 2" strip of soil between building and hardscape.		
	South	8	ND	ND
	West	ND	ND	1 (Hardscape)
B	North	13	6	5
	East	No samples as hardscape samples previously collected = ND.		
	South	14	4	2
	West	5	3	3
C	North	7	1	1
	East	1	ND	ND
	South	16	1	1 (Hardscape)
	West	No windows, doors, or expansion joint present therefore no samples collected from the west elevation of Building C.		
D	North	11	ND	ND
	East	2	1	1
	South	13	4	2
	West	No samples due to proximity of west elevation of Building D to east elevation of Building F.		
E	North	3	ND	ND
	East	1	ND	ND
	South	5	2	ND
	West	ND	ND	1 (Hardscape)
F	North	ND	ND	1 (Hardscape)
	East	22	19	16
	South	ND	ND	2 (Hardscape)
	West	23	22	22 4 (Hardscape)
F Play Area	East	4	1	1

VSS Res = Resident VT Soil Standard – 0.114 ppm
VSS NR = Non-Resident VT Soil Standard – 0.68 ppm
EPA HOC = EPA High Occupancy Clean Up Standard – 1.0 ppm
ND = None Detected

At the 3-meter perimeter, soils in excess of the VSS Res were reported at the north and south elevations of Building A. In addition, a hardscape in excess of the EPA HOC was reported at the west elevation of Building A.

Additional soils in excess of the EPA HOC were reported at the 3-meter perimeter associated with the north, south, and west elevations of Building B.

Soils in excess of the VSS Res and VSS NR were reported at the north and south elevations of Building C. 1 soil and 1 hardscape sample were reported in excess of the EPA HOC at the north and south elevations, respectively. 1 soil sample in excess of the VSS Res was also reported at the east elevation of Building C.

Soils in excess of the VSS Res, VSS NR, and EPA HOC were reported at the south and east elevations of Building D. Soils in excess of VSS Res were reported at the north elevation of Building D.

Soils in excess of the VSS Res were reported at the north, east, and south elevations of Building E. Soils in excess of VSS NR were also reported at the south elevation. In addition, a hardscape sample was reported in excess of the EPA HOC at the west elevation of Building E.

In general, PCB in soil concentrations reported at the 3-meter perimeter associated with Buildings A, B, C, D, and E indicate a reduction in PCB concentrations compared to drip edge samples collected, however further sampling will be required to define the extent of contamination. The drip edge data collected for Buildings A, B, C, D, and E was previously reported in the September 29, 2020 report noted above. Data detailed in the September 29, 2020 report is included in the attached figures.

PCB concentrations in soil and hardscape associated with the east and west elevation drip edges of Building F indicate the presence of soils and hardscapes in excess of the EPA HOC (and therefore in excess of VSS NR). Hardscapes associated with the north and south elevation drip edges were reported in excess of the EPA HOC.

PCB concentrations in soil associated with the Building F play area indicate the presence of soils in excess of the VSS Res.

In general, PCB concentrations reported at the drip edge and at the 3-meter perimeter associated with Building F indicate the presence of elevated levels. PCB concentrations reported at the 3-meter perimeter of Building F indicate a reduction in PCB concentrations compared to drip edge samples collected, however further sampling will be required to define the extent of contamination.

The background sample collected from a landscaped area east of the site buildings was none detect (<0.054 ppm) for PCBs.

Data Usability

The laboratory utilized did not report any quality control/quality assurance issues with their analyses that would affect the usability of the data for this project. Please note that a small number of hardscape samples were reported in excess of target detection limits (<0.99 ppm) due to laboratory dilution. Those areas will be further delineated during the site investigation.

STANDARD OPERATING PROCEDURES

ATC SOPs are presented below and can be presented upon request.

- SOP #04: General Sampling Procedures
- SOP #05: Subsurface Soil Sample Collection Procedures
- SOP #10: Decontamination
- SOP #11: Sample Custody Procedures
- SOP #19: Field Log Book Procedures

CONCLUSIONS

Based on the results summarized above, ATC presents the following conclusion:

- The horizontal extent of PCB contaminated surficial soil and hardscapes has not been completely defined.
- In general, PCB in soil concentrations reported at the 3-meter perimeter associated with Buildings A, B, C, D, E, and F indicate a reduction in PCB concentrations compared to drip edge samples collected.

RECOMMENDATIONS

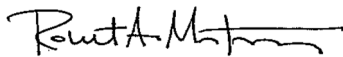
Based on the conclusions noted above, ATC presents the following recommendations:

- Based on these results, the existing interim barrier (located 12 feet from the perimeter of Buildings A – E) should be moved to a distance of 30 feet from the perimeter of each building or at the edge of the hardscape surfaces if hardscapes are located within 30 feet of the building perimeter. This strategy should also be applied at the perimeter of Building F.
- Additional sampling of soils and hardscapes should be conducted during the site investigation to completely define the horizontal extent of PCB contamination. PCB in soil sampling should also be conducted at that time to completely define the vertical extent of PCB contamination. In addition, the forthcoming site investigation intends to characterize all RECs noted in the conceptual site model presented in this report.
- Per IRule requirements, this report should be provided to the VT DEC and other involved regulatory agencies.

Thank you for considering ATC for your environmental management needs. We look forward to working with you in the near future. If you have any questions feel free to contact us at 802 862-1980.

