Phase (check one)	Type (check one)
□Initial Site Investigation □Corrective Action Feasibility Investigation ☑Corrective Action Plan □Corrective Action Summary Report □Operations & Monitoring Report	□Work Scope □Technical Report □PCF Reimbursement Request □General Correspondence

Corrective Action Plan for Remediation of Soil, Groundwater, and Building-Related Contamination during Building Demolition

Former Fonda Group Facility
St. Albans, Vermont
SMS #2008-3777

Prepared for:
Northwest Regional Planning Commission
155 Lake Street
St. Albans, Vermont 05478
Contact: Greta Brunswick

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August 2, 2010

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August 2, 2010

Greta Brunswick
Northwest Regional Planning Commission
155 Lake Street
St. Albans, VT 05478

Re: Corrective Action Plan for Remediation of Soil, Groundwater, and Building-Related Contamination during Building Demolition at the Former Fonda Group Facility
St. Albans, Vermont
JCO #1-1470-13

Dear Ms. Brunswick:

Please find attached the Corrective Action Plan (CAP) for the referenced Site. Remedial actions are necessary at this Site due to the presence of polychlorinated biphenyls (PCBs), semi-volatile organic compounds (SVOCs), metals, and chlorinated volatile organic compounds (VOCs) in some soil above regulatory limits, chlorinated VOCs in some groundwater above regulatory limits, PCBs in some concrete at concentrations that exceed applicable Toxic Substances Control Act regulatory limits, metals above regulatory limits in surface water inside the building, and asbestos containing materials in the main building and at other locations on the property. However, the scope of this CAP is limited to contaminants that are regulated by the Vermont Department of Environmental Conservation and to items that are related demolition of the building and removal of near-surface outdoor soils, including only PCBs in building walls, SVOCs and metals in soils, and metals in standing water. Because some remediation is required to attract a Site redeveloper, the alternatives in the CAP include an interim measure to temporarily prevent exposure to the PCB-impacted concrete slab, which could be used by a future developer.

If you have any questions or require additional information, please do not hesitate to contact us at 229-4600.

Sincerely,

THE JOHNSON COMPANY, INC.

By: Rhonda Kay
Rhonda Kay
Project Manager

C: Matt Becker, VTDEC
Dorrie Paar, US EPA
Dominic Cloud, City of St. Albans

Attachment
K:\1-1470-13\CAP\080210 Fonda CAP- Final.doc

Corrective Action Plan

for

Former Fonda Group Facility Building Demolition
15-21 Lower Newton Street, St. Albans, Vermont

Prepared by: Rhonda Kay Date: 8/2/10
Rhonda Kay
Project Manager, The Johnson Company, Inc.

and by: Joel Behrsing Date: 8/2/2010
Joel Behrsing, Vermont P.E. #6070
Technical Reviewer, The Johnson Company, Inc.

EXECUTIVE SUMMARY

A Corrective Action Plan (CAP) has been prepared by The Johnson Company, Inc. for the Former Fonda Group Facility located at 15-21 Lower Newton Street in St. Albans, Vermont (the Site; SMS#2008-3777). The Site is currently owned by the City of St. Albans. The property is composed of a former paper product manufacturing facility (currently vacant), a separate boiler house, storage shed, surrounding parking areas and driveways, and a forested area to the north of the building. Remedial actions are necessary at the Site due to the presence of polychlorinated biphenyls (PCBs), semi-volatile organic compounds (SVOCs), metals, and chlorinated volatile organic compounds (VOCs) in some soil above regulatory limits, chlorinated VOCs in some groundwater above regulatory limits, PCBs in some concrete at concentrations that exceed applicable Toxic Substances Control Act (TSCA) regulatory limits, metals above regulatory limits in surface water inside the building, and asbestos-containing building materials in various structures. At their present concentrations and locations, these contaminants may present a risk to human health during or following redevelopment of the Site.

The City of St. Albans currently plans to demolish the vacant buildings to prepare for redevelopment of the Site. The CAP does not address uncontaminated portions of the building or property. This CAP is intended to address remediation activities pertaining to the immediate plans for the Site (i.e., building demolition), and includes a discussion of the necessity of corrective action; a brief summary of previous investigations and their findings; and a presentation of potential remedial options, assessed according to their expected cost, effectiveness, and feasibility. Because the long-term redevelopment plans for the Site are currently unknown, the CAP identifies selected remediation alternatives for the Site based on the immediate plans to demolish the buildings and prepare the Site for high-occupancy commercial reuse, which consist of:

1. removal of near surface soils that exceed the Federal Industrial Regional Screening Levels and TSCA regulatory limits;
2. removal of approximately 650 gallons of water in a shredder pit that exceeds Vermont Groundwater Enforcement Standards (VGES) for cadmium and lead;
3. removal of building walls that contain PCB concentrations above TSCA regulatory limits; and
4. quarterly monitoring of groundwater for chlorinated VOCs for two years following building demolition.

Until redevelopment plans are finalized and the PCB-impacted concrete is addressed, the exposed PCB-impacted slab will be covered with plastic sheeting and gravel as an interim measure for a maximum of five years before re-evaluation or remedial action. Additional corrective action measures will be required to address PCB-impacted concrete before Site redevelopment. A Notice to the Land Record will be required to notify future owners of soil contamination above residential screening levels, groundwater contamination above Vermont Groundwater Enforcement Standards, and the requirement to maintain the interim cover over the PCB-impacted concrete.

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1.0 INTRODUCTION

This Corrective Action Plan (CAP) was prepared by The Johnson Company, Inc. for the Former Fonda Group Facility located at 15-21 Lower Newton Street in St. Albans, Vermont (the Site; see Figure 1 and Figure 2). The Site is currently owned by the City of St. Albans. The property is composed of a former paper product manufacturing facility, a separate boiler house and storage shed, surrounding parking areas and driveways, and a forested area to the north of the building. Remedial actions are necessary at the Site due to the presence of polychlorinated biphenyls (PCBs), semi-volatile organic compounds (SVOCs), metals, and chlorinated volatile organic compounds (VOCs) in some soil above regulatory limits, chlorinated VOCs in some groundwater above regulatory limits, PCBs in some concrete at concentrations that exceed applicable Toxic Substances Control Act (TSCA) regulatory limits, metals above regulatory limits in surface water inside the building, and asbestos-containing building materials. At their present concentrations and locations, these contaminants may present a risk to human health during or following redevelopment of the Site. This CAP specifically does not address asbestos-containing building materials or lead-based coatings on building materials because these items are not regulated by the Vermont Department of Environmental Conservation (VT DEC); however, pre-demolition planning must proceed through the Vermont Department of Health's Asbestos and Lead Regulatory Program. In addition, VOCs in soil and groundwater beneath the building will not be addressed in this CAP for the following reasons: 1) downgradient monitoring of groundwater has indicated there have been some off-site impacts; however there is no use of groundwater at the impacted locations and there are no buildings located above the downgradient impacted locations; 2) monitoring of the on-site and downgradient groundwater has indicated that the chlorinated solvent concentrations are stable or declining and, therefore, risk to potential receptors is not increasing; 3) the concrete building slab will be left in place following demolition, minimizing the risk of contact with or ingestion of contaminated soils or groundwater, and inhalation of contaminated vapor; and 4) the property is not currently used for any purpose and will remain unoccupied until it is redeveloped. Redevelopment of the property that will include buildings above or near the chlorinated VOC-impacted soil and groundwater should be preceded by an evaluation of the potential for vapor intrusion. A separate CAP will be prepared to address the PCB-impacted concrete slab and the chlorinated solvent-impacted soil and groundwater once a redevelopment plan is finalized.

This CAP includes a discussion of the necessity of corrective action; a brief summary of previous investigations and their findings; and a presentation of potential remedial options, assessed according to their expected cost, effectiveness, and feasibility. Recommended remedial techniques will be discussed in greater detail.

The objective of the corrective action is to reduce to an acceptable level the risk to human health caused by contamination at the Site. The goals of the remediation are to:

1. Reduce levels of contamination in surface soils to below the Federal Regulatory Screening Levels (RSLs) for Industrial soil used by the VT DEC as soil screening levels;
2. Mitigate risk of exposure to cadmium and lead present in the standing water in the shredder pit inside the building at concentrations above Vermont Groundwater Enforcement Standards (VGES); and
3. Mitigate risk of exposure to concrete with PCB concentrations that exceed the proposed building use limits under TSCA.

Contaminant concentrations by media and water table elevations are summarized in Section 2. Sampling locations are shown in Figures 3 and 4. The most recent groundwater elevation map is provided as Figure 5, and geological cross-sections are provided in Figures 6b and 6c.

The CAP includes the requirements listed in the Vermont DEC November 1997 Corrective Action Guidance Document with the exception of the following:

- A schedule for evaluation of start-up of remedial system; and
- A formal long-term monitoring and O&M plan for the corrective action.

The concentrations of contaminants addressed in this CAP above applicable standards were delineated during the course of a Phase II investigation (summarized in Section 2.1) and a supplemental off-Site investigation (summarized in Section 2.2). A short-term (two year) monitoring plan for sampling the existing groundwater monitoring wells is summarized in Section 4.4. Since specific redevelopment plans have not been confirmed, a staged approach to corrective action is proposed; therefore, a schedule of remedial system startup and a formal long term O&M plan has not been identified.

Sensitive receptors that are at risk of being affected by existing contamination comprise the following:

- Dermal contact, ingestion and/or inhalation of soil or organic particles coated with elevated concentrations of SVOCs, metals, and/or PCBs during Site redevelopment activities; and
- Dermal contact, ingestion, and/or inhalation of concrete dust coated with PCBs during Site redevelopment activities.

No adjacent property owners are expected to be affected by the presence or cleanup of the PCB-contaminated building materials, SVOC-impacted soils, and metal-impacted water in the building. At present, the Site is unoccupied; therefore, only limited exposure risk to building and utility service personnel and emergency responders exists.

The Site, which covers approximately 5.5 acres near the northwestern corner of downtown St. Albans, is bounded by Lower Newton Street on the south; residential properties to the east on North Main Street; railroad tracks, the former Fonda warehouse building, and offices to the west; and a commercial property to the north. The building site is level, but the surrounding land slopes down from east to west; as a result, the properties located to the east and a parking lot associated with the Site are situated several feet above the building area. A paved parking lot affords access to the eastern side of the building, and a separate paved area is located along the western side of the building, to the east of the railroad tracks. The building formerly housed the Fonda Group Facility (later Solo Cup), which formed plates from paper stock and printed on the plates. The manufacturing facility closed in late 2005, and the City of St. Albans purchased the property in 2007. The building is composed of three parts, which are referred to (in this letter and in previous investigations) as Building #1, #2, and #3, and are sequentially oriented from south to north. The southern portion of the facility, called Building #1, is approximately 48,000 square feet and was the first to be constructed. Buildings #2 and 3, which are approximately 30,300 square feet and 40,000 square feet, respectively, are attached in a line from south to north. The City of St. Albans plans to demolish Buildings #1, 2, and 3 in preparation for Site redevelopment. There is also currently a vacant, treed area on the northern end of the property. Presently, the building is unoccupied, and efforts are being made to limit access to the building; those who enter, including utility meter readers and firemen who inspect the sprinkler system, are warned of the presence of PCBs in concrete dust on the floor and are asked to wear the supplied Tyvek protective boot covers while inside the building. A list of interested, threatened, or impacted third parties, including contact names, locations, addresses and phone numbers is provided in Appendix 1.

2.0 SUMMARY OF PREVIOUS INVESTIGATIONS

2.1 PHASE II INVESTIGATION RESULTS

The Johnson Company was contracted by the NRPC to perform a Phase I Environmental Site Assessment (ESA) update for the Site in December 2007 and a subsequent Phase II ESA was conducted between February and October 2008. The Phase II Environmental Site Assessment included sampling for metals, PCBs, VOCs, and SVOCs. The results of the investigation are summarized below. The areas of concern are illustrated on Figure 7. Sampling locations are depicted on Figures 3 and 4.

2.1.1 *Overview*

The results of the ESA indicate that many of the compounds tested in soil and groundwater at the Site are not of significant concern. These compounds include VOCs in most soil and most groundwater, SVOCs in most soils and all groundwater, and most metals in soils and groundwater. Except for chlorinated VOCs in soil and dissolved in groundwater beneath

Building #2, no evidence of gross contamination in soils or groundwater was observed during the investigation.

PCBs, some metals, TCE, and some SVOCs were detected above regulatory limits in some media at the Site. These constituents of concern are discussed below. Figure 7 depicts the areas of concern for these analytes.

2.1.2 *PCBs*

Inside the buildings, PCBs were determined to be present above the TSCA regulatory limit of 1 part per million (ppm) in the concrete slab in two general areas: inside the manufacturing area (where some printing presses were used), warehouse, and maintenance room in Building #1; and in the "printing area" on the eastern side of Buildings #2 and 3, included the printing press room, ink storage room, mixing room, and hazardous waste storage room. All PCB sampling locations are shown on Figure 3.

2.1.2.1 PCBs in Building #1

The PCB results were used to delineate areas of the concrete floor in Building #1 with different ranges of concentrations, which are shown on Figure 7. As indicated on Figure 7, there is a total area of approximately 25,000 square feet of concrete slab in Building #1, including the manufacturing floor, warehouse/storage area, and maintenance room, that contains surficial PCB concentrations between 1 and 10 ppm: an area of approximately 6,200 square feet containing PCBs at concentrations between 10 and 50 ppm and an additional 1,660 square feet containing PCB concentrations greater than or equal to 50 ppm (all PCB areas above 10 ppm are located on the manufacturing floor). In total, the area of concrete containing more than 1 ppm of PCBs is approximately 32,900 square feet. In Building #1, the average concrete thickness is approximately 0.7 feet; therefore, the total volume of concrete containing 1-50 ppm PCBs is 801 cubic yards (including 207 cubic yards from the warehouse/storage area and 44 cubic yards from the maintenance room). Approximately 43 cubic yards contain greater than or equal to 50 ppm PCBs.

2.1.2.2 PCBs in Buildings #2 and 3

The PCB results were used to delineate areas of concrete floor in Buildings #2 and #3 with different ranges of PCB concentrations, which are shown on Figure 7. As indicated on Figure 7, there is approximately 9,000 square feet of concrete with PCB concentrations between 1 and 50 ppm (including approximately 6,000 square feet between 1 and 10 ppm PCB and 3,000 square feet between 10 and 50 ppm). Of the total concrete with PCB concentrations from 1 to 50 ppm, there is approximately 4,000 square feet north and west of the printing room and 5,000 square feet is in the printing room and adjoining rooms to the east (including the ink mixing and storage rooms and hazardous waste storage room). The average concrete thickness in Buildings #2 and 3 north and west of the printing room is approximately 0.7 feet, and the thickness inside the printing room and eastern adjoining rooms is approximately 1.2 feet; therefore, the total volume of concrete with concentrations between 1 and 50 ppm that would be disposed of from the area associated with the printing area in Buildings #2 and #3 (if the entire slab is removed) is approximately 326 cubic yards. There is an additional 1,600 square feet of concrete containing PCBs at concentrations greater than or equal to 50 ppm inside the printing room, resulting in a demolition volume of that type of concrete of 71 cubic yards.

It is assumed that in the printing room, the entire length of the southern wall and the southern section of the western wall (a total of 78 linear feet) may be contaminated with PCBs between 1 and 50 ppm. Using the 7 foot height, this results in an area of 546 square feet, and a volume of approximately 13 cy (assuming the wall is constructed of standard concrete masonry units), and a mass of 13 tons. It is assumed that all of the walls of the hazardous waste storage room are contaminated with PCBs at concentrations greater than or equal to 50 ppm. These walls have a total linear length of approximately 67 feet, and an area (using a height of 7 feet) of 469 square feet. The resulting volume and mass of the masonry walls contaminated with PCBs greater than or equal to 50 ppm is, therefore, 11 cubic yards and 11 tons.

2.1.2.3 PCBs in Transformer Areas

There are two fenced transformer substations at exterior locations. The PCB-containing transformers at Transformer Substation #1, located on the western side of Building #2 were removed in February 2010 by Central Vermont Public Service (CVPS). The transformer substation on the western side of Building #3 (Transformer Substation #2) is currently active with in-service transformers, which are the property of the building owner; the PCB-containing oil in these transformers was replaced by non-PCB oil in 2002, according to information in a previous report. For safety reasons, the concrete at Transformer Substation # 1 could not be sampled until the transformers were removed, but the soil surrounding the concrete pad was sampled at both Transformer Substations #1 and 2, and since there was more room between the energized transformers and the fence at Transformer Substation # 2, bulk concrete samples could be safely collected from that concrete pad in the 2008 investigation. CVPS collected composited concrete and soil samples from Transformer Substation #1 on March 24, 2010. The composited bulk concrete sample from Transformer Substation #1 contained PCBs at 0.3 ppm (below TSCA regulatory limits), and the bulk concrete samples from Transformer Substation # 2 did not contain any PCBs above the laboratory detection limits. All of the soil samples from both transformer substations had PCB concentrations below 1 ppm (five were less than the detection limit and the other three ranged from 0.08 to 0.4 ppm). The estimated area of PCB impacts is 250 square feet on the southern and eastern side of the Pad 2. If the depth of contamination is estimated at 1 foot, the total in-place volume of PCB-impacted soils in this area is approximately 9 cubic yards.

2.1.3 *Metals*

Based on the findings from hand-excavated test pits, the main dump area is estimated to be a 22 by 24 foot oval (approximately 400 square feet, with the wider portion oriented east to west) centered on test pit T-1. The trash in the dump area appeared to be deeper in the center portion (approximately 3-feet below ground surface, b.g.s.) and shallower towards the edges (approximately 2-feet b.g.s.). In addition to the main dump area, a 54 foot by 62 foot area (3,350 square feet) surrounding the main dump area contains scattered surficial solid waste debris, primarily broken glass, bricks and cinder blocks, at a depth of less than 6 inches. Accounting for the various depths across the dump area, the total volume of trash requiring removal is approximately 66 cubic yards. The highest concentration of lead in any of the dump soil samples was 1,000 mg/kg, which exceeds the Residential and Industrial RSLs.

Vanadium was also detected at a concentration that exceeded the previous Vermont Soil Screening Standard (the EPA Region 9 Preliminary Remediation Goal) for Residential soils in the MW-10 (0-1') sample, but this concentration was below the Residential and Industrial RSLs, so no action is required.

The floor drain located beneath the conveyor belt in Building #2 contains sediment with a concentration of lead (610 mg/kg), which exceeds the Residential RSL but does not exceed the Industrial RSL. It is also possible that the other floor drain that is located in the manufacturing area of Building #2, on the western side of the Printing Area wall, may also contain an elevated lead concentration (this floor drain was not sampled). In total, it is estimated that the volume of lead-contaminated soils in these floor drains is approximately 0.02 cubic yards.

The standing water in the shredder pit contained cadmium (0.006 mg/L) and lead (0.019 mg/L) concentrations that were above the VGES levels. It is estimated that the shredder pit currently contains approximately 650 gallons of standing water, though this volume may change due to evaporation and/or leaks in the roof.

2.1.4 *VOCs*

There are no shallow soils (to a depth of 3.5 feet) that are impacted by TCE at levels above 14 mg/kg (the Industrial RSL, which is currently used as a soil standard by VT DEC). A small volume of soils in the vicinity of SC-12 (7-8 feet) contains TCE concentrations that, at 15 mg/kg, slightly exceed the Industrial RSL. Two other samples (SC-5 0.5-1.5 feet, and SC-9 7-7.8 feet) exceeded the Residential RSLs but were below Industrial RSLs. The TCE RSLs that are currently used for soil screening are significantly higher than the previous soil screening levels (the Region 9 Residential and Industrial PRGs were 0.053 mg/kg and 1.3 mg/kg, respectively; the Residential and Industrial RSLs are 2.8 mg/kg and 14.0 mg/kg, respectively); as such, the volume of TCE-contaminated soils that would require remedial action is significantly smaller than previously estimated.

The TCE contamination in soils appears to be impacting groundwater and likely represents a residual source for dissolved contamination in groundwater over time. Although no TCE was reported in the groundwater sample from monitoring well MW-4 collected in the winter, the TCE concentration was above the VGES in the summer round (at 7 ug/L). In addition, a groundwater sample from monitoring well MW-12, which was installed downgradient of the soils containing elevated TCE, contained a TCE concentration of 190 ug/L and a concentration of cis-1,2-dichloroethene (cis-DCE) of 2,100 ug/L. The VGES limits for TCE and cis-DCE are 5 ug/L and 70 ug/L, respectively. The presence of a TCE breakdown product (cis-DCE) in groundwater indicates that some anaerobic biodegradation is occurring. Chlorinated VOCs in groundwater have the potential to migrate extensively downgradient and can impact the indoor air quality in buildings located above, near, or downgradient of the source area. An additional downgradient investigation was performed to evaluate these impacts, as detailed in Section 2.2.

2.1.5 *SVOCs*

One semi-volatile organic compound (SVOC) in the polynuclear aromatic hydrocarbon (PAH) range, namely benzo(a)pyrene, was detected in the MW-8 (0-1') soil sample at a concentration above the Residential RSL, but below the Industrial RSL. However, the soil at this location is currently covered with asphalt, which may be the source of this elevated PAH concentration and is currently mitigating contact and dust inhalation/ingestion risks to receptors.

Several PAH compounds were also detected in the sample collected from the floor drain beneath the conveyor (Conv-FD) above their Residential and Industrial RSLs, including benzo(a)anthracene at 8.0 mg/kg (Industrial RSL is 2.10 mg/kg). The estimated volumes of PAH contaminated soils or sediments in the Conv-FD floor drain is 0.01 cubic yard. The sample collected from the soil inside the boiler house (B Drain) contained the next highest concentrations of PAHs, with multiple PAH compounds present above the Industrial RSL thresholds. There are several low areas inside the boiler house where soil has collected, and it is anticipated that all of this soil (estimated at 6 cubic yards) contains elevated PAH concentrations. The samples from around the storage shed (called Storage Shed, PAH-1, PAH-2, and PAH-3) and catch basin (CB-1) samples also contained concentrations of PAHs above the Residential RSLs but below the Industrial RSLs.

The only non-PAH SVOC compound detected in any of the soil or sediment samples was pentachlorophenol, which was reported at 70 mg/kg in the Conv-FD sample. This concentration is many times greater than the Industrial RSL of 9.0 mg/kg. It is not clear what the source of pentachlorophenol in this floor drain sediment was; though this compound was historically used as a biocide in inks, it was also used as an insecticide and fungicide and, much more commonly, as a wood preservative. It is notable that, despite the hardened-foam consistency of the materials in the Printing Area floor drain (PP-FD), no typical plasticizers such as phthalates were detected above the laboratory detection limits in the sample.

2.1.6 *Asbestos-Containing Materials*

In Building #1, asbestos-containing building materials (ACBM) included window glazing on one window, and some roofing materials (some flashing cement and the silver coating). In Building #2, ACBM consisted of caulking material associated with some steel window frames, roof patching material, and lightweight cement on the roof deck. In Building #3, ABCM was present in the built-up roofing on the southwest corner, and in roof patching material. ACBM associated with the boiler house included insulating materials on piping inside the boiler house and in the overhead chase that houses the pipe as it crosses the paved driveway and enters Building #1. The roofing material on the Storage Shed and the wooden fire hydrant shelter were also ACBM.

2.1.7 *Lead-Based Paint*

In general, positive lead-based paint results were reported in materials associated with windows in several rooms, some walls, some doors and door jambs, some I-beams and posts, as well as yellow-painted surfaces on the interior and exterior of the building.

2.1.8 *Mold Issues*

At the time of the assessment, conditions for mold growth, including excessive moisture as a result of past or current roof leaks and the absence of heating or air conditioning in the building, were favorable. Multiple mold spore types were identified during the investigation, such as Stachybotrys, Aspergillus and Penicillium. Mold control may be accomplished by removing the water infiltration and removing and/or treating the structural building components that have existing mold growth.

2.2 DOWNGRADIENT INVESTIGATION RESULTS

Following the presentation of Phase II ESA results, The Johnson Company completed additional investigation activities to assess the impacts of chlorinated VOCs to groundwater downgradient of the source area beneath Building #2 using EPA brownfields grant funding administered by NRPC. The investigation was conducted in two stages, and the results were presented in a letter dated August 20, 2009, summarized below.

2.2.1 *Downgradient Investigation: Stage 1*

The first stage of the downgradient investigation was initiated in March 2009, following the completion and approval of Modification 4 (February 13, 2009) to the Phase II ESA QAPP Addendum. In March and April 2009, two deep ("D") and three shallow ("S") groundwater monitoring wells along a transect located approximately 100 feet to the west of the building, sufficiently close assess migration of the chlorinated VOCs and far enough away to show evidence of biodegradation. These wells included MW-13S, MW-13D, MW-14S, MW-15S, and MW-15D. The total well depths are summarized in Table 7.

Of the downgradient wells, only the MW-15 pair contained any detectable VOCs. The MW-15S sample contained 140 µg/L of cis-1,2-DCE, and the MW-15D sample contained 4 µg/L of cis-1,2-DCE (significantly lower than the VGES of 70 µg/L). In shallow groundwater, the detection of cis-1,2-DCE in the MW-15S sample at a concentration significantly lower than in the source area may indicate the northern edge of a dissolved plume or may show the results of the dechlorination that has occurred between the source area and the transect. The direction of the dissolved plume movement was not observed directly along the direction of groundwater flow, indicating that subsurface geology has a significant influence. The previously installed wells were also sampled, and the samples from MW-4 and MW-12 contained TCE and breakdown products at concentrations consistent with historical results. Based on this information, a Stage 2 investigation was designed to further delineate downgradient impacts in shallow groundwater.

2.2.2 *Downgradient Investigation: Stage 2*

The Stage 2 downgradient field investigation was conducted July 8 through July 14, 2009 following submittal of Modification 5 (June 26, 2009) to the QAPP Addendum, and focused on the southern portion of the former Fonda warehouse property. The objectives of the Stage 2 investigation were to:

1. further delineate downgradient impacts of chlorinated VOCs to groundwater near buildings located on the adjacent property;
2. assess the potential for additional migration towards the residences located farther west; and
3. evaluate the southern extent of the chlorinated VOC impacts and direction of the plume relative to groundwater flow direction.

Shallow water table borings were installed with a Geoprobe drill rig along two transects, one in each of the southeastern and southwestern portions of the former Fonda warehouse driveways that straddle the former Northwest Counseling Center property. Borings were advanced into the shallow water table, temporary wells were installed, and grab samples were collected with a peristaltic pump once adequate water was present. A mobile gas chromatograph equipped with a mass spectrometer (mobile GC/MS), capable of reporting as low as 2 µg/L for chlorinated VOCs, was employed to analyze results of the grab samples collected along these transects. The locations of the borings are shown on Figure 4, and screened intervals and total depths are shown on Table 2-2.

Table 2-2: Screened Interval and Total Depth of Geoprobe Borings		
Location	**Screened Interval (feet)**	**Total Depth (feet)**
P-1*	4.5-8.0	9.5
P-2	4.5-8.0	9.0
P-3	3.5-7.0	7.3
P-4	5.0-8.5	8.5
P-5	4.5-8.0	9.0
P-6	5.5-9.0	9.5
P-7	7.0-10.5	10.5
P-8	4.8-9.3	9.3
P-9	5.3-8.8	8.8
P-10*	8.5-12.0	12.0
P-11	6.8-11.3	11.3
* Duplicate sample submitted for laboratory confirmation		

The first three samples (P-1 through P-3) were collected from northern, middle, and southern points along the eastern transect. All chlorinated VOC results were reported non-detect (<2 μg/L). Since no impacts were observed at the southernmost point of the transect, an additional sample boring (P-4) was installed 100 feet south of the southernmost point of the transect to confirm that the plume was not likely to impact the building at the former Northwest Counseling Center property. Since no impacts were observed at the northernmost point of the eastern transect, an additional boring (P-5) was installed 30 feet north of the northernmost point of the transect to confirm that the plume had not migrated to the north. Three additional sampling borings (P-6 through P-8) were spaced at 20 foot intervals between P-1 and P-3. One sample from the southeastern property transect (P-1) was submitted for laboratory confirmation.

To evaluate potential impacts to the residential properties to the west, three grab samples were collected along a western transect (P-9 through P-11). All chlorinated Mobile GC/MS results were reported non-detect (<2 μg/L), and one sample (P-10) was submitted for laboratory confirmation. An additional grab sample was collected from MW-15S for Mobile GC/MS analysis and submitted for laboratory confirmation; cis-1,2-DCE was the only compound reported above laboratory detection limits in Mobile GC/MS and laboratory confirmatory samples. Mobile GC/MS and laboratory confirmatory results are compared in Table 2-3.

Table 2-3 Grab Sample Results for cis-1,2-Dichlorethene (µg/L)		
Location	**Mobile GC/MS**	**Laboratory Confirmation Sample**
P-1	<2	<2
P-10	<2	<2
MW-15S	190	250

The laboratory reporting limits were consistent with Mobile GC/MS reporting limits, and the relative percent difference (RPD) reported for cis-1,2-DCE in MW-15S is 27%, indicating an acceptable correlation of Mobile GC/MS and laboratory results.

Two additional monitoring wells, MW-16 (co-located with the P-6 grab sampling point on the eastern transect) and MW-17 (co-located with the P-11 grab sampling point on the western transect), were installed with the Geoprobe. The MW-16 monitoring well was screened from 3.7 to 8.5 feet below ground surface (bgs) and the MW-17 monitoring well was screened between 3.4 and 8.2 feet bgs.

Following installation of MW-16 and MW-17, the wells were developed and allowed to recharge. Before sampling on July 14, 2009, water levels were obtained from monitoring wells. MW-16 and MW-17 were field surveyed relative to the top of casing elevation at MW-15S. The water levels are summarized in the attached Table 7, and the shallow groundwater flow direction is shown on Figure 5.

On July 14, 2009 monitoring wells MW-12, MW-13S, MW-14S, MW-15S, MW-16, and MW-17 were sampled using low flow sampling techniques for analysis of chlorinated VOCs via EPA Method 8260B.

The analytical results are shown on Figure 5. Sampling results are summarized in Table 6.

The results indicate that MW-15S is the only monitoring well downgradient of the Site with VOCs reported above laboratory detection limits. TCE and its associated breakdown products continued to be present in MW-12 and increased concentrations were reported in July 2009 results when compared with April 2009, which may be attributable to seasonal variations in the water table.

The groundwater in the vicinity of the factory building generally flows west, consistent with localized topography. In the vicinity of MW-15S, there appears to be some mounding and the groundwater flows towards the intermittent stream directly to the east, and towards the off-site wells to the north and west.

Based on the Stage 1 and Stage 2 investigation results, the extent of the chlorinated VOC plume consisting of TCE and associated breakdown products has been delineated. The installation of 11 Geoprobe sampling points and 2 monitoring wells downgradient of the TCE source area indicates that the plume has migrated off-site, but that it has not migrated a significant distance beyond the MW-15S location, which is approximately 100 feet west of the building. Although TCE was detected at elevated concentrations in the groundwater at MW-12, the groundwater at MW-15S contained only cis-1,2-DCE, which is a breakdown product of TCE. Therefore, there is evidence that some natural attenuation of TCE has occurred, although there is not sufficient data to determine if this process will continue in the future.

2.2.3 *Downgradient Investigation: April 2010*

Groundwater monitoring was conducted on April 12th and 13th, 2010. Depth to water measurements were collected from all Site and downgradient monitoring wells, with the exception of MW-11, which could not be located and based on field observations may have been destroyed. Three previously impacted wells (MW-4, MW-12, and MW-15S) and six downgradient wells (MW-13S, MW-13D, MW-14S, MW-15D, MW-16, and MW-17) were sampled using low-flow sampling techniques. Samples were analyzed for chlorinated VOCs using EPA Method 8260B at Eastern Analytical, Inc.

Compared to historical analytical results, detections of chlorinated VOCs in MW-4 and MW-15S were reported at similar concentrations, and detections in MW-12 were reported at lower concentrations. The highest concentrations of TCE and associated breakdown products continued to be in MW-12; the concentration of TCE in MW-12 decreased between the July 2009 and April 2010 sampling events, from 1,700 µg/L to 730 µg/L, while the concentration of trans-DCE increased from ND (<2 µg/L) to 20 µg/L.

Overall, the data indicate that the natural attenuation and biodegradation process continues to occur, and that the plume remains stable and does not appear to be migrating beyond the vicinity of MW-15S. With the exception of MW-15S, no detections were reported in downgradient monitoring wells. No detections were reported in the paired deep monitoring well MW-15D. Groundwater levels were observed level with the top of casing (TOC) elevation in the two deep monitoring wells (MW-13D and MW-15D) indicating and upward gradient in the deep wells, which may impede downward migration of dissolved VOCs.

Overall, the chlorinated VOC concentrations appear to be stable or declining, based on the available data.

2.3 ALLEGED WASTE DUMP SAMPLING RESULTS

In April 2009, Matt Becker of the VT DEC supervised the excavation and stockpiling of green-stained soils as part of an investigation for a reported waste pit located east of the driveway near the hazardous waste loading dock. The stained soils were located within a 2-inch thick soil horizon at a depth of 6 inches below the ground surface. At Mr. Becker’s direction, the excavation crew from the City of St. Albans stockpiled the stained soils and covered them with plastic, and installed wooden stakes to define the excavated area. Based on the findings from previous soil and groundwater sampling at the remainder of the site, The Johnson Company limited the analyses of the soil samples to polychlorinated biphenyls (PCBs). Sampling was conducted on July 1, 2009. Samples were placed on ice and shipped under chain of custody protocol to Phoenix Analytical Laboratories, Inc. in Manchester, Connecticut. Field notes and laboratory analytical results are attached. Two samples were collected and submitted for PCB analysis: one sample from the green-stained soils within the stockpile, and one sample from approximately 1 foot below the currently exposed in situ soil in the excavated area. No visual staining was observed in the in situ soils. Samples were analyzed for PCBs via EPA Method 8082 with Soxhlet extraction.

Since concentrations in stockpiled soil were greater than 1 ppm (“Stockpile” at 2.5 ppm of Aroclor-1254), The Johnson Company contacted Kimberly Tisa, the Northeast Regional Coordinator for PCB regulatory issues at the Toxic Substances Control Act (TSCA) division of EPA. Ms. Tisa stated that since the waste product (green ink) was segregated and sampled and the concentration was significantly lower than a typical PCB-contaminated ink product, she will deem the waste ink and the stockpiled soils an “excluded PCB product not regulated for disposal” under TSCA. Therefore, the stockpiled soil was disposed of at the Casella landfill by a City of St. Albans crew before the end of July 2009; no prior TSCA approval was required.

The in-situ soils contained a PCB concentration above the Residential RSL but below the Industrial RSL (“In Situ”, containing 0.25 ppm of Aroclor-1254). The extent of PCB-impacted soils has not been defined.

3.0 CORRECTIVE ACTION FEASIBILITY INVESTIGATION

A separate Corrective Action Feasibility Investigation (CAFI) dated May 15, 2009 was prepared by The Johnson Company, Inc. under contract with NRPC to preliminarily identify remediation alternatives and costs for potential redevelopment of the Site. The CAFI was completed before the Downgradient Investigation. At the time the 2009 CAFI was completed, the redevelopment plan included renovating Building #1 and demolishing Buildings #2 and 3 to provide space for a planned residential development The current plan is to demolish all buildings to provide an open space for future commercial/industrial, high occupancy use. The CAFI section herein has been revised to incorporate the off-site investigation conducted following the 2009 CAFI, include additional remedial alternatives relevant to the currently proposed demolition activities, and reflect current costs associated with remediation activities. Therefore, this CAFI section supersedes the information presented in the 2009 CAFI document.

Although there are two transformer substations associated with the property, only one (Substation 2) is owned by the City of St. Albans. The oil in the transformers at this substation has been changed to non-PCB-containing oil. The transformer owned by CVPS has been removed from the Site. The Site-owned transformer is currently in use but likely to be demolished. Although the transformer must be removed in accordance with TSCA requirements, the removal and disposal is not a remedial action in this CAP. The Site owner will be required to retain a licensed PCB waste transporter to sample the oil in the transformer and dispose of the waste transformer appropriately.

Mold-impacted materials are not addressed in this CAP because risks from exposure to mold will be eliminated with demolition of the buildings. Asbestos and lead-based paint are not addressed in this CAP because they are not regulated by VT DEC.

The items or areas of concern at the Site are limited to the following: 1) PCBs in concrete in Building #1; 2) PCBs in concrete in Buildings #2 and 3; 3) near surface soils with PCB, SVOCS, and metals contamination; 4) floor drain sediments; 5) soils and groundwater with chlorinated VOC contamination; 6) water in the shredder pit.

Immediately following demolition of the buildings, the concrete slab will be left in-place for potential remediation and reuse by the prospective redevelopers, and the Site will continue to be unoccupied until redevelopment occurs. As such, an interim measure to cover the concrete slab in-place is proposed. An alternatives analysis for concrete slab cleanup or risk management has not been included in this document because the future use is not known. For similar reasons, and because the chlorinated VOC concentrations appear to be stable or declining, no remedial alternatives analysis has been included to address chlorinated VOC contamination in soil and groundwater beneath Building #2 and at limited downgradient locations. Following the development of definite plans for reuse of the Site, remediation alternatives for the concrete slab and the chlorinated VOCs (in soil, groundwater, and soil vapor, as appropriate) must be developed, evaluated, and implemented. The VT DEC has stated that they will require quarterly groundwater monitoring for a minimum period of two years following building demolition. The sampling requirements are described below in Section 4.4.

The CAFI is used to evaluate all of the most feasible potential alternatives with respect to effectiveness, implementability, and cost. Following this evaluation, the planned property reuse scenario is used to screen these alternatives and select the most appropriate option, as described in later sections of the CAP.

3.1 NEAR SURFACE SOILS WITH PCB, SVOC, AND METALS CONTAMINATION

PCB-, SVOC-, and metals-contaminated soils are present at various locations around the Site, including the areas and volumes summarized in Table 3.1, below.

