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

DRAFT

Corrective Action Feasibility Investigation for Site Remediation

Former Richmond Creamery
Richmond, Vermont
VTDEC Site #2008-3835

Prepared for:
Chittenden County Regional Planning Commission
110 West Canal Street, Suite 202
Winooski, VT 05404

Prepared By:
The Johnson Company, Inc.
100 State Street, Suite 600
Montpelier, Vermont 05602
Contact: Kurt Muller, P.E.
(802) 229-4600

March 16, 2012

March 16, 2012

Ms. Julie Potter
Chittenden County Regional Planning Commission
110 West Canal Street, Suite 202
Winooski, VT 05404

Re: DRAFT Corrective Action Feasibility Investigation for Site Remediation at the Former Richmond Creamery,
Richmond, Vermont
VTDEC Site #2008-3835
JCO #1-0346-3

Dear Ms. Potter:

Please find the attached Corrective Action Feasibility Investigation (CAFI) for the referenced Site. Potential risks to human health and/or the environment currently exist at the Site due to the presence of asbestos, lead paint, mold, ammonia, possible poly-chlorinated biphenyl (PCB)-containing building materials, polycyclic aromatic hydrocarbons (PAHs), and metals. These materials and the potential for risk they present will remain unless corrective action is taken. Remedial actions are necessary due to PAHs and metals in soil and metals in groundwater at the Site. Remedial actions are also necessary on interior portions of the Site due to a variety of hazardous or potentially hazardous materials, including ammonia in the abandoned refrigeration system, lead paint, asbestos containing building materials, possible PCB-containing caulk, mastic, or other building materials, and mold. This CAFI presents a comparison of costs and benefits of remedial actions for these areas of concern previously identified in the Johnson Company April 19, 2010 Phase II Environmental Site Assessment.

Should you have any questions or require additional information, please do not hesitate to contact us at 229-4600. We look forward to your response.

Sincerely,

THE JOHNSON COMPANY, INC.

By: DRAFT
Kurt Muller, P.E.
Project Engineer

By: DRAFT
Joel Behrsing, P.E.
Senior Engineer

Cc. Mr. Hugo Martinez-Cazon, VTDEC
Mr. David Raphael, LandWorks
Mr. Craig Caswell, property owner
Jessica Dominguez, US EPA

Attachment
\\server02\projects\1-0346-3\CAP_CAFI\CAFI\031612 Richmond Creamery CAFI DRAFT.docx

DRAFT Corrective Action Feasibility Investigation

For the

Former Richmond Creamery
Richmond, Vermont

Prepared by: ______________________________ Date: ________________
Jeremy Matt

and by: ______________________________ Date: ________________
Kurt Muller, Vermont P.E. 74407

and by: ______________________________ Date: ________________
Joel Behrsing, Vermont P.E. 6070

DRAFT

EXECUTIVE SUMMARY

This Corrective Action Feasibility Investigation (CAFI) was prepared for the Chittenden County Regional Planning Commission (CCRPC) and is a report whose scope is designed to clearly communicate the costs and benefits of potential remediation strategies for the interior and exterior contamination at the Site. Interior recognized environmental conditions (RECs) include asbestos containing material (ACM), lead paint, mold, ammonia in the abandoned refrigeration system, a water-filled sump located near the ammonia refrigeration system, mercury containing switches and compressor oil in the refrigeration system, and possible PCB-containing caulk, mastic or other building materials. Exterior RECs present at the Site include a hollow pit which presents a safety hazard, metals and poly-cyclic aromatic hydrocarbons (PAHs) in soil, metals in groundwater, a #6 fuel oil above-ground storage tank (AST) (containing approximately 6-inches of solids), and a partially buried former wastewater underground storage tank (UST). No evidence of environmental impacts from either tank has been observed, but releases could potentially occur if these abandoned tanks are not addressed.

The Site consists of an approximately 5.5-acre parcel located near the Richmond town center. The parcel is bounded on the north east by the New England Central Rail Road line. A commercial property and a cemetery abut the Site to the west, an open field (partially located on the Site) is located to the east, and an open-water wetland associated with the Winooski River is located to the south. The Site houses three buildings: a multi-story building (formerly the creamery) of varying construction that was built and modified between about 1916 and 1975; a livery/blacksmith shop constructed around 1860; and a boiler room which provided heat to the creamery building. The areas around the buildings are either gravel drive ways or are grown up with weeds and grasses. Approximately 1/2 of the parcel is forested; these forested areas are located primarily to the south and east of the buildings. This CAFI includes a brief summary of the results of previous investigations, a discussion of why corrective action is needed, and presents potential remedial alternatives for each of the areas of concern at the Site.

The potential for risks to human health which currently exist at the Site will remain unless corrective action is taken. Sources of contamination that result in potential risk include ammonia associated with the former refrigeration system, lead paint, ACM, and PAHs in soil that likely originating from either atmospheric deposition or importation of impacted fill. Some of the metals detected in soil and groundwater at the Site may be naturally occurring; others may be the result of dumping or disposal but no specific sources of metals contamination have been identified to date.