Sincerely,

ATC GROUP SERVICES LLC



Robert Montgomery
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Direct Line: 802 871 8351
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Thomas Broido
Branch Manager
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Attachments: Figures 1 – 9
 Table 1

S:\Projects - BSTVA-C\Burlington School District\280BS01563 Burlington HS Renovation Project\BHS Site Investigation Soil\Interim Controls Report\BSD_BHS Interim Control Evaluation Report_Final Rev1.docx

Attachments

Building A
PCB Soil Sampling Results
52 Institute Road, Burlington, Vermont
ATC Project #280BS01563
September 16, 18, 2020

Sample Number	Location	Description	Result ppm [Aroclor]
A-01-B	Building A North Wall, 10' from Drip Edge	Soil, 2" depth	0.36[1254]
A-02-B	Building A North Wall, 10' from Drip Edge	Soil, 2" depth	0.17[1254]
A-03-B	Building A North Wall, 10' from Drip Edge	Soil, 2" depth	0.23[1254]
A-04-B	Building A North Wall, 10' from Drip Edge	Soil, 2" depth	0.18[1254]
A-05-B	Building A North Wall, 10' from Drip Edge	Soil, 2" depth	0.14[1254]
A-06-B	Building A North Wall, 10' from Drip Edge	Soil, 2" depth	0.088[1254]
A-07-B	Building A North Wall, 10' from Drip Edge	Soil, 2" depth	0.14[1254]
A-08-B	Building A North Wall, 10' from Drip Edge	Soil, 2" depth	0.15[1254]
A-09-B	Building A North Wall, 10' from Drip Edge	Soil, 2" depth	0.25[1254]
A-10-B	Building A North Wall, 10' from Drip Edge	Soil, 2" depth	0.26[1254]
A-11-B	Building A North Wall, 10' from Drip Edge	Soil, 2" depth	0.13[1254]
A-12-B	Building A North Wall, 10' from Drip Edge	Soil, 2" depth	0.079[1254]
A-13-B	Building A North Wall, 10' from Drip Edge	Soil, 2" depth	0.081[1254]
A-14-B	Building A North Wall, 10' from Drip Edge	Soil, 2" depth	ND<0.051
A-15-B	Building A North Wall, 10' from Drip Edge	Soil, 2" depth	0.072[1254]

Building A
PCB Soil Sampling Results
52 Institute Road, Burlington, Vermont
ATC Project #280BS01563
September 16, 18, 2020

Sample Number	Location	Description	Result ppm [Aroclor]
A-16-B	Building A North Wall, 10' from Drip Edge	Soil, 2" depth	0.13[1254]
A-17-B	Building A North Wall, 10' from Drip Edge	Soil, 2" depth	0.35[1254]
A-18-A	Building A North Wall, Drip Edge	Hardscape, Concrete	ND<0.98
A-19-A	Building A North Wall, Drip Edge	Hardscape, Concrete	ND<0.97
A-20-B	Building A North Wall, 10' from Drip Edge	Soil, 2" depth	0.13[1254]
A-21-B	Building A North Wall, 10' from Drip Edge	Soil, 2" depth	0.32[1254]
A-22-B	Building A North Wall, 10' from Drip Edge	Soil, 2" depth	0.095[1254]
A-23-A	Building A East Wall, Drip Edge	Hardscape, Concrete	ND<0.95
A-24-B	Building A South Wall, 10' from Drip Edge	Soil, 2" depth	0.24[1254]
A-25-B	Building A South Wall, 10' from Drip Edge	Soil, 2" depth	ND<0.050
A-26-B	Building A South Wall, 10' from Drip Edge	Soil, 2" depth	ND<0.052
A-27-B	Building A South Wall, 10' from Drip Edge	Soil, 2" depth	ND<0.053
A-28-B	Building A South Wall, 10' from Drip Edge	Soil, 2" depth	ND<0.053
A-29-B	Building A South Wall, 10' from Drip Edge	Soil, 2" depth	ND<0.054
A-30-B	Building A South Wall, 10' from Drip Edge	Soil, 2" depth	ND<0.053

Building A
PCB Soil Sampling Results
52 Institute Road, Burlington, Vermont
ATC Project #280BS01563
September 16, 18, 2020

Sample Number	Location	Description	Result ppm [Aroclor]
A-31-B	Building A South Wall, 10' from Drip Edge	Soil, 2" depth	ND<0.054
A-32-B	Building A South Wall, 10' from Drip Edge	Soil, 2" depth	0.071[1254]
A-33-B	Building A South Wall, 10' from Drip Edge	Soil, 2" depth	0.069[1254]
A-34-B	Building A South Wall, 10' from Drip Edge	Soil, 2" depth	0.099[1254]
A-35-B	Building A South Wall, 10' from Drip Edge	Soil, 2" depth	0.19[1254]
A-36-A	Building A South Wall, Drip Edge	Soil, 2" depth	0.59[1254]
A-38-A	Building A South Wall, Drip Edge	Soil, 2" depth	0.071[1254]
A-40-A	Building A South Wall, Drip Edge	Soil, 2" depth	0.062[1254]
A-41-B	Building A South Wall, 10' from Drip Edge	Soil, 2" depth	0.089[1254]
A-42-A	Building A South Wall, Drip Edge	Soil, 2" depth	0.20[1254]
A-42-B	Building A South Wall, 10' from Drip Edge	Soil, 2" depth	0.13[1254]
A-43-B	Building A South Wall, 10' from Drip Edge	Soil, 2" depth	0.24[1254]
A-44-A	Building A South Wall, Drip Edge	Soil, 2" depth	0.24[1254]
A-44-B	Building A South Wall, 10' from Drip Edge	Soil, 2" depth	0.19[1254]
A-45-B	Building A South Wall, 10' from Drip Edge	Soil, 2" depth	0.15[1254]

Building A
PCB Soil Sampling Results
52 Institute Road, Burlington, Vermont
ATC Project #280BS01563
September 16, 18, 2020

Sample Number	Location	Description	Result ppm [Aroclor]
A-46-A	Building A South Wall, Drip Edge	Soil, 2" depth	0.22[1254]
A-46-B	Building A South Wall, 10' from Drip Edge	Hardscape, Concrete	ND<0.22
A-47-A	Building A South Wall, Drip Edge	Hardscape, Concrete	ND<0.96
A-48-B	Building A South Wall, 10' from Drip Edge	Soil, 2" depth	0.21[1254]
A-49-B	Building A South Wall, 10' from Drip Edge	Soil, 2" depth	0.067[1254]
A-50-B	Building A South Wall, 10' from Drip Edge	Soil, 2" depth	0.13[1254]
A-51-A	Building A South Wall, Drip Edge	Hardscape, Concrete	ND<0.95
A-52-B	Building A South Wall, 10' from Drip Edge	Soil, 2" depth	0.087[1254]
A-53-B	Building A South Wall, 10' from Drip Edge	Soil, 2" depth	0.095[1254]
A-54-A	Building A West Wall, Drip Edge	Hardscape, Concrete	ND<0.97
A-55-A	Building A West Wall, Drip Edge	Hardscape, Asphalt	ND<1.0
A-56-A	Building A West Wall, Drip Edge	Hardscape, Concrete	ND<0.99
A-57-A	Building A West Wall, Drip Edge	Hardscape, Concrete	ND<0.99
A-58-A	Building A West Wall, Drip Edge	Hardscape, Asphalt	ND<0.97
A-59-A	Building A West Wall, Drip Edge	Hardscape, Concrete	ND<0.88