Table 3.1 Summary of Near Surface Soils containing PCBs, SVOCs, and/or Metals

Location	Contaminant and Concentration	Volume	Solid Waste or Hazardous Waste
Concentrations above Industrial RSLs			
Near hazardous waste storage area loading platform	PCBs- 0.52 ppm to 49 ppm PCBs- equal to or greater than 50 ppm	22 cubic yards 22 cubic yards	Solid waste Hazardous waste
Floor drains in Printing Area	PCBs- 0.8 ppm (above industrial limits)	0.02 cubic yards	Solid waste or daily cover
Floor drains in Building #2 outside Printing Area	Lead- 610 mg/kg, PAHs- above residential and industrial levels, and Pentachlorophenol- 70 mg/kg	0.02 cubic yards	Expected to be solid waste, but TCLP samples required to confirm
Former dump area north of building	Lead- maximum of 1,000 mg/kg (some soils are above industrial limits)	66 cubic yards	Expected to be solid waste, but TCLP analysis for lead required to confirm. Some may be used as daily cover.
Soils inside Boiler House	PAHs- above residential and industrial levels	6 cubic yards	Solid waste
Concentrations above Residential RSLs but below Industrial RSLs			
Edge of transformer pad 2	PCBs- maximum of 0.4 ppm (below industrial limits)	9 cubic yards	Solid waste or daily cover
Beneath asphalt near front loading dock (near MW-8)	PAHs (below industrial limits)	Unknown volume	Solid waste or daily cover
Inside catch basin to the east of Building #3	PAHs (below industrial limits)	Unknown volume (<0.1 cubic yard)	Solid waste or daily cover
Reported ink disposal area east of hazardous loading dock area	PCBs- maximum of 0.25 ppm (below industrial limits)	Unknown volume	Solid waste or daily cover

Table 3.1 Summary of Near Surface Soils containing PCBs, SVOCs, and/or Metals			
Location	**Contaminant and Concentration**	**Volume**	**Solid Waste or Hazardous Waste**
Surface soil immediately north, south, and west of the Storage Shed	PAHs (below industrial limits)	9 cubic yards	Solid waste or daily cover

Based on the future Site use as non-residential, the soils containing PCB and PAH contamination above Residential RSLs but less than Industrial RSLs may be left on-site with a Notice to the Land Records. Soils with contaminant concentrations above Industrial RSLs that are accessible to any Site visitor or user cannot be left in-place. Since risks to human health and the environment from these contaminants, which all tend to adsorb to soil, are largely from direct contact, ingestion, or inhalation, a feasible alternative may be to consolidate them in one area of the Site and cover them with a cap of soil or asphalt. However, recent rulings by the VT DEC Solid Waste Department have required that contaminated soils be placed only in the footprint of an already contaminated location. Because plans for Site redevelopment are uncertain and in-situ treatment options for metals and SVOC contamination in soils are limited, and generally only feasible where very large volumes of soil require treatment, the only alternative that has been considered for all of these soils is removal and proper disposal.

An estimated total of 22 cubic yards of soils are assumed to be hazardous waste, based on their PCB concentrations, but for cost estimating and planning purposes, it has been assumed that the full 44 cubic yards of PCB-impacted soils near the hazardous waste loading dock will be disposed of as hazardous waste. The remaining soils, an estimated 82 cubic yards, will need to be disposed of as solid waste or used as daily cover at a landfill, although soils with concentrations of contaminants above industrial limits often may not be used as daily cover. Removal of soils will be performed by HAZWOPER-trained workers. Floor drain and boiler house sediments and soils should be removed either by hand or using a vacuum-assisted technique. All other soils may be removed using heavy equipment. Removal and disposal of PCB-contaminated soils will require advance approval from the TSCA PCB Coordinator.

The estimated cost to remove and dispose of all PCB-, SVOC-, and metals-contaminated soils is estimated at approximately $74,600, including reporting and confirmatory sampling.

3.2 WATER IN THE SHREDDER PIT

At the time of the Phase II investigation, approximately 650 gallons of water with concentrations of cadmium and lead above VGES levels was present in the shredder pit. Since this water is contaminated, it should be removed before demolition and treated. The St. Albans water treatment facility and the VT DEC have authorized disposal to the St. Albans Wastewater Treatment Facility as a one-time discharge. The City of St. Albans could perform this work with their pumps and staff and have indicated that there would not be an associated cost for this work. To prevent safety risks to future users, the pit should be filled in or fenced to prevent accidental entry.

4.0 SELECTED CORRECTIVE ACTIONS

This section provides details of the recommended corrective action techniques. The long-term redevelopment plan for the Site is unknown; however, to find a potential redeveloper for the Site, the City of St. Albans plans to demolish Buildings #1, 2, and 3. All of the items discussed in this document are not dependent on future site plans.

4.1 SOILS WITH PCB, SVOC, AND METALS CONTAMINATION

Near surface soils have been identified with PCB, SVOC, and metals contamination above industrial RSLs. Due to the accessibility of these soils to any site visitor or user, and relatively small volume of impacted soil, the only feasible alternative considered for these soils is removal and proper disposal. The Johnson Company will provide a notification of planned self-implementing cleanup activities to the EPA's TSCA Coordinator for the northeast region at least two months in advance of cleanup activities for approval. It is anticipated that the waste subcontractor will be required to prepare a work plan for PCB-impacted soil removal activities in accordance with TSCA requirements.

Due to some uncertainty regarding the contents of the soils in some of the floor drains and in the former dump area, The Johnson Company will premark the excavation areas three weeks in advance of planned Site work, and collect one sample from each of the two floor drains outside of the Printing Area for TCLP analysis for metals and pentachlorophenol, as well as three samples from a depth of 1.0-2.0 feet bgs from the former dump area for analysis of TCLP metals. These results will be used to determine the disposal requirements for the soils. If the results of the TCLP analyses are greater than 100 ug/L for pentachlorophenol or 5 ug/L for lead, the soils will be characterized as hazardous waste and cannot be disposed of at a landfill. Based on the most recent sampling, however, the TCLP results are not likely to be above hazardous waste limits. The Johnson Company will supply the landfill with all relevant analytical results in advance of disposal.

In advance of segregating the PCB impacted soils in the hazardous waste loading dock between less than 50 ppm (non-hazardous) and greater than or equal to 50 ppm (hazardous), The Johnson Company will pre-mark the excavation area three weeks in advance and collect four additional soil samples from the area, two from 0-1 foot bgs, and two from 1-2.5 feet bgs, which will be analyzed for PCBs by EPA Method 8082 with Soxhlet extraction. The results will be supplied to the proposed disposal facilities in advance of excavation. Asphalt will also be a component of the waste in the hazardous loading dock area.

A HAZWOPER-trained demolition contractor will remove all SVOC-, PCB-, and metals-impacted soil. The following equipment is expected to be required: tree removal equipment for the former dump area; an excavator for the former dump area and soils around surrounding transformer pad 2; a Vactor truck or hand tools for soils inside the former boiler house; and hand tools for floor drains. It is estimated that the total volume of hazardous soil is 44 cubic yards (66 tons) and the total volume of non-hazardous soil (requiring disposal as solid waste or use as landfill alternative daily cover) is 82 cubic yards (123 tons). The specific soil removal areas are detailed in Table 4.1a, below. If soil cannot be loaded immediately into dump trucks or roll-off containers, it will be completely encapsulated in plastic sheeting until loading. Best construction management practices will be employed to avoid dispersing dust or spilling soil in clean areas. A bill of lading will be required to accompany the non-hazardous soils during transport. A waste manifest will be required to accompany hazardous soils during transport. Non-hazardous soils will be disposed of at a lined landfill, such as the ISW facility in Moretown, Vermont or the Casella facility in Coventry, Vermont. The hazardous soils must be disposed of at a hazardous waste landfill that is permitted to accept soil with PCB concentrations above 50 ppm, such as the Waste Management facility in Model City, New York or the EQ facility in Michigan.

Table 4.1a Summary of Corrective Actions for Near Surface Soils containing PCBs, SVOCs, and/or Metals

Action/Location	Contaminant and Concentration	Volume	Solid Waste or Hazardous Waste
Removal: Near hazardous waste storage area loading platform	PCBs- 0.52 ppm to 50 ppm PCBs- above 50 ppm	22 cubic yards of soil and asphalt: 2.5 ft bgs over ~235 sq ft 22 cubic yards of soil and asphalt: 2.5 ft bgs over ~235 sq ft	Solid waste Hazardous waste
Removal: Floor drains in Printing Area	PCBs- 0.8 ppm (above industrial limits)	0.02 cubic yards: small floor drains	Solid waste or daily cover
Removal: Floor drains in Building #2 outside Printing Area	Lead- 610 mg/kg, PAHs- above industrial levels, and Pentachlorophenol- 70 mg/kg	0.02 cubic yards: small floor drains	Expected to be solid waste, but TCLP samples required to confirm
Removal: Former dump area north of building	Lead- maximum of 1,000 mg/kg (some soils are above industrial limits)	66 cubic yards: 3 ft bgs over 400 sq ft, 0.5 ft bgs over 3,350 sq ft	Expected to be solid waste, but TCLP analysis for lead required to confirm. Some may be used as daily cover.
Removal: Soils inside Boiler House	PAHs- above industrial levels	6 cubic yards: thin layer accumulated over floor and in trenches	Solid waste
cy = cubic yards ft bgs = feet below ground surface		sq ft = square feet	

Immediately following excavation activities, The Johnson Company will collect confirmatory soil samples as detailed in Table 4.1b, below. If the analytical results exceed industrial screening levels, additional excavation and confirmatory sampling will take place. Alternatively, if the analytical results exceed residential (and not industrial) screening levels for PAHs and/or RCRA 8 metals, the area will be backfilled with clean soil and a notice to the City of St. Albans land records will be filed, indicating the observed presence soil impacted above screening levels. The Johnson Company will provide a letter report to the VT DEC documenting the soil removal within two weeks of receipt of final analytical results.

Table 4.1b Confirmatory Soil Samples		
Location	**Number of Samples**	**Analysis**
Near hazardous waste storage area loading platform	18 + 2 duplicates (1 per 25 square feet)	PCBs by EPA Method 8082 with Soxhlet extraction
Former dump area north of building	3 + 1 duplicate	RCRA 8 Metals by EPA Method 6020

4.2 WATER IN THE SHREDDER PIT

Approximately 650 gallons of water in the shredder pit will be removed for treatment prior to building demolition. The City of St. Albans will perform this work, and the St. Albans water treatment facility and the VT DEC have authorized disposal to the St. Albans Wastewater Treatment Facility as a one-time discharge

4.3 PCB-IMPACTED CONCRETE

Following demolition of the building walls and roof, the concrete slab will be left in place. Although a majority of the concrete slab in Buildings #2 and 3 contains PCBs concentrations that are lower than 1 ppm and may be reused or recycled if demolished, the concrete in the majority of Building #1 and in and around the Printing Area in Buildings #2 and 3 is impacted by PCBs at levels which preclude unrestricted redevelopment. Therefore, future redevelopment activities at the Site must address this concrete either by covering the surface or by removing the entire slab depth.

In the interim, following demolition of the walls and roof, the PCB-impacted portions of the floor may be left in place if the property is fenced or other measures are taken to limit access to the concrete slab. In Building #1, the concrete block walls assumed to contain PCBs at concentrations above 1 and less than 50 ppm are estimated, at an average height of 5 feet and 320 feet long, to have a total volume of 40 cubic yards and an approximate weight of 40 tons. In Buildings #2 and 3, the walls up to 3 feet high with PCB concentrations between 1 and 50 ppm are estimated at a total volume of 13 cubic yards and an approximate weight of 13 tons. Also in Buildings #2 and 3, there is an estimated 11 cubic yards or 11 tons of concrete block wall with PCB concentrations above 50 ppm. The Johnson Company will conduct additional sampling of the walls and the concrete slab in advance of demolition. Approximately 36 wall samples and 4 duplicates are proposed for areas where PCB contamination on walls is suspected. Pending comments from TSCA regarding the notification for cleanup, it is assumed that some sampling of the concrete floor slab will be required before the cover is placed. As such, the cost estimate has been carried through this document as an additional item that VT DEC has stated it will not fund, but this work might not be required. The concrete block walls will be demolished and disposed as appropriate according to their PCB concentrations.

Due to the presence of PCB concentrations above 50 ppm in some of the concrete slab, the fence or other barrier must be marked to show that PCBs are present. To ensure no risk is posed to receptors through direct contact or inhalation/ingestion of dust following erosion of the concrete, the entire slab will be covered with a protective layer of plastic sheeting, which will be held in place by a thin layer of clean material.

The Johnson Company will premark the areas to be covered. A layer of 10-mil plastic sheeting will be placed on top of the concrete slab. Since no disturbance of the concrete will occur, this work will not need to be performed by a HAZWOPER-trained worker. A layer of clean gravel, stones, or rubble (such as clean rubble from the demolished building) will be placed in a thin layer over the plastic to hold it in place. A Notice to the Land Records (NTLR) must also be filed in the City of St. Albans land records to warn a future owner against using the slab without removing the areas that are contaminated by PCBs; a draft NTLR is included in Appendix 3. To prevent falls or other safety hazards, the City of St. Albans may wish to fill in or fence the shredder pit and fence any portions of the slab that are more than 2 feet above the surrounding ground surface; however, because these issues are not environmental concerns, they are not required by this CAP.

The estimated cost to perform additional wall sampling, demolish the PCB-impacted walls and appropriately dispose of the concrete block waste, cover the concrete, and place the NTLR is $48,073 (note: this cost is not inclusive of demolition of uncontaminated building materials, walls, or concrete slab). The Johnson Company will document the cover used in a letter to the VT DEC and EPA TSCA coordinator within two weeks of completion.

If additional floor sampling is required by TSCA before the cover is installed, the sampling is estimated to cost an additional $3,691.

4.4 GROUNDWATER MONITORING

This sampling will be conducted quarterly for two years and will include sampling nine wells in total, including: three previously impacted wells (MW-4, MW-12, and MW-15S), and six downgradient wells (MW-13S, MW-13D, MW-14S, MW-15D, MW-16, and MW-17). Depth to water measurements will be collected from all Site and downgradient monitoring wells that remain intact after the building demolition and soil removal work. Sampling will be performed using low-flow sampling techniques, during which physicochemical parameters will be monitored and recorded until stable to ensure groundwater samples are representative of the aquifer. A peristaltic pump will be used to purge and sample the wells. Samples will be collected from all nine wells, in addition to a blind duplicate sample, and submitted on ice under chain of custody protocol for VOC analysis using EPA Method 8260B (chlorinated compounds only). A detailed cost estimate for this sampling is provided in Appendix 2. The total cost for the eight sample rounds is estimated at $34,254.

5.0 SCHEDULE

Following revisions (if necessary) and approval of this CAP, Vermont Waste Management Division policy is to provide public notice and allow two weeks for a public comment period. If public interest is high, an additional period (estimated at two weeks) may be necessary to schedule and conduct an information meeting. Preparation of responses to public comments, and revisions to the CAP may take an additional week. In total, this process is anticipated to take close to one month. All waste materials containing PCB concentrations above

1 ppm are regulated by TSCA, which must review and approve all proposed handling and disposal plans.

After approval of the CAP, the proposed schedule for completion of the corrective action plan is provided in Table 5.1.

Table 5.1 Proposed Schedule

Task	Responsible Party	Duration (Note: Dates provided are estimated and may require postponement)
Submit 30-day self-implementing cleanup plan to EPA Regional PCB Coordinator	The Johnson Company	July 2010: 2 months in advance of removal activities
Sample walls and soil in hazardous waste loading area for PCBs	The Johnson Company, Inc.	August 2010: 1 month in advance of demolition activities
Demolish building except slab and potentially-PCB-impacted walls	Demolition Contractor	September 2010: 1 month
Notify solid waste landfill and hazardous waste landfill of soil volumes and contaminant concentrations	The Johnson Company	September 2010: 2 weeks
Premark excavation areas and have Dig-Safe® mark buried utilities	The Johnson Company	September 2010: 1 day, 48 hours in advance of Excavation
Deliver roll-off containers to the Site	Hauling contractor	September 2010: 1-2 days before removal activities
Excavate PCB-, SVOC- and metals-impacted soil, dispose of appropriately	Excavation Contractor	October 2010: 2 days
Confirmatory soil sampling for PCBs, PAHs, and metals	The Johnson Company	October 2010: 1 day immediately following excavation activities
Cover concrete slab with plastic and gravel	Excavation or Demolition Contractor	October 2010: 2 days
Additional excavation and confirmatory sampling (if needed)	Excavation Contractor	October 2010: 1 day
Report completion of soil removal activities to VTDEC and TSCA	The Johnson Company	November 2010: 2 weeks following receipt of final laboratory results
Total Estimated Time to Complete Program		November 2010. 3-4 months, depending on contractor scheduling/availability

Table 5.2 Long Term Monitoring Schedule		
Task	**Responsible Party**	**Schedule**
Chlorinated VOC-impacted Groundwater Monitoring		
Sample wells for chlorinated VOCs, prepare letter report summarizing results to VT DEC	Environmental Consultant	Quarterly for 2 years following completion of building demolition work (pre-demolition of slab)

6.0 COST ESTIMATE

Preliminary cost estimate information is provided as Appendix 2. A cost summary table for all selected remedial alternatives for the Site is included at the end of Appendix 2. The total estimated cost for remediation items, including the interim action is $160,618, which includes an estimated $3,691 for additional PCB sampling that might be required by would not be eligible for VT DEC funding. Therefore, the total cost that would be eligible for VT DEC funding is estimated at $156,927. It should be noted that slight modifications to this estimate may be required due to potential changes to the soil removal volumes, unexpected site and/or weather conditions, etc. The total estimated cost for remedial actions associated with Site redevelopment following building demolition will depend on selected remedial alternatives based on specific uses proposed for the Site.

7.0 NOTICE TO THE LAND RECORDS

It is expected that the interim concrete covering will be required for a maximum of five years. If the Site has not been redeveloped within five years, the City of St. Albans or current owner must notify TSCA and VT DEC of their future plans for the Site to mitigate risk to receptors. Table 7.1 summarizes the areas in will be included in an NLTR for the property if the listed conditions are met. A draft NLTR is provided in Appendix 3.

Table 7.1 Notice to the Land Record Items		
Area	**Item**	**Condition**
Soil surrounding MW-8	Inform future owners of the presence of PAHs at concentrations above Residential RSLs.	Required unless soil is removed.
Soil surrounding Transformer Substation #2 pad	Inform future owners of the presence of PCBs at concentrations above Residential RSLs.	Required unless soil is removed.
Soil immediately north, south, and west of the Storage Shed	Inform future owners of the presence of PAHs at concentrations above Residential RSLs	Required unless soil is removed.
Soil east of the driveway and southeast of the hazardous waste loading dock (alleged waste ink dumping area)	Inform future owners of the presence of PCBs at concentrations above Residential RSLs.	Required unless soil is removed.
Soil beneath Building #2	Inform future owners of the presence of TCE and associated breakdown products at concentrations above Industrial and Residential RSLs, and of the potential for vapor intrusion.	Required unless soil is removed or remediated.
Groundwater beneath Building #2 and approximately 100 feet west of the building.	Inform future owners of the presence of TCE and associated breakdown products at concentrations above VGES limits, and of the potential for vapor intrusion.	Required until concentrations decline below VGES limits and potential indoor air concentrations from vapor intrusion impacts are shown to be below human health risk levels.
Concrete slab with PCB concentrations above 1 ppm	Inform future owners of the presence of concentrations of PCBs and of their obligations to inspect and maintain the cover until remedial action is complete. Documentation of annual inspections must be forwarded to VT DEC and maintained on file by the building owner.	Will be required unless remedial action occurs immediately.

TABLES

Table 1a. Analytical Results: Bulk Concrete PCBs
Former Fonda Group Facility, St. Albans, VT
JCO Project #1-1470-13

Map	Location	Depth	Date		PCB-1016		PCB-1221		PCB-1232		PCB-1242		PCB-1248		PCB-1254		PCB-1260		PCB-1262		PCB-1268	Total PCBs	*Total PCBs*
Label	CONCRETE																						*x*
	BULK SAMPLES																						***# of***
	TSCA Regulated Lower Limit: 1 ppm (total PCBs)																						***Composites***
					(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)	(mg/kg)	*(mg/kg)*
B-1	B-1	0-0.5"	2/25/2008	U	0.1	U	0.1	U	0.1		0.1	U	0.1		0.3		0.1	U	NA	U	NA	0.5	
B-2	B-2	0-0.5"	2/25/2008	U	0.1	U	0.1	U	0.1		0.1	U	0.1		0.3		0.1	U	NA	U	NA	0.5	
B-3	B-3	0-0.5"	2/25/2008	U	0.1	U	0.1	U	0.1		0.1	U	0.1		0.1		0.2	U	NA	U	NA	0.4	
B-4	B-4	0-0.5"	2/25/2008	U	0.1	U	0.1	U	0.1		0.2	U	0.1		0.3		0.1	U	NA	U	NA	0.6	
B-5	B-5	0-0.5"	2/25/2008	U	0.1	U	0.1	U	0.1		0.1	U	0.1		0.2	<	0.1	U	NA	U	NA	0.4	
B-6	B-6	0-0.5"	2/25/2008	U	0.1	U	0.1	U	0.1		0.1	U	0.1		0.1	<	0.1	U	NA	U	NA	0.3	
B-7	B-7	0-0.5"	2/25/2008	U	0.1	U	0.1	U	0.1		0.5	U	0.1		3.8		0.9	U	NA	U	NA	5.2	
B-8	B-8	0-0.5"	2/25/2008	U	0.1	U	0.1	U	0.1		0.2	U	0.1		14		1.1	U	NA	U	NA	15.3	
	B-8 Duplicate	0-0.5"	2/25/2008	U	0.1	U	0.1	U	0.1		0.3	U	0.1		10		1	U	NA	U	NA	11.3	
	RPD										*40%*				*33%*		*10%*						
B-9	B-9	0-0.5"	2/25/2008	U	0.1	U	0.1	U	0.1		0.1	U	0.1		0.2	<	0.1	U	NA	U	NA	0.4	
B-10	B-10	0-0.5"	2/25/2008	U	0.1	U	0.1	U	0.1		0.3	U	0.1		2.3	<	0.1	U	NA	U	NA	2.7	
B-11	B-11	0-0.5"	2/25/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1		0.2		0.2	U	NA	U	NA	0.4	
B-12	B-12	0-0.5"	2/25/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1		0.2		0.4	U	NA	U	NA	0.6	
B-13	B-13	0-0.5"	2/25/2008	U	0.1	U	0.1	U	0.1		0.2	U	0.1		6.8		1.4	U	NA	U	NA	8.4	
B-14	B-14	0-0.5"	2/25/2008	U	0.1	U	0.1	U	0.1		0.2	U	0.1		0.6		0.4	U	NA	U	NA	1.2	
B-15	B-15	0-0.5"	2/25/2008	U	0.1	U	0.1	U	0.1		0.2	U	0.1		0.3		0.3	U	NA	U	NA	0.8	
ad 2 (S) Co	Pad 2 (S) Conc	0-0.5"	2/6/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0	
ad 2 (N) Co	Pad 2 (N) Conc	0-0.5"	2/6/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0	
MR-1	MR-1	0-0.5"	8/8/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	1.6	
MR-2	MR-2	0-0.5"	8/8/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	0.5	
MR-3	MR-3	0-0.5"	8/8/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	1.4	
MR-4	MR-4	0-0.5"	8/8/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	1.2	
MR-5	MR-5	0-0.5"	8/8/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	1.8	
MR-6	MR-6	0-0.5"	8/8/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	1.1	
MR-7	MR-7	0-0.5"	8/8/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	1.2	
MR-8	MR-8	0-0.5"	8/8/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	1.3	
MR-9	MR-9	0-0.5"	8/8/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	0.67	
MR-10	MR-10	0-0.5"	8/8/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	1.1	
MR-11	MR-11	0-0.5"	8/8/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	0.38	
MR-12	MR-12	0-0.5"	8/8/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	1.7	
	MR-12 Duplicate (Dup 1	0-0.5"	8/8/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	2.7	
MR-13	MR-13	0-0.5"	8/8/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**	U	0.33	U	0.33	1.2	
MR-14	MR-14	0-0.5"	8/8/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	0.66	
MR-15	MR-15	0-0.5"	8/8/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	1.0	
MR-16	MR-16	0-0.5"	8/8/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	1.4	
	MR-16 Duplicate (Dup 2	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	1.9	
MR-17	MR-17	0-0.5"	8/8/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	0.93	
MR-18	MR-18	0-0.5"	8/8/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	2.1	
MR-19	MR-19	0-0.5"	8/8/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	0	
MR-20	MR-20	0-0.5"	8/8/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	1.0	
MR-21	MR-21	0-0.5"	8/8/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	0.43	
MR-22	MR-22	0-0.5"	8/8/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	2.9	
MR-23	MR-23	0-0.5"	8/8/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	1.4	
MR-24	MR-24	0-0.5"	8/8/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	0.45	
WH-1	WH-1	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		0.6	U	0.33	U	0.33	U	0.33	0.6	

U = Compound was not detected above laboratory reporting limit.
NA = Not Analyzed.
Bold/Shaded= Exceeds TSCA regulation limits.
RPD = Relative percent difference.
** = Mixture

Table 1a. Analytical Results: Bulk Concrete PCBs
Former Fonda Group Facility, St. Albans, VT
JCO Project #1-1470-13

Map Label	Location	Depth	Date		PCB-1016		PCB-1221		PCB-1232		PCB-1242		PCB-1248		PCB-1254		PCB-1260		PCB-1262		PCB-1268	Total PCBs	*Total PCBs x # of Composites*
	CONCRETE																						
	BULK SAMPLES																						
	TSCA Regulated Lower Limit: 1 ppm (total PCBs)																						
					(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)	(mg/kg)	*(mg/kg)*
WH-2	WH-2	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	0	
WH-3	WH-3	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	0	
WH-4	WH-4	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	0	
WH-5	WH-5	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	0	
WH-6	WH-6	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	0	
WH-7	WH-7	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	1.5	
WH-8	WH-8	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	0	
WH-9	WH-9	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	0	
WH-10	WH-10	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	0.42	
WH-11	WH-11	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	0.83	
WH-12	WH-12	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	0.35	
WH-13	WH-13	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	0.37	
WH-14	WH-14	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	2.6	
	WH-14 Duplicate (Dup 3	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	2.8	
WH-15	WH-15	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	3.0	
WH-16	WH-16	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	1.7	
WH-17	WH-17	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	1.7	
WH-18	WH-18	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	1.7	
WH-19	WH-19	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	1.7	
WH-20	WH-20	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	1.8	
WH-21	WH-21	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	2.4	
WH-22	WH-22	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	2.8	
WH-23	WH-23	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	1.8	
WH-24	WH-24	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	2.4	
WH-25	WH-25	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	3.4	
WH-26	WH-26	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	2.0	
	WH-26 Duplicate (Dup 4	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	1.9	
WH-27	WH-27	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	0.35	
WH-28	WH-28	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	0	
WH-29	WH-29	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	0	
WH-30	WH-30	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	0.40	
	WH-30 Duplicate (Dup 5	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	1.9	
WH-31	WH-31	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	3.3	
WH-32	WH-32	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	0	
WH-33	WH-33	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	0.34	
WH-34	WH-34	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	0.44	
WH-35	WH-35	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	2.8	
WH-36	WH-36	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	1.1	
WH-37	WH-37	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	1.3	
	WH-37 Duplicate (Dup 6	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		0.66	U	0.33	U	0.33	0.66	
WH-38	WH-38	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	0.4	
WH-39	WH-39	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	0	
WH-40	WH-40	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	0	
WH-41	WH-41	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	0.43	
WH-42	WH-42	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		**		**	U	0.33	U	0.33	2.0	
WH-43	WH-43	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	0	
WH-44	WH-44	0-0.5"	8/7/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	0	

U = Compound was not detected above laboratory reporting limit.
NA = Not Analyzed.
Bold/Shaded= Exceeds TSCA regulation limits.
RPD = Relative percent difference.
** = Mixture

Table 1a. Analytical Results: Bulk Concrete PCBs

Former Fonda Group Facility, St. Albans, VT

JCO Project #1-1470-13

Map Label	Location	Depth	Date		PCB-1016		PCB-1221		PCB-1232		PCB-1242		PCB-1248		PCB-1254		PCB-1260		PCB-1262		PCB-1268	Total PCBs	*Total PCBs x # of Composites*
	CONCRETE																						
	BULK SAMPLES																						
	TSCA Regulated Lower Limit: 1 ppm (total PCBs)																						
					(mg/kg)		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**	**(mg/kg)**	***(mg/kg)***
	Building #1 Composite Sampling (Results above 10 ppm are in bold,																						
1	B#1-A1,A2,B1,B2	0-0.5"	6/18/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		1.8	U	0.33	U	0.33	U	0.33	1.8	7.2
2	B#1-B3,B4,A3,A4	0-0.5"	6/18/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		1.8	U	0.33	U	0.33	U	0.33	1.8	7.2
3	B#1-A5,A6,B5,B6	0-0.5"	6/18/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		2.6	U	0.33	U	0.33	U	0.33	2.6	**10.4**
4	B#1-A7,A8,B7,B8	0-0.5"	6/18/2008	U	3.3	U	3.3	U	3.3	U	3.3	U	3.3		8	U	3.3	U	3.3	U	3.3	8	**32.0**
5	B#1-C3,C4,D3,D4	0-0.5"	6/18/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		1.5	U	0.33	U	0.33	U	0.33	1.5	6.0
6	B#1-C5,C6,D5,D6	0-0.5"	6/18/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		1.3	U	0.33	U	0.33	U	0.33	1.3	5.2
7	B#1-C7,C8,D7,D8	0-0.5"	6/18/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		0.48	U	0.33	U	0.33	U	0.33	0.48	1.9
8	B#1-C9,C10,D9,D10	0-0.5"	6/18/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		0.95	U	0.33	U	0.33	U	0.33	0.95	3.8
9	B#1-E1,E2,F1,F2	0-0.5"	6/18/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		1.8	U	0.33	U	0.33	U	0.33	1.8	7.2
10	B#1-E3,E4,F3,F4	0-0.5"	6/18/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		1.1	U	0.33	U	0.33	U	0.33	1.1	4.4
11	B#1-E5,E6,F5,F6	0-0.5"	6/18/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		1.8	U	0.33	U	0.33	U	0.33	1.8	7.2
	B#1-E5,E6,F5,F6-DUP	0-0.5"	6/18/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		1.8	U	0.33	U	0.33	U	0.33	1.8	7.2
	RPD														*0%*								
12	B#1-E7,E8,F7,F8	0-0.5"	6/18/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	ND	ND
13	B#1-G1,G2,H1,H2	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		2.3	U	0.33	U	0.33	U	0.33	2.3	9.2
14	B#1-G3,G4,H3,H4	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		1.7	U	0.33	U	0.33	U	0.33	1.7	6.8
15	B#1-G5,G6,H5,H6	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		1.6	U	0.33	U	0.33	U	0.33	1.6	6.4
16	B#1-G7,G8,H7,H8	0-0.5"	6/18/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		0.39	U	0.33	U	0.33	U	0.33	0.39	1.6
17	B#1-G9,G10,H9,H10*	0-0.5"	6/18/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		0.68	U	0.33	U	0.33	U	0.33	0.68	2.7
18	B#1-I1,I2,J1,J2	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		3.1	U	0.33	U	0.33	U	0.33	3.1	**12.4**
19	B#1-I3,I4,J3,J4	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		2.8	U	0.33	U	0.33	U	0.33	2.8	**11.2**
20	B#1-I7,I8,J7,J8	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		0.97	U	0.33	U	0.33	U	0.33	0.97	3.9
21	B#1-K1,K2,L1,L2	0-0.5"	6/19/2008	U	16	U	16	U	16	U	16	U	16		47	U	16	U	16	U	16	47	***188.0***
22	B#1-K3,K4,L3,L4	0-0.5"	6/19/2008	U	3.2	U	3.2	U	3.2	U	3.2	U	3.2		11	U	3.2	U	3.2	U	3.2	11	**44.0**
23	B#1-K5,K6,L5,L6	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		1.2	U	0.33	U	0.33	U	0.33	1.2	4.8
24	B#1-K7,K8,L7,L8	0-0.5"	6/19/2008	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32		0.88	U	0.32	U	0.32	U	0.32	0.88	3.5
25	B#1-K9,K10,L9,L10	0-0.5"	6/18/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		0.68	U	0.33	U	0.33	U	0.33	0.68	2.7
26	B#1-M1,M2,N1,N2	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		2.9	U	0.33	U	0.33	U	0.33	2.9	**11.6**
27	B#1-M3,M4,N3,N4	0-0.5"	6/19/2008	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32		2.6	U	0.32	U	0.32	U	0.32	2.6	**10.4**
	B#1-M3,M4,N3,N4-	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		2.6	U	0.33	U	0.33	U	0.33	2.6	**10.4**
	RPD														*0%*								
28	B#1-M5,M6,N5,N6	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		2.9	U	0.33	U	0.33	U	0.33	2.9	**11.6**
29	B#1-M7,M8,N7,N8	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		1.7	U	0.33	U	0.33	U	0.33	1.7	6.8
30	B#1-O1,O2,P1,P2	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		2.4	U	0.33	U	0.33	U	0.33	2.4	9.6
31	B#1-O3,O4,P3,P4	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		1.1	U	0.33	U	0.33	U	0.33	1.1	4.4
32	B#1-O5,O6,P5,P6	0-0.5"	6/19/2008	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32		1.4	U	0.32	U	0.32	U	0.32	1.4	5.6
33	B#1-O7,O8,P7,P8	0-0.5"	6/19/2008	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32		1.6	U	0.32	U	0.32	U	0.32	1.6	6.4
34	B#1-O9,O10,P9,P10	0-0.5"	6/18/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		0.69	U	0.33	U	0.33	U	0.33	0.69	2.8
35	B#1-Q1,Q2,R1,R2	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		3.3	U	0.33	U	0.33	U	0.33	3.3	**13.2**
36	B#1-Q3,Q4,R3,R4	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		3.5	U	0.33	U	0.33	U	0.33	3.5	**14.0**
37	B#1-Q5,Q6,R5,R6	0-0.5"	6/19/2008	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32		3.9	U	0.32	U	0.32	U	0.32	3.9	**15.6**
	B#1-Q5,Q6,R5,R6-	0-0.5"	6/19/2008	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32		4	U	0.32	U	0.32	U	0.32	4	**16.0**
	RPD														*3%*								
38	B#1-Q7,Q8,R7,R8	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		2.7	U	0.33	U	0.33	U	0.33	2.7	**10.8**
39	B#1-S1,S2,T1,T2	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		2.6	U	0.33	U	0.33	U	0.33	2.6	**10.4**
40	B#1-S3,S4,T3,T4	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		1.4	U	0.33	U	0.33	U	0.33	1.4	5.6
41	B#1-S5,S6,T5,T6	0-0.5"	6/19/2008	U	6.6	U	6.6	U	6.6	U	6.6	U	6.6		48	U	6.6	U	6.6	U	6.6	48	***192.0***
42	B#1-U1,U2,V1,V2	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		1.8	U	0.33	U	0.33	U	0.33	1.8	7.2

U = Compound was not detected above laboratory reporting limit.

NA = Not Analyzed.

Bold/Shaded= Exceeds TSCA regulation limits.

RPD = Relative percent difference.