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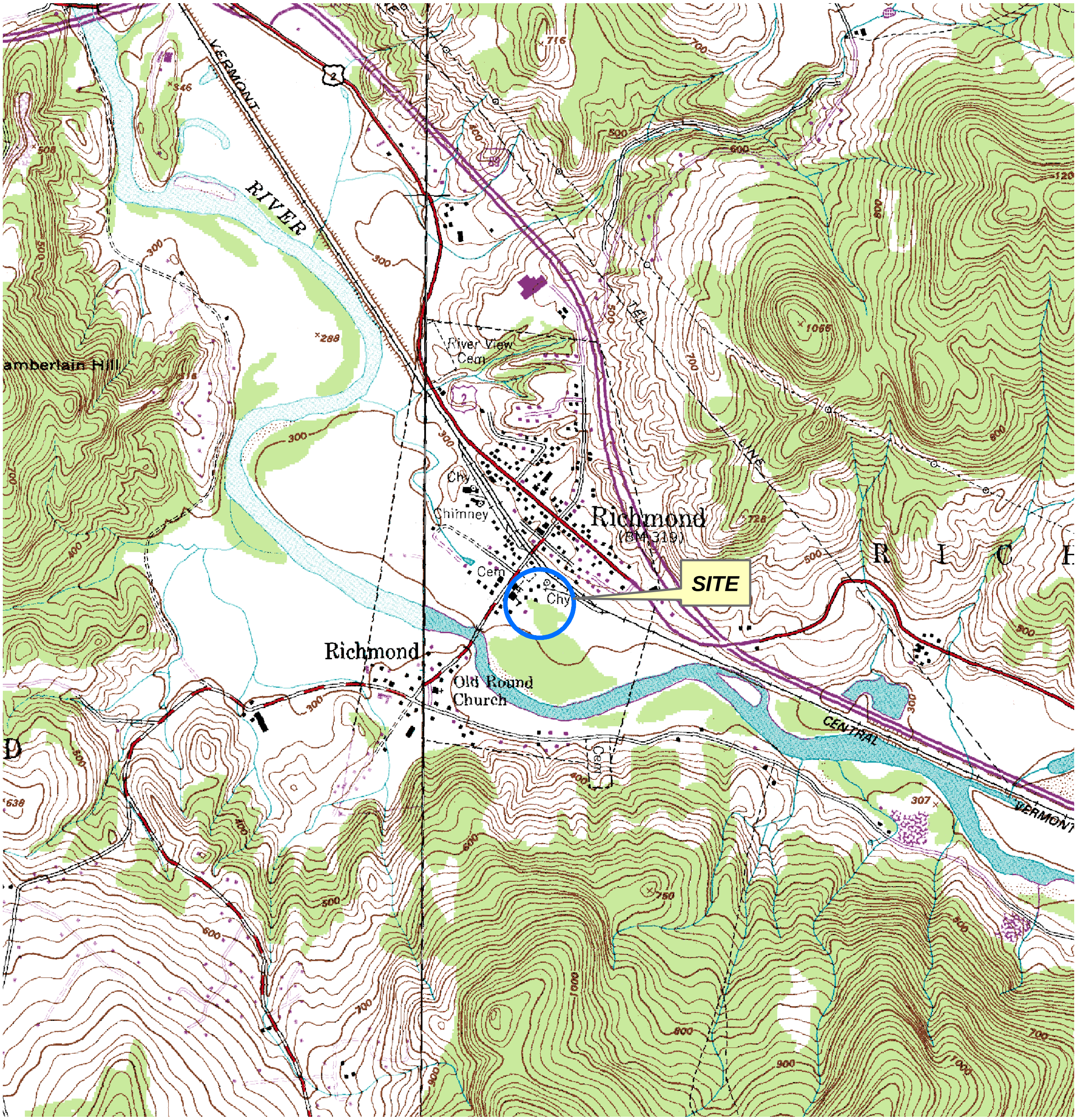
1.0 INTRODUCTION

Using federal Brownfields grant funds, Chittenden County Regional Planning Commission (CCRPC) is providing redevelopment assistance to the current property owner (Craig Caswell of Casing Development), with the main objectives of putting the property to use and mitigating risk to human health and the environment. CCRPC retained The Johnson Company to perform a corrective action feasibility investigation (CAFI) for the Site in accordance with the Vermont Department of Environmental Conservation (VT DEC)'s *Corrective Action Guidance* document dated November, 1997. The CAFI provides an evaluation of various corrective action alternatives and an estimate of cost to implement each of the remedial alternatives presented.

This CAFI is designed to clearly communicate the basis and details of the proposed remediation strategy for contamination both inside the former creamery building (asbestos containing materials, lead paint, mold, ammonia, the sump, mercury switches, compressor oil, and possible polychlorinated biphenyl (PCB)-containing building material) and outside the building (the hollow pit, metals- and polycyclic aromatic hydrocarbon (PAH)-impacted soil, metals-impacted groundwater, one out-of-service #6 fuel oil above-ground storage tank (AST), and one partially buried out-of-service wastewater underground storage tank (UST)) at the Former Richmond Creamery Site in Richmond, Vermont (see Figure 1).

The Site consists of an approximately 5.5-acre parcel located near the Richmond town center. Three buildings are present at the Site: the multi-story former creamery building (of various construction built and modified between 1916 and 1975); a former livery/blacksmith shop (1860); and a boiler room which provided heat to the creamery building. The New England Central Rail Road line forms the northern boundary of the parcel and a commercial property and a cemetery abut the Site to the west. An open field, part of which is located on the Site, forms the eastern boundary, and an open-water wetland associated with the Winooski River is located to the south. Approximately half of the parcel is forested; these forested areas are located primarily to the south and east of the buildings. Around the buildings are gravel drives and areas

1-0346-3/GIS/100708 Figure 1.mxd



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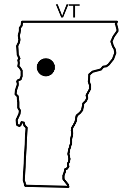

MAP
LOCATION

BASE MAP: USGS 7.5 Minute Topographic Quadrangle West side: Essex Junction, 1987; East side: Richmond, VT 1983

Figure 1. Site Location Map
Former Saputo Cheese/Richmond Creamery
Richmond, Vermont

The Johnson Company

100 State Street, Suite 600
Montpelier, VT 05602

Drawn by: RTK	Date: 10/07/08
Chk'd by: MJM	Date: 10/07/08
Scale: 1:24,000	Project: 1-1470-13

that have grown up with weeds and grasses. This CAFI includes a brief summary of the results of previous investigations, a discussion of why corrective action is needed, and presents potential remedial alternatives for each of the recognized environmental conditions (RECs) at the Site. Previous sample collection locations are show on Figure 2. Figure 3 shows the Site property boundaries and identifies where the RECs are located at the Site

All buildings at the Site are currently vacant and in varying states of disrepair. The Site currently is not secure and therefore some of the disrepair of the buildings can be attributed to recurring vandalism. The Saputo Cheese Factory ceased operations at the Site in 1999 and the Site has been vacant since. Affected environmental media at the Site include soil and groundwater. In addition, impacted building materials, the out-of-service #6 fuel oil AST, and the partially buried wastewater UST have been identified as posing potential risk at the Site.