Building A
PCB Soil Sampling Results
52 Institute Road, Burlington, Vermont
ATC Project #280BS01563
September 16, 18, 2020

Sample Number	Location	Description	Result ppm [Aroclor]
A-60-A	Building A West Wall, Drip Edge	Hardscape, Concrete	ND<0.96
A-61-A	Building A West Wall, Drip Edge	Hardscape, Concrete	ND<0.87

Notes:

Vermont Soil Standard Resident Standard of 0.114ppm

Vermont Soil Standard Non-Resident Standard of 0.68ppm

EPA High Occupancy Clean-UP Standard of 1ppm

Samples analyzed by EMSL Analytical of Cinnaminson, NJ

PCBs - Polychlorinated Biphenyls by EPA Method 8082 with Soxhlet Extraction

BDL - Below Laboratory Detection Limit.

ND - None Detect

NA - Not Analyzed

Bold values represent an exceedance

Vermont SSV, or EPA High Occupancy Standard

*Vermont Soil Standard for residential/non-residential properties

Building B
PCB Soil Sampling Results
52 Institute Road, Burlington, Vermont
ATC Project #280BS01563
September 16, 18, 2020

Sample Number	Location	Description	Result ppm [Aroclor]
B-01-B	Building B West Wall, 10' from Drip Edge	Soil, 2" depth	0.58[1254]
B-02-B	Building B West Wall, 10' from Drip Edge	Soil, 2" depth	7.7[1254]
B-03-B	Building B West Wall, 10' from Drip Edge	Soil, 2" depth	3.3[1254]
B-04-B	Building B West Wall, 10' from Drip Edge	Soil, 2" depth	1.4[1254]
B-05-B	Building B West Wall, 10' from Drip Edge	Soil, 2" depth	0.66[1254]
B-06-B	Building B North Wall, 10' from Drip Edge	Soil, 2" depth	0.95[1254]
B-07-B	Building B North Wall, 10' from Drip Edge	Hardscape, Concrete	ND<0.97
B-08-B	Building B North Wall, 10' from Drip Edge	Hardscape, Concrete	29[1254]
B-09-B	Building B North Wall, 10' from Drip Edge	Hardscape, Concrete	4.3[1254]
B-10-B	Building B North Wall, 10' from Drip Edge	Soil, 2" depth	0.14[1254]
B-11-B	Building B North Wall, 10' from Drip Edge	Soil, 2" depth	0.32[1254]
B-12-B	Building B North Wall, 10' from Drip Edge	Hardscape, Asphalt	ND<0.93
B-13-B	Building B North Wall, 10' from Drip Edge	Hardscape, Asphalt	ND<0.94
B-14-B	Building B North Wall, 10' from Drip Edge	Hardscape, Asphalt	ND<0.98
B-15-B	Building B North Wall, 10' from Drip Edge	Soil, 2" depth	0.29[1254]
B-16-B	Building B North Wall, 10' from Drip Edge	Soil, 2" depth	0.13[1254]

Building B
PCB Soil Sampling Results
52 Institute Road, Burlington, Vermont
ATC Project #280BS01563
September 16, 18, 2020

Sample Number	Location	Description	Result ppm [Aroclor]
B-17-B	Building B North Wall, 10' from Drip Edge	Soil, 2" depth	0.43[1254]
B-18-B	Building B North Wall, 10' from Drip Edge	Soil, 2" depth	0.20[1254]
B-19-B	Building B North Wall, 10' from Drip Edge	Soil, 2" depth	1.6[1254]
B-20-B	Building B North Wall, 10' from Drip Edge	Soil, 2" depth	0.25[1254]
B-21-B	Building B North Wall, 10' from Drip Edge	Soil, 2" depth	2.3[1254]
B-22-B	Building B North Wall, 10' from Drip Edge	Soil, 2" depth	0.54[1254]
B-23-B	Building B North Wall, 10' from Drip Edge	Soil, 2" depth	0.067[1254]
B-24-B	Building B North Wall, 10' from Drip Edge	Hardscape, Asphalt	ND<0.94
B-25-B	Building B South Wall, 10' from Drip Edge	Soil, 2" depth	0.17[1254]
B-26-B	Building B South Wall, 10' from Drip Edge	Soil, 2" depth	0.13[1254]
B-27-B	Building B South Wall, 10' from Drip Edge	Soil, 2" depth	0.15[1254]
B-28-B	Building B South Wall, 10' from Drip Edge	Soil, 2" depth	0.23[1254]
B-29-B	Building B South Wall, 10' from Drip Edge	Soil, 2" depth	0.43[1254] 0.15[1260] 0.58
B-30-B	Building B South Wall, 10' from Drip Edge	Soil, 2" depth	0.081 [1254]
B-31-B	Building B South Wall, 10' from Drip Edge	Soil, 2" depth	1.2[1254]
B-32-B	Building B South Wall, 10' from Drip Edge	Soil, 2" depth	0.69[1254] 0.20[1260] 0.89

Building B
PCB Soil Sampling Results
52 Institute Road, Burlington, Vermont
ATC Project #280BS01563
September 16, 18, 2020