** = Mixture

Table 1a. Analytical Results: Bulk Concrete PCBs
Former Fonda Group Facility, St. Albans, VT
JCO Project #1-1470-13

Map	Location	Depth	Date	PCB-1016		PCB-1221		PCB-1232		PCB-1242		PCB-1248		PCB-1254		PCB-1260		PCB-1262		PCB-1268		Total PCBs	***Total PCBs***
Label	**CONCRETE**																						***x***
	BULK SAMPLES																						***# of***
	TSCA Regulated Lower Limit: 1 ppm (total PCBs)																						***Composites***
					(mg/kg)		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**	**(mg/kg)**	***(mg/kg)***
43	B#1-U3,U4,V3,V4	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		1.5	U	0.33	U	0.33	U	0.33	1.5	6.0
	B#1-U3,U4,V3,V4-DUP	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		1.4	U	0.33	U	0.33	U	0.33	1.4	5.6
	RPD														*7%*								
44	B#1-U5,U6,V5,V6	0-0.5"	6/19/2008	U	6.5	U	6.5	U	6.5	U	6.5	U	6.5		38	U	6.5	U	6.5	U	6.5	38	***152.0***
45	B#1-U7,U8,V7,V8	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		2.6	U	0.33	U	0.33	U	0.33	2.6	**10.4**
46	B#1-U9,U10,V9,V10	0-0.5"	6/18/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		0.99	U	0.33	U	0.33	U	0.33	0.99	4.0
47	B#1-W1,W2,X1,X2	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		1.2	U	0.33	U	0.33	U	0.33	1.2	4.8
48	B#1-W3,W4,X3,X4	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		2.2	U	0.33	U	0.33	U	0.33	2.2	8.8
49	B#1-W5,W6,X5,X6	0-0.5"	6/19/2008	U	3.3	U	3.3	U	3.3	U	3.3	U	3.3		14	U	3.3	U	3.3	U	3.3	14	***56.0***
50	B#1-W7,W8,X7,X8	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		1.3	U	0.33	U	0.33	U	0.33	1.3	5.2
51	B#1-Y3,Y4,Z3,Z4	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		1.5	U	0.33	U	0.33	U	0.33	1.5	6.0
52	B#1-Y5,Y6,Z5,Z6	0-0.5"	6/19/2008	U	3.3	U	3.3	U	3.3	U	3.3	U	3.3		10	U	3.3	U	3.3	U	3.3	10	**40.0**
	B#1-Y5,Y6,Z5,Z6-DUP	0-0.5"	6/19/2008	U	3.3	U	3.3	U	3.3	U	3.3	U	3.3		11	U	3.3	U	3.3	U	3.3	11	**44.0**
	RPD														*10%*								
53	B#1-Y7,Z7,Y8,Z8	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		2.4	U	0.33	U	0.33	U	0.33	2.4	9.6
54	B#1-Y9,Y10,Z9,Z10	0-0.5"	6/18/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		0.52	U	0.33	U	0.33	U	0.33	0.52	2.1
	Printing Area Composite Sampling (Results above 50 ppm are in bold italics,																						
55	B#2-A1,A2,B1,B2	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	ND	ND
56	B#2-A3,A4,B3,B4	0-0.5"	6/19/2008	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32		0.74	U	0.32	U	0.32	U	0.32	0.74	3.0
57	B#2-A5,A6,B5,B6	0-0.5"	6/19/2008	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32		1.5	U	0.32	U	0.32	U	0.32	1.5	6.0
58	B#2-C1,C2,D1,D2	0-0.5"	6/19/2008	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32		0.88	U	0.32	U	0.32	U	0.32	0.88	3.5
59	B#2-C3,C4,D3,D4	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		4.2	U	0.33	U	0.33	U	0.33	4.2	**16.8**
60	B#2-C5,C6,D5,D6	0-0.5"	6/19/2008	U	33	U	33	U	33	U	33	U	33		58	U	33	U	33	U	33	58	***232.0***
61	B#2-C8,D8,C7,D7	0-0.5"	6/19/2008	U	3.3	U	3.3	U	3.3	U	3.3	U	3.3		6.7	U	3.3	U	3.3	U	3.3	6.7	**26.8**
62	B#2-E1,E2,F1,F2	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		0.6	U	0.33	U	0.33	U	0.33	0.6	2.4
63	B#2-E3,E4,F3,F4	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		3.8	U	0.33	U	0.33	U	0.33	3.8	**15.2**
64	B#2-E5,E6,F5,F6	0-0.5"	6/19/2008	U	33	U	33	U	33	U	33	U	33		190	U	33	U	33	U	33	190	***760.0***
65	B#2-E7,E8,F7,F8	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		2.4	U	0.33	U	0.33	U	0.33	2.4	9.6
	B#2-E7,E8,F7,F8-DUP	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		2.8	U	0.33	U	0.33	U	0.33	2.8	**11.2**
	RPD														*15%*								
66	B#2-G1,G2,H1,H2	0-0.5"	6/19/2008	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32		0.64	U	0.32	U	0.32	U	0.32	0.64	2.6
67	B#2-G3,G4,H3,H4	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		1.6	U	0.33	U	0.33	U	0.33	1.6	6.4
68	B#2-G5,G6,H5,H6	0-0.5"	6/19/2008	U	3.3	U	3.3	U	3.3	U	3.3	U	3.3		31	U	3.3	U	3.3	U	3.3	31	***124.0***
69	B#2-G7,G8,H7,H8	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		2.6	U	0.33	U	0.33	U	0.33	2.6	**10.4**
70	B#2-J1,J2,I1,I2	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		0.76	U	0.33	U	0.33	U	0.33	0.76	3.0
	B#2-J1,J2,I1,I2-DUP	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		0.7	U	0.33	U	0.33	U	0.33	0.7	2.8
	RPD														*8%*								
71	B#2-I3,I4,J3,J4	0-0.5"	6/19/2008	U	33	U	33	U	33	U	33	U	33		180	U	33	U	33	U	33	180	***720.0***
72	B#2-I5,I6,J5,J6	0-0.5"	6/19/2008	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32		4.4	U	0.32	U	0.32	U	0.32	4.4	**17.6**
73	B#2-J7,J8,I7,I8**	0-0.5"	6/19/2008	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6		7.8	U	1.6	U	1.6	U	1.6	7.8	**31.2**
74	B#2-K1,K2,L1,L2	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		0.56	U	0.33	U	0.33	U	0.33	0.56	2.2
75	B#2-L3,L4,K3,K4	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		2.1	U	0.33	U	0.33	U	0.33	2.1	8.4
76	B#2-L5,K5	0-0.5"	6/19/2008	U	3.3	U	3.3	U	3.3	U	3.3	U	3.3		10	U	3.3	U	3.3	U	3.3	10	**20.0**
77	B#2-M1,M2,N1,N2	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		0.6	U	0.33	U	0.33	U	0.33	0.6	2.4
78	B#2-N4,N3,M4,M3	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		3.3	U	0.33	U	0.33	U	0.33	3.3	**13.2**
79	B#2-N5,M5	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		1.4	U	0.33	U	0.33	U	0.33	1.4	2.8
80	B#2-O1,O2,P1,P2	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		0.46	U	0.33	U	0.33	U	0.33	0.46	1.8
81	B#2-P5,O5	0-0.5"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		1.1	U	0.33	U	0.33	U	0.33	1.1	2.2
W-1	W-1	0-0.25"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	ND	

U = Compound was not detected above laboratory reporting limit.
NA = Not Analyzed.
Bold/Shaded= Exceeds TSCA regulation limits.
RPD = Relative percent difference.
** = Mixture

Table 1a. Analytical Results: Bulk Concrete PCBs

Former Fonda Group Facility, St. Albans, VT

JCO Project #1-1470-13

Map Label	**Location**	**Depth**	**Date**		**PCB-1016**		**PCB-1221**		**PCB-1232**		**PCB-1242**		**PCB-1248**		**PCB-1254**		**PCB-1260**		**PCB-1262**		**PCB-1268**	**Total PCBs**	***Total PCBs x # of Composites***
	CONCRETE																						
	BULK SAMPLES																						
	TSCA Regulated Lower Limit: 1 ppm (total PCBs)																						
					(mg/kg)		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**	**(mg/kg)**	***(mg/kg)***
W-2	W-2	0-0.25"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	ND	
	W-2-DUP	0-0.25"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	ND	
	RPD	0-0.25"													*0%*								
W-3	W-3	0-0.25"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		0.75	U	0.33	U	0.33	U	0.33	0.75	
W-4	W-4	0-0.25"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		0.73	U	0.33	U	0.33	U	0.33	0.73	
W-5	W-5	0-0.25"	6/19/2008	U	33	U	33	U	33	U	33	U	33		120	U	33	U	33	U	33	120	
W-6	W-6	0-0.25"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		1.1	U	0.33	U	0.33	U	0.33	1.1	
W-7	W-7	0-0.25"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		2.4	U	0.33	U	0.33	U	0.33	2.4	
W-8	W-8	0-0.25"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33		0.54	U	0.33	U	0.33	U	0.33	0.54	
W-9	W-9	0-0.25"	6/19/2008	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	ND	
W-10	W-10	0-0.25"	6/19/2008	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32	ND	
	NOTES:																						

* = Sample mislabeled as B#1-G9,GH,H9,H10

** = Sample mislabeled as B#2-J8,J8,I8,I7

U = Compound was not detected above laboratory reporting limit.
NA = Not Analyzed.
Bold/Shaded= Exceeds TSCA regulation limits.
RPD = Relative percent difference.
** = Mixture

Table 1b. Analytical Results: Soil PCBs

Former Fonda Group Facility, St. Albans, VT

JCO Project #1-1470-13

Location	Depth	Date	PCB-1016		PCB-1221		PCB-1232		PCB-1242		PCB-1248		PCB-1254		PCB-1260		PCB-1262		PCB-1268		Total PCBs
SOIL																					
Federal RSLs Resid. (VT Screening Level)			*3.9*		*0.17*		*0.17*		*0.22*		*0.22*		*0.22*		*0.22*		*0.22*		*0.22*		
Federal RSLs Indust. (VT Screening Level)			*21.0*		*0.62*		*0.62*		*0.74*		*0.74*		*0.74*		*0.74*		*0.74*		*0.74*		
			(mg/kg)		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		
Pad 1 (N) Soil	0-0.5"	2/6/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0
Pad 1 (E) Soil	0-0.5"	2/6/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0
Pad 1 (W) Soil	0-0.5"	2/6/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0
Pad 1 (S) Soil	0-0.5"	2/6/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0
Pad 1 (S) Soil Dup	0-0.5"	2/6/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0
Pad 2 (N) Soil	0-0.5"	2/6/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0
Pad 2 (E) Soil	0-0.5"	2/6/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1		0.2	U	NA	U	NA	0.2
Pad 2 (W) Soil	0-0.5"	2/6/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0
Pad 2 (S) Soil	0-0.5"	2/6/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1		**0.4**	U	NA	U	NA	0.4
T1-Bott	3'	2/6/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0
T2-Bott	4'	2/6/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0
T5-Top	0-0.5'	2/6/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0
T-5 Dup	0-0.5'	2/6/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0
MW-1	0-1'	2/7/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0
MW-2	0-1'	2/7/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0
MW-3	0-1'	2/7/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0
MW-4	0-1'	2/8/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0
MW-4 Duplicate	0-1'	2/8/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0
MW-5	0-1'	2/8/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0
MW-6	0-1'	2/11/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0
MW-7	1'	2/7/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0
MW-8	1'	2/8/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0
MW-9	0-1'	2/8/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0
MW-10	0-1'	2/11/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1		**10**		**0.9**	U	NA	U	NA	10.9
MW-11	0-1'	2/11/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0
PP-FD	0-0.5'	2/6/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1		**0.8**	U	0.1	U	NA	U	NA	0.8
Conv-FD	0-0.5'	2/6/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0
Storage Shed	0.5-1'	2/6/2008	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	NA	U	NA	0
CB-1	0-0.5"	2/25/2008	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	NA	U	NA	0
DUMP 1	0-1'	6/17/2008	U	0.46	U	0.46	U	0.46	U	0.46	U	0.46	U	0.46	U	0.46	U	0.46	U	0.46	0
DUMP 2	0-1'	6/18/2008	U	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U	0.44	0
IS-1 (0-1.5)	0-1.5'	6/17/2008	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	0
IS-1 (0-1.5)-DUP	0-1.5'	6/17/2008	U	0.36	U	0.36	U	0.36	U	0.36	U	0.36	U	0.36	U	0.36	U	0.36	U	0.36	0
IS-2 (1.5-3)	1.5-3'	6/17/2008	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	0
IS-3 (1.5-3)	1.5-3'	6/17/2008	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	0
LD-1 (0-1.5)	0-1.5'	6/17/2008	U	35	U	35	U	35	U	35	U	35		**170**	U	35	U	35	U	35	170
LD-2 (1.5-3)	1.5-3'	6/17/2008	U	0.38	U	0.38	U	0.38	U	0.38	U	0.38		**0.52**	U	0.38	U	0.38	U	0.38	0.52
LD-3 (1.5-3)	1.5-3'	6/17/2008	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	0
SC-7 (1.0-1.5)	1-1.5'	6/17/2008	U	0.38	U	0.38	U	0.38	U	0.38	U	0.38	U	0.38	U	0.38	U	0.38	U	0.38	0
SC-7 (3-4.1)	3-4.1'	6/17/2008	U	0.36	U	0.36	U	0.36	U	0.36	U	0.36	U	0.36	U	0.36	U	0.36	U	0.36	0
Stockpile	Green soil	7/1/2009	U	0.38	U	0.38	U	0.38	U	0.38	U	0.36		**2.5**	U	0.38		NA		NA	2.5
In Situ	1'	7/1/2009	U	0.38	U	0.38	U	0.38	U	0.38	U	0.36		**0.25**	U	0.38		NA		NA	0.25

U = Not detected above reporting limit shown.

NA = Not Analyzed.

Bold = Exceeds Residential PRG.

Black cell = Exceeds Industrial PRG.

RPD = Relative percent difference between original and duplicate samples.

Table 2. Analytical Results: Soil- Metals

Former Fonda Group Facility, St. Albans, VT

JCO Project #1-1470-13

Sample ID	VT/Federal	VT/Federal	T1-Bott		T2-Bott		T5-Top		MW-1		MW-2		MW-3		MW-4		MW-5		MW-6	
Sample Depth	RSL	RSL	3'		4'		0-0.5'		0-1'		0-1'		0-1'		0-1'		0-1'		0-1'	
Units	(mg/kg)	(mg/kg)	(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)	
Sample Date	Resid.	Indust.	2/14/2008		2/14/2008		2/14/2008		2/14/2008		2/14/2008		2/14/2008		2/14/2008		2/14/2008		2/14/2008	
Aluminum	*76,000*	*100,000*		12000		7300		14000		6200		7700		8400		6200		7500		7500
Antimony	*31*	*410*	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5
Arsenic	*0.39 (12*)*	*12*		4.1		2.8		**12**		3.7		3.3		4.1		3.8		3.7		3.3
Barium	*15,000*	*190,000*		98		44		110		34		39		6.3		29		38		46
Beryllium	*160*	*2,000*	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5
Cadmium	*70*	*810*	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5
Chromium	*280*	*1,400*		19		12		21		10		11		13		9.2		11		11
Cobalt	*23*	*300*		7.3		6.5		7.5		8.7		5.6		6.9		33		7.1		8.3
Copper	*3,100*	*41,000*		16		11		18		14		12		14		26		18		17
Iron	*55,000*	*720,000*		17,000		12,000		17,000		15,000		13,000		14,000		14,000		15,000		14,000
Lead	*400*	*800*		25		5.2		62		8.7		6.2		19		9.5		8.2		11
Manganese	*1,800*	*23,000*		320		280		400		400		210		390		370		490		460
Mercury	*6.7*	*28*	U	0.1	U	0.1		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Nickel	*1,600*	*20,000*		17		14		19		15		15		15		17		16		16
Selenium	*390*	*5,100*	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5
Silver	*390*	*5,100*	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	11	U	11	U	11
Thallium	*5.1*	*66*	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5
Tin	*47,000*	*610,000*		22		15		27		12		13		15		9		12		13
Vanadium	*390*	*5,200*		82		30		74		34		34		45		48		44		39
Zinc	*23,000*	*310,000*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2

Notes:
* = The VT background concentration is 12 mg/kg
U = Not detected above reporting limit shown.
NA = Not Analyzed.
Bold = Exceeds Residential PRG.
Black cell = Exceeds Industrial PRG.
RPD = Relative percent difference
K:\1-1470-13\CAP\052610 table

Table 2. Analytical Results: Soil- Metals

Former Fonda Group Facility, St. Albans, VT

JCO Project #1-1470-13

Sample ID	VT/Federal	MW-7		MW-8		MW-9		MW-10		MW-11		PP-FD		Conv-FD		B Drain		Storage Shed		Dump 1		Dump 2	
Sample Depth	**RSL**	**0-1'**		**0-1'**		**0-1'**		**0-1'**		**0-1'**		**0-0.5'**		**0-0.5'**		**0-0.5'**		**0.5-1'**		**0-1'**		**0-1'**	
Units	**(mg/kg)**	**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**	
Sample Date	**Resid.**	**2/14/2008**		**2/14/2008**		**2/14/2008**		**2/14/2008**		**2/14/2008**		**2/6/2008**		**2/6/2008**		**2/6/2008**		**2/6/2008**		**6/17/2008**		**6/17/2008**	
Aluminum	*76,000*		5700		4600		5900		3700		11000		NA		NA		NA		NA		NA		NA
Antimony	*31*	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5		0.6		0.8		1.3	U	0.5	U	0.5	U	0.5
Arsenic	*0.39 (12*)*		3.9		1.8		3		1.9		4.4		1.8		6.9		4.5		3.4		11		9.7
Barium	*15,000*		38		29		33		25		72		NA		NA		NA		NA		NA		NA
Beryllium	*160*	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5
Cadmium	*70*	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5		0.6		17		5.5	U	0.5		5.7		7
Chromium	*280*		11		21		11		15		16		5.4		100		57		31		71		43
Cobalt	*23*		10		3.1		4.8		2.4		9.4		NA		NA		NA		NA		NA		NA
Copper	*3,100*		16		5.2		15		22		14		310		2700		300		18		270		120
Iron	*55,000*		14,000		5,600		12,000		6,900		16,000		NA		NA		NA		NA		NA		NA
Lead	*400*		18		2.9		28		74		9		220		**610**		260		130		**1000**		**910**
Manganese	*1,800*		430		170		310		130		380		NA		NA		NA		NA		NA		NA
Mercury	*6.7*	U	0.1	U	0.1	U	0.1		0.1	U	0.1	U	0.1		1.6		4.8	U	0.1		0.4		0.7
Nickel	*1,600*		19		17		13		8.9		18		5.1		76		360		18		24		26
Selenium	*390*	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5		1.1		0.6
Silver	*390*		0.6	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5		1.1	U	0.5	U	0.5	U	0.5
Thallium	*5.1*	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5
Tin	*47,000*		9.8		16		12		14		20		NA		NA		NA		NA		NA		NA
Vanadium	*390*		40		16		44		95		40		NA		NA		NA		NA		NA		NA
Zinc	*23,000*	U	2	U	2	U	2	U	2	U	2		210		1400		430		270		1500		1600

Notes:
* = The VT background concentration is 12 mg/kg
U = Not detected above reporting limit shown.
NA = Not Analyzed.
Bold = Exceeds Residential PRG.
Black cell = Exceeds Industrial PRG.
RPD = Relative percent difference
K:\1-1470-13\CAP\052610 table

Table 3. Analytical Results: Soil- VOCs

Former Fonda Group Facility, St. Albans, VT

JCO Project #1-1470-13

Sample ID	Federal/VT		T1-Bott		T2-Bott		T5-Top		T-5 Dup		MW-1		MW-1		MW-2		MW-2		MW-3		MW-3	
Sample Depth	RSLs		3'		4'		0-0.5'		0-0.5'		2'		27'		0-1'		10'		6.5'		15'	
Sampling Date	Resid.	Indust.	2/6/2005		2/6/2008		2/6/2008		2/6/2008		2/7/2008		2/7/2008		2/7/2008		2/7/2008		2/7/2008		2/7/2008	
Units	(mg/kg)	(mg/kg)	(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)	
Dichlorodifluoromethane	180	780	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2
Chloromethane	120.0	500.0	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2
Vinyl Chloride	0.06 (BLD)	1.70	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Bromomethane	7.3	32	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2
Chloroethane	None	None	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2
Trichlorofluoromethane	790	3,400	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Diethyl Ether (Ethyl ether)	16,000	200,000	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Acetone	61,000	630,000	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
1,1-Dichloroethene	240	1,100	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Methylene chloride	11	53	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Carbon Disulfide	820	3,700	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Methyl-t-Butyl Ether	43	220	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
trans-1,2-Dichloroethene	69	230	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
1,1-Dichloroethane	3.3	17	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
2,2-Dichloropropane	None	None	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
cis-1,2-Dichloroethene	780	10,000	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
2-Butanone (MEK)	28,000	200,000	U	0.6	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5
Bromochloromethane	None	None	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Tetrahydrofuran (THF)	None	None	U	0.6	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5
Chloroform	0.29	1.50	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
1,1,1-Trichloroethane	8,700	38,000	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Carbon Tetrachloride	0.61	3.00	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
1,1-Dichloropropene	None	None	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Benzene	1.10	5.40	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
1,2-Dichloroethane	0.43	2.20	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Trichloroethene	2.8	14.0	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
1,2-Dichloropropane	0.89	4.50	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Dibromomethane	25	110	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Bromodichloromethane	0.27	1.40	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
4-Methyl-2-pentanone	5,300	53,000	U	0.6	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5
cis-1,3-Dichloropropene	1.70	1.80	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Toluene	5,000	45,000	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
trans-1,3-Dichloropropene	None	None	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
1,1,2-Trichloroethane	1.10	5.30	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
2-Hexanone	210.00	1,400.00	U	0.6	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5
Tetrachloroethene	0.55	2.60	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
1,3-Dichloropropane	1600	20,000	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Dibromochloromethane	0.68	3.3	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05

Notes:
U = Not detected above reporting limit shown.
NA = Not Analyzed.
Bold = Exceeds Residential PRG.
Black cell = Exceeds Industrial PRG.
RPD = Relative percent difference

Table 3. Analytical Results: Soil- VOCs

Former Fonda Group Facility, St. Albans, VT

JCO Project #1-1470-13

Sample ID	Federal/VT		T1-Bott		T2-Bott		T5-Top		T-5 Dup		MW-1		MW-1		MW-2		MW-2		MW-3		MW-3	
Sample Depth	RSLs		3'		4'		0-0.5'		0-0.5'		2'		27'		0-1'		10'		6.5'		15'	
Sampling Date	Resid.	Indust.	2/6/2005		2/6/2008		2/6/2008		2/6/2008		2/7/2008		2/7/2008		2/7/2008		2/7/2008		2/7/2008		2/7/2008	
Units	(mg/kg)	(mg/kg)	(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)	
1,2-Dibromoethane	0.01 (BLD)	0.07 (BLD)	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Chlorobenzene	290	1,400	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
1,1,1,2-Tetrachloroethane	1.9	9.3	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Ethylbenzene	5	27	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Xylene (m,p)	3,400	17,000	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Xylene (o)	3,800	19,000	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Styrene	6,300	36,000	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Bromoform	61	220	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Isopropylbenzene	2,100	11,000	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Bromobenzene	300	1,800	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
1,1,2,2-Tetrachloroethane	0.56	2.80	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
1,2,3-Trichloropropane	0.005 (BLD)	3.3	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
n-Propylbenzene	3,400	21,000	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
2-Chlorotoluene	1,600	20,000	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
4-Chlorotoluene	5,500	72,000	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
1,3,5-Trimethylbenzene	780	10,000	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
tert-Butylbenzene	None	None	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
1,2,4-Trimethylbenzene	62	260	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
sec-Butylbenzene	None	None	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
1,3-Dichlorobenzene	6.1	62	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
4-Isopropyltoluene	None	None	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
1,4-Dichlorobenzene	2.4	12.0	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
1,2-Dichlorobenzene	1,900	9,800	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
n-Butylbenzene	None	None	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
1,2-Dibromo-3-Chloropropane	2	2	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
1,2,4-Trichlorobenzene	22	99	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Hexachlorobutadiene	6.2	22	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Naphthalene	3.6	18	U	0.4	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3
1,2,3-Trichlorobenzene	None	None	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05

Notes:

U = Not detected above reporting limit shown.

NA = Not Analyzed.

Bold = Exceeds Residential PRG.

Black cell = Exceeds Industrial PRG.

RPD = Relative percent difference

Table 3. Analytical Results: Soil- VOCs

Former Fonda Group Facility, St. Albans, VT

JCO Project #1-1470-13

Sample ID	Federal/VT		MW-4		MW-4		MW-5		MW-5		MW-6		MW-6		MW-7		MW-7		MW-8	
Sample Depth	RSLs		0-1'		4.5'		0-1'		7'		5.3'		11.8'		6'		11'		1'	
Sampling Date	Resid.	Indust.	2/8/2008		2/8/2008		2/8/2008		2/8/2008		2/8/2008		2/8/2008		2/7/2008		2/7/2008		2/8/2008	
Units	(mg/kg)	(mg/kg)	(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)	
Dichlorodifluoromethane	180	780	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2
Chloromethane	120.0	500.0	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2
Vinyl Chloride	0.06 (BLD)	1.70	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Bromomethane	7.3	32	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2
Chloroethane	None	None	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2
Trichlorofluoromethane	790	3,400	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Diethyl Ether (Ethyl ether)	16,000	200,000	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
Acetone	61,000	630,000	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
1,1-Dichloroethene	240	1,100	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
Methylene chloride	11	53	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Carbon Disulfide	820	3,700	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Methyl-t-Butyl Ether	43	220	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
trans-1,2-Dichloroethene	69	230	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
1,1-Dichloroethane	3.3	17	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
2,2-Dichloropropane	None	None	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
cis-1,2-Dichloroethene	780	10,000	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
2-Butanone (MEK)	28,000	200,000	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5
Bromochloromethane	None	None	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
Tetrahydrofuran (THF)	None	None	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5
Chloroform	0.29	1.50	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
1,1,1-Trichloroethane	8,700	38,000	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
Carbon Tetrachloride	0.61	3.00	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
1,1-Dichloropropene	None	None	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
Benzene	1.10	5.40	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
1,2-Dichloroethane	0.43	2.20	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
Trichloroethene	2.8	14.0		0.19		0.17	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
1,2-Dichloropropane	0.89	4.50	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
Dibromomethane	25	110	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
Bromodichloromethane	0.27	1.40	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
4-Methyl-2-pentanone	5,300	53,000	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5
cis-1,3-Dichloropropene	1.70	1.80	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
Toluene	5,000	45,000	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
trans-1,3-Dichloropropene	None	None	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
1,1,2-Trichloroethane	1.10	5.30	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
2-Hexanone	210.00	1,400.00	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5
Tetrachloroethene	0.55	2.60	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
1,3-Dichloropropane	1600	20,000	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
Dibromochloromethane	0.68	3.3	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05

Notes:
U = Not detected above reporting limit shown.
NA = Not Analyzed.
Bold = Exceeds Residential PRG.
Black cell = Exceeds Industrial PRG.
RPD = Relative percent difference

Table 3. Analytical Results: Soil- VOCs
Former Fonda Group Facility, St. Albans, VT
JCO Project #1-1470-13

Sample ID	Federal/VT		MW-4		MW-4		MW-5		MW-5		MW-6		MW-6		MW-7		MW-7		MW-8	
Sample Depth	RSLs		0-1'		4.5'		0-1'		7'		5.3'		11.8'		6'		11'		1'	
Sampling Date	Resid.	Indust.	2/8/2008		2/8/2008		2/8/2008		2/8/2008		2/8/2008		2/8/2008		2/7/2008		2/7/2008		2/8/2008	
Units	(mg/kg)	(mg/kg)	(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)	
1,2-Dibromoethane	0.01 (BLD)	0.07 (BLD)	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
Chlorobenzene	290	1,400	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
1,1,1,2-Tetrachloroethane	1.9	9.3	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
Ethylbenzene	5	27	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
Xylene (m,p)	3,400	17,000	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
Xylene (o)	3,800	19,000	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
Styrene	6,300	36,000	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
Bromoform	61	220	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
Isopropylbenzene	2,100	11,000	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
Bromobenzene	300	1,800	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
1,1,2,2-Tetrachloroethane	0.56	2.80	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
1,2,3-Trichloropropane	0.005 (BLD)	3.3	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
n-Propylbenzene	3,400	21,000	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
2-Chlorotoluene	1,600	20,000	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
4-Chlorotoluene	5,500	72,000	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
1,3,5-Trimethylbenzene	780	10,000	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
tert-Butylbenzene	None	None	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
1,2,4-Trimethylbenzene	62	260	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
sec-Butylbenzene	None	None	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
1,3-Dichlorobenzene	6.1	62	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
4-Isopropyltoluene	None	None	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
1,4-Dichlorobenzene	2.4	12.0	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
1,2-Dichlorobenzene	1,900	9,800	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
n-Butylbenzene	None	None	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
1,2-Dibromo-3-Chloropropane	2	2	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
1,2,4-Trichlorobenzene	22	99	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
Hexachlorobutadiene	6.2	22	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05
Naphthalene	3.6	18	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3
1,2,3-Trichlorobenzene	None	None	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05	U	0.05	U	0.05

Notes:
U = Not detected above reporting limit shown.
NA = Not Analyzed.
Bold = Exceeds Residential PRG.
Black cell = Exceeds Industrial PRG.
RPD = Relative percent difference

Table 3. Analytical Results: Soil- VOCs

Former Fonda Group Facility, St. Albans, VT

JCO Project #1-1470-13

Sample ID	Federal/VT		MW-8		MW-9		MW-9		MW-10		MW-10		MW-11		MW-11		MW-11		B Drain	
Sample Depth	RSLs		5'		5'		10'		1'		6'		2'		6'		6' Duplicate		0-0.5'	
Sampling Date	Resid.	Indust.	2/8/2008		2/8/2008		2/8/2008		2/11/2008		2/11/2008		2/11/2008		2/11/2008		2/11/2008		2/6/2008	
Units	(mg/kg)	(mg/kg)	(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)	
Dichlorodifluoromethane	180	780	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.4
Chloromethane	120.0	500.0	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.4
Vinyl Chloride	0.06 (BLD)	1.70	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.2
Bromomethane	7.3	32	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.4
Chloroethane	None	None	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.4
Trichlorofluoromethane	790	3,400	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.2
Diethyl Ether (Ethyl ether)	16,000	200,000	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
Acetone	61,000	630,000	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	4
1,1-Dichloroethene	240	1,100	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
Methylene chloride	11	53	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.2
Carbon Disulfide	820	3,700	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.2
Methyl-t-Butyl Ether	43	220	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.2
trans-1,2-Dichloroethene	69	230	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
1,1-Dichloroethane	3.3	17	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
2,2-Dichloropropane	None	None	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
cis-1,2-Dichloroethene	780	10,000	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
2-Butanone (MEK)	28,000	200,000	U	0.5	U	0.6	U	0.5	U	0.5	U	0.5	U	0.5	U	0.6	U	0.5	U	0.9
Bromochloromethane	None	None	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
Tetrahydrofuran (THF)	None	None	U	0.5	U	0.6	U	0.5	U	0.5	U	0.5	U	0.5	U	0.6	U	0.5	U	0.9
Chloroform	0.29	1.50	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
1,1,1-Trichloroethane	8,700	38,000	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
Carbon Tetrachloride	0.61	3.00	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
1,1-Dichloropropene	None	None	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
Benzene	1.10	5.40	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
1,2-Dichloroethane	0.43	2.20	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
Trichloroethene	2.8	14.0	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
1,2-Dichloropropane	0.89	4.50	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
Dibromomethane	25	110	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
Bromodichloromethane	0.27	1.40	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
4-Methyl-2-pentanone	5,300	53,000	U	0.5	U	0.6	U	0.5	U	0.5	U	0.5	U	0.5	U	0.6	U	0.5	U	0.9
cis-1,3-Dichloropropene	1.70	1.80	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
Toluene	5,000	45,000	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
trans-1,3-Dichloropropene	None	None	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
1,1,2-Trichloroethane	1.10	5.30	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
2-Hexanone	210.00	1,400.00	U	0.5	U	0.6	U	0.5	U	0.5	U	0.5	U	0.5	U	0.6	U	0.5	U	0.9
Tetrachloroethene	0.55	2.60	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
1,3-Dichloropropane	1600	20,000	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
Dibromochloromethane	0.68	3.3	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09

Notes:

U = Not detected above reporting limit shown.

NA = Not Analyzed.

Bold = Exceeds Residential PRG.

Black cell = Exceeds Industrial PRG.

RPD = Relative percent difference

Table 3. Analytical Results: Soil- VOCs
Former Fonda Group Facility, St. Albans, VT
JCO Project #1-1470-13

Sample ID	Federal/VT		MW-8		MW-9		MW-9		MW-10		MW-10		MW-11		MW-11		MW-11		B Drain	
Sample Depth	RSLs		5'		5'		10'		1'		6'		2'		6'		6' Duplicate		0-0.5'	
Sampling Date	Resid.	Indust.	2/8/2008		2/8/2008		2/8/2008		2/11/2008		2/11/2008		2/11/2008		2/11/2008		2/11/2008		2/6/2008	
Units	(mg/kg)	(mg/kg)	(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)	
1,2-Dibromoethane	0.01 (BLD)	0.07 (BLD)	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
Chlorobenzene	290	1,400	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
1,1,1,2-Tetrachloroethane	1.9	9.3	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
Ethylbenzene	5	27	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
Xylene (m,p)	3,400	17,000	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
Xylene (o)	3,800	19,000	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
Styrene	6,300	36,000	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
Bromoform	61	220	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
Isopropylbenzene	2,100	11,000	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
Bromobenzene	300	1,800	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
1,1,2,2-Tetrachloroethane	0.56	2.80	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
1,2,3-Trichloropropane	0.005 (BLD)	3.3	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
n-Propylbenzene	3,400	21,000	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
2-Chlorotoluene	1,600	20,000	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
4-Chlorotoluene	5,500	72,000	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
1,3,5-Trimethylbenzene	780	10,000	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
tert-Butylbenzene	None	None	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
1,2,4-Trimethylbenzene	62	260	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
sec-Butylbenzene	None	None	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
1,3-Dichlorobenzene	6.1	62	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
4-Isopropyltoluene	None	None	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
1,4-Dichlorobenzene	2.4	12.0	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
1,2-Dichlorobenzene	1,900	9,800	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05		0.11
n-Butylbenzene	None	None	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
1,2-Dibromo-3-Chloropropane	2	2	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
1,2,4-Trichlorobenzene	22	99	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
Hexachlorobutadiene	6.2	22	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09
Naphthalene	3.6	18	U	0.3	U	0.4	U	0.3	U	0.3	U	0.3	U	0.3	U	0.4	U	0.3	U	0.5
1,2,3-Trichlorobenzene	None	None	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.05	U	0.09

Notes:
U = Not detected above reporting limit shown.
NA = Not Analyzed.
Bold = Exceeds Residential PRG.
Black cell = Exceeds Industrial PRG.
RPD = Relative percent difference

Table 3. Analytical Results: Soil- VOCs

Former Fonda Group Facility, St. Albans, VT

JCO Project #1-1470-13

Sample ID	Federal/VT		StorageShed		Trip Blank1		Trip Blank2		MW-4 Floor		SC-1		SC-2		SC-2		SC-3		SC-3	
Sample Depth	RSLs		0.5-1'						Drain		0.5-1.5'		0.5-1.5'		3-4.8'		0.5-1.5'		3-3.5'	
Sampling Date	Resid.	Indust.	2/6/2008		2/6/2008		2/7/2008		6/17/2008		6/17/2008		6/17/2008		6/18/2008		6/17/2008		6/18/2008	
Units	(mg/kg)	(mg/kg)	(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)	
Dichlorodifluoromethane	180	780	U	0.3	U	0.2	U	0.2	U	0.2	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Chloromethane	120.0	500.0	U	0.3	U	0.2	U	0.2	U	0.2	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Vinyl Chloride	0.06 (BLD)	1.70	U	0.2	U	0.1	U	0.1	U	0.2	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Bromomethane	7.3	32	U	0.3	U	0.2	U	0.2	U	0.2	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Chloroethane	None	None	U	0.3	U	0.2	U	0.2	U	0.2	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Trichlorofluoromethane	790	3,400	U	0.2	U	0.1	U	0.1	U	0.2	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Diethyl Ether (Ethyl ether)	16,000	200,000	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
Acetone	61,000	630,000	U	3	U	2	U	2		NA		NA		NA		NA		NA		NA
1,1-Dichloroethene	240	1,100	U	0.08	U	0.05	U	0.05	U	0.09	U	0.06	U	0.06	U	0.05	U	0.05	U	0.05
Methylene chloride	11	53	U	0.2	U	0.1	U	0.1	U	0.2	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Carbon Disulfide	820	3,700	U	0.2	U	0.1	U	0.1		NA		NA		NA		NA		NA		NA
Methyl-t-Butyl Ether	43	220	U	0.2	U	0.1	U	0.1		NA		NA		NA		NA		NA		NA
trans-1,2-Dichloroethene	69	230	U	0.08	U	0.05	U	0.05	U	0.09	U	0.06	U	0.06	U	0.05	U	0.05	U	0.05
1,1-Dichloroethane	3.3	17	U	0.08	U	0.05	U	0.05	U	0.09	U	0.06	U	0.06	U	0.05	U	0.05	U	0.05
2,2-Dichloropropane	None	None	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
cis-1,2-Dichloroethene	780	10,000	U	0.08	U	0.05	U	0.05	U	0.09	U	0.06	U	0.06	U	0.05	U	0.05	U	0.05
2-Butanone (MEK)	28,000	200,000	U	0.8	U	0.5	U	0.5		NA		NA		NA		NA		NA		NA
Bromochloromethane	None	None	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
Tetrahydrofuran (THF)	None	None	U	0.8	U	0.5	U	0.5		NA		NA		NA		NA		NA		NA
Chloroform	0.29	1.50	U	0.08	U	0.05	U	0.05	U	0.09	U	0.06	U	0.06	U	0.05	U	0.05	U	0.05
1,1,1-Trichloroethane	8,700	38,000	U	0.08	U	0.05	U	0.05	U	0.09	U	0.06	U	0.06	U	0.05	U	0.05	U	0.05
Carbon Tetrachloride	0.61	3.00	U	0.08	U	0.05	U	0.05	U	0.09	U	0.06	U	0.06	U	0.05	U	0.05	U	0.05
1,1-Dichloropropene	None	None	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
Benzene	1.10	5.40	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
1,2-Dichloroethane	0.43	2.20	U	0.08	U	0.05	U	0.05	U	0.09	U	0.06	U	0.06	U	0.05	U	0.05	U	0.05
Trichloroethene	2.8	14.0	U	0.08	U	0.05	U	0.05	U	0.09		0.37		0.39		0.75		0.18		0.4
1,2-Dichloropropane	0.89	4.50	U	0.08	U	0.05	U	0.05	U	0.09	U	0.06	U	0.06	U	0.05	U	0.05	U	0.05
Dibromomethane	25	110	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
Bromodichloromethane	0.27	1.40	U	0.08	U	0.05	U	0.05	U	0.09	U	0.06	U	0.06	U	0.05	U	0.05	U	0.05
4-Methyl-2-pentanone	5,300	53,000	U	0.8	U	0.5	U	0.5		NA		NA		NA		NA		NA		NA
cis-1,3-Dichloropropene	1.70	1.80	U	0.08	U	0.05	U	0.05	U	0.09	U	0.06	U	0.06	U	0.05	U	0.05	U	0.05
Toluene	5,000	45,000	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
trans-1,3-Dichloropropene	None	None	U	0.08	U	0.05	U	0.05	U	0.09	U	0.06	U	0.06	U	0.05	U	0.05	U	0.05
1,1,2-Trichloroethane	1.10	5.30	U	0.08	U	0.05	U	0.05	U	0.09	U	0.06	U	0.06	U	0.05	U	0.05	U	0.05
2-Hexanone	210.00	1,400.00	U	0.8	U	0.5	U	0.5		NA		NA		NA		NA		NA		NA
Tetrachloroethene	0.55	2.60	U	0.08	U	0.05	U	0.05	U	0.09	U	0.06	U	0.06	U	0.05	U	0.05	U	0.05
1,3-Dichloropropane	1600	20,000	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
Dibromochloromethane	0.68	3.3	U	0.08	U	0.05	U	0.05	U	0.09	U	0.06	U	0.06	U	0.05	U	0.05	U	0.05

Notes:
U = Not detected above reporting limit shown.
NA = Not Analyzed.
Bold = Exceeds Residential PRG.
Black cell = Exceeds Industrial PRG.
RPD = Relative percent difference

Table 3. Analytical Results: Soil- VOCs
Former Fonda Group Facility, St. Albans, VT
JCO Project #1-1470-13

Sample ID	Federal/VT		StorageShed		Trip Blank1		Trip Blank2		MW-4 Floor		SC-1		SC-2		SC-2		SC-3		SC-3	
Sample Depth	RSLs		0.5-1'						Drain		0.5-1.5'		0.5-1.5'		3-4.8'		0.5-1.5'		3-3.5'	
Sampling Date	Resid.	Indust.	2/6/2008		2/6/2008		2/7/2008		6/17/2008		6/17/2008		6/17/2008		6/18/2008		6/17/2008		6/18/2008	
Units	(mg/kg)	(mg/kg)	(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)	
1,2-Dibromoethane	0.01 (BLD)	0.07 (BLD)	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
Chlorobenzene	290	1,400	U	0.08	U	0.05	U	0.05	U	0.09	U	0.06	U	0.06	U	0.05	U	0.05	U	0.05
1,1,1,2-Tetrachloroethane	1.9	9.3	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
Ethylbenzene	5	27	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
Xylene (m,p)	3,400	17,000	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
Xylene (o)	3,800	19,000	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
Styrene	6,300	36,000	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
Bromoform	61	220	U	0.08	U	0.05	U	0.05	U	0.09	U	0.06	U	0.06	U	0.05	U	0.05	U	0.05
Isopropylbenzene	2,100	11,000	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
Bromobenzene	300	1,800	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
1,1,2,2-Tetrachloroethane	0.56	2.80	U	0.08	U	0.05	U	0.05	U	0.09	U	0.06	U	0.06	U	0.05	U	0.05	U	0.05
1,2,3-Trichloropropane	0.005 (BLD)	3.3	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
n-Propylbenzene	3,400	21,000	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
2-Chlorotoluene	1,600	20,000	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
4-Chlorotoluene	5,500	72,000	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
1,3,5-Trimethylbenzene	780	10,000	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
tert-Butylbenzene	None	None	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
1,2,4-Trimethylbenzene	62	260	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
sec-Butylbenzene	None	None	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
1,3-Dichlorobenzene	6.1	62	U	0.08	U	0.05	U	0.05	U	0.09	U	0.06	U	0.06	U	0.05	U	0.05	U	0.05
4-Isopropyltoluene	None	None	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
1,4-Dichlorobenzene	2.4	12.0	U	0.08	U	0.05	U	0.05	U	0.09	U	0.06	U	0.06	U	0.05	U	0.05	U	0.05
1,2-Dichlorobenzene	1,900	9,800	U	0.08	U	0.05	U	0.05	U	0.09	U	0.06	U	0.06	U	0.05	U	0.05	U	0.05
n-Butylbenzene	None	None	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
1,2-Dibromo-3-Chloropropane	2	2	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
1,2,4-Trichlorobenzene	22	99	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
Hexachlorobutadiene	6.2	22	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA
Naphthalene	3.6	18	U	0.5	U	0.3	U	0.3		NA		NA		NA		NA		NA		NA
1,2,3-Trichlorobenzene	None	None	U	0.08	U	0.05	U	0.05		NA		NA		NA		NA		NA		NA

Notes:
U = Not detected above reporting limit shown.
NA = Not Analyzed.
Bold = Exceeds Residential PRG.
Black cell = Exceeds Industrial PRG.
RPD = Relative percent difference

Table 3. Analytical Results: Soil- VOCs

Former Fonda Group Facility, St. Albans, VT

JCO Project #1-1470-13

Sample ID	Federal/VT		SC-4		SC-4-Dup			SC-4		SC-5		SC-6		SC-7		SC-7		SC-8		SC-9	
Sample Depth	RSLs		0.5-1.5'		0.5-1.5'		RPD	3-4.3'		0.5-1.5'		0.5-1.5'		0.5-1.5'		3-4.1'		0.5-1.5'		2.5-3.5'	
Sampling Date	Resid.	Indust.	6/17/2008		6/17/2008			6/18/2008		6/17/2008		6/17/2008		6/17/2008		6/18/2008		6/17/2008		8/14/2008	
Units	(mg/kg)	(mg/kg)	(mg/kg)		(mg/kg)			(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)	
Dichlorodifluoromethane	180	780	U	0.1	U	0.1	0%	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Chloromethane	120.0	500.0	U	0.1	U	0.1	0%	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Vinyl Chloride	0.06 (BLD)	1.70	U	0.1	U	0.1	0%	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Bromomethane	7.3	32	U	0.1	U	0.1	0%	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Chloroethane	None	None	U	0.1	U	0.1	0%	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Trichlorofluoromethane	790	3,400	U	0.1	U	0.1	0%	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Diethyl Ether (Ethyl ether)	16,000	200,000		NA		NA			NA		NA		NA		NA		NA		NA		NA
Acetone	61,000	630,000		NA		NA			NA		NA		NA		NA		NA		NA		NA
1,1-Dichloroethene	240	1,100	U	0.06	U	0.05	18%	U	0.06	U	0.07	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05
Methylene chloride	11	53	U	0.1	U	0.1	0%	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Carbon Disulfide	820	3,700		NA		NA			NA		NA		NA		NA		NA		NA		NA
Methyl-t-Butyl Ether	43	220		NA		NA			NA		NA		NA		NA		NA		NA		NA
trans-1,2-Dichloroethene	69	230	U	0.06	U	0.05	18%	U	0.06	U	0.07	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05
1,1-Dichloroethane	3.3	17	U	0.06	U	0.05	18%	U	0.06	U	0.07	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05
2,2-Dichloropropane	None	None		NA		NA			NA		NA		NA		NA		NA		NA		NA
cis-1,2-Dichloroethene	780	10,000	U	0.06	U	0.05	18%	U	0.06	U	0.07	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05
2-Butanone (MEK)	28,000	200,000		NA		NA			NA		NA		NA		NA		NA		NA		NA
Bromochloromethane	None	None		NA		NA			NA		NA		NA		NA		NA		NA		NA
Tetrahydrofuran (THF)	None	None		NA		NA			NA		NA		NA		NA		NA		NA		NA
Chloroform	0.29	1.50	U	0.06	U	0.05	18%	U	0.06	U	0.07	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05
1,1,1-Trichloroethane	8,700	38,000	U	0.06	U	0.05	18%	U	0.06	U	0.07	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05
Carbon Tetrachloride	0.61	3.00	U	0.06	U	0.05	18%	U	0.06	U	0.07	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05
1,1-Dichloropropene	None	None		NA		NA			NA		NA		NA		NA		NA		NA		NA
Benzene	1.10	5.40		NA		NA			NA		NA		NA		NA		NA		NA		NA
1,2-Dichloroethane	0.43	2.20	U	0.06	U	0.05	18%	U	0.06	U	0.07	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05
Trichloroethene	2.8	14.0		0.2		0.16	22%		0.19		**2.9**		0.37	U	0.05	U	0.05		0.26		0.46
1,2-Dichloropropane	0.89	4.50	U	0.06	U	0.05	18%	U	0.06	U	0.07	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05
Dibromomethane	25	110		NA		NA			NA		NA		NA		NA		NA		NA		NA
Bromodichloromethane	0.27	1.40	U	0.06	U	0.05	18%	U	0.06	U	0.07	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05
4-Methyl-2-pentanone	5,300	53,000		NA		NA			NA		NA		NA		NA		NA		NA		NA
cis-1,3-Dichloropropene	1.70	1.80	U	0.06	U	0.05	18%	U	0.06	U	0.07	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05
Toluene	5,000	45,000		NA		NA			NA		NA		NA		NA		NA		NA		NA
trans-1,3-Dichloropropene	None	None	U	0.06	U	0.05	18%	U	0.06	U	0.07	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05
1,1,2-Trichloroethane	1.10	5.30	U	0.06	U	0.05	18%	U	0.06	U	0.07	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05
2-Hexanone	210.00	1,400.00		NA		NA			NA		NA		NA		NA		NA		NA		NA
Tetrachloroethene	0.55	2.60	U	0.06	U	0.05	18%	U	0.06	U	0.07	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05
1,3-Dichloropropane	1600	20,000		NA		NA			NA		NA		NA		NA		NA		NA		NA
Dibromochloromethane	0.68	3.3	U	0.06	U	0.05	18%	U	0.06	U	0.07	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05

Notes:

U = Not detected above reporting limit shown.