Sensitive receptors that are at risk from existing contamination and their potential exposure routes are listed below:

<u>Exterior Sensitive Receptors / Exposure Routes</u>

- Human and ecological receptors: contact, ingestion and/or inhalation of soil or organic particles impacted by PAHs and/or metals;
- Human and ecological receptors are potentially at risk should they be exposed to a release of #6 fuel oil sludge or the unconfirmed contents of the wastewater UST;
- Groundwater: impacted from metals contamination

  - **<u>Interior Sensitive Receptors / Exposure Routes</u>**

- Human contact with, ingestion of, and/or inhalation of hazardous materials, including asbestos, lead based paint, mercury, anhydrous ammonia, mold, and potentially PCB-containing building materials

1-0346-3/GIS/060109 All Samples.mxd

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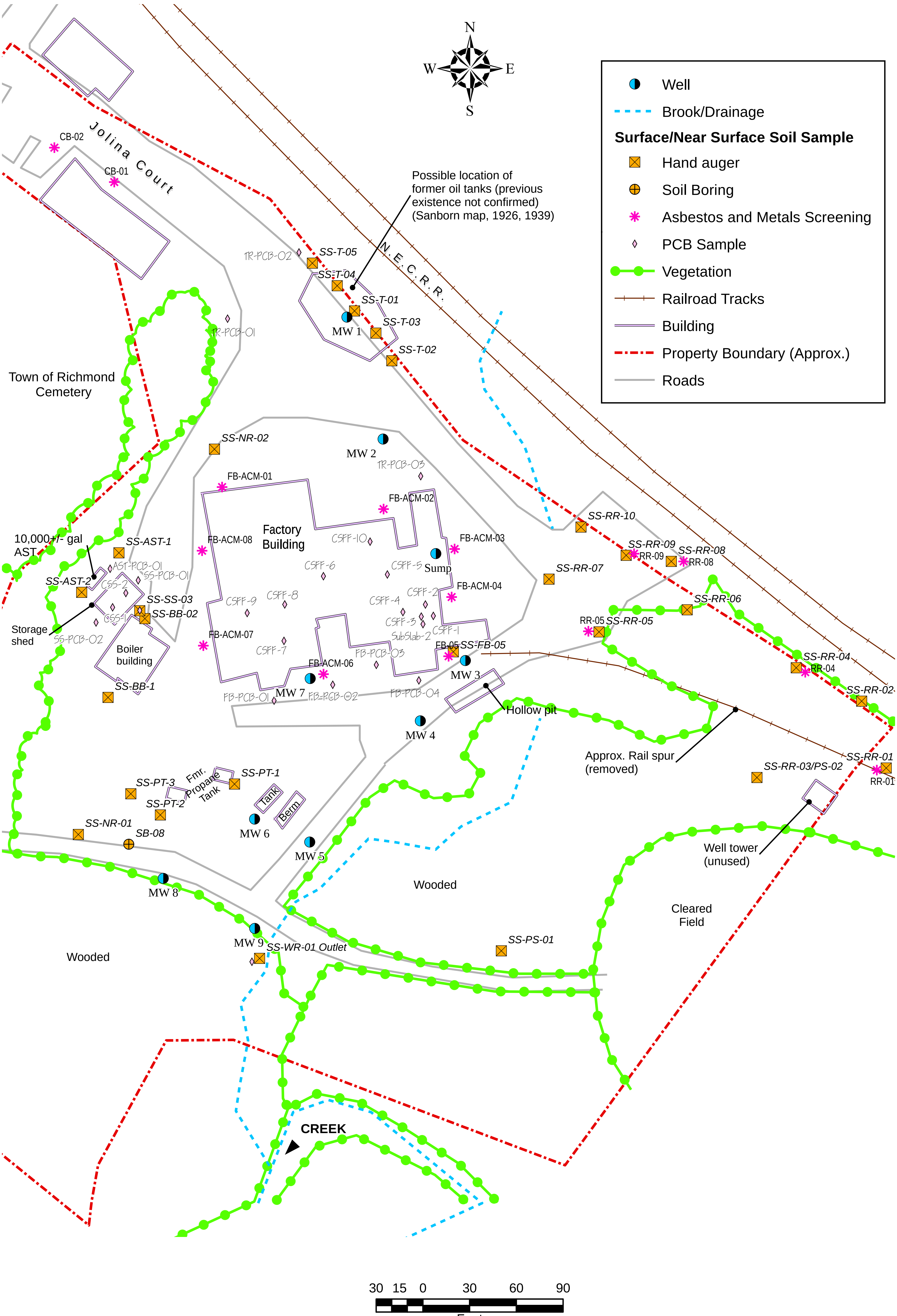
TJKCAD
JCO
LOGO_N11X17.DWG



Sources: NAIP Orthophoto 4407233_sw, "Boundary Survey Plat: Properties of Casing Development, LLC and Central Vermont Properties", Stuart J. Morrow, March 2004; and "Overview of Site", Heindel and Noyes, November 27, 2002. Survey by The Johnson Company, 2009.

Figure 2. All Sampling Locations
Former Richmond Creamery
Richmond, Vermont

The Johnson Company

100 State Street, Suite 600
Montpelier, VT 05602

Drawn by: RTK	Date: 03/09/09
Rev'd by:	Date:
Chk'd by:	Date:
App'd by:	Date:
Scale: 1"=60'	Project: 1-0346-3