Sample Number	Location	Description	Result ppm [Aroclor]
B-33-B	Building B South Wall, 10' from Drip Edge	Soil, 2" depth	0.14[1254]
B-34-B	Building B South Wall, 10' from Drip Edge	Soil, 2" depth	0.16[1254]
B-35-B	Building B South Wall, 10' from Drip Edge	Soil, 2" depth	0.27[1254]
B-36-B	Building B South Wall, 10' from Drip Edge	Soil, 2" depth	0.59[1254]
B-37-B	Building B South Wall, 10' from Drip Edge	Soil, 2" depth	0.21[1254]
B-38-B	Building B South Wall, 10' from Drip Edge	Soil, 2" depth	0.58[1254] 0.11[1260] 0.69
B-39-B	Building B South Wall, 10' from Drip Edge	Soil, 2" depth	1.6[1254]

Notes:

Vermont Soil Standard Resident Standard of 0.114ppm

Vermont Soil Standard Non-Resident Standard of 0.68ppm

EPA High Occupancy Clean-UP Standard of 1ppm

Samples analyzed by EMSL Analytical of Cinnaminson, NJ
 PCBs - Polychlorinated Biphenyls by EPA Method 8082 with Soxhlet
 Extraction

BDL - Below Laboratory Detection Limit.

ND - None Detect

NA - Not Analyzed

Bold values represent an exceedance

Vermont SSV, or EPA High Occupancy Standard

*Vermont Soil Standard for residential/non-residential properties

Building C
PCB Soil Sampling Results
52 Institute Road, Burlington, Vermont
ATC Project #280BS01563
September 16, 18, 2020

Sample Number	Location	Description	Result ppm [Aroclor]
C-01-B	Building C North Wall, 10' from Drip Edge	Soil, 2" depth	ND<0.052
C-02-B	Building C North Wall, 10' from Drip Edge	Soil, 2" depth	ND<0.054
C-03-B	Building C North Wall, 10' from Drip Edge	Soil, 2" depth	0.11[1254]
C-04-B	Building C North Wall, 10' from Drip Edge	Soil, 2" depth	0.11[1254]
C-05-B	Building C North Wall, 10' from Drip Edge	Soil, 2" depth	ND<0.062
C-06-B	Building C North Wall, 10' from Drip Edge	Soil, 2" depth	0.21[1254]
C-07-B	Building C North Wall, 10' from Drip Edge	Soil, 2" depth	0.13[1254]
C-08-B	Building C North Wall, 10' from Drip Edge	Soil, 2" depth	0.065[1254]
C-09-B	Building C North Wall, 10' from Drip Edge	Soil, 2" depth	0.066[1254]
C-10-B	Building C North Wall, 10' from Drip Edge	Soil, 2" depth	0.052[1254]
C-11-B	Building C North Wall, 10' from Drip Edge	Soil, 2" depth	0.081[1254]
C-12-B	Building C North Wall, 10' from Drip Edge	Soil, 2" depth	0.18[1254] 1.3[1260] 1.48

Building C
PCB Soil Sampling Results
52 Institute Road, Burlington, Vermont
ATC Project #280BS01563
September 16, 18, 2020

Sample Number	Location	Description	Result ppm [Aroclor]
C-13-B	Building C North Wall, 10' from Drip Edge	Soil, 2" depth	0.31[1254]
C-14-B	Building C North Wall, 10' from Drip Edge	Soil, 2" depth	0.24[1254]
C-15-B	Building C North Wall, 10' from Drip Edge	Soil, 2" depth	0.13[1254]
C-16-B	Building C North Wall, 10' from Drip Edge	Soil, 2" depth	0.078[1254]
C-17-B	Building C North Wall, 10' from Drip Edge	Soil, 2" depth	0.081[1254]
C-18-B	Building C North Wall, 10' from Drip Edge	Soil, 2" depth	0.077[1254]
C-19-B	Building C North Wall, 10' from Drip Edge	Soil, 2" depth	0.12[1254]
C-20-B	Building C North Wall, 10' from Drip Edge	Soil, 2" depth	ND<0.050
C-21-B	Building C North Wall, 10' from Drip Edge	Soil, 2" depth	ND<0.049
C-22-B	Building C North Wall, 10' from Drip Edge	Soil, 2" depth	ND<0.049
C-23-A	Building C East Wall, Drip Edge	Soil, 2" depth	0.074[1254]
C-24-A	Building C East Wall, Drip Edge	Soil, 2" depth	0.057[1254]

Building C
PCB Soil Sampling Results
52 Institute Road, Burlington, Vermont
ATC Project #280BS01563
September 16, 18, 2020

Sample Number	Location	Description	Result ppm [Aroclor]
C-25-A	Building C East Wall, Drip Edge	Hardscape,Concrete	ND<0.99
C-26-A	Building C East Wall, Drip Edge	Soil, 2" depth	0.084[1254]
C-27-A	Building C East Wall, Drip Edge	Soil, 2" depth	0.11[1254]
C-28-A	Building C East Wall, Drip Edge	Soil, 2" depth	0.21[1254]
C-28-B	Building C East Wall, 10' from Drip Edge	Soil, 2" depth	0.11[1254]
C-29-B	Building C South Wall, 10' from Drip Edge	Soil, 2" depth	0.14[1254]
C-30-B	Building C South Wall, 10' from Drip Edge	Soil, 2" depth	0.085[1254]
C-31-B	Building C South Wall, 10' from Drip Edge	Soil, 2" depth	0.10[1254]
C-32-B	Building C South Wall, 10' from Drip Edge	Soil, 2" depth	0.26[1254]
C-33-B	Building C South Wall, 10' from Drip Edge	Soil, 2" depth	0.24[1254] 0.17[1260] 0.41
C-34-B	Building C South Wall, 10' from Drip Edge	Soil, 2" depth	0.33[1254]
C-35-B	Building C South Wall, 10' from Drip Edge	Soil, 2" depth	0.15[1254]

Building C
PCB Soil Sampling Results
52 Institute Road, Burlington, Vermont
ATC Project #280BS01563
September 16, 18, 2020