NA = Not Analyzed.

Bold = Exceeds Residential PRG.

Black cell = Exceeds Industrial PRG.

RPD = Relative percent difference

Table 3. Analytical Results: Soil- VOCs

Former Fonda Group Facility, St. Albans, VT

JCO Project #1-1470-13

Sample ID	Federal/VT		SC-4		SC-4-Dup			SC-4		SC-5		SC-6		SC-7		SC-7		SC-8		SC-9	
Sample Depth	RSLs		0.5-1.5'		0.5-1.5'		RPD	3-4.3'		0.5-1.5'		0.5-1.5'		0.5-1.5'		3-4.1'		0.5-1.5'		2.5-3.5'	
Sampling Date	Resid.	Indust.	6/17/2008		6/17/2008			6/18/2008		6/17/2008		6/17/2008		6/17/2008		6/18/2008		6/17/2008		8/14/2008	
Units	(mg/kg)	(mg/kg)	(mg/kg)		(mg/kg)			(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)	
1,2-Dibromoethane	0.01 (BLD)	0.07 (BLD)		NA		NA			NA		NA		NA		NA		NA		NA		NA
Chlorobenzene	290	1,400	U	0.06	U	0.05	18%	U	0.06	U	0.07	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05
1,1,1,2-Tetrachloroethane	1.9	9.3		NA		NA			NA		NA		NA		NA		NA		NA		NA
Ethylbenzene	5	27		NA		NA			NA		NA		NA		NA		NA		NA		NA
Xylene (m,p)	3,400	17,000		NA		NA			NA		NA		NA		NA		NA		NA		NA
Xylene (o)	3,800	19,000		NA		NA			NA		NA		NA		NA		NA		NA		NA
Styrene	6,300	36,000		NA		NA			NA		NA		NA		NA		NA		NA		NA
Bromoform	61	220	U	0.06	U	0.05	18%	U	0.06	U	0.07	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05
Isopropylbenzene	2,100	11,000		NA		NA			NA		NA		NA		NA		NA		NA		NA
Bromobenzene	300	1,800		NA		NA			NA		NA		NA		NA		NA		NA		NA
1,1,2,2-Tetrachloroethane	0.56	2.80	U	0.06	U	0.05	18%	U	0.06	U	0.07	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05
1,2,3-Trichloropropane	0.005 (BLD)	3.3		NA		NA			NA		NA		NA		NA		NA		NA		NA
n-Propylbenzene	3,400	21,000		NA		NA			NA		NA		NA		NA		NA		NA		NA
2-Chlorotoluene	1,600	20,000		NA		NA			NA		NA		NA		NA		NA		NA		NA
4-Chlorotoluene	5,500	72,000		NA		NA			NA		NA		NA		NA		NA		NA		NA
1,3,5-Trimethylbenzene	780	10,000		NA		NA			NA		NA		NA		NA		NA		NA		NA
tert-Butylbenzene	None	None		NA		NA			NA		NA		NA		NA		NA		NA		NA
1,2,4-Trimethylbenzene	62	260		NA		NA			NA		NA		NA		NA		NA		NA		NA
sec-Butylbenzene	None	None		NA		NA			NA		NA		NA		NA		NA		NA		NA
1,3-Dichlorobenzene	6.1	62	U	0.06	U	0.05	18%	U	0.06	U	0.07	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05
4-Isopropyltoluene	None	None		NA		NA			NA		NA		NA		NA		NA		NA		NA
1,4-Dichlorobenzene	2.4	12.0	U	0.06	U	0.05	18%	U	0.06	U	0.07	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05
1,2-Dichlorobenzene	1,900	9,800	U	0.06	U	0.05	18%	U	0.06	U	0.07	U	0.06	U	0.05	U	0.05	U	0.05	U	0.05
n-Butylbenzene	None	None		NA		NA			NA		NA		NA		NA		NA		NA		NA
1,2-Dibromo-3-Chloropropane	2	2		NA		NA			NA		NA		NA		NA		NA		NA		NA
1,2,4-Trichlorobenzene	22	99		NA		NA			NA		NA		NA		NA		NA		NA		NA
Hexachlorobutadiene	6.2	22		NA		NA			NA		NA		NA		NA		NA		NA		NA
Naphthalene	3.6	18		NA		NA			NA		NA		NA		NA		NA		NA		NA
1,2,3-Trichlorobenzene	None	None		NA		NA			NA		NA		NA		NA		NA		NA		NA

Notes:
U = Not detected above reporting limit shown.
NA = Not Analyzed.
Bold = Exceeds Residential PRG.
Black cell = Exceeds Industrial PRG.
RPD = Relative percent difference

Table 3. Analytical Results: Soil- VOCs

Former Fonda Group Facility, St. Albans, VT

JCO Project #1-1470-13

Sample ID	Federal/VT		SC-9		SC-10		SC-10		SC-11		SC-12		SC-12		SC-12 Dup			SC-13	
Sample Depth	RSLs		7-7.8'		2.5-3.5'		7-8'		7-8'		2.5-3.5'		7-8'		7-8'		*RPD*	7-8'	
Sampling Date	Resid.	Indust.	8/14/2008		8/14/2008		8/14/2008		8/14/2008		8/14/2008		8/14/2008		8/14/2008			8/14/2008	
Units	(mg/kg)	(mg/kg)	(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)			(mg/kg)	
Dichlorodifluoromethane	180	780	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.2	U	0.1	*0%*	U	0.1
Chloromethane	120.0	500.0	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.2	U	0.1	*0%*	U	0.1
Vinyl Chloride	0.06 (BLD)	1.70	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.2	U	0.1	*0%*	U	0.1
Bromomethane	7.3	32	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.2	U	0.1	*0%*	U	0.1
Chloroethane	None	None	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.2	U	0.1	*0%*	U	0.1
Trichlorofluoromethane	790	3,400	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.2	U	0.1	*0%*	U	0.1
Diethyl Ether (Ethyl ether)	16,000	200,000		NA		NA		NA		NA		NA		NA		NA			NA
Acetone	61,000	630,000		NA		NA		NA		NA		NA		NA		NA			NA
1,1-Dichloroethene	240	1,100	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.09	U	0.05	*0%*	U	0.05
Methylene chloride	11	53	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.2	U	0.1	*0%*	U	0.1
Carbon Disulfide	820	3,700		NA		NA		NA		NA		NA		NA		NA			NA
Methyl-t-Butyl Ether	43	220		NA		NA		NA		NA		NA		NA		NA			NA
trans-1,2-Dichloroethene	69	230	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.09	U	0.05	*0%*	U	0.05
1,1-Dichloroethane	3.3	17	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.09	U	0.05	*0%*	U	0.05
2,2-Dichloropropane	None	None		NA		NA		NA		NA		NA	U	0.09		NA			NA
cis-1,2-Dichloroethene	780	10,000		0.09	U	0.05	U	0.05	U	0.05	U	0.05		0.35		0.17	*0%*	U	0.05
2-Butanone (MEK)	28,000	200,000		NA		NA		NA		NA		NA		NA		NA			NA
Bromochloromethane	None	None		NA		NA		NA		NA		NA		NA		NA			NA
Tetrahydrofuran (THF)	None	None		NA		NA		NA		NA		NA		NA		NA			NA
Chloroform	0.29	1.50	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.09	U	0.05	*0%*	U	0.05
1,1,1-Trichloroethane	8,700	38,000	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.09	U	0.05	*0%*	U	0.05
Carbon Tetrachloride	0.61	3.00	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.09	U	0.05	*0%*	U	0.05
1,1-Dichloropropene	None	None		NA		NA		NA		NA		NA		NA		NA			NA
Benzene	1.10	5.40		NA		NA		NA		NA		NA		NA		NA			NA
1,2-Dichloroethane	0.43	2.20	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.09	U	0.05	*0%*	U	0.05
Trichloroethene	2.8	14.0		**6.6**		0.33	U	0.05	U	0.05		0.59		**15**		**7.4**	*68%*	U	0.05
1,2-Dichloropropane	0.89	4.50	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.09	U	0.05	*0%*	U	0.05
Dibromomethane	25	110		NA		NA		NA		NA		NA		NA		NA			NA
Bromodichloromethane	0.27	1.40	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.09	U	0.05	*0%*	U	0.05
4-Methyl-2-pentanone	5,300	53,000		NA		NA		NA		NA		NA		NA		NA			NA
cis-1,3-Dichloropropene	1.70	1.80	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.09	U	0.05	*0%*	U	0.05
Toluene	5,000	45,000		NA		NA		NA		NA		NA		NA		NA			NA
trans-1,3-Dichloropropene	None	None	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.09	U	0.05	*0%*	U	0.05
1,1,2-Trichloroethane	1.10	5.30	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.09	U	0.05	*0%*	U	0.05
2-Hexanone	210.00	1,400.00		NA		NA		NA		NA		NA		NA		NA			NA
Tetrachloroethene	0.55	2.60	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.09	U	0.05	*0%*	U	0.05
1,3-Dichloropropane	1600	20,000		NA		NA		NA		NA		NA		NA		NA			NA
Dibromochloromethane	0.68	3.3	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.09	U	0.05	*0%*	U	0.05

Notes:

U = Not detected above reporting limit shown.

NA = Not Analyzed.

Bold = Exceeds Residential PRG.

Black cell = Exceeds Industrial PRG.

RPD = Relative percent difference

Table 3. Analytical Results: Soil- VOCs

Former Fonda Group Facility, St. Albans, VT

JCO Project #1-1470-13

Sample ID	Federal/VT		SC-9		SC-10		SC-10		SC-11		SC-12		SC-12		SC-12 Dup			SC-13	
Sample Depth	RSLs		7-7.8'		2.5-3.5'		7-8'		7-8'		2.5-3.5'		7-8'		7-8'		*RPD*	7-8'	
Sampling Date	Resid.	Indust.	8/14/2008		8/14/2008		8/14/2008		8/14/2008		8/14/2008		8/14/2008		8/14/2008			8/14/2008	
Units	(mg/kg)	(mg/kg)	(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)			(mg/kg)	
1,2-Dibromoethane	0.01 (BLD)	0.07 (BLD)		NA		NA		NA		NA		NA		NA		NA			NA
Chlorobenzene	290	1,400	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.09	U	0.05	*0%*	U	0.05
1,1,1,2-Tetrachloroethane	1.9	9.3		NA		NA		NA		NA		NA		NA		NA			NA
Ethylbenzene	5	27		NA		NA		NA		NA		NA		NA		NA			NA
Xylene (m,p)	3,400	17,000		NA		NA		NA		NA		NA		NA		NA			NA
Xylene (o)	3,800	19,000		NA		NA		NA		NA		NA		NA		NA			NA
Styrene	6,300	36,000		NA		NA		NA		NA		NA		NA		NA			NA
Bromoform	61	220	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.09	U	0.05	*0%*	U	0.05
Isopropylbenzene	2,100	11,000		NA		NA		NA		NA		NA		NA		NA			NA
Bromobenzene	300	1,800		NA		NA		NA		NA		NA		NA		NA			NA
1,1,2,2-Tetrachloroethane	0.56	2.80	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.09	U	0.05	*0%*	U	0.05
1,2,3-Trichloropropane	0.005 (BLD)	3.3		NA		NA		NA		NA		NA		NA		NA			NA
n-Propylbenzene	3,400	21,000		NA		NA		NA		NA		NA		NA		NA			NA
2-Chlorotoluene	1,600	20,000		NA		NA		NA		NA		NA		NA		NA			NA
4-Chlorotoluene	5,500	72,000		NA		NA		NA		NA		NA		NA		NA			NA
1,3,5-Trimethylbenzene	780	10,000		NA		NA		NA		NA		NA		NA		NA			NA
tert-Butylbenzene	None	None		NA		NA		NA		NA		NA		NA		NA			NA
1,2,4-Trimethylbenzene	62	260		NA		NA		NA		NA		NA		NA		NA			NA
sec-Butylbenzene	None	None		NA		NA		NA		NA		NA		NA		NA			NA
1,3-Dichlorobenzene	6.1	62	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.09	U	0.05	*0%*	U	0.05
4-Isopropyltoluene	None	None		NA		NA		NA		NA		NA		NA		NA			NA
1,4-Dichlorobenzene	2.4	12.0	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.09	U	0.05	*0%*	U	0.05
1,2-Dichlorobenzene	1,900	9,800	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.09	U	0.05	*0%*	U	0.05
n-Butylbenzene	None	None		NA		NA		NA		NA		NA		NA		NA			NA
1,2-Dibromo-3-Chloropropane	2	2		NA		NA		NA		NA		NA		NA		NA			NA
1,2,4-Trichlorobenzene	22	99		NA		NA		NA		NA		NA		NA		NA			NA
Hexachlorobutadiene	6.2	22		NA		NA		NA		NA		NA		NA		NA			NA
Naphthalene	3.6	18		NA		NA		NA		NA		NA		NA		NA			NA
1,2,3-Trichlorobenzene	None	None		NA		NA		NA		NA		NA		NA		NA			NA

Notes:
U = Not detected above reporting limit shown.
NA = Not Analyzed.
Bold = Exceeds Residential PRG.
Black cell = Exceeds Industrial PRG.
RPD = Relative percent difference

Table 3. Analytical Results: Soil- VOCs

Former Fonda Group Facility, St. Albans, VT

JCO Project #1-1470-13

Sample ID	Federal/VT		SC-14		SC-14		SC-15		SC-16		SCMW-12		CONV-FD		Trip Blank	
Sample Depth	RSLs		2.5-3.5'		7-8'		7-8'		7-8'		7-8'		0-3"			
Sampling Date	Resid.	Indust.	8/14/2008		8/14/2008		8/14/2008		8/14/2008		8/14/2008		8/14/2008		8/14/2008	
Units	(mg/kg)	(mg/kg)	(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)	
Dichlorodifluoromethane	180	780	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.2	U	0.1
Chloromethane	120.0	500.0	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.2	U	0.1
Vinyl Chloride	0.06 (BLD)	1.70	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.2	U	0.1
Bromomethane	7.3	32	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.2	U	0.1
Chloroethane	None	None	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.2	U	0.1
Trichlorofluoromethane	790	3,400	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.2	U	0.1
Diethyl Ether (Ethyl ether)	16,000	200,000		NA		NA		NA		NA		NA		NA		NA
Acetone	61,000	630,000		NA		NA		NA		NA		NA		NA		NA
1,1-Dichloroethene	240	1,100	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05
Methylene chloride	11	53	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.2	U	0.1
Carbon Disulfide	820	3,700		NA		NA		NA		NA		NA		NA		NA
Methyl-t-Butyl Ether	43	220		NA		NA		NA		NA		NA		NA		NA
trans-1,2-Dichloroethene	69	230	U	0.05		1.2	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05
1,1-Dichloroethane	3.3	17	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05
2,2-Dichloropropane	None	None		NA		NA		NA		NA		NA	U	0.1		NA
cis-1,2-Dichloroethene	780	10,000	U	0.05		1.5	U	0.05	U	0.05		0.14	U	0.1	U	0.05
2-Butanone (MEK)	28,000	200,000		NA		NA		NA		NA		NA		NA		NA
Bromochloromethane	None	None		NA		NA		NA		NA		NA		NA		NA
Tetrahydrofuran (THF)	None	None		NA		NA		NA		NA		NA		NA		NA
Chloroform	0.29	1.50	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.09	U	0.05
1,1,1-Trichloroethane	8,700	38,000	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	1	U	0.05
Carbon Tetrachloride	0.61	3.00	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05
1,1-Dichloropropene	None	None		NA		NA		NA		NA		NA		NA		NA
Benzene	1.10	5.40		NA		NA		NA		NA		NA		NA		NA
1,2-Dichloroethane	0.43	2.20	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.09	U	0.05
Trichloroethene	2.8	14.0		0.47		0.66	U	0.05	U	0.05		0.13	U	0.1	U	0.05
1,2-Dichloropropane	0.89	4.50	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05
Dibromomethane	25	110		NA		NA		NA		NA		NA		NA		NA
Bromodichloromethane	0.27	1.40	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05
4-Methyl-2-pentanone	5,300	53,000		NA		NA		NA		NA		NA		NA		NA
cis-1,3-Dichloropropene	1.70	1.80	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05
Toluene	5,000	45,000		NA		NA		NA		NA		NA		NA		NA
trans-1,3-Dichloropropene	None	None	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05
1,1,2-Trichloroethane	1.10	5.30	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05
2-Hexanone	210.00	1,400.00		NA		NA		NA		NA		NA		NA		NA
Tetrachloroethene	0.55	2.60	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05
1,3-Dichloropropane	1600	20,000		NA		NA		NA		NA		NA		NA		NA
Dibromochloromethane	0.68	3.3	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05

Notes:
U = Not detected above reporting limit shown.
NA = Not Analyzed.
Bold = Exceeds Residential PRG.
Black cell = Exceeds Industrial PRG.
RPD = Relative percent difference

Table 3. Analytical Results: Soil- VOCs
Former Fonda Group Facility, St. Albans, VT
JCO Project #1-1470-13

Sample ID	Federal/VT		SC-14		SC-14		SC-15		SC-16		SCMW-12		CONV-FD		Trip Blank	
Sample Depth	RSLs		2.5-3.5'		7-8'		7-8'		7-8'		7-8'		0-3"			
Sampling Date	Resid.	Indust.	8/14/2008		8/14/2008		8/14/2008		8/14/2008		8/14/2008		8/14/2008		8/14/2008	
Units	(mg/kg)	(mg/kg)	(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)	
1,2-Dibromoethane	0.01 (BLD)	0.07 (BLD)		NA		NA		NA		NA		NA		NA		NA
Chlorobenzene	290	1,400	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05
1,1,1,2-Tetrachloroethane	1.9	9.3		NA		NA		NA		NA		NA		NA		NA
Ethylbenzene	5	27		NA		NA		NA		NA		NA		NA		NA
Xylene (m,p)	3,400	17,000		NA		NA		NA		NA		NA		NA		NA
Xylene (o)	3,800	19,000		NA		NA		NA		NA		NA		NA		NA
Styrene	6,300	36,000		NA		NA		NA		NA		NA		NA		NA
Bromoform	61	220	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05
Isopropylbenzene	2,100	11,000		NA		NA		NA		NA		NA		NA		NA
Bromobenzene	300	1,800		NA		NA		NA		NA		NA		NA		NA
1,1,2,2-Tetrachloroethane	0.56	2.80	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05
1,2,3-Trichloropropane	0.005 (BLD)	3.3		NA		NA		NA		NA		NA		NA		NA
n-Propylbenzene	3,400	21,000		NA		NA		NA		NA		NA		NA		NA
2-Chlorotoluene	1,600	20,000		NA		NA		NA		NA		NA		NA		NA
4-Chlorotoluene	5,500	72,000		NA		NA		NA		NA		NA		NA		NA
1,3,5-Trimethylbenzene	780	10,000		NA		NA		NA		NA		NA		NA		NA
tert-Butylbenzene	None	None		NA		NA		NA		NA		NA		NA		NA
1,2,4-Trimethylbenzene	62	260		NA		NA		NA		NA		NA		NA		NA
sec-Butylbenzene	None	None		NA		NA		NA		NA		NA		NA		NA
1,3-Dichlorobenzene	6.1	62	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05
4-Isopropyltoluene	None	None		NA		NA		NA		NA		NA		NA		NA
1,4-Dichlorobenzene	2.4	12.0	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05
1,2-Dichlorobenzene	1,900	9,800	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.1	U	0.05
n-Butylbenzene	None	None		NA		NA		NA		NA		NA		NA		NA
1,2-Dibromo-3-Chloropropane	2	2		NA		NA		NA		NA		NA		NA		NA
1,2,4-Trichlorobenzene	22	99		NA		NA		NA		NA		NA		NA		NA
Hexachlorobutadiene	6.2	22		NA		NA		NA		NA		NA		NA		NA
Naphthalene	3.6	18		NA		NA		NA		NA		NA		NA		NA
1,2,3-Trichlorobenzene	None	None		NA		NA		NA		NA		NA		NA		NA

Notes:
U = Not detected above reporting limit shown.
NA = Not Analyzed.
Bold = Exceeds Residential PRG.
Black cell = Exceeds Industrial PRG.
RPD = Relative percent difference

Table 4. Analytical Results: Soil- SVOCs

Former Fonda Group Facility, St. Albans, VT

JCO Project #1-1470-13

Sample ID	Federal/VT		T5-Top		MW-1		MW-4		MW-4		MW-7		MW-8		PP-FD		Conv-FD	
Sample Depth	**RSLs**		**0-0.5'**		**24-28'**		**0-1'**		**0-1' Duplicate**		**0-1'**		**1'**		**0-0.5'**		**0-0.5'**	
Units	**(mg/kg)**	**(mg/kg)**	**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**	
Sample Date	**Resid.**	**Indust.**	**2/6/2008**		**2/7/2008**		**2/7/2008**		**2/7/2008**		**2/7/2008**		**2/8/2008**		**2/6/2008**		**2/6/2008**	
Phenol	18,000	180,000	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
2-Chlorophenol	390	5,100	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
2,4-Dichlorophenol	180	1,800	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
2,4,5-Trichlorophenol	6,100	62,000	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
2,4,6-Trichlorophenol	44.0	160.0	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
Pentachlorophenol	3.0	9.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	5.0		**70.0**
2-Nitrophenol	None	None	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
4-Nitrophenol	None	None	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
2,4-Dinitrophenol	120	1,200	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	5.0	U	10.0
2-Methylphenol (m-Cresol)	3,100	31,000	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
3/4-Methylphenol (o,p-Cresol	310	3,100	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
2,4-Dimethylphenol	1,200	12,000	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
4-Chloro-3-methylphenol	None	None	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
4,6-Dinitro-2-methylphenol	None	None	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	5.0	U	10.0
Benzoic Acid	240,000	2,500,000	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	5.0	U	10.0
N-Nitrosodimethylamine	0.0023*	0.034	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
N-Nitroso-di-n-propylamine	0.069*	0.25	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
N-nitrosodiphenylamine	99	350	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
bis (2-Chloroethyl) Ether	0.21	1.00	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
bis (2-chloroisopropyl)ether	None	None	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
bis (2-Chloroethoxy) methane	180	1,800	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
1,3-Dichlorobenzene	None	None	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
1,4-Dichlorobenzene	2.4	12.0	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	**3.0**
1,2-Dichlorobenzene	1,900	9,800	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
1,2,4-Trichlorobenzene	22	99	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
2-Chloronaphthalene	6,300	82,000	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
4-Chlorophenyl-phenylether	None	None	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
4-Bromophenyl-phenylether	None	None	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
Hexachloroethane	35	120	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
Hexachlorobutadiene	6.2	22.0	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
Hexachlorocyclopentadiene	370	3,700	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	5.0	U	10.0
Hexachlorobenzene	0.3	1.1	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
4-Chloroaniline	2.4	8.6	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	**3.0**
2-Nitroaniline	610	6,000	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
3-Nitroaniline	None	None	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0

Notes:
U = Not detected above reporting limit shown.
NA = Not Analyzed.
Bold = Exceeds Residential PRG.
Black cell = Exceeds Industrial PRG.
RPD = Relative percent difference

Table 4. Analytical Results: Soil- SVOCs

Former Fonda Group Facility, St. Albans, VT

JCO Project #1-1470-13

Sample ID	Federal/VT		T5-Top		MW-1		MW-4		MW-4		MW-7		MW-8		PP-FD		Conv-FD	
Sample Depth	RSLs		0-0.5'		24-28'		0-1'		0-1' Duplicate		0-1'		1'		0-0.5'		0-0.5'	
Units	(mg/kg)	(mg/kg)	(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)	
Sample Date	Resid.	Indust.	2/6/2008		2/7/2008		2/7/2008		2/7/2008		2/7/2008		2/8/2008		2/6/2008		2/6/2008	
4-Nitroaniline	24	86	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
Benzyl Alcohol	6,100	61,000	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
Nitrobenzene	4.8	24	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
Isophorone	510	1,800	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
2,4-Dinitrotoluene	1.6	5.5	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	**3.0**
2,6-Dinitrotoluene	61	620	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
Benzidine	0.0005*	0.0075*	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	1.0	U	3.0
3,3'-Dichlorobenzidene	1.1	3.8	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
Pyridine	78	1,000	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
Azobenzene	5.1	23	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
Carbazole	None	None	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
Dimethylphthalate	None	None	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
Diethylphthalate	49,000	490,000	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
Di-n-butylphthalate (Dibutyl p	6,100	62,000	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	1.0	U	3.0
Butylbenzylphthalate	260	910	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0		8.0
bis(2-Ethylhexyl)phthalate	35	120	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	6.0		21.0
Di-n-octylphthalate	None	None	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
Dibenzofuran	78	1,000	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
Naphthalene	3.6	18	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
2-Methylnaphthalene	None	None	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
Acenaphthylene	None	None	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
Acenaphthene	3,400	33,000	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
Fluorene	2,300	22,000	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0	U	3.0
Phenanthrene	None	None	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2		0.4	U	1.0		24.0
Anthracene	17,000	170,000	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1.0		6.0
Fluoranthene	2,300	22,000	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2		0.4	U	1.0		38.0
Pyrene	1,700	17,000	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2		0.3	U	1.0		21.0
Benzo(a)anthracene	0.15	2.10		0.06	U	0.02	U	0.02	U	0.02	U	0.02		**0.17**	U	0.10		**8.00**
Chrysene	15	210		0.06	U	0.02	U	0.02	U	0.02	U	0.02		0.16	U	0.10		10.00
Benzo(b)fluoranthene	0.15	2.10		0.06	U	0.02	U	0.02	U	0.02	U	0.02		0.15	U	0.10		**10.00**
Benzo(k)fluoranthene	1.5	21.0		0.04	U	0.02	U	0.02	U	0.02	U	0.02		0.13	U	0.10		**10.00**
Benzo(a)pyrene	0.015	0.210		**0.06**	U	**0.02**	U	**0.02**	U	**0.02**	U	**0.02**		**0.15**	U	**0.10**		**7.00**
Indeno(1,2,3-cd)pyrene	0.15	2.10		0.04	U	0.02	U	0.02	U	0.02	U	0.02		0.09	U	0.10	U	3.00
Dibenz(a,h)anthracene	0.015	0.210		**0.02**	U	**0.02**	U	**0.02**	U	**0.02**	U	**0.02**		**0.05**	U	**0.10**	U	3.00
Benzo(g,h,i)perylene	None	None		0.05	U	0.02	U	0.02	U	0.02	U	0.02		0.09	U	0.10		3.00

Notes:
U = Not detected above reporting limit shown.
NA = Not Analyzed.
Bold = Exceeds Residential PRG.
Black cell = Exceeds Industrial PRG.
RPD = Relative percent difference
K:\1-1470-13\CAP\052610 tables for CAP Fonda Data.xlsx 4 SVOCs- soil

Table 4. Analytical Results: Soil- SVOCs

Former Fonda Group Facility, St. Albans, VT

JCO Project #1-1470-13

Sample ID	Federal/VT		Storage Shed		CB-1		B Drain		PAH-1		PAH-2		PAH-3	
Sample Depth	RSLs		0.5-1'		0-0.5'		0-0.5'		0-0.5'		0-0.5'		0-0.5'	
Units	(mg/kg)	(mg/kg)	(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)	
Sample Date	Resid.	Indust.	2/6/2008		2/25/2008		2/6/2008		6/17/2008		6/17/2008		6/17/2008	
Phenol	18,000	180,000	U	0.2	U	0.2								
2-Chlorophenol	390	5,100	U	0.2	U	0.2								
2,4-Dichlorophenol	180	1,800	U	0.2	U	0.2								
2,4,5-Trichlorophenol	6,100	62,000	U	0.2	U	0.2								
2,4,6-Trichlorophenol	44.0	160.0	U	0.2	U	0.2								
Pentachlorophenol	3.0	9.0	U	1.0	U	1.0								
2-Nitrophenol	None	None	U	0.2	U	0.2								
4-Nitrophenol	None	None	U	0.2	U	0.2								
2,4-Dinitrophenol	120	1,200	U	1.0	U	1.0								
2-Methylphenol (m-Cresol)	3,100	31,000	U	0.2	U	0.2								
3/4-Methylphenol (o,p-Cresol	310	3,100	U	0.2		0.4								
2,4-Dimethylphenol	1,200	12,000	U	0.2	U	0.2								
4-Chloro-3-methylphenol	None	None	U	0.2	U	0.2								
4,6-Dinitro-2-methylphenol	None	None	U	1.0	U	1.0								
Benzoic Acid	240,000	2,500,000	U	1.0	U	1.0								
N-Nitrosodimethylamine	0.0023*	0.034	U	0.2	U	0.2								
N-Nitroso-di-n-propylamine	0.069*	0.25	U	0.2	U	0.2								
N-nitrosodiphenylamine	99	350	U	0.2	U	0.2								
bis (2-Chloroethyl) Ether	0.21	1.00	U	0.2	U	0.2								
bis (2-chloroisopropyl)ether	None	None	U	0.2	U	0.2								
bis (2-Chloroethoxy) methane	180	1,800	U	0.2	U	0.2								
1,3-Dichlorobenzene	None	None	U	0.2	U	0.2								
1,4-Dichlorobenzene	2.4	12.0	U	0.2	U	0.2								
1,2-Dichlorobenzene	1,900	9,800	U	0.2	U	0.2								
1,2,4-Trichlorobenzene	22	99	U	0.2	U	0.2								
2-Chloronaphthalene	6,300	82,000	U	0.2	U	0.2								
4-Chlorophenyl-phenylether	None	None	U	0.2	U	0.2								
4-Bromophenyl-phenylether	None	None	U	0.2	U	0.2								
Hexachloroethane	35	120	U	0.2	U	0.2								
Hexachlorobutadiene	6.2	22.0	U	0.2	U	0.2								
Hexachlorocyclopentadiene	370	3,700	U	1.0	U	1.0								
Hexachlorobenzene	0.3	1.1	U	0.2	U	0.2								
4-Chloroaniline	2.4	8.6	U	0.2	U	0.2								
2-Nitroaniline	610	6,000	U	0.2	U	0.2								
3-Nitroaniline	None	None	U	0.2	U	0.2								

Notes:
U = Not detected above reporting limit shown.
NA = Not Analyzed.
Bold = Exceeds Residential PRG.
Black cell = Exceeds Industrial PRG.
RPD = Relative percent difference
K:\1-1470-13\CAP\052610 tables for CAP Fonda Data.xlsx 4 SVOCs- soil

Table 4. Analytical Results: Soil- SVOCs
Former Fonda Group Facility, St. Albans, VT
JCO Project #1-1470-13

Sample ID	**Federal/VT**		**Storage Shed**		**CB-1**		**B Drain**		**PAH-1**		**PAH-2**		**PAH-3**	
Sample Depth	**RSLs**		**0.5-1'**		**0-0.5'**		**0-0.5'**		**0-0.5'**		**0-0.5'**		**0-0.5'**	
Units	**(mg/kg)**	**(mg/kg)**	**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**		**(mg/kg)**	
Sample Date	**Resid.**	**Indust.**	**2/6/2008**		**2/25/2008**		**2/6/2008**		**6/17/2008**		**6/17/2008**		**6/17/2008**	
4-Nitroaniline	24	86	U	0.2	U	0.2								
Benzyl Alcohol	6,100	61,000	U	0.2	U	0.2								
Nitrobenzene	4.8	24	U	0.2	U	0.2								
Isophorone	510	1,800	U	0.2	U	0.2								
2,4-Dinitrotoluene	1.6	5.5	U	0.2	U	0.2								
2,6-Dinitrotoluene	61	620	U	0.2	U	0.2								
Benzidine	0.0005*	0.0075*	U	0.4	U	0.4								
3,3'-Dichlorobenzidene	1.1	3.8	U	0.2	U	0.2								
Pyridine	78	1,000	U	0.2	U	0.2								
Azobenzene	5.1	23	U	0.2	U	0.2								
Carbazole	None	None	U	0.2	U	0.2								
Dimethylphthalate	None	None	U	0.2	U	0.2								
Diethylphthalate	49,000	490,000	U	0.2	U	0.2								
Di-n-butylphthalate (Dibutyl p	6,100	62,000	U	0.5	U	0.5								
Butylbenzylphthalate	260	910	U	0.2		0.4								
bis(2-Ethylhexyl)phthalate	35	120	U	1.0	U	1.0								
Di-n-octylphthalate	None	None	U	0.2	U	0.2								
Dibenzofuran	78	1,000	U	0.2	U	0.2								
Naphthalene	3.6	18	U	0.2	U	0.2	U	1.0	U	0.2	U	0.2	U	0.2
2-Methylnaphthalene	None	None	U	0.2	U	0.2	U	1.0	U	0.2	U	0.2	U	0.2
Acenaphthylene	None	None	U	0.2	U	0.2	U	1.0	U	0.2	U	0.2	U	0.2
Acenaphthene	3,400	33,000	U	0.2	U	0.2	U	1.0	U	0.2	U	0.2	U	0.2
Fluorene	2,300	22,000	U	0.2	U	0.2	U	1.0	U	0.2	U	0.2	U	0.2
Phenanthrene	None	None	U	0.2	U	0.2		4.0		0.2	U	0.2	U	0.2
Anthracene	17,000	170,000	U	0.2	U	0.2	U	1.0	U	0.2	U	0.2	U	0.2
Fluoranthene	2,300	22,000	U	0.2	U	0.2		5.0		0.4	U	0.2	U	0.2
Pyrene	1,700	17,000	U	0.2	U	0.2		5.0		0.3	U	0.2	U	0.2
Benzo(a)anthracene	0.15	2.10		0.07		0.11		**2.00**		0.14		0.07		0.05
Chrysene	15	210		0.07		0.06		4.00		0.17		0.08		0.04
Benzo(b)fluoranthene	0.15	2.10		0.08		0.12		**2.00**		**0.30**		**0.17**		0.12
Benzo(k)fluoranthene	1.5	21.0		0.06		0.06		**2.00**		0.08		0.04		0.03
Benzo(a)pyrene	0.015	0.210		**0.07**		**0.08**		**5.00**		**0.16**		**0.07**		**0.04**
Indeno(1,2,3-cd)pyrene	0.15	2.10		0.05		0.05		**1.00**		0.09		**0.50**		0.02
Dibenz(a,h)anthracene	0.015	0.210		**0.02**	U	**0.02**	U	**1.00**	U	**0.02**	U	**0.02**	U	**0.02**
Benzo(g,h,i)perylene	None	None		0.05		0.06		2.00		0.10		0.05		0.03