1-0346-3/GIS/Figure 3 REC Locns 030712.mxd

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JCO
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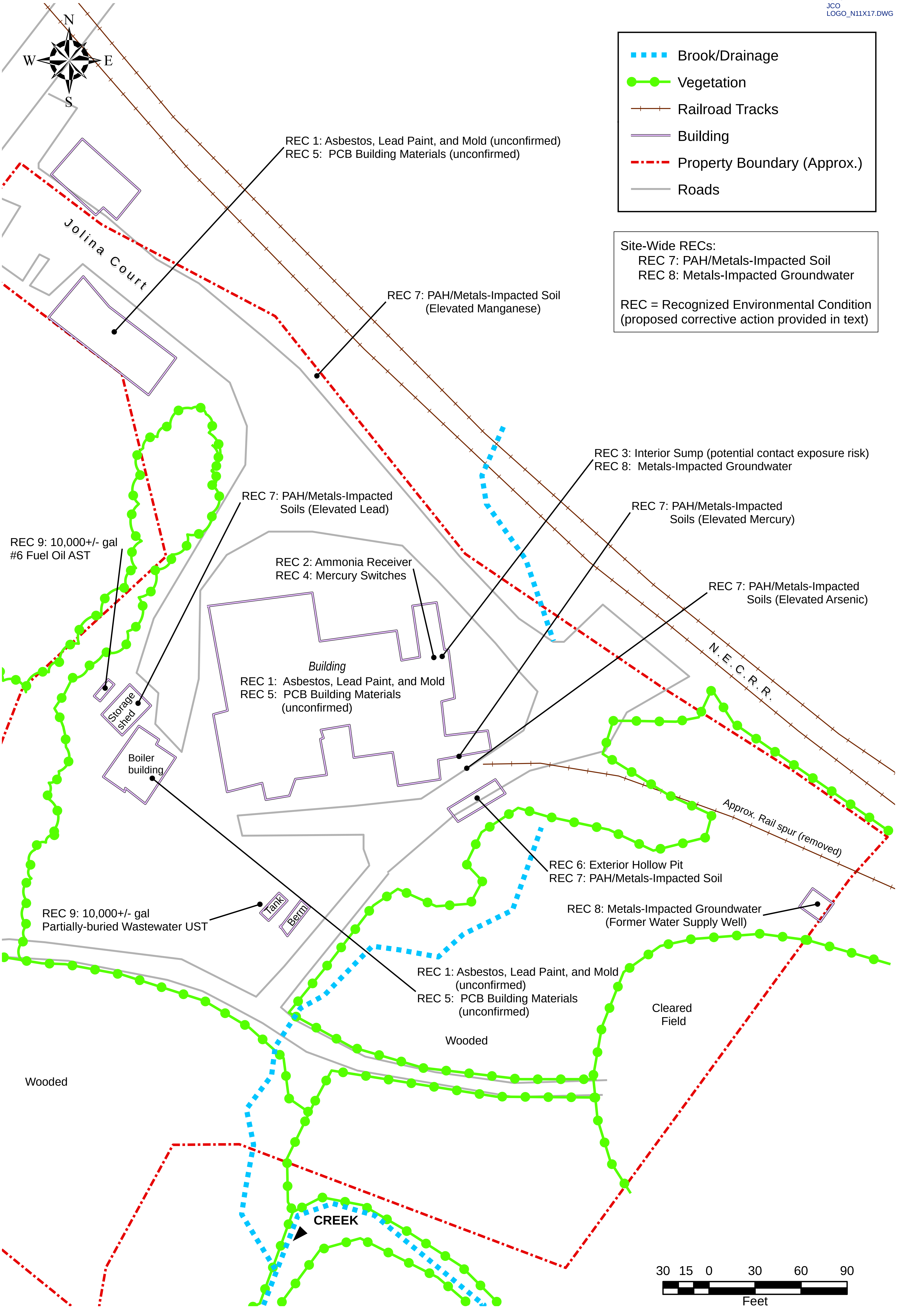

Sources: NAIP Orthophoto 4407233_sw,
"Boundary Survey Plat: Properties of Casing Development,
LLC and Central Vermont Properties", Stuart J. Morrow, March
2004; and "Overview of Site", Heindel and Noyes, November 27, 2002;
GPS Survey by The Johnson Company, 2009.

Figure 3. Site Boundaries and REC Locations
Former Richmond Creamery
Richmond, Vermont

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

Drawn by:	JEM	Date:	03/07/12
Rev'd by:	TJK	Date:	03/16/12
Chk'd by:		Date:	
App'd by:		Date:	
Scale:	1"=60'	Project:	1-0346-3

2.0 INVESTIGATION EXECUTIVE SUMMARIES

The Johnson Company understands that two (2) Phase I and one (1) Phase II environmental site assessments (ESAs) have been performed at the Site. The first Phase I ESA was conducted by Heindel & Noyes (H&N) (December 2, 2002). The second Phase I ESA and the Phase II ESA were performed by The Johnson Company (October 2008 and April 19, 2010, respectively). The major points of each report are summarized in Section 2.1. The full Executive Summaries of each report are included in Appendix 1. Tables of contaminant concentrations, obtained during the Johnson Company Phase II ESA, are included as Appendix 2.

2.1 EXECUTIVE SUMMARY OVERVIEW

The following sections are summaries of work, data, and interpretations presented in previous reports. The information and conclusions presented by consultants other than The Johnson Company have not been re-evaluated. Text provided in italics has been directly copied and presented unedited from the report it was originally provided in.

2.1.1 Heindel & Noyes Phase I ESA (December 2, 2002)

Heindel & Noyes was retained by Casing Development, LLC to perform a Phase I ESA of the Former Richmond Creamery. The following RECs were identified by H&N:

- *It is likely that ammonia, a regulated substance, is still present in the refrigeration system's holding tank*
- *The AST for #6 fuel oil could potentially still contain product and there is no secondary containment system in place. Is unknown if an SPCC plan is in effect regarding this tank, which is required if it to be utilized in the future*
- *The presence of the receptacles containing an unknown substance does pose a threat, as the nature of their contents is unknown at this time*
- *The use of the open pipe into the ground within the boiler building is currently unknown*
- *The rusted AST located to the rear of the boiler building could be of concern, as its use and contents are unknown at this time*
- *The presence of waste oil within the drum, plastic tub and parts washing station is a violation of current waste oil storage regulations*

- *There are two holding tanks observed in the facility whose past use and contents are unknown*
- *Given the past use of a portion of the property as a storage area for oil and or gas in an area appearing to border property owned by the railroad and the subject property, there is the probability a release of product occurred which could have impacted the soils surrounding the oil storage area and the subject property*
- *Prior to the municipal disposal connection it is likely an on-site septic system was utilized to manage the facilities waste disposal needs. It is unknown if this previous system has been removed or is still present on the property*
- *Since one transformer was manufactured prior to the ban on PCBs, it is assumed to contain PCB oils*
- *Due to the presence of a railroad along the property border, it is possible polycyclic aromatic hydrocarbons (PAHs) often associated with railroad use have migrated onto the subject property and impacted the surrounding soils of the area. PAHs could also be present along the driveway area where a historic railroad tie was located until its removal in the 1970's*
- *There is a large amount of trash of an unknown composition observed in one section of the property*
- *The origin and former contents of the pit observed within the driveway area is unknown*
- *There is a pipe coming out of an embankment whose beginning point is unknown. It is likely a storm water drain, but this opinion has not been confirmed*
- *An on-site well is still present on the property which was utilized prior to the municipal connection. It is currently unknown if this well has been disconnected from the facility and capped, as is required by current groundwater protection rules*
- *The likely presence of lead-based paint poses a threat to the environment as well as to human exposure*
- *The likely presence of asbestos containing materials poses a threat to the environment as well as human health if a certified consultant does not remove it*

2.1.2 The Johnson Company Phase I ESA (October 2008)

The Johnson Company (JCO) was retained by the Chittenden County Regional Planning Commission (CCRPC) to perform a Phase I ESA of the Former Richmond Creamery. The following RECs were identified by JCO:

- *Containerized potentially hazardous materials in the former factory and storage buildings. Some of these containers were observed to be uncovered, which presents risk for spills or releases.*