Sample Number	Location	Description	Result ppm [Aroclor]
C-36-B	Building C South Wall, 10' from Drip Edge	Soil, 2" depth	0.17[1254]
C-37-B	Building C South Wall, 10' from Drip Edge	Soil, 2" depth	0.21[1254]
C-38-B	Building C South Wall, 10' from Drip Edge	Soil, 2" depth	0.27[1254]
C-39-B	Building C South Wall, 10' from Drip Edge	Soil, 2" depth	0.18[1254]
C-40-B	Building C South Wall, 10' from Drip Edge	Soil, 2" depth	0.18[1254]
C-41-B	Building C South Wall, 10' from Drip Edge	Soil, 2" depth	0.14[1254]
C-42-B	Building C South Wall, 10' from Drip Edge	Soil, 2" depth	0.15[1254]
C-43-B	Building C South Wall, 10' from Drip Edge	Soil, 2" depth	0.32[1254]
C-44-B	Building C South Wall, 10' from Drip Edge	Soil, 2" depth	0.22[1254]
C-45-B	Building C South Wall, 10' from Drip Edge	Soil, 2" depth	0.051[1254]
C-46-B	Building C South Wall, 10' from Drip Edge	Soil, 2" depth	0.24[1254]
C-47-B	Building C South Wall, 10' from Drip Edge	Hardscape, Asphalt	ND<1.0

Building C
PCB Soil Sampling Results
52 Institute Road, Burlington, Vermont
ATC Project #280BS01563
September 16, 18, 2020

Sample Number	Location	Description	Result ppm [Aroclor]
C-48-B	Building C South Wall, 10' from Drip Edge	Hardscape, Asphalt	ND<0.93
C-49-B	Building C South Wall, 10' from Drip Edge	Soil, 2" depth	0.75[1254]
C-50-B	Building C South Wall, 10' from Drip Edge	Hardscape, Asphalt	ND<0.94

Notes:

Vermont Soil Standard Resident Standard of 0.114ppm

Vermont Soil Standard Non-Resident Standard of 0.68ppm

EPA High Occupancy Clean-UP Standard of 1ppm

Samples analyzed by EMSL Analytical of Cinnaminson, NJ
 PCBs - Polychlorinated Biphenyls by EPA Method 8082 with Soxhlet
 Extraction

BDL - Below Laboratory Detection Limit.

ND - None Detect

NA - Not Analyzed

Bold values represent an exceedance

Vermont SSV, or EPA High Occupancy Standard

*Vermont Soil Standard for residential/non-residential properties

Building D
PCB Soil Sampling Results
52 Institute Road, Burlington, Vermont
ATC Project #280BS01563
September 16, 18, 2020

Sample Number	Location	Description	Result ppm [Aroclor]
D-01-B	Building D North Wall, 10' from Drip Edge	Soil, 2" depth	0.34[1254]
D-02-B	Building D North Wall, 10' from Drip Edge	Soil, 2" depth	0.24[1254]
D-03-B	Building D North Wall, 10' from Drip Edge	Soil, 2" depth	0.30[1254]
D-04-B	Building D North Wall, 10' from Drip Edge	Soil, 2" depth	0.18[1254]
D-05-B	Building D North Wall, 10' from Drip Edge	Soil, 2" depth	0.26[1254]
D-06-B	Building D North Wall, 10' from Drip Edge	Soil, 2" depth	0.22[1254]
D-07-B	Building D North Wall, 10' from Drip Edge	Soil, 2" depth	0.22[1254]
D-08-B	Building D North Wall, 10' from Drip Edge	Soil, 2" depth	0.10[1254]
D-09-B	Building D North Wall, 10' from Drip Edge	Soil, 2" depth	0.12[1254]
D-10-B	Building D North Wall, 10' from Drip Edge	Hardscape, Asphalt	ND<0.97
D-11-B	Building D North Wall, 10' from Drip Edge	Soil, 2" depth	ND<0.058
D-12-B	Building D North Wall, 10' from Drip Edge	Soil, 2" depth	0.13[1254]
D-13-B	Building D North Wall, 10' from Drip Edge	Soil, 2" depth	0.26[1254]
D-14-B	Building D North Wall, 10' from Drip Edge	Soil, 2" depth	0.19[1254]
D-15-B	Building D North Wall, 10' from Drip Edge	Hardscape, Asphalt	ND<0.87

Building D
PCB Soil Sampling Results
52 Institute Road, Burlington, Vermont
ATC Project #280BS01563
September 16, 18, 2020

Sample Number	Location	Description	Result ppm [Aroclor]
D-16-B	Building D East Wall, 10' from Drip Edge	Soil, 2" depth	0.82[1254]
D-17-B	Building D South Wall, 10' from Drip Edge	Soil, 2" depth	1.9[1254]
D-18-B	Building D South Wall, 10' from Drip Edge	Soil, 2" depth	0.32[1254]
D-19-B	Building D South Wall, 10' from Drip Edge	Soil, 2" depth	ND<0.053
D-20-B	Building D South Wall, 10' from Drip Edge	Soil, 2" depth	ND<0.097
D-21-B	Building D South Wall, 10' from Drip Edge	Soil, 2" depth	0.13[1254]
D-22-B	Building D South Wall, 10' from Drip Edge	Soil, 2" depth	9.2[1260]
D-23-B	Building D South Wall, 10' from Drip Edge	Soil, 2" depth	0.26[1254]
D-24-B	Building D South Wall, 10' from Drip Edge	Soil, 2" depth	1.0[1260]
D-25-B	Building D South Wall, 10' from Drip Edge	Soil, 2" depth	1.7[1260]
D-26-B	Building D South Wall, 10' from Drip Edge	Soil, 2" depth	0.34[1254]
D-27-B	Building D South Wall, 10' from Drip Edge	Soil, 2" depth	0.26[1254]
D-28-B	Building D South Wall, 10' from Drip Edge	Soil, 2" depth	0.21[1254]
D-29-B	Building D South Wall, 10' from Drip Edge	Soil, 2" depth	0.28[1254]
D-30-B	Building D South Wall, 10' from Drip Edge	Soil, 2" depth	0.74[1254]

Building D
PCB Soil Sampling Results
52 Institute Road, Burlington, Vermont
ATC Project #280BS01563
September 16, 18, 2020

Sample Number	Location	Description	Result ppm [Aroclor]
D-31-B	Building D South Wall, 10' from Drip Edge	Soil, 2" depth	0.40[1254]
D-32-B	Building D South Wall, 10' from Drip Edge	Soil, 2" depth	0.55[1254]

Notes:

Vermont Soil Standard Resident Standard of 0.114ppm

Vermont Soil Standard Non-Resident Standard of 0.68ppm

EPA High Occupancy Clean-UP Standard of 1ppm

Samples analyzed by EMSL Analytical of Cinnaminson, NJ
 PCBs - Polychlorinated Biphenyls by EPA Method 8082 with Soxhlet
 Extraction

BDL - Below Laboratory Detection Limit.