Notes:
U = Not detected above reporting limit shown.
NA = Not Analyzed.
Bold = Exceeds Residential PRG.
Black cell = Exceeds Industrial PRG.
RPD = Relative percent difference
K:\1-1470-13\CAP\052610 tables for CAP Fonda Data.xlsx 4 SVOCs- soil

Table 5. Analytical Results: Aqueous- PCBs

Former Fonda Group Facility, St. Albans, VT

JCO Project #1-1470-13

(All results in ug/L)

Sample ID	***VGES- Total PCBs (ug/L)***	**Pit-W**		**MW-10**	
Sample Date		**2/25/2008**		**6/18/2008**	
PCB-1016	*0.5*	U	0.5	U	0.5
PCB-1221	*0.5*	U	0.5	U	0.5
PCB-1232	*0.5*	U	0.5	U	0.5
PCB-1242	*0.5*	U	0.5	U	0.5
PCB-1248	*0.5*	U	0.5	U	0.5
PCB-1254	*0.5*	U	0.5	U	0.5
PCB-1260	*0.5*	U	0.5	U	0.5
PCB-1262	*0.5*	Not analyzed by lab			
PCB-1268	*0.5*	Not analyzed by lab			

Table 6. Analytical Results: Groundwater- VOCs
Former Fonda Group Facility, St. Albans, VT
JCO Project #1-1470-13

Sample ID	*VGES (ug/L)*	**Pit-W**		**MW-1**		**MW-1 Duplicate**		**MW-2**		**MW-3**		**MW-3**		**MW-4**		**MW-4**		**MW-4**		**MW-5**		**MW-6**	
Sampling Date		2/25/2008		2/12/2008		2/12/2008		2/12/2008		2/12/2008		8/18/2008		2/12/2008		8/18/2008		4/10/2009		2/12/2008		2/12/2008	
Dichlorodifluoromethane	*1,000*	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5
Chloromethane	*3*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
Vinyl Chloride	*2*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
Bromomethane	*10*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2		NA	U	2	U	2
Chloroethane	*None*	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5
Trichlorofluoromethane	*2,100*	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5
Diethyl Ether	*None*	U	5	U	5	U	5	U	5	U	5		NA	U	5		NA		NA	U	5	U	5
Acetone	*700*	U	10	U	10	U	10	U	10	U	10		NA		50		NA		NA	U	10	U	10
1,1-Dichloroethene	*7*	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1
Methylene chloride	*5*	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5
Carbon Disulfide	*None*	U	5	U	5	U	5		5	U	5		NA	U	5		NA		NA	U	5	U	5
Methyl-t-Butyl Ether (MTBE)	*40*	U	5	U	5	U	5	U	5	U	5		NA	U	5		NA		NA	U	5	U	5
trans-1,2-Dichloroethene	*100*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
1,1-Dichloroethane	*70*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
2,2-Dichloropropane	*None*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
cis-1,2-Dichloroethene	*70*	U	2	U	2	U	2	U	2	U	2	U	2	U	2		6		3	U	2	U	2
2-Butanone (MEK)	*4,200*	U	10	U	10	U	10	U	10	U	10		NA	U	10		NA		NA	U	10	U	10
Bromochloromethane	*90*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
Tetrahydrofuran (THF)	*None*	U	10	U	10	U	10	U	10	U	10		NA	U	10		NA		NA	U	10	U	10
Chloroform	*None*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
1,1,1-Trichloroethane	*200*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
Carbon Tetrachloride	*5*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
1,1-Dichloropropene	*None*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
Benzene	*5*	U	1	U	1	U	1	U	1	U	1		NA	U	1		NA		NA	U	1	U	1
1,2-Dichloroethane	*5*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
Trichloroethene	*5*	U	2	U	2	U	2	U	2	U	2	U	2	U	2		**7**		5	U	2	U	2
1,2-Dichloropropane	*5*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
Dibromomethane	*None*	U	2	U	2	U	2	U	2	U	2		NA	U	2		NA		NA	U	2	U	2
Bromodichloromethane	*90*	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1
4-Methyl-2-pentanone (MIBK)	*560*	U	10	U	10	U	10	U	10	U	10		NA	U	10		NA		NA	U	10	U	10
cis-1,3-Dichloropropene	*None*	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1
Toluene	*1,000*	U	1	U	1	U	1	U	1	U	1		NA	U	1		NA		NA	U	1	U	1
trans-1,3-Dichloropropene	*None*	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1
1,1,2-Trichloroethane	*5*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
2-Hexanone	*None*	U	10	U	10	U	10	U	10	U	10		NA	U	10		NA		NA	U	10	U	10
Tetrachloroethene	*5*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
1,3-Dichloropropane	*1*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
Dibromochloromethane	*60*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
1,2-Dibromoethane (EDB)	*0.05*	U	1	U	1	U	1	U	1	U	1		NA	U	1		NA		NA	U	1	U	1
Chlorobenzene	*100*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
1,1,1,2-Tetrachloroethane	*70*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
Ethylbenzene	*700*	U	1	U	1	U	1	U	1	U	1		NA	U	1		NA		NA	U	1	U	1

H = Hold time exceeded at lab
NA = Not analyzed
K:\1-1470-13\CAP\052610 tables for CAP Fonda Data.xlsx 6 VOCs-GW

Table 6. Analytical Results: Groundwater- VOCs
Former Fonda Group Facility, St. Albans, VT
JCO Project #1-1470-13

Sample ID	*VGES (ug/L)*	Pit-W		MW-1		MW-1 Duplicate		MW-2		MW-3		MW-3		MW-4		MW-4		MW-4		MW-5		MW-6	
Sampling Date		2/25/2008		2/12/2008		2/12/2008		2/12/2008		2/12/2008		8/18/2008		2/12/2008		8/18/2008		4/10/2009		2/12/2008		2/12/2008	
Xylene (m,p)	*None*	U	1	U	1	U	1	U	1	U	1		NA	U	1		NA		NA	U	1	U	1
Xylene (o)	*None*	U	1	U	1	U	1	U	1	U	1		NA	U	1		NA		NA	U	1	U	1
Xylenes (total)	*10,000*	*U*	*2*	*U*	*2*	*U*	*2*	*U*	*2*	*U*	*2*		*NA*	*U*	*2*		*NA*		NA	*U*	*2*	*U*	*2*
Styrene	*100*	U	1	U	1	U	1	U	1	U	1		NA	U	1		NA		NA	U	1	U	1
Bromoform	*None*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2		NA	U	2	U	2
Isopropylbenzene (Cumene)	*None*	U	1	U	1	U	1	U	1	U	1		NA	U	1		NA		NA	U	1	U	1
Bromobenzene	*None*	U	2	U	2	U	2	U	2	U	2		NA	U	2		NA		NA	U	2	U	2
1,1,2,2-Tetrachloroethane	*70*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
1,2,3-Trichloropropane	*5*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
n-Propylbenzene	*None*	U	1	U	1	U	1	U	1	U	1		NA	U	1		NA		NA	U	1	U	1
2-Chlorotoluene	*None*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
4-Chlorotoluene	*100*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
1,3,5-Trimethylbenzene	*None*	U	1	U	1	U	1	U	1	U	1		NA	U	1		NA		NA	U	1	U	1
1,2,4-Trimethylbenzene	*None*	U	1	U	1	U	1	U	1	U	1		NA	U	1		NA		NA	U	1	U	1
1,3,5 + 1,2,4- TMB	*350*	*U*	*2*	*U*	*2*	*U*	*2*	*U*	*2*	*U*	*2*		*NA*	*U*	*2*		*NA*		NA	*U*	*2*	*U*	*2*
tert-Butylbenzene	*None*	U	1	U	1	U	1	U	1	U	1		NA	U	1		NA		NA	U	1	U	1
sec-Butylbenzene	*None*	U	1	U	1	U	1	U	1	U	1		NA	U	1		NA		NA	U	1	U	1
1,3-Dichlorobenzene	*600*	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1
4-Isopropyltoluene	*None*	U	1	U	1	U	1	U	1	U	1		NA	U	1		NA		NA	U	1	U	1
1,4-Dichlorobenzene	*75*	U	1	U	1	U	1	U	1	U	1		NA	U	1		NA	U	1	U	1	U	1
1,2-Dichlorobenzene	*600*	U	1	U	1	U	1	U	1	U	1		NA	U	1		NA	U	1	U	1	U	1
n-Butylbenzene	*None*	U	1	U	1	U	1	U	1	U	1		NA	U	1		NA		NA	U	1	U	1
1,2-Dibromo-3-Chloropropane (Dibromochloropropane)	*0.2*	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1
1,2,4-Trichlorobenzene	*70*	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1
Hexachlorobutadiene	*1*	U	1	U	1	U	1	U	1	U	1		NA	U	1		NA	U	1	U	1	U	1
Naphthalene	*20*	U	5	U	5	U	5	U	5	U	5		NA	U	5		NA		NA	U	5	U	5
1,2,3-Trichlorobenzene	*None*	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1

H = Hold time exceeded at lab
NA = Not analyzed

Table 6. Analytical Results: Groundwater- VOCs
Former Fonda Group Facility, St. Albans, VT
JCO Project #1-1470-13

Sample ID	***VGES (ug/L)***	**MW-6**		**MW-7**		**MW-8**		**MW-9**		**MW-10**		**MW-11**		**MW-12**		**MW-12 Duplicate**			**MW-12**		**MW-12**	
Sampling Date		8/18/2008		2/12/2008		2/12/2008		2/12/2008		2/12/2008		2/25/2008		8/18/2008		8/18/2008		*RPD*	4/10/2009		7/14/2009	
Dichlorodifluoromethane	*1,000*	U	5	U	5	U	5	U	5	U	5	U	5	U	50	U	50	*0%*	U	5	U	5
Chloromethane	*3*	U	2	U	2	U	2	U	2	U	2	U	2	U	20	U	20	*0%*	U	2	U	2
Vinyl Chloride	*2*	U	2	U	2	U	2	U	2	U	2	U	2	U	20	U	20	*0%*	U	2	U	2
Bromomethane	*10*	U	2	U	2	U	2	U	2	U	2	U	2	U	20	U	20	*0%*		NA		NA
Chloroethane	*None*	U	5	U	5	U	5	U	5	U	5	U	5	U	50	U	50	*0%*	U	5	U	5
Trichlorofluoromethane	*2,100*	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	*0%*	U	5	U	5
Diethyl Ether	*None*		NA	U	5	U	5	U	5	U	5	U	5		NA		NA			NA		NA
Acetone	*700*		NA	U	10	U	10	U	10		110	U	10		NA		NA			NA		NA
1,1-Dichloroethene	*7*	U	1	U	1	U	1	U	1	U	1	U	1	U	10	U	10	*0%*		5		**10**
Methylene chloride	*5*	U	5	U	5	U	5	U	5	U	5	U	5	U	50	U	50	*0%*	U	5	U	5
Carbon Disulfide	*None*		NA	U	5	U	5	U	5	U	5	U	5		NA		NA			NA		NA
Methyl-t-Butyl Ether (MTBE)	*40*		NA	U	5	U	5	U	5	U	5	U	5		NA		NA			NA		NA
trans-1,2-Dichloroethene	*100*	U	2	U	2	U	2	U	2	U	2	U	2		10		10	*0%*		29	U	2
1,1-Dichloroethane	*70*	U	2	U	2	U	2	U	2	U	2	U	2	U	10	U	10	*0%*	U	2	U	2
2,2-Dichloropropane	*None*	U	2	U	2	U	2	U	2	U	2	U	2	U	10	U	10	*0%*	U	2	U	2
cis-1,2-Dichloroethene	*70*	U	2	U	2	U	2	U	2	U	2	U	2		**2100**		**2200**	*5%*	**H**	**1700**		**2400**
2-Butanone (MEK)	*4,200*		NA	U	10	U	10	U	10		10	U	10		NA		NA			NA		NA
Bromochloromethane	*90*	U	2	U	2	U	2	U	2	U	2	U	2	U	10	U	10	*0%*	U	2	U	2
Tetrahydrofuran (THF)	*None*		NA	U	10	U	10	U	10	U	10	U	10		NA		NA			NA		NA
Chloroform	*None*		4		7	U	2	U	2	U	2	U	2	U	10	U	10	*0%*	U	2	U	2
1,1,1-Trichloroethane	*200*	U	2	U	2	U	2	U	2	U	2	U	2	U	10	U	10	*0%*	U	2	U	2
Carbon Tetrachloride	*5*	U	2	U	2	U	2	U	2	U	2	U	2	U	10	U	10	*0%*	U	2	U	2
1,1-Dichloropropene	*None*	U	2	U	2	U	2	U	2	U	2	U	2	U	10	U	10	*0%*	U	2	U	2
Benzene	*5*		NA	U	1	U	1	U	1	U	1	U	1		NA		NA			NA		NA
1,2-Dichloroethane	*5*	U	2	U	2	U	2	U	2	U	2	U	2	U	10	U	10	*0%*	U	2	U	2
Trichloroethene	*5*	U	2	U	2	U	2	U	2	U	2	U	2		**190**		**280**	*38%*	**H**	**840**		**1700**
1,2-Dichloropropane	*5*	U	2	U	2	U	2	U	2	U	2	U	2	U	10	U	10	*0%*	U	2	U	2
Dibromomethane	*None*		NA	U	2	U	2	U	2	U	2	U	2		NA		NA			NA		NA
Bromodichloromethane	*90*	U	1	U	1	U	1	U	1	U	1	U	1	U	10	U	10	*0%*	U	1	U	1
4-Methyl-2-pentanone (MIBK)	*560*		NA	U	10	U	10	U	10		10	U	10		NA		NA			NA		NA
cis-1,3-Dichloropropene	*None*	U	1	U	1	U	1	U	1	U	1	U	1	U	10	U	10	*0%*	U	1	U	1
Toluene	*1,000*		NA	U	1	U	1	U	1	U	1	U	1		NA		NA			NA		NA
trans-1,3-Dichloropropene	*None*	U	1	U	1	U	1	U	1	U	1	U	1	U	10	U	10	*0%*	U	1	U	1
1,1,2-Trichloroethane	*5*	U	2	U	2	U	2	U	2	U	2	U	2	U	20	U	20	*0%*	U	2	U	2
2-Hexanone	*None*		NA	U	10	U	10	U	10	U	10	U	10		NA		NA			NA		NA
Tetrachloroethene	*5*	U	2	U	2	U	2	U	2	U	2	U	2	U	20	U	20	*0%*	U	2	U	2
1,3-Dichloropropane	*1*	U	2	U	2	U	2	U	2	U	2	U	2	U	20	U	20	*0%*	U	2	U	2
Dibromochloromethane	*60*	U	2	U	2	U	2	U	2	U	2	U	2	U	20	U	20	*0%*	U	2	U	2
1,2-Dibromoethane (EDB)	*0.05*		NA	U	1	U	1	U	1	U	1	U	1		NA		NA			NA		NA
Chlorobenzene	*100*	U	2	U	2	U	2	U	2	U	2	U	2	U	20	U	20	*0%*	U	2	U	2
1,1,1,2-Tetrachloroethane	*70*	U	2	U	2	U	2	U	2	U	2	U	2	U	20	U	20	*0%*	U	2	U	2
Ethylbenzene	*700*		NA	U	1	U	1	U	1	U	1	U	1		NA		NA			NA		NA

H = Hold time exceeded at lab
NA = Not analyzed
K:\1-1470-13\CAP\052610 tables for CAP Fonda Data.xlsx 6 VOCs-GW

Table 6. Analytical Results: Groundwater- VOCs
Former Fonda Group Facility, St. Albans, VT
JCO Project #1-1470-13

Sample ID	***VGES (ug/L)***	**MW-6**		**MW-7**		**MW-8**		**MW-9**		**MW-10**		**MW-11**		**MW-12**		**MW-12 Duplicate**			**MW-12**		**MW-12**	
Sampling Date		8/18/2008		2/12/2008		2/12/2008		2/12/2008		2/12/2008		2/25/2008		8/18/2008		8/18/2008		*RPD*	4/10/2009		7/14/2009	
Xylene (m,p)	*None*		NA	U	1	U	1	U	1	U	1	U	1		NA		NA			NA		NA
Xylene (o)	*None*		NA	U	1	U	1	U	1	U	1	U	1		NA		NA			NA		NA
Xylenes (total)	*10,000*		*NA*	*U*	*2*	*U*	*2*	*U*	*2*	*U*	*2*	*U*	*2*		*NA*		*NA*			NA		NA
Styrene	*100*		NA	U	1	U	1	U	1	U	1	U	1		NA		NA			NA		NA
Bromoform	*None*	U	2	U	2	U	2	U	2	U	2	U	2	U	20	U	20	*0%*		NA		NA
Isopropylbenzene (Cumene)	*None*		NA	U	1	U	1	U	1	U	1	U	1		NA		NA			NA		NA
Bromobenzene	*None*		NA	U	2	U	2	U	2	U	2	U	2		NA		NA			NA		NA
1,1,2,2-Tetrachloroethane	*70*	U	2	U	2	U	2	U	2	U	2	U	2	U	20	U	20	*0%*	U	2	U	2
1,2,3-Trichloropropane	*5*	U	2	U	2	U	2	U	2	U	2	U	2	U	20	U	20	*0%*	U	2	U	2
n-Propylbenzene	*None*		NA	U	1	U	1	U	1	U	1	U	1		NA		NA			NA		NA
2-Chlorotoluene	*None*	U	2	U	2	U	2	U	2	U	2	U	2	U	20	U	20	*0%*	U	2	U	2
4-Chlorotoluene	*100*	U	2	U	2	U	2	U	2	U	2	U	2	U	20	U	20	*0%*	U	2	U	2
1,3,5-Trimethylbenzene	*None*		NA	U	1	U	1	U	1	U	1	U	1		NA		NA			NA		NA
1,2,4-Trimethylbenzene	*None*		NA	U	1	U	1	U	1	U	1	U	1		NA		NA			NA		NA
1,3,5 + 1,2,4- TMB	*350*		*NA*	*U*	*2*	*U*	*2*	*U*	*2*	*U*	*2*	*U*	*2*		*NA*		*NA*			NA		NA
tert-Butylbenzene	*None*		NA	U	1	U	1	U	1	U	1	U	1		NA		NA			NA		NA
sec-Butylbenzene	*None*		NA	U	1	U	1	U	1	U	1	U	1		NA		NA			NA		NA
1,3-Dichlorobenzene	*600*	U	1	U	1	U	1	U	1	U	1	U	1	U	10	U	10	*0%*	U	1	U	1
4-Isopropyltoluene	*None*		NA	U	1	U	1	U	1	U	1	U	1		NA		NA			NA		NA
1,4-Dichlorobenzene	*75*		NA	U	1	U	1	U	1	U	1	U	1		NA		NA		U	1	U	1
1,2-Dichlorobenzene	*600*		NA	U	1	U	1	U	1	U	1	U	1		NA		NA		U	1	U	1
n-Butylbenzene	*None*		NA	U	1	U	1	U	1	U	1	U	1		NA		NA			NA		NA
1,2-Dibromo-3-Chloropropane (Dibromochloropropane)	*0.2*	U	1	U	1	U	1	U	1	U	1	U	1	U	10	U	10	*0%*	U	1	U	1
1,2,4-Trichlorobenzene	*70*	U	1	U	1	U	1	U	1	U	1	U	1	U	10	U	10	*0%*	U	1	U	1
Hexachlorobutadiene	*1*		NA	U	1	U	1	U	1	U	1	U	1		NA		NA		U	1	U	1
Naphthalene	*20*		NA	U	5	U	5	U	5	U	5	U	5		NA		NA			NA		NA
1,2,3-Trichlorobenzene	*None*	U	1	U	1	U	1	U	1	U	1	U	1	U	10	U	10	*0%*	U	1	U	1

H = Hold time exceeded at lab
NA = Not analyzed
K:\1-1470-13\CAP\052610 tables for CAP Fonda Data.xlsx 6 VOCs-GW

Table 6. Analytical Results: Groundwater- VOCs

Former Fonda Group Facility, St. Albans, VT

JCO Project #1-1470-13

Sample ID	*VGES (ug/L)*	MW-13S	MW-13S	MW-13D	MW-14S	MW-14S	MW-15S	MW-15S	MW-15S	MW-15D
Sampling Date		4/10/2009	7/14/2009	4/10/2009	4/10/2009	7/14/2009	4/10/2009	7/9/2009	7/14/2009	4/10/2009
Dichlorodifluoromethane	*1,000*	U 5	U 5	U 5	U 5	U 5	U 5	U 5	U 5	U 5
Chloromethane	*3*	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2
Vinyl Chloride	*2*	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2
Bromomethane	*10*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroethane	*None*	U 5	U 5	U 5	U 5	U 5	U 5	U 5	U 5	U 5
Trichlorofluoromethane	*2,100*	U 5	U 5	U 5	U 5	U 5	U 5	U 5	U 5	U 5
Diethyl Ether	*None*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	*700*	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	*7*	5	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1
Methylene chloride	*5*	U 5	U 5	U 5	U 5	U 5	U 5	U 5	U 5	U 5
Carbon Disulfide	*None*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl-t-Butyl Ether (MTBE)	*40*	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	*100*	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2
1,1-Dichloroethane	*70*	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2
2,2-Dichloropropane	*None*	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2
cis-1,2-Dichloroethene	*70*	U 2	U 2	U 2	U 2	U 2	**140**	**250**	**260**	4
2-Butanone (MEK)	*4,200*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromochloromethane	*90*	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2
Tetrahydrofuran (THF)	*None*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	*None*	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2
1,1,1-Trichloroethane	*200*	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2
Carbon Tetrachloride	*5*	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2
1,1-Dichloropropene	*None*	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2
Benzene	*5*	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	*5*	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2
Trichloroethene	*5*	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2
1,2-Dichloropropane	*5*	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2
Dibromomethane	*None*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	*90*	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1
4-Methyl-2-pentanone (MIBK)	*560*	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	*None*	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1
Toluene	*1,000*	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	*None*	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1
1,1,2-Trichloroethane	*5*	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2
2-Hexanone	*None*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	*5*	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2
1,3-Dichloropropane	*1*	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2
Dibromochloromethane	*60*	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2
1,2-Dibromoethane (EDB)	*0.05*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	*100*	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2
1,1,1,2-Tetrachloroethane	*70*	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2
Ethylbenzene	*700*	NA	NA	NA	NA	NA	NA	NA	NA	NA

H = Hold time exceeded at lab

NA = Not analyzed

Table 6. Analytical Results: Groundwater- VOCs
Former Fonda Group Facility, St. Albans, VT
JCO Project #1-1470-13

Sample ID	***VGES (ug/L)***	**MW-13S**	**MW-13S**	**MW-13D**	**MW-14S**	**MW-14S**	**MW-15S**	**MW-15S**	**MW-15S**	**MW-15D**
Sampling Date		4/10/2009	7/14/2009	4/10/2009	4/10/2009	7/14/2009	4/10/2009	7/9/2009	7/14/2009	4/10/2009
Xylene (m,p)	*None*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylene (o)	*None*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes (total)	*10,000*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	*100*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	*None*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene (Cumene)	*None*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromobenzene	*None*	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	*70*	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2
1,2,3-Trichloropropane	*5*	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2
n-Propylbenzene	*None*	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	*None*	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2
4-Chlorotoluene	*100*	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2	U 2
1,3,5-Trimethylbenzene	*None*	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene	*None*	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5 + 1,2,4- TMB	*350*	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	*None*	NA	NA	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	*None*	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	*600*	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1
4-Isopropyltoluene	*None*	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	*75*	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1
1,2-Dichlorobenzene	*600*	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1
n-Butylbenzene	*None*	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-Chloropropane (Dibromochloropropane)	*0.2*	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1
1,2,4-Trichlorobenzene	*70*	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1
Hexachlorobutadiene	*1*	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1
Naphthalene	*20*	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	*None*	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1	U 1

H = Hold time exceeded at lab
NA = Not analyzed

Table 6. Analytical Results: Groundwater- VOCs

Former Fonda Group Facility, St. Albans, VT

JCO Project #1-1470-13

Sample ID	VGES (ug/L)	MW-16		MW-17		P-1		P-10		Trip Blank 1		Trip Blank 2		Trip Blank 3		Trip Blank 4		Trip Blank 5	
Sampling Date		7/14/2009		7/14/2009		7/9/2009		7/9/2009		1/25/2008		2/21/2008		8/12/2008		4/10/2009		7/9/2009	
Dichlorodifluoromethane	1,000	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5
Chloromethane	3	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
Vinyl Chloride	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
Bromomethane	10	NA		NA		NA		NA		U	2	U	2	U	2	NA		NA	
Chloroethane	None	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5
Trichlorofluoromethane	2,100	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5
Diethyl Ether	None	NA		NA		NA		NA		U	5	U	5		NA	NA		NA	
Acetone	700	NA		NA		NA		NA		U	10	U	10		NA	NA		NA	
1,1-Dichloroethene	7	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1
Methylene chloride	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5
Carbon Disulfide	None	NA		NA		NA		NA		U	5	U	5		NA	NA		NA	
Methyl-t-Butyl Ether (MTBE)	40	NA		NA		NA		NA		U	5	U	5		NA	NA		NA	
trans-1,2-Dichloroethene	100	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
1,1-Dichloroethane	70	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
2,2-Dichloropropane	None	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
cis-1,2-Dichloroethene	70	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
2-Butanone (MEK)	4,200	NA		NA		NA		NA		U	10	U	10		NA	NA		NA	
Bromochloromethane	90	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
Tetrahydrofuran (THF)	None	NA		NA		NA		NA		U	10	U	10		NA	NA		NA	
Chloroform	None	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
1,1,1-Trichloroethane	200	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
Carbon Tetrachloride	5	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
1,1-Dichloropropene	None	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
Benzene	5	NA		NA		NA		NA		U	1	U	1		NA	NA		NA	
1,2-Dichloroethane	5	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
Trichloroethene	5	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
1,2-Dichloropropane	5	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
Dibromomethane	None	NA		NA		NA		NA		U	2	U	2		NA	NA		NA	
Bromodichloromethane	90	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1
4-Methyl-2-pentanone (MIBK)	560	NA		NA		NA		NA		U	10	U	10		NA	NA		NA	
cis-1,3-Dichloropropene	None	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1
Toluene	1,000	NA		NA		NA		NA		U	1	U	1		NA	NA		NA	
trans-1,3-Dichloropropene	None	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1
1,1,2-Trichloroethane	5	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
2-Hexanone	None	NA		NA		NA		NA		U	10	U	10		NA	NA		NA	
Tetrachloroethene	5	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
1,3-Dichloropropane	1	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
Dibromochloromethane	60	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
1,2-Dibromoethane (EDB)	0.05	NA		NA		NA		NA		U	1	U	1		NA	NA		NA	
Chlorobenzene	100	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
1,1,1,2-Tetrachloroethane	70	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
Ethylbenzene	700	NA		NA		NA		NA		U	1	U	1		NA	NA		NA	

H = Hold time exceeded at lab

NA = Not analyzed

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Table 6. Analytical Results: Groundwater- VOCs
Former Fonda Group Facility, St. Albans, VT
JCO Project #1-1470-13

Sample ID	*VGES (ug/L)*	**MW-16**		**MW-17**		**P-1**		**P-10**		**Trip Blank 1**		**Trip Blank 2**		**Trip Blank 3**		**Trip Blank 4**		**Trip Blank 5**	
Sampling Date		7/14/2009		7/14/2009		7/9/2009		7/9/2009		1/25/2008		2/21/2008		8/12/2008		4/10/2009		7/9/2009	
Xylene (m,p)	*None*		NA		NA		NA		NA	U	1	U	1		NA		NA		NA
Xylene (o)	*None*		NA		NA		NA		NA	U	1	U	1		NA		NA		NA
Xylenes (total)	*10,000*		NA		NA		NA		NA	*U*	*2*	*U*	*2*		*NA*		NA		NA
Styrene	*100*		NA		NA		NA		NA	U	1	U	1		NA		NA		NA
Bromoform	*None*		NA		NA		NA		NA	U	2	U	2	U	2		NA		NA
Isopropylbenzene (Cumene)	*None*		NA		NA		NA		NA	U	1	U	1		NA		NA		NA
Bromobenzene	*None*		NA		NA		NA		NA	U	2	U	2		NA		NA		NA
1,1,2,2-Tetrachloroethane	*70*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
1,2,3-Trichloropropane	*5*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
n-Propylbenzene	*None*		NA		NA		NA		NA	U	1	U	1		NA		NA		NA
2-Chlorotoluene	*None*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
4-Chlorotoluene	*100*	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
1,3,5-Trimethylbenzene	*None*		NA		NA		NA		NA	U	1	U	1		NA		NA		NA
1,2,4-Trimethylbenzene	*None*		NA		NA		NA		NA	U	1	U	1		NA		NA		NA
1,3,5 + 1,2,4- TMB	*350*		NA		NA		NA		NA	*U*	*2*	*U*	*2*		*NA*		NA		NA
tert-Butylbenzene	*None*		NA		NA		NA		NA	U	1	U	1		NA		NA		NA
sec-Butylbenzene	*None*		NA		NA		NA		NA	U	1	U	1		NA		NA		NA
1,3-Dichlorobenzene	*600*	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1
4-Isopropyltoluene	*None*		NA		NA		NA		NA	U	1	U	1		NA		NA		NA
1,4-Dichlorobenzene	*75*	U	1	U	1	U	1	U	1	U	1	U	1		NA	U	1	U	1
1,2-Dichlorobenzene	*600*	U	1	U	1	U	1	U	1	U	1	U	1		NA	U	1	U	1
n-Butylbenzene	*None*		NA		NA		NA		NA	U	1	U	1		NA		NA		NA
1,2-Dibromo-3-Chloropropane (Dibromochloropropane)	*0.2*	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1
1,2,4-Trichlorobenzene	*70*	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1
Hexachlorobutadiene	*1*	U	1	U	1	U	1	U	1	U	1	U	1		NA	U	1	U	1
Naphthalene	*20*		NA		NA		NA		NA	U	5	U	5		NA		NA		NA
1,2,3-Trichlorobenzene	*None*	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1

H = Hold time exceeded at lab
NA = Not analyzed
K:\1-1470-13\CAP\052610 tables for CAP Fonda Data.xlsx 6 VOCs-GW

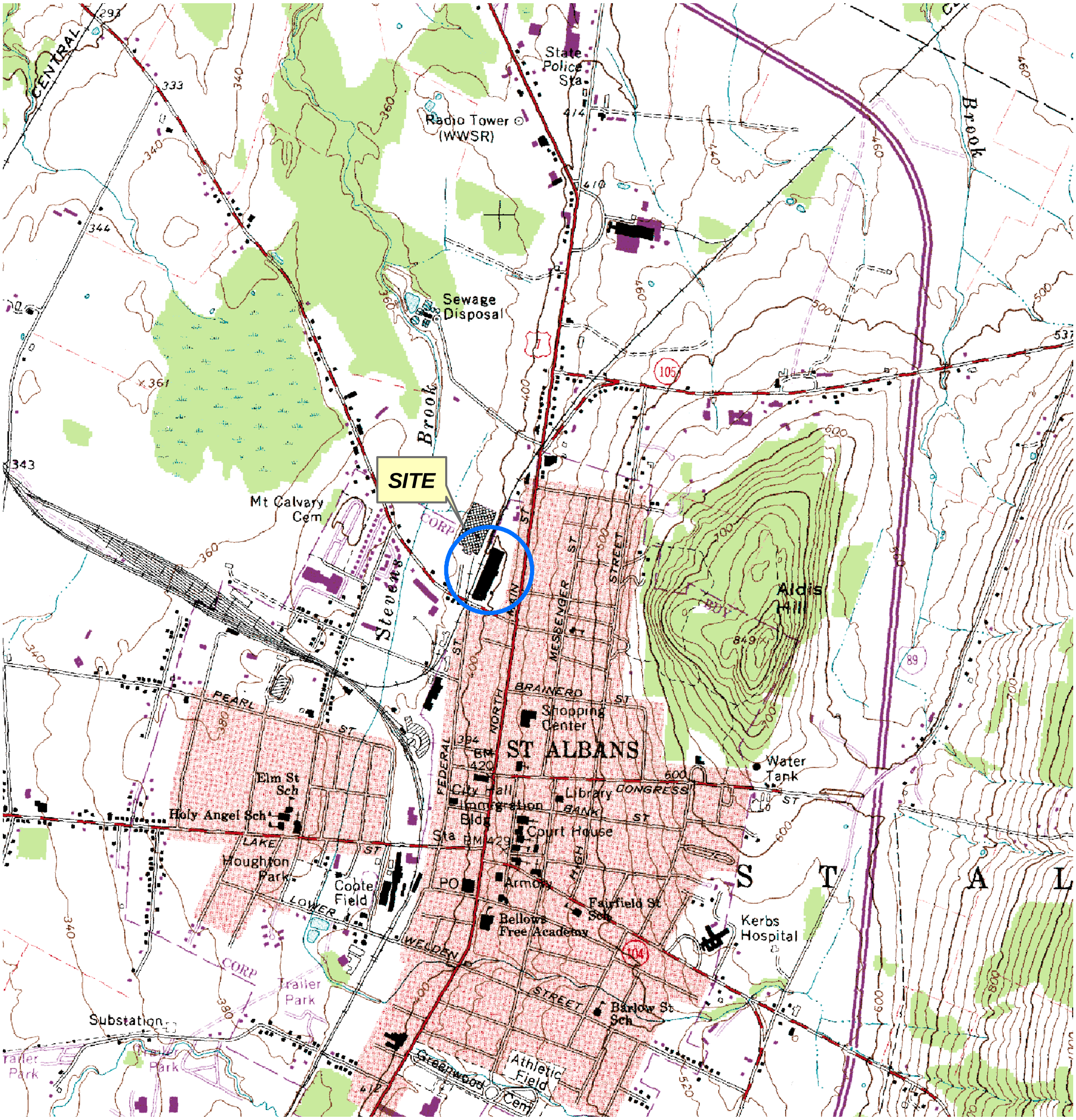
Table 7. Water Levels
Former Fonda Group Facility, St. Albans, VT
JCO Project #1-1470-13

Monitoring Well	X Coordinate (m, VT SPCS)	Y Coordinate (m, VT SPCS)	TOC Elevation* (ft)	Total Well Depth (ft bTOC)	Depth to Water - 02/25/08 (ft bTOC)	Water Table Elevation 02/25/08 (ft)	Depth to Water - 08/18/08 (ft bTOC)	Water Table Elevation 08/18/08 (ft)	Depth to Water - 09/14/09 (ft bTOC)	Water Table Elevation 09/14/09 (ft)
MW-1	453846.14	257912.25	97.12	20.80	6.07	91.05	5.63	91.49	5.20	91.92
MW-2	453866.80	257963.44	97.16	11.89	6.70	90.46	6.50	90.66	6.18	90.98
MW-3	453843.92	257959.56	97.12	16.15	7.48	89.64	7.15	89.97	7.07	90.05
MW-4	453883.36	257995.93	97.10	9.89	4.80	92.3	5.41	91.69	5.06	92.04
MW-5	453887.11	258034.15	97.03	10.97	7.33	89.7	7.32	89.71	7.24	89.79
MW-6	453869.02	258033.51	97.06	12.75	7.45	89.61	7.73	89.33	7.14	89.92
MW-7	453882.89	258081.32	97.07	10.12	5.25	91.82	5.48	91.59	5.19	91.88
MW-8	453809.95	257897.65	93.90	9.90	7.90	86	7.20	86.70	6.87	87.03
MW-9[1]	453833.66	257868.68	96.14	12.13	5.20	90.94	5.21	90.93	4.72	91.42
MW-10	453893.15	257976.41	93.77	9.12	3.81	93	0.72	93.05	0.81	92.96
MW-11	453891.49	258097.40	100.00	10.06	5.00	95	6.06	93.94	5.36	94.64
MW-12[2]	453849.94	258006.49	97.10	14.00	Not present	Not present	5.02	92.08	8.28	88.82
MW-13S	453819.44	258035.64	81.28	8.6	Not present	Not present	Not present	Not present	2.4	78.88
MW-13D	453820.51	258037.51	81.17	24.2	Not present	Not present	Not present	Not present	0.1	81.07
MW-14S	453815.92	258024.24	81.74	9.2	Not present	Not present	Not present	Not present	2.36	79.38
MW-15S	453809.75	258010.38	81.91	10.7	Not present	Not present	Not present	Not present	1.29	80.62
MW-15D	453810.47	258010.07	81.86	24	Not present	Not present	Not present	Not present	5.05	76.81
MW-16	453791.61	258002.13	82.28	8.8	Not present	Not present	Not present	Not present	2.84	79.44
MW-17	453725.02	257961.39	81.71	9.0	Not present	Not present	Not present	Not present	2.95	78.76

* = Arbitrary elevation of 100 ft amsl assigned to MW-11 TOC
[1] = 2.4 feet of riser pipe cut off on 02/25/08 to install road box
[2] = Not surveyed, TOC elevation estimated from MW-3 and MW-6
Original TOC elevation (96.81), 3.04 ft was cut off on 6/18/08 when road box was installed, therefore new TOC elev. = 93.77