  Recommendation: *A licensed environmental contractor should characterize and remove all containerized potentially hazardous materials.*

- *Onsite well, not abandoned or used since connection to Town of Richmond municipal water supply. If unsecured, this well can provide a conduit for hazardous materials to be released to groundwater.*

  Recommendation: *If there is no proposed use for the groundwater from the on-site well, it should be properly abandoned. Since the facility is served by municipal water service, it is unlikely that the well will be permitted for future use. However, any use should be preceded by sampling for a variety of potential contaminants.*

- *Property records indicate Standard Oil Company formerly owned a portion of the Site, and a 1926 Sanborn map shows the approximate location of three oil storage tanks.*

  Recommendation: *The approximate location of the three former oil storage tanks associated with the Standard Oil Company should be inspected with a metal detector. Should this limited inspection indicate the presence of underground storage tank(s) on site, the tanks should be removed in accordance with VTDEC UST guidelines. A proper UST closure will include confirmatory soil sampling and will include groundwater sampling if soil samples show evidence of a release.*

- *A hollow pit of unconfirmed contents, covered by a concrete slab, is present on the Site. Recommendation: The contents of the pit should be determined. If there is evidence that the pit once contained oil, soil and/or groundwater sampling should be conducted immediately outside the pit.*

- *Polynuclear aromatic hydrocarbons (PAHs) from idling rail cars may be present in the vicinity of the former rail spur that crossed the northeastern corner of the Site.*

  Recommendation: *Efforts should be made to conduct a limited near-surface soil investigation for the presence of PAHs.*

- *Potential impacts to soil and groundwater resulting from possible releases during ongoing factory operations. Due to the machinery formerly present at the Site, the use of lubricating oils and cleaning chemicals is suspected, although in many areas of the factory it is likely that these cleaning products were food-grade and not a major source of contamination to environmental media.*

  Recommendation: *A limited subsurface soil and groundwater investigation should be conducted in the building interior and exterior to evaluate potential contamination as a result of releases.*

- *The presence of hydraulic fluid buckets in the storage shed indicates that this product was used in some machinery or equipment at the Site. Some hydraulic fluids historically contained PCBs before their use in unenclosed systems was banned in the late-1970's. There is not evidence to suggest the widespread release of hydraulic fluids in a food-manufacturing facility.*

  Recommendation: *A limited surface soil and building flooring investigation for PCBs is warranted in and around the storage shed. A limited number of wipe or bulk concrete samples inside the building is also recommended to provide more information on the prevalence of PCBs at the Site.*

Although not Recognized Environmental Conditions, the following items should be addressed in future investigations at the Site:

- *A 10,000-gallon above ground storage tank containing some residual fuel oil sludge is present on the Site. The piping for this AST was routed overhead, and no staining or olfactory evidence of releases to the ground surface were observed.*
  Recommendation: *The sludge from the AST should be removed and the tank should be cleaned. This would remove the potential for releases to the environment if the AST fails. If the AST is to be reused, it must be inspected before being filled with oil.*

- *Residual ammonia potentially present in the abandoned refrigeration system*
  Recommendation: *Prior to any clean up efforts, a licensed environmental contractor should characterize and remove all containerized potentially hazardous materials.*

- *Asbestos has been identified in the shingles that cover the outside of the factory building. Soils in unpaved areas immediately outside the building should be sampled for asbestos to determine if asbestos fibers are present at levels that would cause health risks to site users. Accessible areas of the building have been sampled for asbestos, but portions of the building may not have been assessed. In addition, sampling for lead paint has not been conducted.*

  Recommendation: *Additional sampling should be conducted to assess all remaining areas of the building, including the roof, for asbestos-containing materials. Soil sampling outside the building should be completed to evaluate the potential for exposure to asbestos in soils. A lead paint assessment should be completed before the building is renovated or demolished.*

- *Fluorescent light bulbs possibly containing mercury and lead in the factory building.*

  Recommendation *Prior to any site reuse, a licensed environmental contractor should characterize and remove all out of service or unused fluorescent light bulbs and PCB-containing fluorescent light ballasts.*

In addition to the RECs identified above, the 2008 JCO Phase I ESA reviewed and provided responses to the following H&N RECs:

- *2002 H&N REC: The use of the open pipe into the ground within the boiler building is currently unknown.*
  The Johnson Company Follow Up: Based on observations at the Site and confirmation by Mr. Ingalls, the pipe led to a condensation tank that has been removed.
- *2002 H&N REC: The rusted AST located to the rear of the boiler building could be of concern, as its use and contents are unknown.*
  The Johnson Company Follow Up: According to Mr. Ingalls, this AST was removed in 2005. The tank contained condensate from the boiler, and it was not perceived as a REC.
- *2002 H&N REC: Since one transformer was manufactured prior to the ban on PCBs, it is assumed to contain PCB oils.*
  The Johnson Company Follow Up: All transformers and overhead power lines at the Site have been removed, and are no longer a REC at the Site.
- *2002 H&N Observation: There is a large amount of trash of an unknown composition observed in one section of the property.*
  The Johnson Company Follow Up: Although a pile of tires and small amounts of trash were observed, a "large amount of trash of unknown origin" was not observed by The Johnson Company. Mr. Ingalls indicated that, since the completion of the 2002 H&N ESA, he had removed and disposed of approximately 15 cubic yards of non-hazardous trash.
- *2002 H&N Observation: There is a pipe coming out of an embankment whose beginning point is unknown. It is likely a storm water drain, but this opinion has yet to be confirmed.*
  The Johnson Company Follow Up: This pipe was not observed by The Johnson Company. It is possible that the pipe was obscured by vegetation.