ND - None Detect

NA - Not Analyzed

Bold values represent an exceedance

Vermont SSV, or EPA High Occupancy Standard

*Vermont Soil Standard for residential/non-residential properties

Building E
PCB Soil Sampling Results
52 Institute Road, Burlington, Vermont
ATC Project #280BS01563
September 16, 18, 2020

Sample Number	Location	Description	Result ppm [Aroclor]
E-01-B	Building E North Wall, 10' from Drip Edge	Soil, 2" depth	0.14[1254]
E-02-B	Building E North Wall, 10' from Drip Edge	Soil, 2" depth	ND<0.058
E-03-B	Building E North Wall, 10' from Drip Edge	Soil, 2" depth	0.078[1254]
E-04-B	Building E North Wall, 10' from Drip Edge	Soil, 2" depth	0.092[1254]
E-05-B	Building E North Wall, 10' from Drip Edge	Soil, 2" depth	ND<0.061
E-06-B	Building E North Wall, 10' from Drip Edge	Soil, 2" depth	0.11[1254]
E-07-B	Building E North Wall, 10' from Drip Edge	Soil, 2" depth	0.11[1254]
E-08-B	Building E North Wall, 10' from Drip Edge	Soil, 2" depth	0.28[1254]
E-09-B	Building E North Wall, 10' from Drip Edge	Soil, 2" depth	0.16[1254]
E-10-B	Building E North Wall, 10' from Drip Edge	Soil, 2" depth	0.10[1254]
E-11-B	Building E North Wall, 10' from Drip Edge	Soil, 2" depth	0.083[1254]
E-12-B	Building E North Wall, 10' from Drip Edge	Soil, 2" depth	ND<0.077
E-13-B	Building E East Wall, 10' from Drip Edge	Soil, 2" depth	0.096[1254]
E-14-B	Building E East Wall, 10' from Drip Edge	Soil, 2" depth	0.18[1254]
E-15-B	Building E East Wall, 10' from Drip Edge	Soil, 2" depth	ND<0.053
E-16-B	Building E South Wall, 10' from Drip Edge	Soil, 2" depth	ND<0.053
E-17-B	Building E South Wall, 10' from Drip Edge	Soil, 2" depth	0.098[1254]
E-18-B	Building E South Wall, 10' from Drip Edge	Soil, 2" depth	0.20[1254]
E-19-B	Building E South Wall, 10' from Drip Edge	Soil, 2" depth	0.74[1254]

Building E
PCB Soil Sampling Results
52 Institute Road, Burlington, Vermont
ATC Project #280BS01563
September 16, 18, 2020

Sample Number	Location	Description	Result ppm [Aroclor]
E-20-B	Building E South Wall, 10' from Drip Edge	Soil, 2" depth	0.087[1254]
E-21-B	Building E South Wall, 10' from Drip Edge	Soil, 2" depth	0.24[1254]
E-22-B	Building E South Wall, 10' from Drip Edge	Hardscape, Asphalt	ND<0.99
E-23-B	Building E South Wall, 10' from Drip Edge	Hardscape, Asphalt	ND<0.84
E-24-B	Building E South Wall, 10' from Drip Edge	Soil, 2" depth	0.19[1254]
E-25-B	Building E South Wall, 10' from Drip Edge	Soil, 2" depth	0.98[1254]
E-26-B	Building E South Wall, 10' from Drip Edge	Hardscape, Asphalt	ND<0.97
E-27-B	Building E South Wall, 10' from Drip Edge	Hardscape, Asphalt	ND<0.83
E-28-A	Building E West Wall, 10' from Drip Edge	Hardscape, Concrete	ND<1.0

Notes:

Vermont Soil Standard Resident Standard of 0.114ppm

Vermont Soil Standard Non-Resident Standard of 0.68ppm

EPA High Occupancy Clean-UP Standard of 1ppm

Samples analyzed by EMSL Analytical of Cinnaminson, NJ
PCBs - Polychlorinated Biphenyls by EPA Method 8082 with Soxhlet
Extraction
BDL - Below Laboratory Detection Limit.
ND - None Detect
NA - Not Analyzed
Bold values represent an exceedance
Vermont SSV, or EPA High Occupancy Standard
*Vermont Soil Standard for residential/non-residential properties

Building F
PCB Soil Sampling Results
52 Institute Road, Burlington, Vermont
ATC Project #280BS01563
September 16, 18, 2020

Sample Number	Location	Description	Result ppm [Aroclor]
F-01-A	Building F North Wall, Drip Edge	Hardscape, Concrete	ND<0.97
F-02-A	Building F North Wall, Drip Edge	Hardscape, Concrete	ND<0.94
F-03-A	Building F North Wall, Drip Edge	Hardscape, Asphalt	ND<0.92
F-04-A	Building F North Wall, Drip Edge	Hardscape, Asphalt	ND<0.98
F-05-A	Building F North Wall, Drip Edge	Hardscape, Asphalt	ND<0.99
F-06-A	Building F North Wall, Drip Edge	Hardscape, Asphalt	2.1 [1254]
F-07-A	Building F East Wall, Drip Edge	Soil, 2" depth	1.0[1254] 0.21[1260] 1.21
F-07-B	Building F East Wall, 10' from Drip Edge	Soil, 2" depth	0.074[1254]
F-08-A	Building F East Wall, Drip Edge	Soil, 2" depth	0.28[1254]
F-08-B	Building F East Wall, 10' from Drip Edge	Soil, 2" depth	ND<0.052
F-09-A	Building F East Wall, Drip Edge	Soil, 2" depth	0.38[1254] 0.098[1260] 0.478
F-09-B	Building F East Wall, 10' from Drip Edge	Soil, 2" depth	ND<0.051
F-10-A	Building F East Wall, Drip Edge	Soil, 2" depth	0.064[1254]
F-11-A	Building F East Wall, Drip Edge	Soil, 2" depth	0.58[1254] 0.16[1260] 0.74
F-11-B	Building F East Wall, 10' from Drip Edge	Soil, 2" depth	0.082[1254]