FIGURES

1-1470-13/GIS/112807 Figure 1.mxd

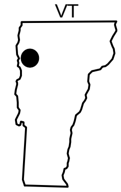


N

1 0.5 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

CONTOUR INTERVAL = 20 FT



MAP
LOCATION

BASE MAP: USGS 7.5 Minute Topographic Quadrangle St. Albans, VT 1987

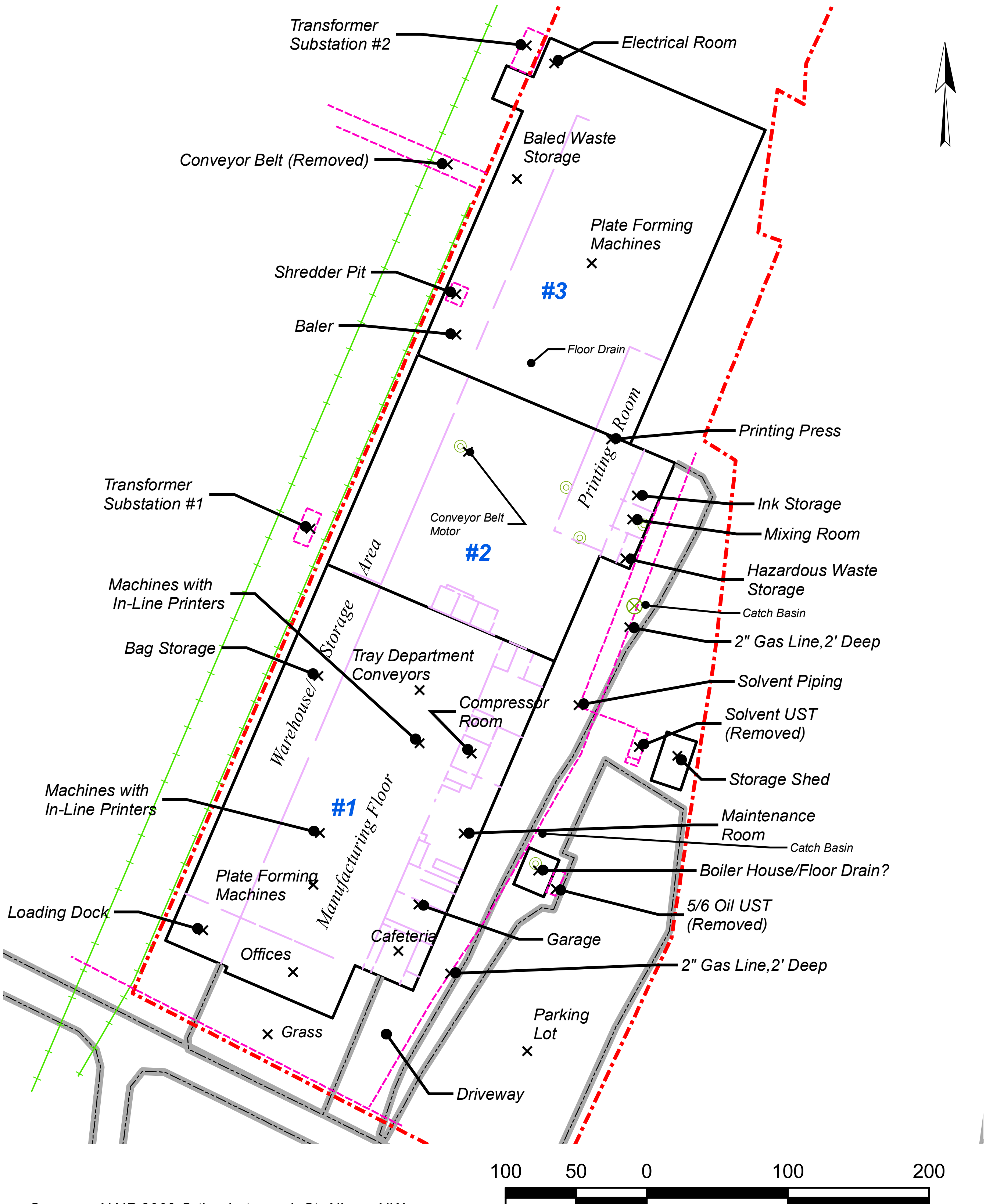
Figure 1. Site Location Map
Former Fonda Manufacturing
St. Albans, Vermont

The Johnson Company

100 State Street, Suite 600
Montpelier, VT 05602

Drawn by: RTK	Date: 04/03/08
Chk'd by: J_B	Date: 04/03/08
Scale: 1:24,000	Project: 1-1470-13

K:\1-1470-13\GIS\TSCA Notification Figures\051210 Figure 2 Site Layout.mxd



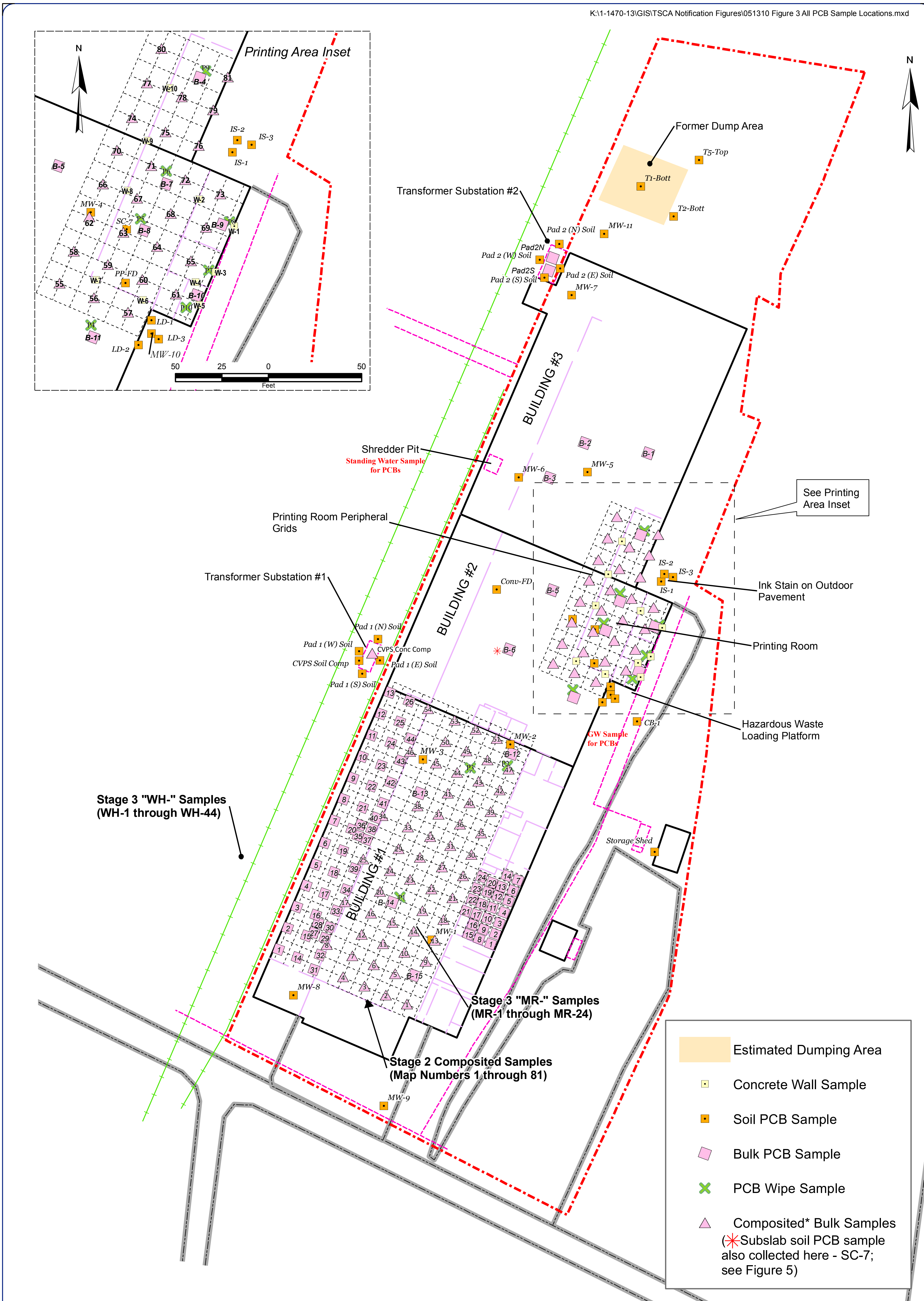
Sources: NAIP 2003 Orthophotograph St. Albans NW (4407316_nw) and "Facility Plan: The Fonda Group, Inc., by New England Air Quality Testing, 3/19/01.

Note: All lines are approximate.

Figure 2. Site Layout
Former Fonda Manufacturing
St. Albans, Vermont

The Johnson Company
100 State Street, Suite 600
Montpelier, VT 05602

Drawn by:	RTK	Date:	05/12/10
Reviewed by:		Date:	
Scale:	1"=100'	Project:	1-1470-13



* Composited sample shown is composed of one sample from each of the surrounding grid squares.

80 40 0 80 160
Feet

Note: All lines are approximate.

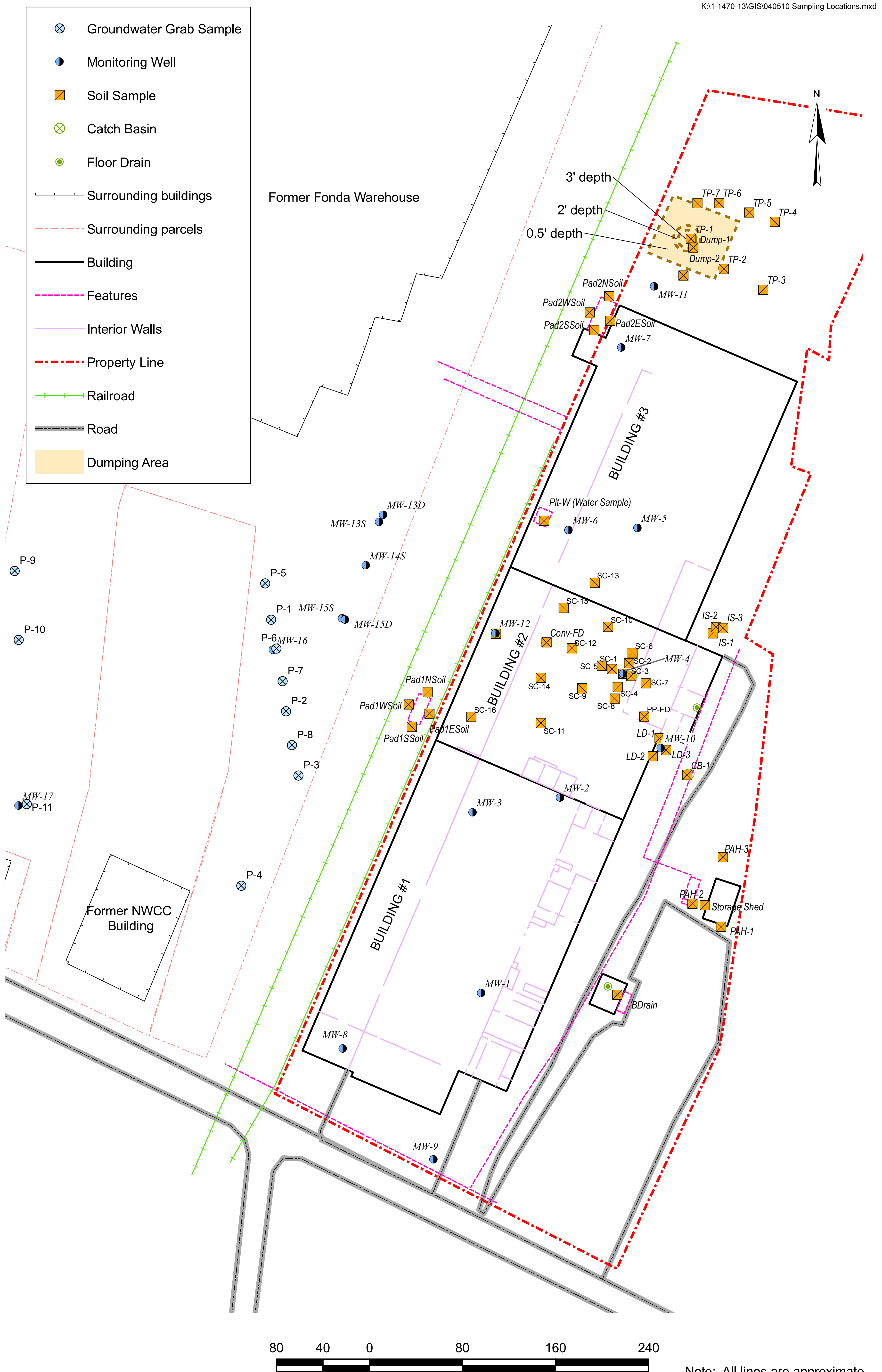
Sources: NAIP 2003 Orthophotograph St. Albans NW (4407316_nw) and "Facility Plan: The Fonda Group, Inc., by New England Air Quality Testing, 3/19/01.

P:
TJKCAD
JCO
LOGO_N11X17-2.DWG

Figure 3. PCB Soil, Concrete, and Water Sampling Locations
Former Fonda Manufacturing
St. Albans, Vermont

The Johnson Company
100 State Street, Suite 600
Montpelier, VT 05602
(802) 229-4600

Drawn by: RTK Date: 05/13/10
Chk'd by: Date:
Scale: 1"=80' Project: 1-1470-13



Note: All lines are approximate.

Sources: NAIP 2003 Orthophotograph St. Albans NW (4407316_nw) and "Facility Plan: The Fonda Group, Inc., by New England Air Quality Testing, 3/19/01.
Sample results are preliminary as of 02/05/08.

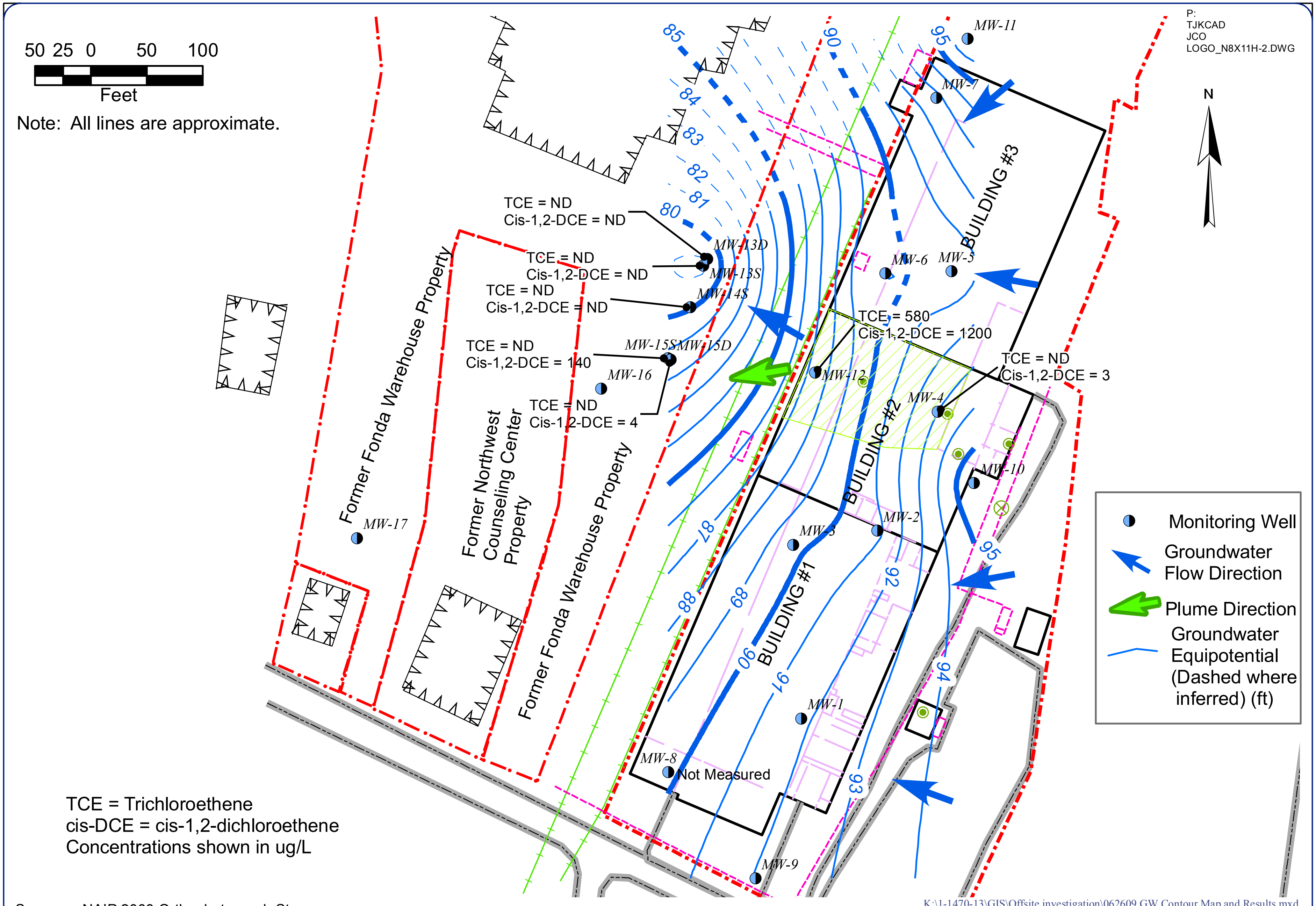
P:
TJKCAD
JCO
LOGO_N11X17-2.DWG

Figure 4. Sampling Locations (Except PCBs)
Former Fonda Manufacturing
St. Albans, Vermont

The Johnson Company

100 State Street, Suite 600
Montpelier, VT 05602
(802) 229-4600

Drawn by:	RTK	Date:	04/05/10
Chk'd by:		Date:	
Scale:	1"=80'	Project:	1-1470-13

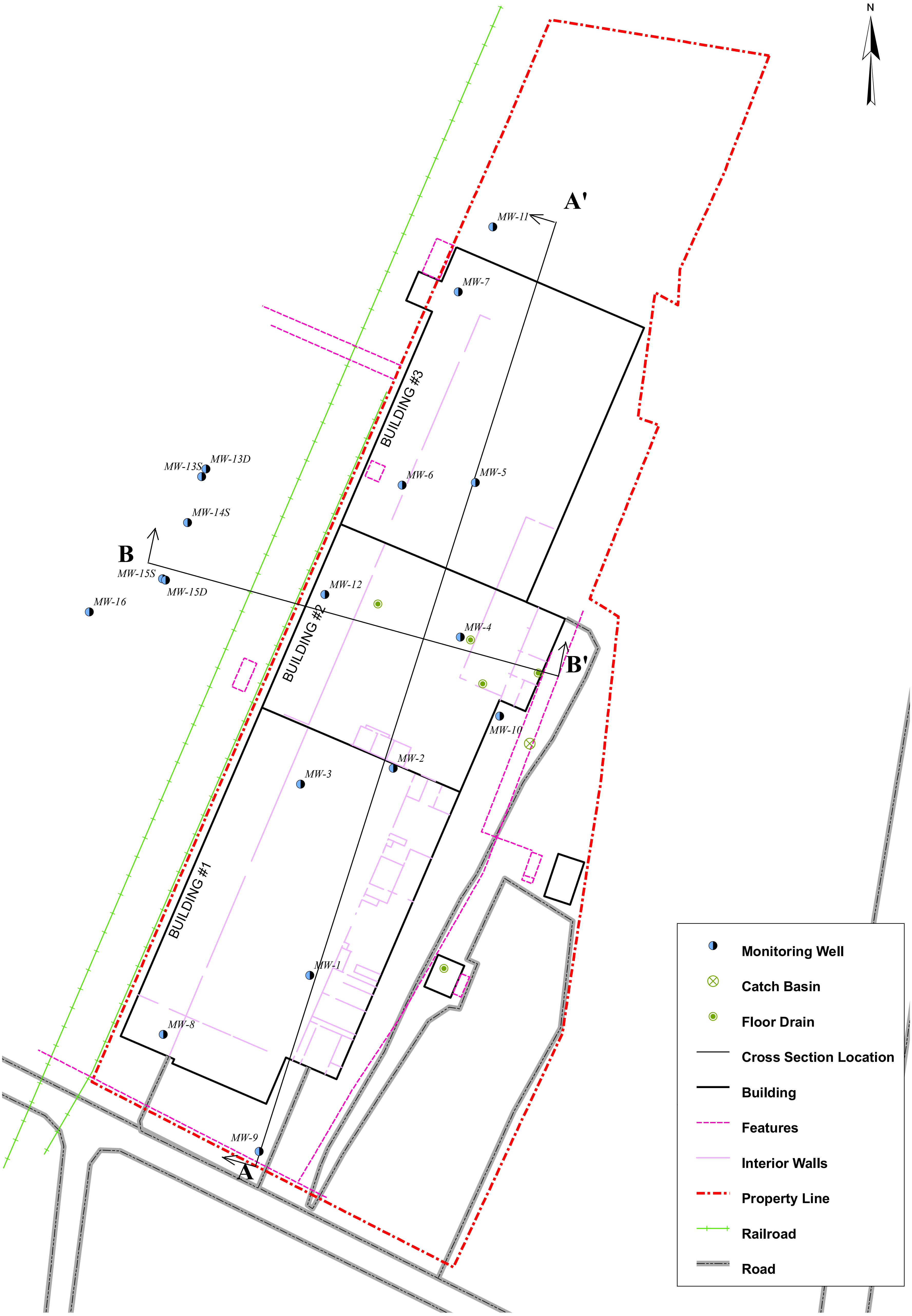


Sources: NAIP 2003 Orthophotograph St. Albans NW (4407316_nw) and "Facility Plan: The Fonda Group, Inc., by New England Air Quality Testing, 3/19/01. Water elevations based on a level survey by The Johnson Company on 4/10/09.

Figure 5. Results and Groundwater Directions- April 10, 2009
Former Fonda Manufacturing
St. Albans, Vermont

The Johnson Company
100 State Street, Suite 600
Montpelier, VT 05602
(802) 229-4600

Drawn by:	TJK	Date:	04/28/09
Chk'd by:	RTK	Date:	06/26/09
Scale:	1"=120'	Project:	1-1470-13



Sources: NAIP 2003 Orthophotograph St. Albans NW (4407316_nw) and "Facility Plan: The Fonda Group, Inc., by New England Air Quality Testing, 3/19/01.
Water elevations based on a level survey by The Johnson Company on 02/12/08.

Note: All lines are approximate.

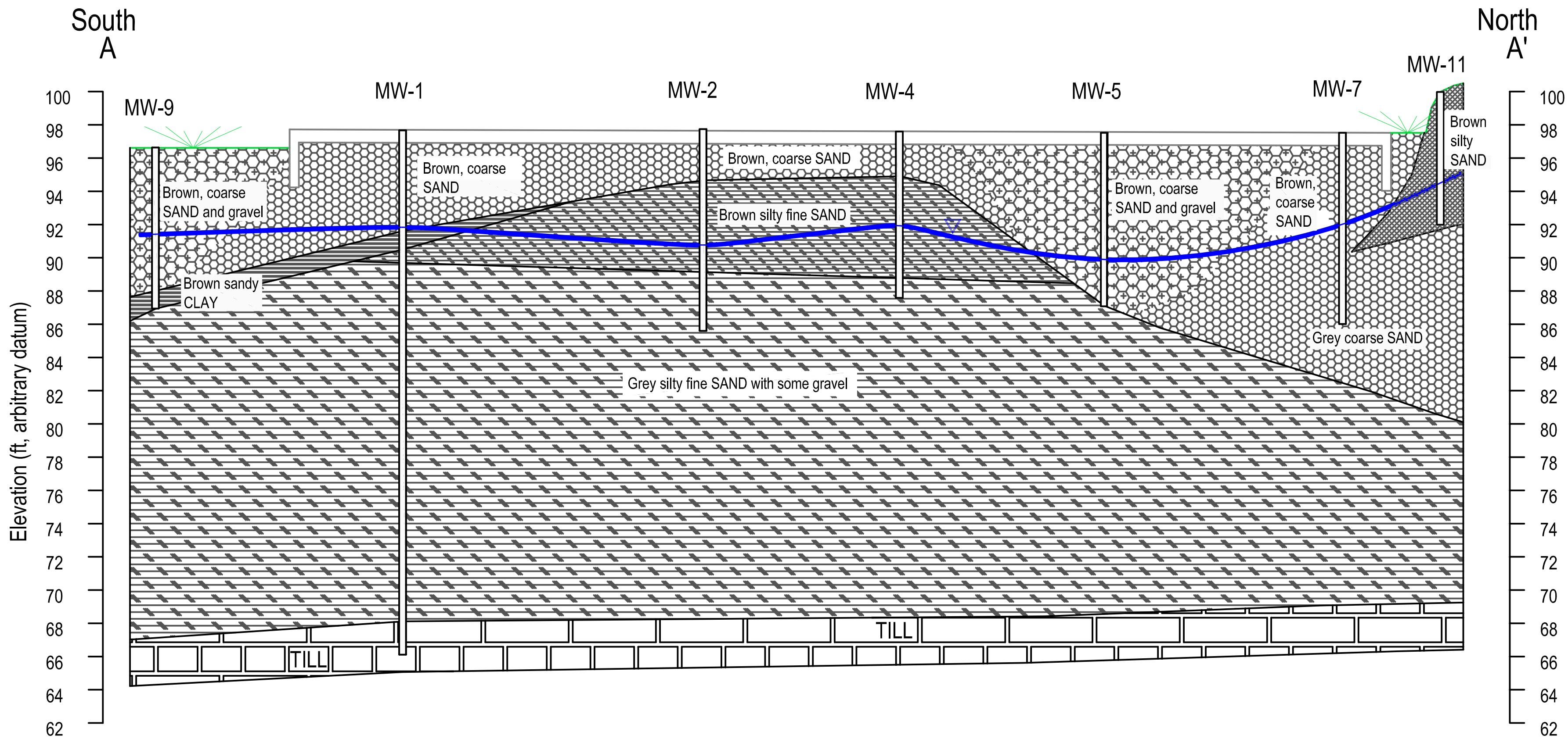
40 20 0 40 80
Feet

Figure 6a: Cross Section Locations
Former Fonda Manufacturing Facility
St. Albans, Vermont

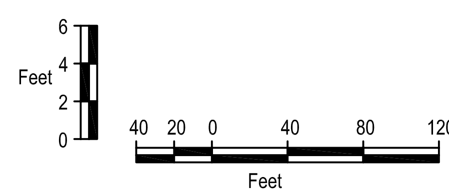
The Johnson Company
100 State Street, Suite 600
Montpelier, VT 05602
(802) 229-4600

Drawn by: JSG Date: 04/01/10
Chk'd by: RTK Date: 04/05/10
Scale: 1"=80' Project: 1-1470-13

P:
TJKCAD
JCO
LOGO_N11X17-2.DWG



Sample ID	VGES (ug/L)	MW-9		MW-1		MW-2		MW-4						MW-5		MW-7		MW-11	
Sampling Date		2/12/2008		2/12/2008		2/12/2008		2/12/2008		8/18/2008		4/10/2009		2/12/2008		2/12/2008		2/25/2008	
1,1-Dichloroethene	7	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1
trans-1,2-Dichloroethene	100	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2
cis-1,2-Dichloroethene	70	U	2	U	2	U	2	U	2		6		3	U	2	U	2	U	2
Trichloroethene	5	U	2	U	2	U	2	U	2		**7**		5	U	2	U	2	U	2
Tetrachloroethene	5	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2



Notes:
U = Not detected above reporting limit shown
Vertical Exaggeration: 1H: 3.05V

Figure 6b. Cross-Section A-A'
Former Fonda Group Facility
St. Albans, VT

The Johnson Company
100 State Street, Suite 600
Montpelier, VT 05602

Drawn by: JSG Date: 04/01/10
Reviewed by: RTK Date: 04/05/10
Scale: As Shown Project: 1-1470-13

K:\1-1470-13\GIS\X-Section A-A'.dwg

Sample ID	VGES	MW-15S						MW-15D		MW-12						MW-4						MW-10	
Sampling Date	(ug/L)	4/10/2009		7/9/2009		7/14/2009		4/10/2009		8/18/2008		4/10/2009		7/14/2009		2/12/2008		8/18/2008		4/10/2009		2/12/2008	
1,1-Dichloroethene	7	U	1	U	1	U	1	U	1	U	10		5		**10**	U	1	U	1	U	1	U	1
trans-1,2-Dichloroethene	100	U	2	U	2	U	2	U	2		10		29	U	2	U	2	U	2	U	2	U	2
cis-1,2-Dichloroethene	70		**140**		**250**		**260**		4		**2100**	H	**1700**		**2400**	U	2		6		3	U	2
Trichloroethene	5	U	2	U	2	U	2	U	2		**190**	H	**840**		**1700**	U	2		**7**		5	U	2
Tetrachloroethene	5	U	2	U	2	U	2	U	2	U	20	U	2	U	2	U	2	U	2	U	2	U	2

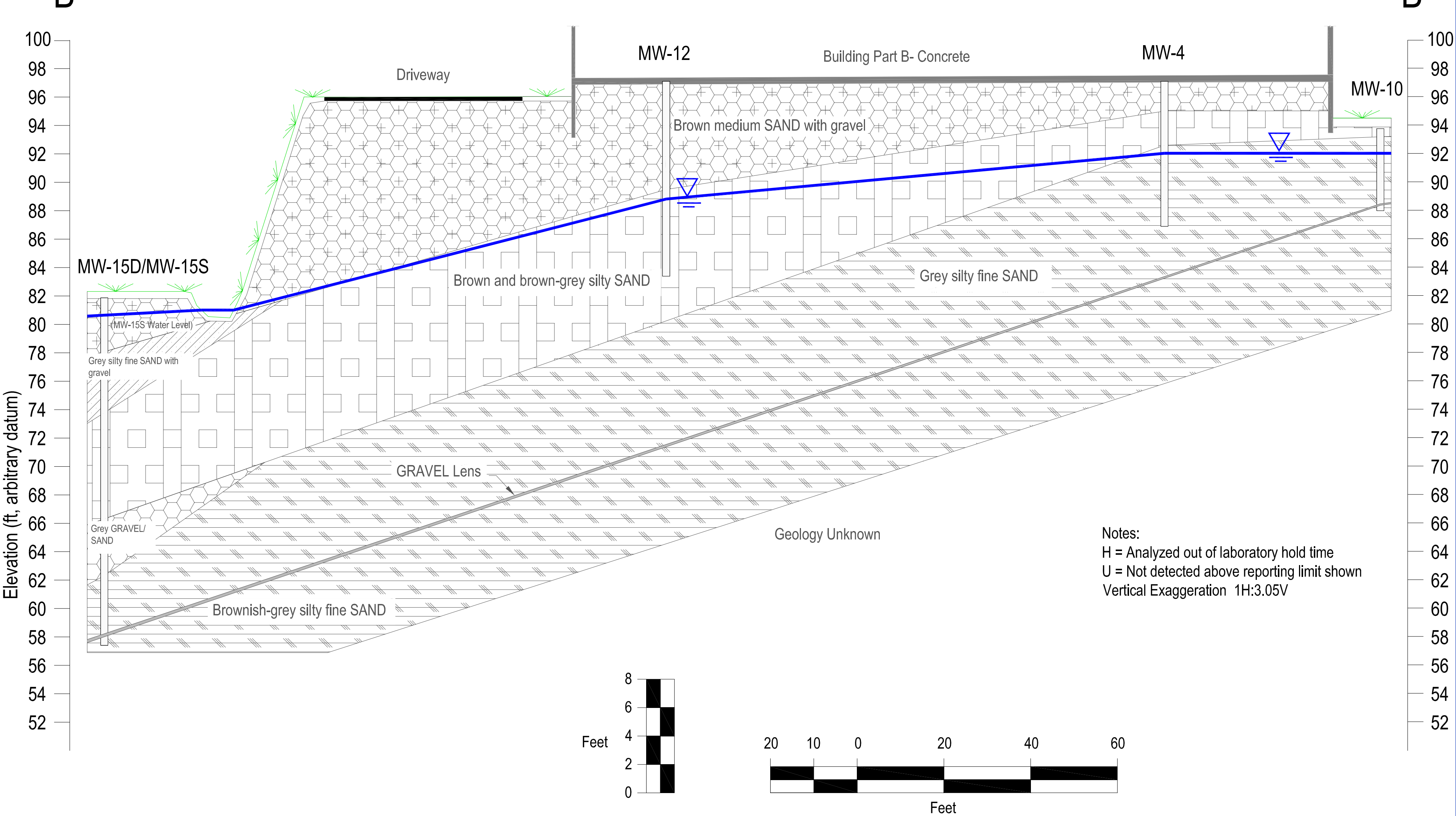


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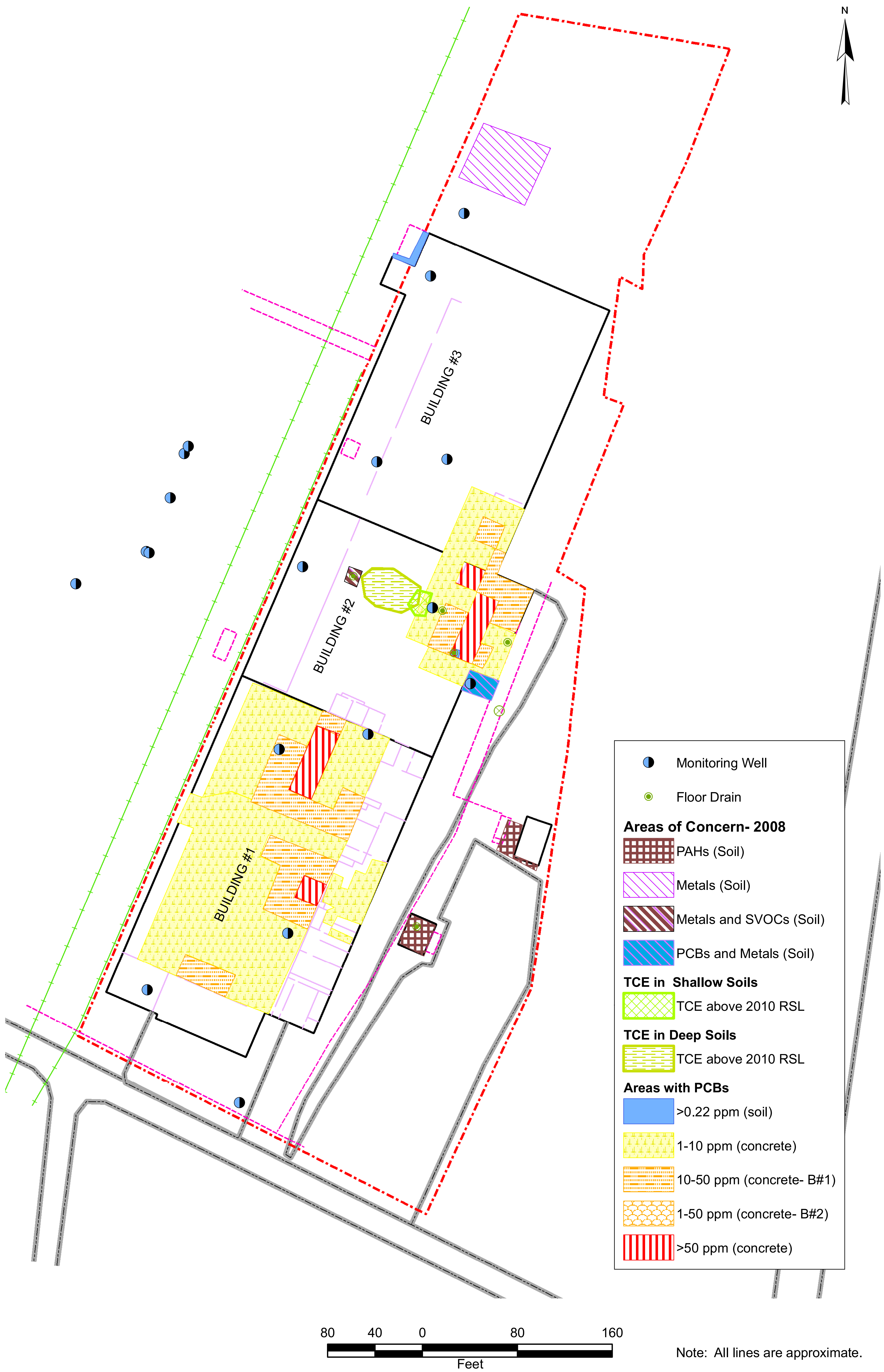
Figure 6c. Cross-Section B-B'
Former Fonda Group Facility
St. Albans, VT

The Johnson Company

100 State Street, Suite 600
Montpelier, VT 05602

Drawn by: JSG Date: 04/01/10
Reviewed by: RTK Date: 04/05/10
Scale: As Shown Project: 1-1470-13

K:\1-1470-13\GIS\TSCA Notification Figures\060710 Figure 7 All AOCs.mxd



Note: All lines are approximate.

Sources: NAIP 2003 Orthophotograph St. Albans NW (4407316_nw) and "Facility Plan: The Fonda Group, Inc., by New England Air Quality Testing, 3/19/01.