2.1.3 The Johnson Company Phase II ESA (December 19, 2010)

The Johnson Company was retained by the CCRCP to perform a Phase II ESA to address the RECs identified in the H&N and JCO Phase I ESAs. This work included 1) collection of soil samples for metals field screening and laboratory analysis; 2) installation and sampling of monitoring wells; 3) collection of soil and bulk concrete samples for PCB analysis; 4) inspection of the building for ACM, lead paint, and mold; 5) inspection of the concrete pit; 6) a hazardous waste inventory; 7) inspection of the ammonia refrigeration system; 8) an assessment of the water supply well; and 9) characterization of the sump inside the building. It was found that: 1) soils were contaminated with metals and PAHs above applicable screening values; 2) groundwater samples contained metals at concentrations above Vermont groundwater enforcement standards (VGES); 3) PCBs were not detected at concentrations above the laboratory detection limits in any samples; 4) ACM, lead paint, and mold were detected in samples collected from within the building; 5) the concrete pit was found to contain concrete rubble and no evidence of volatile organic compounds (VOC) impacts were found (the purpose of this pit is still unknown); 6) according to the Vermont Department of Environmental Conservation (VTDEC), the hazardous waste identified in the hazardous waste inventory was removed from the property and properly disposed of under the oversight of the Vermont Resources Conservation and Recovery Act (VTRCRA) department; 7) approximately 125 gallons of ammonia were identified in the receiver of the ammonia refrigeration system; 8) the water supply well could not be safely accessed so no samples were collected from the well and it is unknown if the well has been properly abandoned; and 9) VOCs and PAHs were not detected in the aqueous sample collected from the sump; metals (arsenic, barium, and manganese) were detected in the sump sample. The following recommendations were included in the Johnson Company Phase II ESA report:

- *Although metals concentrations were detected in groundwater wells at concentrations exceeding Vermont Groundwater Enforcement Standards (VGES), VOCs and semi-volatile organic compounds (SVOCs) were not detected above VGES, and there is no evidence to suggest existing impacts to groundwater from Site activities. The elevated concentrations of arsenic and manganese in groundwater appear to be related to the successful degradation of petroleum products at the Site, and groundwater is not a source of drinking water at the Site.*
- *No remedial actions are recommended for groundwater unless a use is identified for the existing water supply well, in which case additional sampling should be conducted in advance of use. No additional water supply wells should be installed on the property without advance coordination with the Sites Management Section of VT DEC.*
- *A hollow pit of concrete rubble does not appear to be impacting groundwater or soil and no remedial actions are recommended to address the pit. However, this pit could pose a safety hazard for future redevelopment activities and should be managed appropriately.*
- *Additional sampling should be conducted to delineate the areal and vertical extent of the soils impacted by metals (arsenic, lead, manganese, and mercury) outside of the southeastern corner of the building.*
- *Additional sampling should be conducted to delineate the areal extent of surficial soils impacted by PAHs and naphthalene. If residential redevelopment is planned, these results*

should be used as part of a risk assessment to evaluate the potential human health risks associated with PAHs and naphthalene at the Site.

- *Since no groundwater remediation is recommended, the existing onsite monitoring wells should be closed to prevent a conduit for contamination during any future Site uses.*
- *Once the building plans for the Site have been finalized, a Corrective Action Plan (CAP) should be developed in accordance with the VT DEC guidelines to address the following issues of concern at the Site:*
    - *Metals and PAH impacted shallow soils*
    - *Ammonia present in the abandoned refrigeration system*
    - *Containerized materials present in the factory building, if they have not already been removed by the owners*
    - *The water supply well*
    - *The sump inside the building*
    - *Asbestos, lead paint, and mold*

Details of the CAP recommendations listed above are provided as follows:

- *Once the building plans for the Site have been finalized, a Corrective Action Plan (CAP) should be developed in accordance with the VT DEC guidelines to address the following issues of concern at the Site:*
    - *Metals and PAH impacted shallow soils*
    - *Ammonia present in the abandoned refrigeration system*
    - *The water supply well*
    - *The sump inside the building*
    - *Asbestos, lead paint, and mold*

Details of the CAP recommendations listed above are provided as follows:

- *Metals (arsenic, lead, manganese, and mercury) were reported in four surface and near-surface soil samples at concentrations above soil screening levels for residential soils. The soils outside the southeast corner of the building should be removed or covered, as should the soils on the northeast side of the storage shed. In addition, PAHs were reported at concentrations exceeding residential and industrial screening levels in locations surrounding the former rail spur and in the reported vicinity of the former tanks, in addition to isolated locations in other portions of the property. Currently, a complete vegetative covering at the rail spur area limits exposure to PAH compounds; however, if the Site use changes, remediation or land use restrictions should be applied to limit future exposures. In the* *former tank area, no action is recommended due to its proximity to the functioning rail line, which will be a continuing source of PAHs in the future.*

- *The presence of ammonia was confirmed in the abandoned refrigeration system. In its current condition, the ammonia refrigeration system does not pose an environmental hazard. However, it could pose a health and safety risk for future redevelopment activities. Ammonia in the storage tank should be pumped and reclaimed, and any residual ammonia present in refrigeration system removed prior to demolition or reuse of the building.*
- *An onsite former water supply well could not be accessed during the Phase II field investigation. The well is not easily accessible and is unlikely to serve as a conduit for contamination into groundwater. However, elevated concentrations of arsenic and manganese have been detected in shallow groundwater at the Site. Although the screened interval of the supply well is not known, it should be sampled before any future uses. Alternatively, if it will not be used and future redevelopment activities would result in Site modifications making the well more accessible, the well should be demolished and properly decommissioned.*
- *Concentrations of arsenic were observed above VGES in a sump located in the factory building. Metals concentrations were consistent with surrounding shallow groundwater, and no remedial actions are recommended. However, exposure to the water in the sump should be prevented during redevelopment activities by removing the sump. Alternatively, since the sump may be connected to groundwater and it may not be possible to completely pump out, the sump could also be covered to secure access and prevent ingestion of the water.*
- *Asbestos containing building materials and lead-based paint should be handled and disposed of appropriately during demolition or reuse of the building. Asbestos was not detected in soil samples analyzed with Polarized Light Microscopy (PLM). However, chrysotile was reported in both soil samples analyzed with Transmission Electron Microscopy. Although no remedial actions would be required due to the presence of asbestos, best-management practices should be employed to limit exposure to dust during soil-disturbing activities.*
- *The presence of four mold types was confirmed in the factory building mold inspection. Although no remedial actions are recommended, best-management practices should be employed to limit exposure to mold during demolition or renovation activities, and conditions conducive to mold growth should be addressed prior to building reuse.*

2.2 PREVIOUS EXECUTIVE SUMMARIES

See Appendix 1 for the full unedited text of the Executive Summaries from previous reports referenced above.

2.3 SUMMARY OF RECOGNIZED ENVIRONMENTAL CONDITIONS

Currently, nine RECs are present at the Site (see Figure 3). The following RECs are presented in the Notes on Figure 3 and not as a specific location because they are either building-wide or Site-wide: <u>*REC 1:*</u> asbestos, lead paint, and mold; <u>*REC 5:*</u> PCB building materials; <u>*REC*</u>

7: PAH- and metals-impacted soils; and *REC 8:* metals-impacted groundwater. The RECs presented below are based on the type of planned remedial responses.