Building F
PCB Soil Sampling Results
52 Institute Road, Burlington, Vermont
ATC Project #280BS01563
September 16, 18, 2020

Sample Number	Location	Description	Result ppm [Aroclor]
F-12-A	Building F East Wall, Drip Edge	Soil, 2" depth	0.24[1254] 0.082[1260] 0.322
F-12-B	Building F East Wall, 10' from Drip Edge	Soil, 2" depth	0.10[1254]
F-13-A	Building F East Wall, Drip Edge	Soil, 2" depth	0.93[1254] 0.25[1260] 1.18
F-13-B	Building F East Wall, 10' from Drip Edge	Soil, 2" depth	0.12[1254]
F-14-A	Building F East Wall, Drip Edge	Soil, 2" depth	0.94[1254] 0.29[1260] 1.23
F-14-B	Building F East Wall, 10' from Drip Edge	Soil, 2" depth	0.37[1254]
F-15-A	Building F East Wall, Drip Edge	Soil, 2" depth	13[1254] 2.8[1260] 15.8
F-16-A	Building F East Wall, Drip Edge	Soil, 2" depth	0.74[1254] 0.21[1260] 0.95
F-17-A	Building F East Wall, Drip Edge	Soil, 2" depth	0.89[1254] 0.31[1260] 1.2
F-18-A	Building F East Wall, Drip Edge	Soil, 2" depth	3.0[1254] 0.56[1260] 3.56
F-19-A	Building F East Wall, Drip Edge	Soil, 2" depth	4.7[1254] 2.2[1260] 6.9
F-20-A	Building F East Wall, Drip Edge	Soil, 2" depth	2.0[1254] 0.84[1260] 2.84

Building F
PCB Soil Sampling Results
52 Institute Road, Burlington, Vermont
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Sample Number	Location	Description	Result ppm [Aroclor]
F-21-A	Building F East Wall, Drip Edge	Soil, 2" depth	2.0[1254] 0.83[1260] 2.83
F-22-A	Building F East Wall, Drip Edge	Soil, 2" depth	2.1[1254] 0.53[1260] 2.63
F-23-A	Building F East Wall, Drip Edge	Soil, 2" depth	2.8[1254] 0.77[1260] 3.57
F-24-A	Building F East Wall, Drip Edge	Soil, 2" depth	2.4[1254] 0.50[1260] 2.9
F-25-A	Building F East Wall, Drip Edge	Soil, 2" depth	0.65[1254] 0.20[1260] 0.85
F-26-A	Building F East Wall, Drip Edge	Soil, 2" depth	1.3[1254] 0.33[1260] 1.63
F-27-A	Building F East Wall, Drip Edge	Soil, 2" depth	4.0[1254] 1.1[1260] 5.1
F-28-A	Building F East Wall, Drip Edge	Soil, 2" depth	10[1254] 1.3[1260] 11.3
F-29-A	Building F East Wall, Drip Edge	Soil, 2" depth	13[1254]
F-30-A	Building F South Wall, Drip Edge	Hardscape, Concrete	ND<0.84
F-31-A	Building F South Wall, Drip Edge	Hardscape, Concrete	ND<0.93
F-32-A	Building F South Wall, Drip Edge	Hardscape, Concrete	ND<1.0

Building F
PCB Soil Sampling Results
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Sample Number	Location	Description	Result ppm [Aroclor]
F-33-A	Building F South Wall, Drip Edge	Hardscape, Concrete	1.1[1254]
F-34-A	Building F South Wall, Drip Edge	Hardscape, Concrete	ND<0.95
F-35-A	Building F South Wall, Drip Edge	Hardscape, Concrete	ND<0.84
F-36-A	Building F West Wall, Drip Edge	Hardscape, Asphalt	3.1[1254]
F-37-A	Building F West Wall, Drip Edge	Hardscape, Asphalt	10[1254] 1.9[1260] 11.9
F-38-A	Building F West Wall, Drip Edge	Hardscape, Asphalt	7.1[1254] 1.3[1260] 8.4
F-39-A	Building F West Wall, Drip Edge	Soil, 2" depth	3.8[1254] 1.4[1260] 5.2
F-40-A	Building F West Wall, Drip Edge	Soil, 2" depth	5.7[1254] 1.7[1260] 7.4
F-41-A	Building F West Wall, Drip Edge	Soil, 2" depth	10[1254] 2.9[1260] 12.9
F-42-A	Building F West Wall, Drip Edge	Hardscape, Asphalt	3.5[1254] 1.1[1260] 4.6
F-43-A	Building F West Wall, Drip Edge	Soil, 2" depth	1.9[1254] 0.65[1260] 2.55
F-44-A	Building F West Wall, Drip Edge	Soil, 2" depth	2.4[1254] 0.88[1260] 3.28