P:
TJKCAD
JCO
LOGO_N11X17-2.DWG

Figure 7. All Areas of Concern- Summer 2008
Former Fonda Manufacturing
St. Albans, Vermont

The Johnson Company

100 State Street, Suite 600
Montpelier, VT 05602
(802) 229-4600

Drawn by: RTK Date: 10/30/08
Chk'd by: Date:
Scale: 1"=80' Project: 1-1470-13

APPENDIX 1

LIST OF CONTACTS

List of Contacts		
Party Name	**Contact Name, Address and Phone Number**	**Association with Project**
Interested, Threatened or Impacted Third Parties		
City of St. Albans	Dominic Cloud, City Manager City of St. Albans 100 North Main Street St. Albans, VT 05478 (802) 524-1500	Current owner of Site property
Northwest Regional Planning Commission	Greta Brunswick Land Use Planner Northwest Regional Planning Commission 155 Lake Street St., Albans, VT 05478 (802) 524-5958	EPA Grantee and project manager
Vermont Department of Environmental Conservation	Matt Becker Waste Management Division, Brownfields Response Program Vermont Department of Environmental Conservation 103 South Main Street Waterbury, Vermont 05671-0404 (802) 241-3449	VTDEC Site Manager
United States Environmental Protection Agency	Dorrie Paar EPA New England - Region 1 5 Post Office Square, Suite 100 Mail Code OSRR07-2 Boston, MA 02109-3912 (617) 918-1432	Grant source for assessments and CAP
5-7 Lower Newton Street and 220 North Main Street	Michael L. and Sylvie Corbeil PO Box 124 St. Albans, VT 05478-0124	Neighboring Property Owner
6 Lower Newton Street	Shawn E. Demore and Tiffany E. Sherrill 6 Lower Newton Street St. Albans, VT 05478	Neighboring Property Owner
9 Lower Newton Street	Carmen Chabot Family Trust 9 Lower Newton Street St. Albans, VT 05478	Neighboring Property Owner
10 Lower Newton Street	Gary and Rose Lawton 10 Lower Newton Street St. Albans, VT 05478	Neighboring Property Owner
11 Lower Newton Street	Steven C. and Valarie J. Brunelle 11 Lower Newton Street St. Albans, VT 05478	Neighboring Property Owner
16 Lower Newton Street	Ralph A. Bailey 16 Lower Newton Street St. Albans, VT 05478	Neighboring Property Owner
18 Lower Newton Street	Peter J. Smith 18 Lower Newton Street St. Albans, VT. 05478	Neighboring Property Owner
20 Lower Newton Street	Kathleen Lashway 20 Lower Newton Street St. Albans, VT. 05478	Neighboring Property Owner
22 Lower Newton Street	Gloria J. Brown PO Box 624, 22 Lower Newton Street St. Albans, VT. 05478	Neighboring Property Owner
27 Lower Newton Street	Northwestern Counseling Support Services	Neighboring Property

List of Contacts		
Party Name	**Contact Name, Address and Phone Number**	**Association with Project**
	107 Fisher Pond Road St. Albans, VT 05478	Owner
29 Lower Newton Street	Catamount St. Albans 2 LLC c/o Redstone Commercial 210 College Street, Suite 201 Burlington, VT 05401	Neighboring Property Owner
222 North Main Street	Gregory H. and Kimberly T. Douglas 222 North Main Street, Apt. 1 St. Albans, VT 05478	Neighboring Property Owner
228 North Main Street	Yellow Wood Associated Trust c/o Shanna Ratner, Trustee 228 North Main Street St. Albans, VT 05478	Neighboring Property Owner
230 North Main Street	Jesse and Kathyrn White 230 North Main Street St. Albans, VT 05478	Neighboring Property Owner
232 North Main Street	Kenneth and Janis Appel 232 North Main Street St. Albans, VT 05478	Neighboring Property Owner
238 North Main Street	Stanley E. and Betty H. Mossey Joint Revocable Trust 238 North Main Street St. Albans, VT 05478	Neighboring Property Owner
242 North Main Street	Liisa M. Puro 242 North Main Street St. Albans, VT 05478	Neighboring Property Owner
244 North Main Street	Louis J. Preston 244 North Main Street St. Albans, VT 05478	Neighboring Property Owner
246 North Main Street	Mary Schumer 85 High Street St. Albans, VT 05478	Neighboring Property Owner
248 North Main Street	Daniel P. and Helen F. Branon 248 North Main Street St. Albans, VT 05478	Neighboring Property Owner
260 North Main Street	Daniel J. Handy and Luneau Family Trusts 699 Highgate Road St. Albans, VT 05478	Neighboring Property Owner
Contractors and Subcontractors		
The Johnson Company	Rhonda Kay The Johnson Company, Inc. 100 State Street, Suite 600 Montpelier, VT 05060 (802) 229-4600	Environmental consultant, developer of CAP, oversight of corrective action

APPENDIX 2

ITEMIZED COST ESTIMATE

Itemized Cost Estimate- Surface Soils
Former Fonda Group Facility, St. Albans, VT
JCO Project #1-1470-13

Only Option: PCB, SVOC, Metals Contaminated Soil Removal

Assumptions:

Disposal as solid waste:

Cut trees and excavate 2-3 ft soil and surficial trash north of building (66 cu yds = 100 tons)

Trees to remain in a pile on-site
See below for hazardous disposal
Approval from PCB coordinator required

Disposal as hazardous waste:

Excavate top 2.5 feet of soil and asphalt from 470 square foot area near hazardous waste loading dock (44 cu yds total)

22 cu yds are hazardous (33 tons), but all 44 cu yds will be disposed of as hazardous (66 tons) *FOR COST ESTIMATING
Approval from PCB coordinator required

Disposal of soils in Boiler House and Floor Drains in Building:

Remove soils from boiler house with Vactor truck or by hand, load into roll-off and dispose (6 cu yds = 9 tons)
Remove sediment from 4 floor drain sumps inside building

Approval from PCB coordinator required
Does not include cleaning drain lines after demolition

Sampling:
Pre-removal:

Collect 1 sample from each non-printing floor drain (2 total) for TCLP metals + TCLP pentachlorophenol
Collect 3 samples + 1 duplicate from buried trash area for TCLP metals
Collect 4 samples + 1 duplicate from hazardous loading dock for PCBs

Post-removal:

Collect 3 + 1 duplicate confirmatory metals samples from buried trash area for RCRA 8 metals
Collect 18 samples + 2 duplicates from the haz waste loading area for PCBs

Preparation							
Oversight	4	hours	$105	per hour	$420		
TSCA Notification and Workplan Preparation	30	hours	$85	per hour	$2,550		
Paperwork, coordinate subcontractors	12	hours	$64	per hour	$768		
Pre-mark site	4	hours	$64	per hour	$256		
mileage	130	miles	$0.59	per mile	$76		
Communications	1.50%	labor			$60		
						$4,130	
Low Level Shallow Soil Excavation and Disposal Costs							
Tree clearing	15	hrs	$131	hr	$1,969		
Soil excavation	26	hrs	$158	hr	$4,095		
Soil transportation	7	loads	$1,050	load	$7,350		
Soil disposal (solid waste)	100	tons	$70	ton	$7,000		
Engineer/ Scientist III	16	hours	$64	per hour	$1,024		oversight
mileage	260	miles	$0.59	per mile	$152		
Pre and post excav PCB samples	25	samples	$71.50	per sample	$1,788		
Pre excav TCLP metals samples	6	samples	$231.00	per sample	$1,386		
Pre excav TCLP pentachlorophenol sample	1	sample	$150.00	per sample	$150		
Confirmatory RCRA 8 metals samples	4	samples	$124.30	per sample	$497		
Shipping	3	units	$100.00	per unit	$300		
Reporting	16	hours	$64.00	per hour	$1,024		
Communications	1.50%	labor			$31		
	Solid waste/daily cover excavation and disposal subtotal					$26,765	
Hazardous Soil Excavation and Disposal Costs							
Soil excavation	10	hrs	$131	hr	$1,310		
Transport & Disposal (>50 ppm)	66	tons	$342	per ton	$22,589		
Oversight	3	hours	$105	per hour	$315		
Engineer/ Scientist III	8	hours	$64	per hour	$512		oversight
mileage	130	miles	$0.51	per mile	$66		
Reporting	3	hours	$64	per hour	$192		
Communications	1.50%	labor			$11		
			Excavation and disposal subtotal			$24,994	

Itemized Cost Estimate- Surface Soils
Former Fonda Group Facility, St. Albans, VT
JCO Project #1-1470-13

Boiler House Soil Removal and Disposal Costs							
Boiler house soil removal, disposal	1	job	$9,818	job	$9,818		
Sump cleaning and disposal	1	job	$1,386	job	$1,386		
Engineer/ Scientist III	8	hours	$64	per hour	$512		oversight
mileage	130	miles	$0.59	per mile	$76		
Reporting	2	hours	$64	per hour	$128		
Communications	1.50%	labor			$10		
			Boiler House Soil Removal subtotal			$11,929	
				Subtotal			$67,818
				10% contingency			$6,782
		PCB, PAH, Metals Contaminated Soil Disposal Total Estimated Cost					**$74,600**

Itemized Cost Estimate: Concrete in Buildings
Former Fonda Group Facility, St. Albans, VT
JCO Project #1-1470-13

Interim Measure: Remove PCB-Impacted walls, cover concrete with poly and gravel

Assumptions

Does not include costs to demolish uncontaminated portions of building
Building #1:
Walls demolished. Approximately 320 ft length at 5' high has concentrations of 1-50 ppm
wall area= 1600 sq ft Volume = 40 cy = 40 tons
Buildings #2 & 3:
Concrete block walls up to 3 feet demolished and disposed of
Block walls with PCBs between 1 and 50 ppm
546 sq ft Volume = 13 cy = 13 tons
Block walls with PCBs>50 ppm
469 sq ft Volume = 11 cy = 11 tons
Additional wall samples collected to confirm = 40 samples
270 cubic yards of gravel (2 inch depth) will be required
Reporting of cover implementation will be conducted in conjunction with other Corrective Action Items

Preparation						
Oversight	1	hours	$105	per hour	$105	
Coordination, premark	6	hours	$64	per hour	$384	
Communications	1.50%	labor			$7	
						$496
Concrete Sampling						
Oversight	1	hours	$105	per hour	$105	
On-Site work	8	hours	$64	per hour	$512	
mileage	130	miles	$0.59	per mile	$76	
Drill, generator, equipment	1	days	$200	per day	$200	
PCB samples	40	samples	$72	per sample	$2,860	
Sample shipping	1	unit	$100	per unit	$100	
Communications	1.50%	labor			$9	
						$3,862
Demolition of Concrete Walls with PCBs 1-50 ppm Costs						
Concrete demo	2615	sf	$4	per unit	$10,460	
Transport & Disposal (<50 ppm)	53	tons	$215	per ton	$11,395	
Transport & Disposal (>50 ppm)	11	tons	$345	per ton	$3,795	
						$25,650
Equipment						
Poly Sheeting	50,000	sq feet	$0.065	per sq foot	$3,250	
Gravel (1 truckload=16 cubic yards)	17	truckloads	$372	truckoad	$6,324	
skidsteer rental	1	day	$400	day	$400	
Labor	12	hours	$50	hour	$600	
						$10,574
Implementation						
Oversight	3	hours	$105	per hour	$315	
On-Site work, reporting to TSCA	16	hours	$64	per hour	$1,024	
Mileage	130	miles	$0.59	per mile	$76	
Survey for deed restriction	1	unit	$2,000	per unit	$2,000	
Communications	1.50%	labor			$20	
						$3,120
					Subtotal	$43,703
					10% contingency	$4,370
					Wall Demolition and Concrete Cover Estimated Cost	**$48,073**

Additional sampling that may be required for TSCA cleanup notification:
Additional floor samples collected from adjusted concentration areas = 40 samples

Concrete Sampling						
On-Site work	7	hours	$64	per hour	$448	
mileage	130	miles	$0.59	per mile	$76	
Drill, generator, equipment	1	days	$200	per day	$200	
PCB samples	40	samples	$72	per sample	$2,860	
Sample shipping	1	unit	$100	per unit	$100	
Communications	1.50%	labor			$7	
					Subtotal- Additional Floor Samples	$3,691
					Wall Demolition and Concrete Cover with Additional Floor Samples Total	**$51,764**

Itemized Cost Estimate- TCE in Groundwater
Former Fonda Group Facility, St. Albans, VT
JCO Project #3-1928-5

Required: Monitor TCE-impacted Wells

Assumptions:

Nine existing wells sampled for chlorinated VOCs by EPA 8260B, 1 duplicate required
Quaterly sampling for 2 years

Items	Personnel/Equip.	Billing Rate/Unit		# Units	Units	Total Est. Cost	Notes
1. Scope of Work							
	Project Manager	$85	hr	1	hrs	$85.00	
	Project Sci/Eng III	$64	hr	2	hrs	$128.00	
					Sub Total	*$213.00*	
2. Monitoring Well Sampling							
Assumes sampling 9 wells + 1 duplicate for chlorinated VOCs							
	Project Manager	$85	hr	2	hrs	$170.00	Oversight
	Project Sci/Eng III	$64	hr	2	hrs	$128.00	field prep
	Project Sci/Eng III	$64	hr	15	hrs	$960.00	sampling
	mileage	$0.55	mile	130	miles	$71.50	
	truck	$75.00	day	1	day	$75.00	
	YSI flow through cell	$125	day	1	day	$125.00	
	turbidity meter	$30	day	1	day	$30.00	
	peristaltic pump	$35	day	1	day	$35.00	
	water level marker	$20	day	1	day	$20.00	
	PPE, decon	$35	day	1	day	$35.00	
	tubing	$8	well	9	wells	$72.00	
	Chorinated VOC analysis	$110	sample	10	samples	$1,100.00	1 duplicate
					Sub Total	*$2,821.50*	
3. Reporting							
Letter report summarizing results to VTDEC							
	Senior Sci/Eng VIII	$105	hr	1	hrs	$105.00	
	Project Manager	$85	hr	1	hrs	$85.00	
	Project Sci/Eng III	$64	hr	8	hrs	$512.00	
	GIS/CAD	$52	hr	3	hrs	$156.00	
					Sub Total	*$858.00*	
					Sampling Sub-total per year		*$3,892.50*
Number of events=		8	events	4	events per year		
					Sampling Sub-total for all events		*$31,140.00*
					10 % Contingency		$3,114.00
					Investigation Total		***$34,254.00***

Summary of Cost Estimates
Former Fonda Group Facility, St. Albans, VT
JCO Project #3-1928-5

Selected Alternatives	
Concrete Slab Buildings #1, 2, 3:	
Interim Measure: Remove PCB-Impacted walls, cover concrete with poly and gravel	$48,073
Additional Concrete Floor Sampling	$3,691
SVOC-, PCB-, Metals-Impacted Soils:	
Only Option: PCB, SVOC, Metals Contaminated Soil Removal	$74,600
TCE-Impacted Groundwater	
Required: Monitor TCE-impacted Wells	$34,254
Total for selected alternatives	***$160,618***

Total that may be eligible for VT DEC Funding (additional PCB floor sampling excluded) $156,927

APPENDIX 3

DRAFT NOTICE TO THE LAND RECORDS

Notice to the City of St. Albans Land Records

This is to serve notice to the City of St. Albans, Vermont, that contamination exists at the former Fonda Group Facility property located at 15-21 Lower Newton Street. The property is filed in the Waste Management Division records as the Former Fonda Group Facility, SMS Site # 2008-3777.

On-site contamination resulted from the release of PCBs to concrete inside the former building from previous manufacturing processes, release of PCBs to soil outside the building from a transformer, a release of polynuclear aromatic hydrocarbons (PAHs) to soil from an unknown cause, and a release of trichloroethene (TCE) to soil and groundwater beneath the center of the building as a result of previous manufacturing processes. PCB contamination in concrete is present above the Toxic Substances Control Act's (TSCA's) regulatory limit of 1 part per million (ppm) for porous media, with maximum concentrations in localized areas approaching 200 ppm. Following demolition of the building structure, the concrete slab floor was left in-place and covered with plastic sheeting and a minimum of 2 inches of clean gravel. The concentrations of PCBs in concrete may present an exposure risk to Site users, but these risks are expected to be minimized to acceptable levels if the property remains unoccupied and the covering remains intact. Concentrations of PCBs near the former Transformer Substation #2 at the northwestern corner of the former building and in the alleged former ink waste dump area on the eastern side of the driveway and southeast of the hazardous waste loading dock are below the TSCA regulatory limit and below Industrial Regional Screening Levels for soil, but are above Residential Regional Screening Levels for soil. Concentrations of PAHs are above Residential Regional Screening Levels but below Industrial Regional Screening Levels at the following locations: immediately north, south, and west of the former storage shed near the eastern boundary of the property, below pavement outside the former loading dock at the southwestern corner of the former building, and inside the catch basin in the eastern parking lot. Concentrations of TCE and its degradation products in soil are above Industrial and Residential Screening Levels at the following location: beneath the concrete slab in Building #2, near the centerline of the building. Concentrations of TCE and its degradation products in groundwater are above Vermont Groundwater Enforcement Standards at the following locations: beneath Building #2 and in groundwater within approximately 100 feet west of the building. The TCE and resulting degradation product concentrations in soil and groundwater have the potential to impact indoor air quality in a building located above the contamination. As long as the on-site building remains unoccupied and no buildings are constructed above the TCE-related contamination, there are no unacceptable human health or ecological risks. However, if any buildings are to be occupied on-Site or in the area of downgradient impacts to groundwater, the potential for indoor air quality impacts must be assessed and mitigated before occupancy.

Details are outlined in the reports titled *Phase II Environmental Site Assessment: Former Fonda Group Facility Site* dated October 2008 and *Corrective Action Plan for Remediation of Soil, Groundwater, and Building-Related Contamination* prepared by The Johnson Company, Inc. dated *XXXXX*. Copies of these reports are in the site file and are available for review at the Vermont Department of Environmental Conservation (VTDEC) offices in Waterbury, Vermont.

The conditions described in the above reports and VTDEC site file do not require further remedial action or VTDEC management while the Site remains unoccupied. Current conditions do not represent a significant risk to human health or the environment. If the Site will be redeveloped for residential reuse, the PCB contamination in concrete and the PAH and PCB contamination in soil must be addressed. If the Site will be redeveloped for industrial reuse, the PCB contamination in concrete must be addressed. The plastic sheeting and gravel cover are required to be maintained to prevent risk to Site users until the property is redeveloped. The plastic sheeting and gravel cover must be inspected annually beginning one year after the interim remedy is installed and documentation of the inspection must be forwarded to VTDEC and a copy must be kept on file with the building's current owner.

Prior to conducting any subsurface work, excavation, or groundwater extraction in the vicinity of the above described contamination on the property, the Agency of Natural Resources, Department of Environmental Conservation, Waste Management Division (VTANR/DEC/WMD), must be notified.

The status of this site may only be updated or altered by the Vermont ANR/DEC/WMD. For further information contact:

Vermont Agency of Natural Resources
Department of Environmental Conservation
Waste Management Division
103 South Main Street / West Building
Waterbury, VT 05671-0404
Tel: (802) 241-3888

by: City of St. Albans

____
Authorized representative / date

APPENDIX 4

DRAFT HEALTH AND SAFETY PLAN

DRAFT HEALTH AND SAFETY PLAN

Sampling Before and After Demolition
Former Fonda Group Facility
15-21 Lower Newton Street

St. Albans, Vermont

June 4, 2010

Project Client:

Northwest Regional Planning Commission
55 Lake Street
St. Albans, VT 05478

Hospital Directions:

Start **21 Lower Newton St**
St Albans, VT 05478
End **133 Fairfield St**
St Albans, VT 05478
Travel **1.3 mi – about 3 mins**

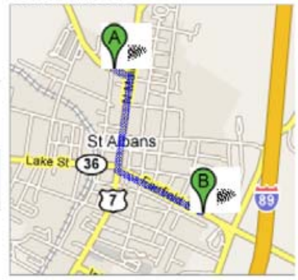
21 Lower Newton St
St Albans, VT 05478
Drive: 1.3 mi – about 3 mins

1.	Head **southeast** on **Lower Newton St/VT-38** toward **N Main St/US-7**	0.1 mi
2.	Turn **right** at **N Main St/US-7**	0.6 mi 2 mins
3.	Turn **left** at **Fairfield St/VT-36**	0.6 mi 2 mins

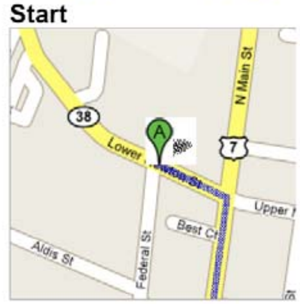
133 Fairfield St
St Albans, VT 05478

These directions are for planning purposes only. You may find that construction projects, traffic, or other events may cause road conditions to differ from the map results.

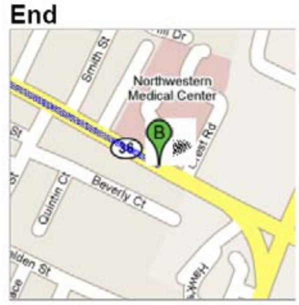
Overview



Start



End



Map data ©2008 NAVTEQ™

Map data ©2008 NAVTEQ™

Health and Safety Plan

for

Sampling Before and After Demolition

at

Former Fonda Group Facility
15-21 Lower Newton Street
St. Albans, Vermont

Adopted by: ____ Date: ____________________
TBD
Site Safety Officer

Adopted by: ____ Date: ____________________
Rhonda Kay
Project Manager

Adopted by: ____ Date: ____________________
Thomas R. Osborne
Corporate Health and Safety Officer

SITE SAFETY PLAN ACKNOWLEDGMENT FORM

I have read, understand and will abide by the procedures set forth in this Health and Safety Plan and any amendments thereto. I have also been briefed of the contents of this plan and been given sufficient opportunity to ask any questions that have arisen, and have received answers which I believe are appropriate and complete which are incorporated in this Health and Safety Plan or its Amendments.

Printed Name	Signature	Representing	Date

By acknowledging the contents of this plan, individuals are recognizing the hazards present at the site and are indicating that they are willing to accept the jurisdiction of the appropriate site officials as well as the policies and procedures required to minimize exposure to potentially hazardous substances.

TABLE OF CONTENTS

LIST OF APPENDICES

1.0 INTRODUCTION

1.1 SCOPE OF WORK

The Johnson Company will be performing pre- and post-demolition soil and concrete sampling activities at the Former Fonda Group Facility at 15-21 Lower Newton Street in St. Albans, Vermont as part of Corrective Action Activities. The Site is approximately 9.75 acres and hosts an unoccupied building. The Site can be accessed on the south side by Lower Newton Street, and is adjacent to the railroad tracks. The general location of the subject area is indicated in Figure 1. This work is scheduled to be conducted in summer 2010 and consists of the collection of soil and concrete samples for fixed laboratory analysis.

Demolition and excavation contractors will be performing building and soil removal and will work under their own Health and Safety Plans. All personnel who visit the site or participate in on-site soil and concrete sampling activities and have the potential to be exposed to contaminants will be required to read and sign this Health and Safety Plan.

The Site was formerly used as a paper product forming and printing facility. Contaminants identified at the Site include polychlorinated biphenyls (PCBs), semi-volatile organic compounds (SVOCs) and lead. In addition, chlorinated volatile organic compounds (VOCs) have been identified beneath the concrete slab in soil and groundwater, but no exposure is expected during sampling activities.

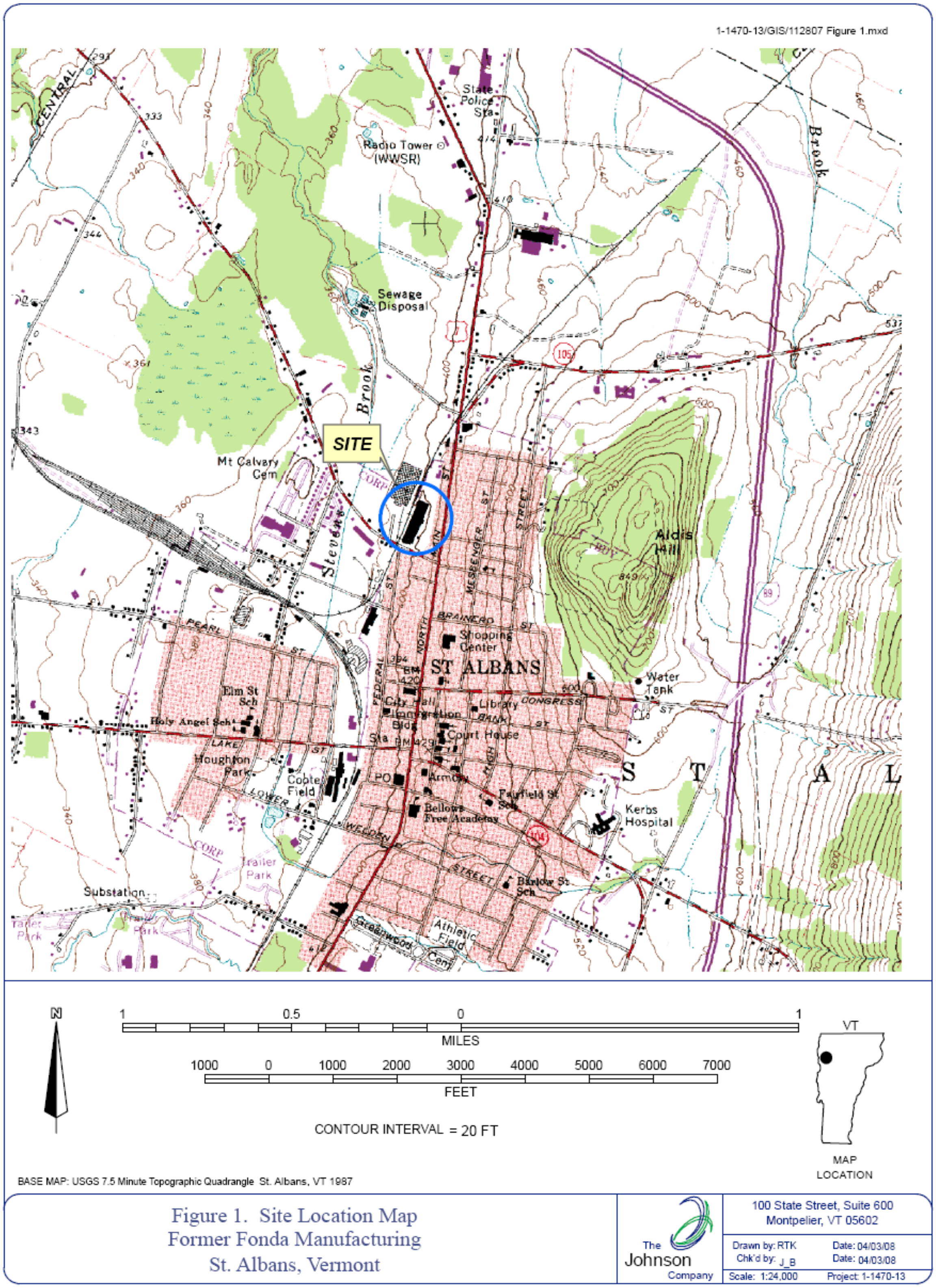


Figure 1. Site Location Map
Former Fonda Manufacturing
St. Albans, Vermont

PCBs in dust and soil will be monitored visually during sampling. All reasonable attempts will be made to control dust during sampling. If visible dust cannot be controlled, all work will cease and the site will be evacuated until the circumstances are evaluated in relation to the risk to human health of all on-site workers. Engineering controls or an amendment to the Health and Safety Plan may be needed to continue on-site work.

Level D PPE is adequate for site entry and to conduct all activities where concrete will not be disturbed. Level D protection includes chemical resistant gloves (nitrile), steel-toed boots, sight and hearing protection, and hard hats (if overhead hazards are present). Modified Level C protection (including all elements of Level D and a particulate respirator) will be required during all concrete sampling activities. The Level D and Modified Level C PPE ensembles are described in detail in Section 2.2 of this plan.

1.2 HEALTH AND SAFETY PLAN (HSP)

This site Health and Safety Plan (HSP) has been developed by The Johnson Company, Inc., for use during the performance of subsurface environmental site assessment activities at the Former Fonda Group Facility in St. Albans, Vermont. The plan describes the health and safety guidelines that will be implemented during this work to protect on-site personnel, visitors and the public from physical harm and exposure to hazardous materials. The specific requirements of this HSP will be revised if new information is received or conditions change. All revisions will be in writing and attached as amendments in Appendix A.

1.3 TRAINING REQUIREMENTS

All personnel, including subcontractors and visitors who will enter the exclusion zone (EZ) or contamination reduction zone (CRZ), must have fulfilled the appropriate training requirements stated in 29 CFR 1910.120, Occupational Safety and Health Administration, Hazardous Waste Operations and Emergency Response, Final Rule. There are no fences on the Site to prevent access; therefore, the exclusion zone is defined herein as the area surrounding the sampler, which is to be blocked off by traffic cones if necessary.

Further site-specific training will be conducted before initiation of field activities. This training will include but will not necessarily be limited to: emergency procedures, site control, personnel responsibilities, and provisions of this HASP.

In addition, all personnel entering an exclusion zone or a contamination reduction zone must have completed the appropriate medical monitoring requirements under 29 CFR 1910.120(f) and must have successfully passed a qualitative respiratory fit test in accordance with 29 CFR 1910.134 within the last twelve months.

Documentation of the appropriate training, baseline medical monitoring (where required), and respirator fit tests may be requested by the Site Safety Officer (SSO) for site workers prior to entering the exclusion area.

1.4 HEALTH AND SAFETY PERSONNEL

Personnel responsible for the health and safety provisions of this project are the Project Supervisor, Corporate Health and Safety Officer, the Project Manager and the Site Safety Officer.

1.4.1 Project Supervisor – Christopher M. Crandell, P.E., President

The general supervisor has the responsibility and authority to direct all hazardous waste operations. He/she has the authority and responsibility to suspend or modify work practices for any reason, including health and safety issues.

1.4.2 Project Manager – Rhonda Kay, Project Manager

The Project Manager is responsible for overseeing the entire project operation, implementing the project HSP, providing an adequate supply of safety equipment, and ensuring that all personnel have received adequate safety training, and have read this document and understand it. He/she has the authority to enforce compliance with the HSP, suspend or modify work practices for safety reasons, and to exclude from the site and project-related operations any individual whose on-site conduct endangers his/her own health and safety or the health and safety of others.

1.4.3 *Site Safety Officer – To Be Determined*

The Site Safety Officer (SSO) is responsible for advising the Project Manager of health and safety matters. Further, he/she is responsible for implementing this plan, supervising any monitoring programs, establishing necessary work zones and preparing any written amendments to the HSP. The SSO will also be responsible for providing Material Safety Data Sheets (MSDS) or Chemical Hazard Resource Information System (CHRIS) Sheets to the Project Manager regarding chemicals that may be present at each site. The SSO shall be responsible for informing all individuals involved in this project of the contents of this plan and shall ensure that each person acknowledges an understanding of this plan in writing. He/she is responsible for thoroughly briefing all individuals on the anticipated hazards pertinent to the chemical and physical environment, protective clothing, and emergency procedures. By acknowledging the contents of this plan, individuals are recognizing the hazards presented on site, the policies and procedures required to minimize exposure and are willing to accept the jurisdiction of the appropriate site officials. The SSO has the authority to ensure compliance with the HSP, suspend or modify work practices for safety reasons and to exclude from the site any individual whose on-site conduct endangers his/her own health or the health and safety of others.

1.4.4 *Project Professionals*

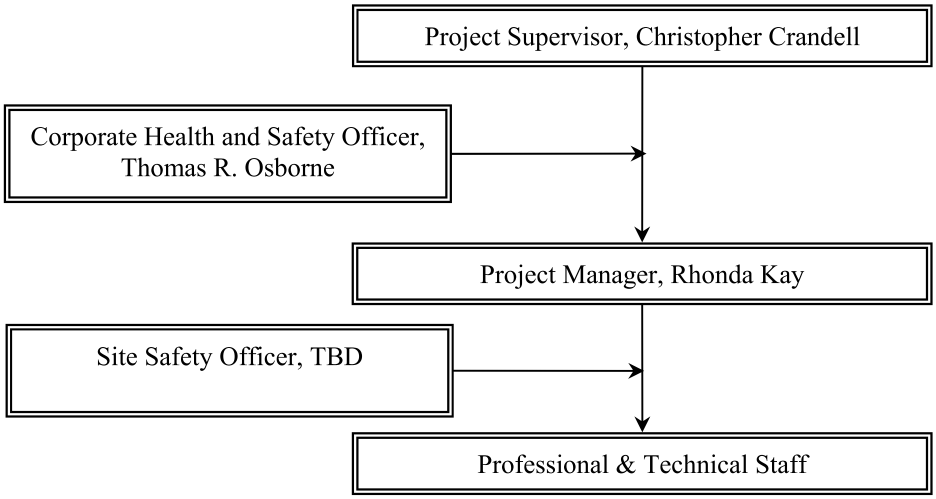
Project professionals are responsible for conducting individual tasks at project sites. They have the responsibility and authority to exclude any persons from the site for reasons associated with health and safety issues.

1.4.5 *Corporate Health and Safety Officer – Thomas R. Osborne*

The Corporate Health and Safety Officer is responsible for the overall health and safety of the personnel conducting work associated with this project, compliance with the appropriate regulations, review of the HSP to ensure its compliance with all appropriate regulations and ensuring compliance to Company policy by all projects. Any significant changes in working conditions requiring a written amendment to this plan requires the oral or written authorization of the Corporate Health and Safety Officer. The Corporate Health and Safety Officer will have the final word in any dispute with regard to health and safety.

1.5 CHAIN OF COMMAND

The organizational structure at The Johnson Company for issues pertaining to health and safety pursuant to 29 CFR 1910.120 is as follows:



1.6 PROJECT PERSONNEL RESPONSIBILITIES DURING EMERGENCIES

The SSO is responsible for responding to and correcting an emergency situation. These duties include the protection of employees, evacuating and securing the work area, ensuring the protection of the public and the environment, ensuring that appropriate decontamination procedures are implemented on all personnel, determining the cause of the incident, recommending changes to prevent its reoccurrence, upgrading or downgrading the level of personal protection equipment, and notification of the appropriate Federal, State and local agencies.

1.7 MEDICAL EMERGENCIES

All personnel who are injured or become ill in the Exclusion Zone must be decontaminated to the maximum extent possible. If injuries are minor, a full decontamination procedure as described in Section 3.0 will be completed and first-aid administered as needed prior to transport. If injuries are severe, a partial decontamination will be completed which will include the removal of all contaminated clothing and redressing in clean coveralls or appropriate materials. First-aid will be administered by trained personnel as needed prior to the arrival of medical personnel. Any person transported for further medical attention will be accompanied by information regarding the chemical(s) to which they may have been exposed.

Any vehicle and equipment used to transport contaminated personnel will be cleaned or decontaminated, as necessary.

1.8 EVACUATION ROUTES

In the event of an emergency that requires evacuation of the work area, a verbal command will be sounded to clearly inform all personnel of the emergency situation. At that time, all personnel will proceed to a point within the clean zone, upwind of any smoke, vapors or spills and proceed with decontamination procedures.

A gathering point and a secondary location will be determined by the SSO and communicated to all site workers prior to the start of work. Personnel should gather immediately at the designated location for a head count in the event of an emergency requiring evacuation. In the event that environmental conditions preclude congregating at the primary gathering location, all personnel will use the evacuation route safest for them and re-convene at the secondary gathering location.

2.0 PERSONAL PROTECTIVE EQUIPMENT

2.1 INTRODUCTION

As required by OSHA 1910.120, PPE must be selected which will protect employees from the specific hazards they are likely to encounter on-site. Selection of the appropriate PPE shall be in compliance with 29 CFR 1910.120(g)(3). In areas where the chemicals of potential concern are known, Level D will be worn unless air monitoring indicates that Action Levels have been exceeded. If Action Levels are exceeded, all work will stop, and the health and safety procedures will be re-evaluated. The evaluation will be used to prepare an amendment to this HSP.

The site information may suggest the use of combinations of PPE selected from the different protection levels as being more suitable to the hazards of the work. It should be cautioned that the listing below does not fully address the performance of specific PPE material in relation to the specific hazards at the job site, and that PPE selection, evaluation and selection is an ongoing process until sufficient information about the hazards and PPE performance is obtained.

2.2 DESCRIPTION OF LEVEL D

The equipment used in the Level D ensemble is meant to provide protection from minimal hazardous contamination. It should be used for nuisance contamination only.

Boots/shoes: Heavy duty leather work boots or shoes with steel toe and shank. In wet environments, or if preferred, these can be substituted with heavy duty rubber boots with steel toe and shank.

Gloves: Nitrile inner gloves whenever the possibility of contact with contaminated water or soils exists. Heavy duty, chemical resistant outer gloves as necessary.

Coveralls: White Tyvek to protect clothes against nuisance contamination (optional). No hood or booties required. As necessary.

Safety Glasses: NIOSH-approved (as necessary) when machines or operations present potential eye or face injury from physical, chemical or radiation agents.

Hard Hat: NIOSH-approved (as necessary) when working around heavy equipment including excavating equipment.

2.3 DESCRIPTION OF MODIFIED LEVEL C

The equipment used in the Modified Level C ensemble is meant to provide protection from airborne contaminants in concrete dust. Level C protection will be used in addition to Level D PPE.

The following constitute modified Level C equipment; it will be used during concrete sampling and may be used as appropriate during other activities.

Air purifying respirator: Full-face or half-mask, NIOSH approved, with HEPA filter.

3.0 DECONTAMINATION PROCEDURES

3.1 DECONTAMINATION OF PERSONNEL

Modified Level C

Disposable respirators and/or respirator cartridges will be disposed of properly as solid waste. The employee's hands and face will be washed as soon as possible.

Level D

All disposable gloves and Tyvek, if utilized, will be disposed of properly as solid waste. The heavy duty work boots will be washed of all nuisance contaminants. The employee's hands and face will be washed as soon as possible.

All disposable gear will be placed in a double lined garbage bag and securely sealed. The garbage bag will be delivered to a solid waste repository as soon as is reasonable after the job is complete.

3.2 DECONTAMINATION OF MACHINERY AND EQUIPMENT

All equipment and excavation machinery will be decontaminated as appropriate on site.

All hand-held equipment will be decontaminated by removal of disposable wrappings or by washing in soapy water, followed by a clean water rinse on site.

Decontamination water will be disposed on site in a fashion that does not pose threat to the environment or human health.

4.0 SITE AND ACTIVITY HAZARDS

4.1 GENERAL

Potential hazards and their context are listed together with Standard Operating Procedures (SOPs) for health and safety.

4.1.1 *Hazards and SOPs Associated with Potentially Contaminated Soil and Concrete*

Hazard: ingestion, inhalation, and skin absorption

SOPs: Nitrile gloves (selection of glove type shall be as directed in Section 2.2) will be worn when handling contaminated solids and liquids. Air will be monitored for visible dust. Personal protective equipment will be upgraded or downgraded at the direction of the SSO, as necessary. Safety glasses will be worn to reduce the likelihood of foreign matter entering the eyes. If deemed necessary by the SSO, all site work will cease until dust control is accomplished or supplied air is available.

4.1.2 *Heavy Equipment Operation*

Hazard: Injury due to impact from equipment.

SOPs: Excavating and demolition equipment shall be operated by experienced and skilled operators. Care shall be taken in the movement and placing of equipment to prevent collision with other vehicles or equipment, to stay away from power sources, to avoid poor footing, and to avoid injury in the operation of the equipment. Equipment shall not be operated during or in the proximity of lightning storms. NIOSH approved hard hats, safety glasses, and steel-toed boots shall be worn when working around heavy equipment.

4.1.3 *Overhead Electrical Lines*

Hazard: Injury from contacting overhead electrical lines

SOPs: Survey area for overhead lines before mobilizing heavy equipment. Take care that tall equipment will not contact the overhead lines or utility poles when being moved or used. A safe rule is to maintain at least ten feet of clearance from all overhead lines.

4.1.4 *Excavations*

Hazard: Entrapment if the excavation caves in, injury from falling into open excavations.

SOP: Use caution around all open excavations. Do not enter any excavation that is more than 4 feet deep unless a trench box is used to shore up the side walls.

4.1.5 *Heat Stress*

Hazard: Heat stress and heat exhaustion producing personal injury

SOP: When the ambient temperature exceeds 70 °F and personnel are wearing protective clothing, a heat stress monitoring program shall be implemented. If deemed appropriate by the SSO or the Project Manager, all employees will work in 50 minute cycles separated by a minimum 10 minute rest in a shaded location.

4.1.5.1 Monitoring Protocol:

Heart rate. Count the radial pulse during a 30-second period as early as possible in the rest period. If the heart rate exceeds 110 beats per minute at the beginning of the rest period, shorten the next work cycle by one-third and keep the rest period the same. If the heart rates still exceeds 110 beats per minute at the next rest period, shorten the following work cycle by one-third.

Oral temperature. Use a clinical thermometer (3 minutes under the tongue) or similar device to measure the oral temperature at the end of the work period (before drinking). If the oral temperature exceeds 99.6°F (37.6°C), shorten the next work cycle by one-third without changing the rest period. If oral temperature still exceeds 99.6°F (37.6°C) at the beginning of the next rest period, shorten the following work cycle by one-third.
DO NOT PERMIT A WORKER TO WEAR A SEMI-PERMEABLE OR IMPERMEABLE GARMENT WHEN HIS/HER ORAL TEMPERATURE EXCEEDS 100.6°F (38.1°C).

4.1.5.2 Prevention

Proper training and preventive measures will help avert serious illness and loss of work productivity. Preventing heat stress is particularly important because once someone suffers from heat stroke or heat exhaustion, that person may be predisposed to additional heat injuries. To avoid heat stress, management should take the following steps:

Adjust work schedules: Modify work/rest schedules according to monitoring requirements. Mandate work slowdowns as needed.

Rotate personnel: Alternate job functions to minimize over stress or overexertion at one task. Add additional personnel to work teams. Perform work during cooler hours of the day if possible or at night if adequate lighting can be provided.

Provide shelter (air-conditioned, if possible) or shaded areas to protect personnel during rest periods.