1. **INTERIOR – ASBESTOS, LEAD PAINT, AND MOLD:** The presence of asbestos, lead paint, and mold inside the building has been confirmed.

2. **INTERIOR – AMMONIA REFRIGERATION SYSTEM:** The ammonia refrigeration system was inspected on April 14, 2009 by Governed Air of Vermont, Inc. of South Burlington, Vermont. The Governed Air representative concluded that significant quantities of ammonia were present in the receiver (the approximately 250-gallon receiver was estimated to be ½ full). Until the system is dismantled, the volume of residual ammonia within other system components cannot be determined.

3. **INTERIOR – SUMP:** The former purpose of the sump, which is located adjacent to the ammonia refrigeration system receiver, is not known. No plumbing is visible entering or leaving the sump. An aqueous sample collected from the sump reported no VOCs or SVOCs above laboratory detection limits. Arsenic was detected (0.012 mg/L) at a concentration slightly above the arsenic VGES (0.010 mg/L). Barium and manganese were both detected at concentrations below VGES. The detected concentrations are generally consistent with concentrations present in groundwater samples: it is possible the sump may be connected to the groundwater.

4. **INTERIOR – HAZARDOUS MATERIALS:** Four mercury switches are located in the ammonia compressor room. These switches are connected to the ammonia system, and cannot be removed until the ammonia system has been decommissioned. In addition, compressor oil may be present in the ammonia refrigeration system: this oil cannot be collected while ammonia remains in the system. Given the building's condition it is possible that additionally unidentified hazardous material remains onsite and may be encountered during building deconstruction.

5. **INTERIOR – PCB BUILDING MATERIALS:** A PCB building materials inspection has not occurred, but the presence of PCB building materials is possible given the age and construction of the building.

6. **EXTERIOR – HOLLOW PIT:** The former purpose of the exterior hollow pit is unknown. It currently contains concrete rubble. The ambient air in the pit was screened for VOCs with a photoionization detector (PID). A reading of 0.2 ppmV in the pit was observed; ambient air registered 0.4 ppmV. No sample could be retrieved with an extendable hand auger.

7. **EXTERIOR – METALS- AND PAH-IMPACTED SOILS:** Surficial (0-0.5 feet below ground surface (fbgs)) soils impacted with PAHs above applicable screening

levels were identified across the site. Elevated PAHs were also detected (at one location) at depths up to 14 fbgs. lead, mercury, and manganese were detected at concentrations above residential screening levels in one surficial sample each. Arsenic was detected in all analytical soil samples (both shallow and deep) at concentrations exceeding both residential (0.39 mg/kg) and industrial (1.6 mg/kg) EPA Regional Screening Levels (RSLs).

8. **EXTERIOR – GROUNDWATER AND WATER SUPPLY WELL:** Laboratory results of all of the groundwater samples collected on April 20, 2009 reported arsenic and/or manganese at concentrations above VGES. These elevated concentrations may be naturally occurring or may be the result of changes in soil and groundwater chemistry as a result of degrading petroleum hydrocarbons.

9. **EXTERIOR – OUT OF SERVICE STORAGE TANKS:** The fuel oil AST formerly contained #6 fuel oil. This tank currently contains approximately 6 inches of sludge and no fuel oil. The tank appears to be in good condition and no evidence of releases was observed. The second tank is a partially buried underground storage tank (UST) located to the southwest of the building. This tank was reportedly associated with the whey disposal system. Septic wastes and floor drains may have also been directed into this tank. Samples of tank contents have not been collected, although based on visual and olfactory observations it does not appear that this tank was used to store petroleum.

3.0 CORRECTIVE ACTION FEASIBILITY INVESTIGATION

Following is an evaluation of the feasibility of various corrective action alternatives and an estimate of their implementation cost. For several RECs only one obvious remedial alternative was considered, as no other form of remediation would adequately mitigate risks associated with the REC.

The cost estimates presented in the following sections are summarized in Appendix 3. Detailed cost estimates for each REC are also provided in Appendix 3. Subcontractor cost estimates have been included in Appendix 4 for informational purposes only.

3.1 REC #1: ASBESTOS, LEAD PAINT, AND MOLD

The Johnson Company's 2010 Phase II environmental site assessment (ESA) included asbestos containing materials (ACM), lead based paint (LBP), and mold inspections of the building which confirmed a significant presence of both ACM, LBP, and mold throughout portions of the Site (see the ACM and LBP inspection reports included as Appendix 5).

The asbestos inspection reported the following ACM associated with the factory building:

- Basement: gray ceiling/wall panels in milk receiving room; milk silo room; and in the production and storage areas

- First floor:
    - gray ceiling panels in the ammonia compressor room, the storage room /culture room, and the closet under stairs,
    - tan 9 inch x 9 inch vinyl floor tile in the lab

- Second floor:
    - tan 9 inch x 9 inch vinyl floor tile in the reception area and conference room (including closet)
    - gray 9 inch x 9 inch vinyl floor tile in the bathroom, the office floor, and the storage room floor
    - gold adhesive beneath gray tile in the front reception area
    - cream/green linoleum in the office bathroom
    - sheetrock compound at hallway wall edge and stairs
    - blue vinyl floor tile near bathrooms
    - black tar on cork in ceiling in the attic stock room

- exterior blue siding

The LBP inspection reported that lead-based paints and coatings are present on all levels of the factory building interior, with limited presence in the basement. There were also exterior painted surfaces that exhibited lead detections, including a first floor loading dock door, light blue shingles on an upper portion of the building, and the coatings on the exterior foundation walls.

A mold inspection was performed concurrently with the LBP inspection. At the time of the assessment, conditions for mold growth were favorable, including excessive moisture as a result of past or current roof leaks and the absence of heating or air conditioning in the building. Four mold types were identified: Mycelial fragments, Aspergillus/Penicillium, Cladiosporium, and Basidiospores. Unidentified/other mold types were also reported in 3 of the 4 samples. All four of the identified mold types are prevalent in outdoor environments in northern New England and common to indoor environments with high moisture contents.

The presence of ACM and LBP must be addressed during building demolition, disposal, rehabilitation and/or renovation. Prior to disturbing the building in any way, the Vermont Department of Health (VTDOH), Asbestos and Lead Regulatory Program (ALRP) must be contacted and approve a management plan, and all applicable permits must be in place.