Building F
PCB Soil Sampling Results
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Sample Number	Location	Description	Result ppm [Aroclor]
F-45-A	Building F West Wall, Drip Edge	Soil, 2" depth	4.1[1254] 1.4[1260] 5.5
F-46-A	Building F West Wall, Drip Edge	Soil, 2" depth	3.9[1254] 1.4[1260] 5.3
F-47-A	Building F West Wall, Drip Edge	Soil, 2" depth	3.5[1254] 1.3[1260] 4.8
F-48-A	Building F West Wall, Drip Edge	Soil, 2" depth	7.1[1254] 2.0[1260] 9.1
F-49-A	Building F West Wall, Drip Edge	Soil, 2" depth	0.34[1254] 0.14[1260] 0.48
F-50-A	Building F West Wall, Drip Edge	Soil, 2" depth	1.7[1254] 0.83[1260] 2.53
F-51-A	Building F West Wall, Drip Edge	Soil, 2" depth	1.5[1254] 1.1[1260] 2.6
F-52-A	Building F West Wall, Drip Edge	Soil, 2" depth	3.9[1254] 3.4[1260] 7.3
F-53-A	Building F West Wall, Drip Edge	Soil, 2" depth	1.8[1254] 1.1[1260] 2.9
F-54-A	Building F West Wall, Drip Edge	Soil, 2" depth	3.1[1254] 2.5[1260] 5.6
F-55-A	Building F West Wall, Drip Edge	Soil, 2" depth	0.57[1254] 0.63[1260] 1.2

Building F
PCB Soil Sampling Results
52 Institute Road, Burlington, Vermont
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Sample Number	Location	Description	Result ppm [Aroclor]
F-56-A	Building F West Wall, Drip Edge	Soil, 2" depth	1.5[1254] 1.9[1260] 3.4
F-57-A	Building F West Wall, Drip Edge	Soil, 2" depth	1.1[1254] 1.7[1260] 2.8
F-58-A	Building F West Wall, Drip Edge	Soil, 2" depth	1.1[1254] 1.8[1260] 2.9
F-59-A	Building F West Wall, Drip Edge	Soil, 2" depth	1.6[1254] 2.3[1260] 3.9
F-60-A	Building F West Wall, Drip Edge	Soil, 2" depth	0.72[1254] 1.1[1260] 1.82
F-61-A	Building F West Wall, Drip Edge	Soil, 2" depth	0.48[1254] 0.73[1260] 1.21
F-62-A	Building F West Wall, Drip Edge	Soil, 2" depth	0.67[1254] 0.44[1260] 1.11

Notes:

Vermont Soil Standard Resident Standard of 0.114ppm

Vermont Soil Standard Non-Resident Standard of 0.68ppm

EPA High Occupancy Clean-UP Standard of 1ppm

Samples analyzed by EMSL Analytical of Cinnaminson, NJ
PCBs - Polychlorinated Biphenyls by EPA Method 8082 with Soxhlet
Extraction

BDL - Below Laboratory Detection Limit.

ND - None Detect

NA - Not Analyzed

Bold values represent an exceedance

Vermont SSV, or EPA High Occupancy Standard

*Vermont Soil Standard for residential/non-residential properties

**Play Area
PCB Soil Sampling Results
52 Institute Road, Burlington, Vermont
ATC Project #280BS01563
September 16, 18, 2020**

Sample Number	Location	Description	Result ppm [Aroclor]
F-02-PA	Building F Play Ground Area	North Center 80' from F Bldg East Elevation	ND<0.050
F-03-PA	Building F Play Ground Area	South Center 80' from F Bldg East Elevation	ND<0.050
F-06-PA	Building F Play Ground Area	North Center 70' from F Bldg East Elevation	ND<0.049
F-07-PA	Building F Play Ground Area	South Center 70' from F Bldg East Elevation	ND<0.050
F-10-PA	Building F Play Ground Area	North Center 60' from F Bldg East Elevation	ND<0.048
F-11-PA	Building F Play Ground Area	South Center 60' from F Bldg East Elevation	ND<0.051
F-14-PA	Building F Play Ground Area	North Center 50' from F Bldg East Elevation	ND<0.050
F-15-PA	Building F Play Ground Area	South Center 50' from F Bldg East Elevation	ND<0.056
F-18-PA	Building F Play Ground Area	North Center 40' from F Bldg East Elevation	ND<0.120
F-19-PA	Building F Play Ground Area	South Center 40' from F Bldg East Elevation	ND<0.050
F-22-PA	Building F Play Ground Area	North Center 30' from F Bldg East Elevation	ND<0.050
F-23-PA	Building F Play Ground Area	South Center 30' from F Bldg East Elevation	ND<0.050

Play Area
PCB Soil Sampling Results
52 Institute Road, Burlington, Vermont
ATC Project #280BS01563
September 16, 18, 2020

Sample Number	Location	Description	Result ppm [Aroclor]
F-26-PA	Building F Play Ground Area	North Center 20' from F Bldg East Elevation	ND<0.050
F-27-PA	Building F Play Ground Area	South Center 20' from F Bldg East Elevation	ND<0.051

Notes:

Vermont Soil Standard Resident Standard of 0.114ppm

Vermont Soil Standard Non-Resident Standard of 0.68ppm

EPA High Occupancy Clean-UP Standard of 1ppm

Samples analyzed by EMSL Analytical of Cinnaminson, NJ

PCBs - Polychlorinated Biphenyls by EPA Method 8082 with Soxhlet Extraction

BDL - Below Laboratory Detection Limit.

ND - None Detect

NA - Not Analyzed

Bold values represent an exceedance

Vermont SSV, or EPA High Occupancy Standard

*Vermont Soil Standard for residential/non-residential properties

Z Samples
PCB Soil Sampling Results
52 Institute Road, Burlington, Vermont
ATC Project #280BS01563
September 16, 18, 2020

Sample Number	Location	Description	Result ppm [Aroclor]
Z-01	East of Main Parking lot	Soil, 2" depth	ND<0.054

Notes:

Vermont Soil Standard Resident Standard of 0.114ppm

Vermont Soil Standard Non-Resident Standard of 0.68ppm

EPA High Occupancy Clean-UP Standard of 1ppm

Samples analyzed by EMSL Analytical of Cinnaminson, NJ

PCBs - Polychlorinated Biphenyls by EPA Method 8082 with Soxhlet
Extraction

BDL - Below Laboratory Detection Limit.

ND - None Detect

NA - Not Analyzed

Bold values represent an exceedance

Vermont SSV, or EPA High Occupancy Standard

*Vermont Soil Standard for residential/non-residential properties