Maintain workers' body fluids at normal levels. This is necessary to ensure that the cardiovascular system functions adequately. Daily fluid intake must be approximately equal to the amount of water lost in sweat. The normal thirst mechanism is not sensitive enough to ensure that enough water will be drunk to replace lost sweat. When heavy sweating occurs, encourage the worker to drink more. The following strategies may be useful:

1. Maintain water temperature at 50° to 60°F (10° to 15.6°C).
2. Provide small disposable cups that hold about 4 ounces (0.1 liter).
3. Have workers drink at least a cup or two every 15 to 20 minutes, or at each monitoring break. A total of 1 to 1.6 gallons (4 to 6 liters) of fluid per day are recommended, but more may be necessary to maintain body weight.

4.1.6 Cold Exposure

Hazard: Cold injury (frostbite and hypothermia) and impaired ability to work are dangers at low temperatures and when the wind-chill factor is low.

SOP: Workers will wear appropriate clothing in layers. Warm shelter will be available and work and rest periods will be scheduled as necessary.

4.1.7 Natural Toxins

Hazard: Contact with poisonous plants, infected ticks, insect toxins

Exposure to poison ivy and poison oak, poisonous fruits, and irritants, such as nettles, is possible in the site environment. More common is the exposure to insect toxins, e.g., bees, hornets, wasps, and spiders. Although these risks may be ever-present, they are believed to present little serious risk in general. It is acknowledged, however, that individual persons may experience discomforting, severe or even fatal allergic reactions to one or more of the exposures listed. Individuals known to experience severe reactions should have with them at all times appropriate medication for the emergency relief of symptoms. Individuals experiencing anaphylactic shock should be placed in the care of the EMS immediately.

In addition to the above mentioned natural toxins is the potential to be exposed to Deer ticks and other ticks.

Ticks may be found in the area of the Site during the spring and summer months. Ticks are found on tall grasses and shrubs. They get on animals and humans that brush against grasses and shrubs. Ticks crawl; they do not fly or jump.

Some ticks carry diseases. The most common diseases caused by tick bites include: **Rocky Mountain spotted fever** (RMSF), **Lyme disease**, and **Ehrlichiosis**.
RMSF causes flu-like symptoms. A rash may appear on the body, face, palms, and soles of the feet. RMSF can be treated with medicine. If left untreated, RMSF can cause death.

Lyme disease, like RMSF, causes flu-like symptoms: fatigue, chills and fever, headache, muscle and joint pain, and swollen lymph nodes. In most cases a bulls-eye shaped rash forms around the site of the bite. Other symptoms that may show up later include: joint pain and swelling, numbness, stiff neck, fever, headache, and heart rhythm irregularities. Lyme disease is not deadly. If left untreated, Lyme disease can cause serious health problems.

Ehrlichiosis causes fever, headache, fatigue, malaise (feeling poorly), chills, muscle aches, sweating, nausea, and vomiting. Less common symptoms include: cough, joint pain, confusion, and a rash. The rash can occur anywhere on the body. The disease can be treated with medicine. If left untreated, Ehrlichiosis can cause serious health problems.

If you have any of the symptoms listed above following a tick bite, go to your doctor right away.

First Aid:

1. To remove a tick, grasp it with a pair of tweezers at the head, as close to the skin as possible. Gently pull straight up with a slow, steady force. Try not to break or crush the tick.
2. Wash the bite site with soapy water.
3. If you have any of the symptoms listed above following a tick bite, go to your doctor.

Safety Tips: Wear light-colored clothing outdoors to help spot ticks. Wear long sleeves and pants tucked into your socks or boots. Use a hat for added protection. Avoid walking in tall brush and shrubs. After being outdoors, check your body and hair for ticks. Wash and dry any clothing worn at a high temperature. Apply an insect repellent containing DEET to your clothing and sparingly to your skin.

4.1.8 Noise

Hazard: Temporary or permanent hearing loss

Working in close proximity to drill rigs and excavation machinery may expose JCO employees to noise levels that exceed the OSHA PEL of 90 dBA for an 8-hour day. Exposure to noise can result in the following:

- Temporary hearing losses where normal hearing returns after a rest period;
- Interference with speech communication and the perception of auditory signals;
- Interference with the performance of complicated tasks; and
- Permanent hearing loss due to repeated exposure resulting in nerve destruction in the hearing organ.

Any time JCO employees are within fifty (50) feet of operating drill rigs, hearing protection will be worn.

4.1.9 Cuts and Lacerations

Hazard: Minor wounds

Minor wounds are the most likely of the risks to persons moving about the project site. Cuts and abrasions are most likely to occur as individuals move through trees and underbrush and contact thorny plants, sharp stones, sharp ends of branches, and similar objects. Many of these injuries can be prevented by wearing appropriate clothes, gloves, and footwear. Eye injuries can be prevented by wearing safety glasses, or goggles. Most of these types of injuries require only minor first aid administered on site. Medical attention should be sought for more serious injuries. Employees are at an increased risk of cutting themselves with the knives used to cut tubing for groundwater sampling. Tubing cutters should be used, when possible. However, if knives or blades must be used, follow the safety precautions listed below:

- Keep your free hand out of the way
- Secure your work if cutting through thick material
- Use only sharp blades; dull blades require more force that results in less knife control
- Don't put your knife in your pocket
- Use a self-retracting blade

· Wear leather or Kevlar® gloves when using knives or blades.

4.1.10 *Back Safety*

Hazard: Injury to back

The manual moving and handling of materials on a site poses a risk to workers in the form of muscle strains and minor injuries due to dropped containers. Using the proper techniques to lift and move heavy pieces of equipment is important to reduce the potential for back injury. The following precautions should be implemented when lifting or moving heavy objects (generally defined as fifty pounds or more under ”perfect” conditions, and less if loading or unloading vehicles, if the weight is not evenly distributed in the object, or if the ground conditions are not level, smooth and dry):

- Use mechanical devices to move objects that are too heavy to be moved manually
- If mechanical devices are not available, ask another person to assist you.
- Bend at the knees, not the waist. Let your legs do the lifting.
- Do not twist while lifting
- Bring the load as close to you as possible before lifting
- Be sure the path you are taking while carrying a heavy object is free of obstructions and slip, trip and fall hazards.

4.1.11 *Ultraviolet Light Hazard*

Hazard: sunburn, skin damage

Skin and eye exposure to bright sunlight can cause sunburn. Sunglasses with UVA/UVB protection and sunscreen with an SPF factor of 15+ will be used when the UV index is known or expected to be 3 or greater.

4.1.12 *Slips and Falls*

Hazard: Injury from falling into pits.

SOPs: Use caution around the pit inside the building. Use a ladder to enter and exit the pits and use caution once inside as the floor may be oily. Use proper lighting to visualize the layout of the pit.

4.2 TASK SAFETY

DigSafe will be notified and a DigSafe permit will be obtained prior to any subsurface activity. St. Albans Light and Water personnel will also be notified to provide mark-outs of subsurface public utilities including municipal sewer, water and electrical lines.

4.2.1 *Soil and Concrete Sampling*

Hazard: Contact with contaminated soil and concrete, and physical injury.

SOPs: Gloves, selected as per Section 2.3, hard hat, safety glasses, and heavy duty steel toe and shank boots shall be worn at all times. Modified Level C gear shall be worn as required by this HASP and the SSO. Electrical hazards require that no drilling activities will be performed during thunderstorms or around buried or overhead electrical or telephone cables or conduits. Extreme care must be taken in the vicinity of gas lines and other explosive or high pressure utility lines.

5.0 SITE CONTROL

5.1 RESTRICTED AREAS

Where dust is visibly present, all work shall cease until dust can be controlled. Engineering controls or an amendment to this HSP may be needed to continue on-site work. In addition, once the chemical constituents and concentrations are known, appropriate personnel protection equipment shall be utilized to resume on-site work. An exclusion zone will be established by the SSO a minimum of 15 feet in all directions from any excavation, subsurface sampling location, or drilling activity. The contamination reduction zone will be located at the perimeter of the exclusion zone to facilitate the egress of employees and equipment. These zones will function to protect the employees, subcontractors, and general public from exposure to potentially hazardous materials and to allow for easy egress and decontamination of all personnel and equipment.

5.2 GENERAL FIELD STANDARD OPERATING PROCEDURES

1 The "buddy system" shall be used at all times by field personnel in the Exclusion Zone.
2. Visual, voice or radio communications shall be maintained at all times.
3. Contact with contaminated surfaces, waters, soils, and equipment shall be avoided whenever possible. Do not walk through discolored surfaces or kneel on the ground, nor lean, sit or place equipment on chemical containment drums or containers.
4. Eating, drinking, and smoking are prohibited in exclusion and contamination reduction zones. Alcoholic beverages are prohibited on the job site.
5. Hands and face must be thoroughly washed upon leaving the contamination reduction area. Further, whenever decontamination procedures for outer garments are in effect, the entire body should be thoroughly washed as soon as possible after the protective garment is removed.
6. Failure to complete a respiratory fit test shall preclude admission to any zone requiring respiratory protection.

7. All equipment must be decontaminated or discarded upon exiting the exclusion zone.
8. Personal protective equipment shall be required for all field personnel and may include, but is not limited to respiratory protection, hard hat, chemical resistant coveralls, boots, gloves, safety glasses, and ear protection.
9. Anyone reporting to work under the influence of alcohol and/or illicit drugs will be subject to disciplinary action.
10. All employees shall listen for and yield the right-of-way to construction equipment.
11. All equipment operators shall provide warning prior to movement and watch for personnel in their path.
12. Employees are responsible to clean and maintain the protective equipment issued to them. Any and all defects or failures of the equipment shall be reported immediately to the SSO.
13. All personnel shall report all injuries and/or illnesses to the SSO regardless of the severity of injuries.
14. Personnel shall avoid any potentially dangerous environmental situations such as entering a confined space without proper supervision, training and equipment.
15. "Dig Safe" number must be notified not less than 48 hours prior to all drilling and excavation operations.
16. All personnel are required to contact the Project Manager or Project Officer when conducting a field investigation or site inspection. They must at a minimum, call prior to, or as soon as possible after leaving a site.
17. Personnel encountering a potentially hazardous environment (e.g., noticing strong vapor levels of unidentified substances) shall instruct all other on-site personnel to leave the site and shall call the on-site project manager and site safety officer for instruction. Personnel shall not re-enter the site without proper protective clothing, and shall not work at the site until the unknown substance is further characterized.
18. A hard hat shall be worn when working around heavy equipment.
19. A shirt and long pants shall be worn at all times.
20. Goggles shall be worn when handling chemicals that may damage the eyes.
21. Skin abrasions must be thoroughly protected to prevent chemical exposure.
22. Each employee is responsible for his or her health and safety.

6.0 EMERGENCY PHONE NUMBERS / HOSPITAL LOCATION / MAP

	TELEPHONE
Ambulance:	911
Fire:	911
Police:	911
Northwestern Medical Center*	802-524-5911
VT Poison Control Center	802-658-3456

The Johnson Company, Inc.:

Rhonda Kay, Project Manager.. 802-229-4600, ext. 137

TBD, Site Safety Officer.. 802-229-4600

Thomas R. Osborne, Corporate Health & Safety Officer........................... 802-229-4600, ext. 111

State of Vermont Contact:

Matt Becker.. 802-241-3449

Client Contact:

Greta Brunswick, NRPC.. 802-524-5958

City of St. Albans Contacts:

Dominic Cloud, Manager, City of St. Albans... 802-524-1500, ext. 254
Alan Robtoy, St. Albans Public Works 802-309-1813

Other Contacts
Vermont Gas (Mike).. 802-233-6148

* Hospital Location:

Northwestern Medical Center
133 Fairfield Street
St. Albans, VT
For a map of the route to the hospital, see the following page.

Hospital Location Map

Get Google Maps on your phone
Text the word "GMAPS" to 466453

Start	**21 Lower Newton St** **St Albans, VT 05478**
End	**133 Fairfield St** **St Albans, VT 05478**
Travel	**1.3 mi – about 3 mins**

21 Lower Newton St
St Albans, VT 05478
Drive: 1.3 mi – about 3 mins

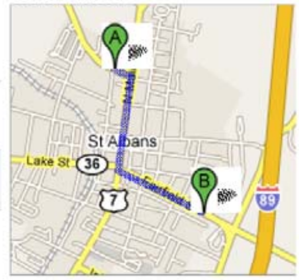
1.	Head **southeast** on **Lower Newton St/VT-38** toward **N Main St/US-7**	0.1 mi
2.	Turn **right** at **N Main St/US-7**	0.6 mi 2 mins
3.	Turn **left** at **Fairfield St/VT-36**	0.6 mi 2 mins

133 Fairfield St
St Albans, VT 05478

These directions are for planning purposes only. You may find that construction projects, traffic, or other events may cause road conditions to differ from the map results.

Map data ©2008 NAVTEQ™

Overview



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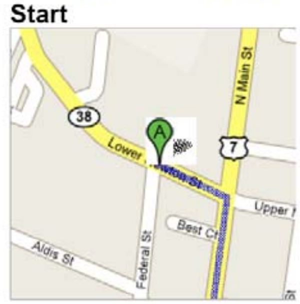

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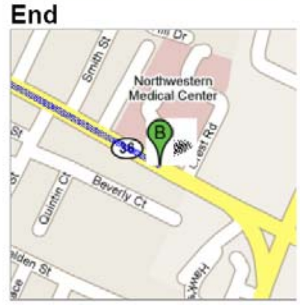

Map data ©2008 NAVTEQ™

APPENDIX A

AMENDMENTS TO THE HEALTH AND SAFETY PLAN

APPENDIX B

GLOSSARY

ºC	Degrees Celsius
CFR	Codified Federal Regulations
CHRIS	Chemical Hazard Resource Information System
CO	Carbon monoxide
CRZ	Contamination Reduction Zone
EPA	U. S. Environmental Protection Agency
EZ	Exclusion Zone
ºF	Degrees Fahrenheit
H_2S	Hydrogen sulfide
HASP	Health and Safety Plan
IDLH	Immediately Dangerous to Life and Health level
LEL	Lower Explosive Limit
MGI	Multigas Indicator
MSDS	Materials Safety Data Sheets
NIOSH	National Institute for Occupational Safety and Health
O_2	Oxygen
OSHA	U. S. Occupational Safety and Health Administration
PID	Photoionization Detector
PPE	Personal Protective Equipment
ppm	Parts per million
SOP	Standard Operating Procedure
SSO	Site Safety Officer
SZ	Support Zone
TLV	Threshold Limit Value
VOC	Volatile Organic Compounds

APPENDIX C

MATERIALS SAFETY DATA SHEETS

ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

POLYCHLORINATED BIPHENYLS

Division of Toxicology ToxFAQs™ **February 2001**

This fact sheet answers the most frequently asked health questions (FAQs) about polychlorinated biphenyls. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Polychlorinated biphenyls (PCBs) are a mixture of individual chemicals which are no longer produced in the United States, but are still found in the environment. Health effects that have been associated with exposure to PCBs include acne-like skin conditions in adults and neurobehavioral and immunological changes in children. PCBs are known to cause cancer in animals. PCBs have been found in at least 500 of the 1,598 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What are polychlorinated biphenyls?

Polychlorinated biphenyls are mixtures of up to 209 individual chlorinated compounds (known as congeners). There are no known natural sources of PCBs. PCBs are either oily liquids or solids that are colorless to light yellow. Some PCBs can exist as a vapor in air. PCBs have no known smell or taste. Many commercial PCB mixtures are known in the U.S. by the trade name Aroclor.

PCBs have been used as coolants and lubricants in transformers, capacitors, and other electrical equipment because they don't burn easily and are good insulators. The manufacture of PCBs was stopped in the U.S. in 1977 because of evidence they build up in the environment and can cause harmful health effects. Products made before 1977 that may contain PCBs include old fluorescent lighting fixtures and electrical devices containing PCB capacitors, and old microscope and hydraulic oils.

What happens to PCBs when they enter the environment?

- PCBs entered the air, water, and soil during their manufacture, use, and disposal; from accidental spills and leaks during their transport; and from leaks or fires in products containing PCBs.
- PCBs can still be released to the environment from hazardous waste sites; illegal or improper disposal of industrial wastes and consumer products; leaks from old electrical transformers containing PCBs; and burning of some wastes in incinerators.
- PCBs do not readily break down in the environment and thus may remain there for very long periods of time. PCBs can travel long distances in the air and be deposited in areas far away from where they were released. In water, a small amount of PCBs may remain dissolved, but most stick to organic particles and bottom sediments. PCBs also bind strongly to soil.
- PCBs are taken up by small organisms and fish in water. They are also taken up by other animals that eat these aquatic animals as food. PCBs accumulate in fish and marine mammals, reaching levels that may be many thousands of times higher than in water.

How might I be exposed to PCBs?

- Using old fluorescent lighting fixtures and electrical devices and appliances, such as television sets and refrigerators, that were made 30 or more years ago. These items may leak small amounts of PCBs into the air when they get hot during operation, and could be a source of skin exposure.
- Eating contaminated food. The main dietary sources of PCBs are fish (especially sportfish caught in contaminated lakes or rivers), meat, and dairy products.
- Breathing air near hazardous waste sites and drinking contaminated well water.
- In the workplace during repair and maintenance of PCB transformers; accidents, fires or spills involving transformers, fluorescent lights, and other old electrical devices; and disposal of PCB materials.

How can PCBs affect my health?

The most commonly observed health effects in people exposed to large amounts of PCBs are skin conditions such as acne and rashes. Studies in exposed workers have shown changes in blood and urine that may indicate liver damage. PCB exposures in the general population are not likely to result in skin and liver effects. Most of the studies of health effects of PCBs in the general population examined children of mothers who were exposed to PCBs.

Animals that ate food containing large amounts of PCBs for short periods of time had mild liver damage and some died. Animals that ate smaller amounts of PCBs in food over several weeks or months developed various kinds of health effects, including anemia; acne-like skin conditions; and liver, stomach, and thyroid gland injuries. Other effects

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of PCBs in animals include changes in the immune system, behavioral alterations, and impaired reproduction. PCBs are not known to cause birth defects.

How likely are PCBs to cause cancer?

Few studies of workers indicate that PCBs were associated with certain kinds of cancer in humans, such as cancer of the liver and biliary tract. Rats that ate food containing high levels of PCBs for two years developed liver cancer. The Department of Health and Human Services (DHHS) has concluded that PCBs may reasonably be anticipated to be carcinogens. The EPA and the International Agency for Research on Cancer (IARC) have determined that PCBs are probably carcinogenic to humans.

How can PCBs affect children?

Women who were exposed to relatively high levels of PCBs in the workplace or ate large amounts of fish contaminated with PCBs had babies that weighed slightly less than babies from women who did not have these exposures. Babies born to women who ate PCB-contaminated fish also showed abnormal responses in tests of infant behavior. Some of these behaviors, such as problems with motor skills and a decrease in short-term memory, lasted for several years. Other studies suggest that the immune system was affected in children born to and nursed by mothers exposed to increased levels of PCBs. There are no reports of structural birth defects caused by exposure to PCBs or of health effects of PCBs in older children. The most likely way infants will be exposed to PCBs is from breast milk. Transplacental transfers of PCBs were also reported In most cases, the benefits of breast-feeding outweigh any risks from exposure to PCBs in mother's milk.

How can families reduce the risk of exposure to PCBs?

❑ You and your children may be exposed to PCBs by eating fish or wildlife caught from contaminated locations. Certain states, Native American tribes, and U.S. territories have issued advisories to warn people about PCB-contaminated fish and fish-eating wildlife. You can reduce your family's exposure to PCBs by obeying these advisories.

❑ Children should be told not play with old appliances, electrical equipment, or transformers, since they may contain PCBs.

❑ Children should be discouraged from playing in the dirt near hazardous waste sites and in areas where there was a transformer fire. Children should also be discouraged from eating dirt and putting dirty hands, toys or other objects in their mouths, and should wash hands frequently.

❑ If you are exposed to PCBs in the workplace it is possible to carry them home on your clothes, body, or tools. If this is the case, you should shower and change clothing before leaving work, and your work clothes should be kept separate from other clothes and laundered separately.

Is there a medical test to show whether I've been exposed to PCBs?

Tests exist to measure levels of PCBs in your blood, body fat, and breast milk, but these are not routinely conducted. Most people normally have low levels of PCBs in their body because nearly everyone has been environmentally exposed to PCBs. The tests can show if your PCB levels are elevated, which would indicate past exposure to above-normal levels of PCBs, but cannot determine when or how long you were exposed or whether you will develop health effects.

Has the federal government made recommendations to protect human health?

The EPA has set a limit of 0.0005 milligrams of PCBs per liter of drinking water (0.0005 mg/L). Discharges, spills or accidental releases of 1 pound or more of PCBs into the environment must be reported to the EPA. The Food and Drug Administration (FDA) requires that infant foods, eggs, milk and other dairy products, fish and shellfish, poultry and red meat contain no more than 0.2-3 parts of PCBs per million parts (0.2-3 ppm) of food. Many states have established fish and wildlife consumption advisories for PCBs.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2000. Toxicological profile for polychlorinated biphenyls (PCBs). Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs™ Internet address is http://www.atsdr.cdc.gov/toxfaq.html . ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

LEAD

CAS # 7439-92-1

Division of Toxicology and Environmental Medicine ToxFAQs™ **August 2007**

This fact sheet answers the most frequently asked health questions (FAQs) about lead. For more information, call the ATSDR Information Center at 1-800-232-4636. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It is important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to lead can happen from breathing workplace air or dust, eating contaminated foods, or drinking contaminated water. Children can be exposed from eating lead-based paint chips or playing in contaminated soil. Lead can damage the nervous system, kidneys, and reproductive system. Lead has been found in at least 1,272 of the 1,684 National Priority List sites identified by the Environmental Protection Agency (EPA).

What is lead?

Lead is a naturally occurring bluish-gray metal found in small amounts in the earth's crust. Lead can be found in all parts of our environment. Much of it comes from human activities including burning fossil fuels, mining, and manufacturing.

Lead has many different uses. It is used in the production of batteries, ammunition, metal products (solder and pipes), and devices to shield X-rays. Because of health concerns, lead from paints and ceramic products, caulking, and pipe solder has been dramatically reduced in recent years. The use of lead as an additive to gasoline was banned in 1996 in the United States.

What happens to lead when it enters the environment?

❏ Lead itself does not break down, but lead compounds are changed by sunlight, air, and water.
❏ When lead is released to the air, it may travel long distances before settling to the ground.
❏ Once lead falls onto soil, it usually sticks to soil particles.
❏ Movement of lead from soil into groundwater will depend on the type of lead compound and the characteristics of the soil.

How might I be exposed to lead?

❏ Eating food or drinking water that contains lead. Water pipes in some older homes may contain lead solder. Lead can leach out into the water.
❏ Spending time in areas where lead-based paints have been used and are deteriorating. Deteriorating lead paint can contribute to lead dust.
❏ Working in a job where lead is used or engaging in certain hobbies in which lead is used, such as making stained glass.
❏ Using health-care products or folk remedies that contain lead.

How can lead affect my health?

The effects of lead are the same whether it enters the body through breathing or swallowing. Lead can affect almost every organ and system in your body. The main target for lead toxicity is the nervous system, both in adults and children. Long-term exposure of adults can result in decreased performance in some tests that measure functions of the nervous system. It may also cause weakness in fingers, wrists, or ankles. Lead exposure also causes small increases in blood pressure, particularly in middle-aged and older people and can cause anemia. Exposure to high lead levels can severely damage the brain and kidneys in adults or children and ultimately cause death. In pregnant women, high levels of exposure to lead may cause miscarriage. High-level exposure in men can damage the organs responsible for sperm production.

How likely is lead to cause cancer?

We have no conclusive proof that lead causes cancer in humans. Kidney tumors have developed in rats and mice that had been given large doses of some kind of lead compounds. The Department of Health and Human Services

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Agency for Toxic Substances and Disease Registry

(DHHS) has determined that lead and lead compounds are reasonably anticipated to be human carcinogens and the EPA has determined that lead is a probable human carcinogen. The International Agency for Research on Cancer (IARC) has determined that inorganic lead is probably carcinogenic to humans and that there is insufficient information to determine whether organic lead compounds will cause cancer in humans.

How can lead affect children?

Small children can be exposed by eating lead-based paint chips, chewing on objects painted with lead-based paint, or swallowing house dust or soil that contains lead.

Children are more vulnerable to lead poisoning than adults. A child who swallows large amounts of lead may develop blood anemia, severe stomachache, muscle weakness, and brain damage. If a child swallows smaller amounts of lead, much less severe effects on blood and brain function may occur. Even at much lower levels of exposure, lead can affect a child's mental and physical growth.

Exposure to lead is more dangerous for young and unborn children. Unborn children can be exposed to lead through their mothers. Harmful effects include premature births, smaller babies, decreased mental ability in the infant, learning difficulties, and reduced growth in young children. These effects are more common if the mother or baby was exposed to high levels of lead. Some of these effects may persist beyond childhood.

How can families reduce the risks of exposure to lead?

❑ Avoid exposure to sources of lead.

❑ Do not allow children to chew or mouth surfaces that may have been painted with lead-based paint.

❑ If you have a water lead problem, run or flush water that has been standing overnight before drinking or cooking with it.

❑ Some types of paints and pigments that are used as make-up or hair coloring contain lead. Keep these kinds of products away from children

❑ If your home contains lead-based paint or you live in an area contaminated with lead, wash children's hands and faces often to remove lead dusts and soil, and regularly clean the house of dust and tracked in soil.

Is there a medical test to determine whether I've been exposed to lead?

A blood test is available to measure the amount of lead in your blood and to estimate the amount of your recent exposure to lead. Blood tests are commonly used to screen children for lead poisoning. Lead in teeth or bones can be measured by X-ray techniques, but these methods are not widely available. Exposure to lead also can be evaluated by measuring erythrocyte protoporphyrin (EP) in blood samples. EP is a part of red blood cells known to increase when the amount of lead in the blood is high. However, the EP level is not sensitive enough to identify children with elevated blood lead levels below about 25 micrograms per deciliter (μg/dL). These tests usually require special analytical equipment that is not available in a doctor's office. However, your doctor can draw blood samples and send them to appropriate laboratories for analysis.

Has the federal government made recommendations to protect human health?

The Centers for Disease Control and Prevention (CDC) recommends that states test children at ages 1 and 2 years. Children should be tested at ages 3–6 years if they have never been tested for lead, if they receive services from public assistance programs for the poor such as Medicaid or the Supplemental Food Program for Women, Infants, and Children, if they live in a building or frequently visit a house built before 1950; if they visit a home (house or apartment) built before 1978 that has been recently remodeled; and/or if they have a brother, sister, or playmate who has had lead poisoning. CDC considers a blood lead level of 10 μg/dL to be a level of concern for children.

EPA limits lead in drinking water to 15 μg per liter.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2007. Toxicological Profile for lead (Update). Atlanta, GA: U.S. Department of Public Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology and Environmental Medicine, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-800-232-4636, FAX: 770-488-4178. ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html. ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

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POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)

Agency for Toxic Substances and Disease Registry ToxFAQs **September 1996**

This fact sheet answers the most frequently asked health questions (FAQs) about polycyclic aromatic hydrocarbons (PAHs). For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

SUMMARY: Exposure to polycyclic aromatic hydrocarbons usually occurs by breathing air contaminated by wild fires or coal tar, or by eating foods that have been grilled. PAHs have been found in at least 600 of the 1,430 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What are polycyclic aromatic hydrocarbons?

(Pronounced pŏl′ĭ-sī′klĭk ăr′ə-măt′ĭk hī′drə-kar′bənz)

Polycyclic aromatic hydrocarbons (PAHs) are a group of over 100 different chemicals that are formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances like tobacco or charbroiled meat. PAHs are usually found as a mixture containing two or more of these compounds, such as soot.

Some PAHs are manufactured. These pure PAHs usually exist as colorless, white, or pale yellow-green solids. PAHs are found in coal tar, crude oil, creosote, and roofing tar, but a few are used in medicines or to make dyes, plastics, and pesticides.

What happens to PAHs when they enter the environment?

- PAHs enter the air mostly as releases from volcanoes, forest fires, burning coal, and automobile exhaust.
- PAHs can occur in air attached to dust particles.
- Some PAH particles can readily evaporate into the air from soil or surface waters.
- PAHs can break down by reacting with sunlight and other chemicals in the air, over a period of days to weeks.
- PAHs enter water through discharges from industrial and wastewater treatment plants.
- Most PAHs do not dissolve easily in water. They stick to solid particles and settle to the bottoms of lakes or rivers.
- Microorganisms can break down PAHs in soil or water after a period of weeks to months.
- In soils, PAHs are most likely to stick tightly to particles; certain PAHs move through soil to contaminate underground water.
- PAH contents of plants and animals may be much higher than PAH contents of soil or water in which they live.

How might I be exposed to PAHs?

- Breathing air containing PAHs in the workplace of coking, coal-tar, and asphalt production plants; smokehouses; and municipal trash incineration facilities.
- Breathing air containing PAHs from cigarette smoke, wood smoke, vehicle exhausts, asphalt roads, or agricultural burn smoke.
- Coming in contact with air, water, or soil near hazardous waste sites.
- Eating grilled or charred meats; contaminated cereals, flour, bread, vegetables, fruits, meats; and processed or pickled foods.
- Drinking contaminated water or cow's milk.

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- Nursing infants of mothers living near hazardous waste sites may be exposed to PAHs through their mother's milk.

How can PAHs affect my health?

Mice that were fed high levels of one PAH during pregnancy had difficulty reproducing and so did their offspring. These offspring also had higher rates of birth defects and lower body weights. It is not known whether these effects occur in people.

Animal studies have also shown that PAHs can cause harmful effects on the skin, body fluids, and ability to fight disease after both short- and long-term exposure. But these effects have not been seen in people.

How likely are PAHs to cause cancer?

The Department of Health and Human Services (DHHS) has determined that some PAHs may reasonably be expected to be carcinogens.

Some people who have breathed or touched mixtures of PAHs and other chemicals for long periods of time have developed cancer. Some PAHs have caused cancer in laboratory animals when they breathed air containing them (lung cancer), ingested them in food (stomach cancer), or had them applied to their skin (skin cancer).

Is there a medical test to show whether I've been exposed to PAHs?

In the body, PAHs are changed into chemicals that can attach to substances within the body. There are special tests that can detect PAHs attached to these substances in body tissues or blood. However, these tests cannot tell whether any health effects will occur or find out the extent or source of your exposure to the PAHs. The tests aren't usually available in your doctor's office because special equipment is needed to conduct them.

Has the federal government made recommendations to protect human health?

The Occupational Safety and Health Administration (OSHA) has set a limit of 0.2 milligrams of PAHs per cubic meter of air (0.2 mg/m^3). The OSHA Permissible Exposure Limit (PEL) for mineral oil mist that contains PAHs is 5 mg/m^3 averaged over an 8-hour exposure period.

The National Institute for Occupational Safety and Health (NIOSH) recommends that the average workplace air levels for coal tar products not exceed 0.1 mg/m^3 for a 10-hour workday, within a 40-hour workweek. There are other limits for workplace exposure for things that contain PAHs, such as coal, coal tar, and mineral oil.

Glossary

Carcinogen: A substance that can cause cancer.

Ingest: Take food or drink into your body.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 1995. Toxicological profile for polycyclic aromatic hydrocarbons. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

PENTACHLOROPHENOL

CAS #87-86-5

Division of Toxicology ToxFAQs™ **September 2001**

This fact sheet answers the most frequently asked health questions (FAQs) about pentachlorophenol. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It is important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Pentachlorophenol is a manufactured chemical which is a restricted use pesticide and is used industrially as a wood preservative for utility poles, railroad ties, and wharf pilings. Exposure to high levels of pentachlorophenol can cause increases in body temperature, liver effects, damage to the immune system, reproductive effects, and developmental effects. This substance has been found in at least 313 of the 1,585 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is pentachlorophenol?

Pentachlorophenol is a manufactured chemical that does not occur naturally. Pure pentachlorophenol exists as colorless crystals. Impure pentachlorophenol (the form usually found at hazardous waste sites) is dark gray to brown and exists as dust, beads, or flakes. Humans are usually exposed to impure pentachlorophenol (also called technical grade pentachlorophenol).

Pentachlorophenol was widely used as a pesticide and wood preservative. Since 1984, the purchase and use of pentachlorophenol has been restricted to certified applicators. It is no longer available to the general public. It is still used industrially as a wood preservative for utility poles, railroad ties, and wharf pilings.

What happens to pentachlorophenol when it enters the environment?

❑ Pentachlorophenol can be found in the air, water, and soil. It enters the environment through evaporation from treated wood surfaces, industrial spills, and disposal at uncontrolled hazardous waste sites.

❑ Pentachlorophenol is broken down by sunlight, other chemicals, and microorganisms to other chemicals within a couple of days to months.

❑ Pentachlorophenol is found in fish and other foods, but tissue levels are usually low.

How might I be exposed to pentachlorophenol?

❑ The general populations can be exposed to very low levels of pentachlorophenol in contaminated indoor and outdoor air, food, drinking water and soil.

❑ People who work or live near a wood treatment facility or in the production of utility poles, railroad ties, or wharf pilings may be exposed to pentachlorophenol in the air or by coming in contact with the treated wood.

❑ People living near hazardous waste sites may also be exposed to higher than usual levels of pentachlorophenol.

How can pentachlorophenol affect my health?

Studies in workers show that exposure to high levels of pentachlorophenol can cause the cells in the body to produce excess heat. When this occurs, a person may experience a very high fever, profuse sweating, and difficulty breathing. The body temperature can increase to dangerous levels, causing injury to various organs and tissues, and even death. Liver effects and damage to the immune system have also been observed in humans exposed to high levels of pentachlorophenol for a long time. Damage to the thyroid and reproductive system has been observed in laboratory animals exposed to high doses of pentachlorophenol. Some of the harmful effects of pentachlorophenol are caused by the other chemicals present in technical grade pentachlorophenol.

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How likely is pentachlorophenol to cause cancer?

Some studies have found an increase in cancer risk in workers exposed to high levels of technical grade pentachlorophenol for a long time, but other studies have not found this. Increases in liver, adrenal gland, and nasal tumors have been found in laboratory animals exposed to high doses of pentachlorophenol.

The EPA has determined that pentachlorophenol is a probable human carcinogen and the International Agency for Cancer Research (IARC) considers it possibly carcinogenic to humans.

How can pentachlorophenol affect children?

Infants who were exposed to diapers and bedding which was accidentally contaminated with pentachlorophenol had high fevers, a large amount of sweating, difficulty breathing, and harmful effects on the nervous system and liver, and some died. Although these effects are similar to effects seen in adults exposed to pentachlorophenol, we do not know whether children and adults differ in their susceptibility to pentachlorophenol.

We do not know if exposure to pentachlorophenol will result in birth defects or other developmental effects in people. Death, low body weights, decreased growth, and skeletal effects have been observed in laboratory animals exposed to high levels of pentachlorophenol during development.

How can families reduce the risk of exposure to pentachlorophenol?

Pentachlorophenol was a widely used pesticide for a long time. Today its use is restricted and it can only be used by certified applicators. You may have old containers of pesticides in your attic, basement, or garage that contain pentachlorophenol. Removing these old containers will reduce your family's risk of exposure to pentachlorophenol.

If you live near utility poles and railroad tracks, you should prevent your children from playing, climbing, or sitting on them especially in the hot summer months.

Though pentachlorophenol has been found in some food, its levels are low. You can minimize the risk of your family's exposure by peeling and thoroughly washing fruits and vegetables before cooking.

Children should avoid playing in soils near hazardous waste sites where pentachlorophenol may have been discarded.

Is there a medical test to show whether I've been exposed to pentachlorophenol?

Tests are available to measure pentachlorophenol and its breakdown product in blood, urine, and body tissues. These tests cannot be performed in the doctor's office because they require the use of special equipment. Because pentachlorophenol leaves the body fairly quickly, these tests are best for finding exposures that occurred within the last several days. These tests do not tell you how much pentachlorophenol you have been exposed to and cannot be used to predict the occurrence, nature, or severity of toxic effects.

Has the federal government made recommendations to protect human health?

The EPA has set a limit for drinking water of 1 part of pentachlorophenol per billion parts of water (1 ppb).

The Occupational Safety and Health Administration (OSHA) has set a limit of 0.5 milligrams of pentachlorophenol per cubic meter of workplace air (0.5 mg/m^3) for 8 hour shifts and 40 hour work weeks.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2001. Toxicological Profile for Pentachlorophenol Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

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APPENDIX 5

NEWS BRIEF

News Brief

A Corrective Action Plan (CAP) has been prepared by The Johnson Company, Inc. for the Former Fonda Group Facility located at 15-21 Lower Newton Street in St. Albans, Vermont (the Site; SMS#2008-3777). The Site is currently owned by the City of St. Albans. The property is composed of a former paper product manufacturing facility (currently vacant), a separate boiler house, storage shed, surrounding parking areas and driveways, and a forested area to the north of the building. Remedial actions are necessary at the Site due to the presence of polychlorinated biphenyls (PCBs), semi-volatile organic compounds (SVOCs), metals, and chlorinated volatile organic compounds (VOCs) in some soil above regulatory limits, chlorinated VOCs in some groundwater above regulatory limits, PCBs in some concrete at concentrations that exceed applicable Toxic Substances Control Act (TSCA) regulatory limits, metals above regulatory limits in surface water inside the building, and asbestos-containing building materials in various structures. At their present concentrations and locations, these contaminants may present a risk to human health during or following redevelopment of the Site.

The City of St. Albans currently plans to demolish the vacant buildings to prepare for redevelopment of the Site. The CAP does not address uncontaminated portions of the building or property. This CAP is intended to address remediation activities pertaining to the immediate plans for the Site (i.e., building demolition), and includes a discussion of the necessity of corrective action; a brief summary of previous investigations and their findings; and a presentation of potential remedial options, assessed according to their expected cost, effectiveness, and feasibility. Because the long-term redevelopment plans for the Site are currently unknown, the CAP identifies selected remediation alternatives for the Site based on the immediate plans to demolish the buildings and prepare the Site for high-occupancy commercial reuse, which consist of:

1. removal of near surface soils that exceed the Federal Industrial Regional Screening Levels and TSCA regulatory limits;
2. removal of approximately 650 gallons of water in a shredder pit that exceeds Vermont Groundwater Enforcement Standards (VGES) for cadmium and lead;
3. removal of building walls that contain PCB concentrations above TSCA regulatory limits; and
4. quarterly monitoring of groundwater for chlorinated VOCs for two years following building demolition.

Until redevelopment plans are finalized and the PCB-impacted concrete is addressed, the exposed PCB-impacted slab will be covered with plastic sheeting and gravel as an interim measure for a maximum of five years before re-evaluation or remedial action. Additional corrective action measures will be required to address PCB-impacted concrete before Site redevelopment. A Notice to the Land Record will be required to notify future owners of soil contamination above residential screening levels, groundwater contamination above Vermont Groundwater Enforcement Standards, and the requirement to maintain the interim cover over the PCB-impacted concrete.