The building is comprised of several interconnected structures of varying construction, age, and condition and in its current state is structurally unstable. Sections of the building have already failed and without action additional structural failure is imminent, although certain portions of the building remain in better condition than others: a structural engineer's assessment of the building was performed on February 25, 2012, and the resulting assessment report dated March 13, 2012, is included as Appendix 6. Also, the building is currently not secure to the public as is evident by graffiti and theft of select building materials. Given the condition of the building and risk to human health and the environment, posed by the ACM and LBP, the

VTDEC has suggested that mitigation of risks associated with the building be prioritized. The impacted building, in its current state, arguably presents more risk to human health and the environment than any other identified REC at the Site. The risk associated with the building coupled with VTDEC's desire to have the current property owner expeditiously address this issue, prioritizes the section of the CAFI that present the options for building remediation.

Given the different construction and condition of the various portions of the building, special consideration must be made to develop an appropriate plan that will address the variety of surfaces and materials that will be encountered during the abatement effort. Although traditional asbestos abatement (in advance of any renovation or demolition) will be feasible in some portions of the building, several areas, particularly the more-recent, single story additions to the building are not safe for entry, thus eliminating the option of a traditional ACM abatement in those areas. Mr. Robert Neeld, P.E. of Engineering Ventures, Inc. prepared a structural engineer's assessment report (see Appendix 6) which describes the condition of the various building sections in detail.

In addition to the buildings' questionable structural integrity, portions of the building complex may or may not qualify as historically sensitive and therefore may require some degree of preservation during redevelopment or documentation prior to demolition. The Historic Preservation Review Coordinator of the Vermont Division for Historic Preservation (VDHP) has requested the aforementioned structural engineer's assessment of the buildings to supplement the Archaeological Resources Assessment (ARA) of the Site performed (revised in April 2009) by the University of Vermont's Consulting Archaeology Program, in order to determine which, if any of the on-site structures warrant preservation or study and documentation. To date, the Town of Richmond has not placed an order to demolish the buildings and has also indicated that a demolition permit will not be granted by the Town without approval from the Division for Historic Preservation.

The Johnson Company has completed the appropriate research, discussed remediation alternatives with local industry experts and solicited contractor cost proposals (see Appendix 4) to develop cost estimates and abatement options for ACM and LBP. It should be noted that mold abatement is not included in the scope of this CAFI, however until ACM and LBP abatement are completed mold cannot be addressed. Additionally, it is likely that much of the mold will indirectly be addressed during ACM and LBP abatement through removal of mold-impacted ACM and/or LBP.

Although asbestos inspections performed in 2009 provided a valuable assessment of the extent of ACM in the building, it was determined by each of the contacted ACM abatement contractors that additional bulk samples would be required to comply with United States Environmental Protection Agency (US EPA) National Emissions Standards for Hazardous Air Pollutants (NESHAP) assessment requirements prior abatement planning, management plan development, and ultimately rehabilitation or demolition. An asbestos assessment performed to NESHAP standards facilitates future VTDOH Asbestos Control Division permitting. This additional assessment would include inspection of the boiler room building and former livery building. After assessment activities are completed the selected Vermont certified asbestos project designer would develop a written work plan in collaboration with the VTDOH ALRP to ensure compliance with all State Regulations for Asbestos Control (VRAC), V.S.A. Title 18, Chapter 26.

In areas of the building that can structurally support a crew of adequately protected workers and their equipment, traditional abatement will likely be the required and selected ACM remedial alternative. Traditional abatement involves physically removing ACM from interior and exterior portions of the structure, and containerizing the material for disposal while the building remains intact. Although traditional abatement does not typically affect a building's support structure, it does require disturbance of interior and exterior building materials. This disturbance may reveal structural conditions that indicate an unsafe working environment and delay progress of traditional abatement. Before any construction or abatement crews initiate intrusive work, a plan should be prepared by / or in conjunction with the structural engineer to remove or shore collapsing structures. Additionally, a structural engineer and/or site safety manager should be assigned to further assess and monitor the structures for occupancy, in order to confirm the structural integrity of sections requiring entry for abatement. According to the ACM contractors, traditional abatement is the more cost effective technique and given the likelihood that some portions of the building will be required to remain intact based on historic value it is anticipated that traditional abatement methods will be employed in all areas where it can be safely supported.

Due to the questionable structural integrity in certain portions of the building it is anticipated that an alternative practices work plan request will be made to VTDOH ALRP for approval of a work plan specifically to address areas where traditional abatement is not feasible. Specifically, the work plan will address: 1) the preparation of the work area; 2) protection of workers and public; 3) identify the Vermont certified asbestos project monitor and their role; 3) removal of the various forms of ACM; 4) personal exposure monitoring; 5) disposal of ACM; 6) and visual clearance inspection of the building and surrounding soil by a qualified third party to ensure that the asbestos has been removed. Assuming approval from ALRP, the work plan will contain non-traditional methods that may include: 1) the use of heavy excavation equipment to selectively remove and segregate ACM from non-ACM; 2) controlled demolition while extensively wetting material to control suspension of friable dust into the air; 3) manually segregating material; and / or 4), disposal of co-mingle demolition material as ACM to avoid the extensive effort required to segregate out ACM.

Until the structural engineer’s assessment report is submitted to the VDHP and the directive is received from them regarding any requirements to preserve buildings that may be deemed historically sensitive, details describing abatement techniques specific to each section of the building cannot be provided. However, in order to estimate abatement costs, assumptions were made based on the currently available information and are clearly presented in the attached ACM abatement cost proposals. The cost proposals assumed that selective building demolition would occur after areas that could support traditional abatement have been cleared of ACM. Additionally, it was assumed that, in areas of the building which are unsuitable for traditional abatement, building demolition and ACM abatement would occur concurrently under an alternative practices work plan. The ACM contractors also provided cost proposals for demolition assuming the entire building would be demolished, although this may change based on the directive provided by Division for Historic Preservation.

An estimated cost range to perform asbestos abatement only (does not include demolition costs but assumes demolition would occur concurrently with abatement) would be between \$70,000 and \$110,000. This range of cost does not include: oversight by the Johnson Company, monitoring and additional building evaluation by the structural engineer, or contingency for overages, which are common. Assuming the entire building is demolished following ACM and LBP abatement and "clean" construction and demolition debris (excluding concrete and brick) is disposed of off-site an estimated range for demolition of between \$120,000 and \$135,000 can be assumed for planning purposes. Considering disposal costs are often based on weight, a cost effective approach to minimize disposal cost would be to bury concrete and brick onsite (assuming permission could be obtained). This material once buried would be treated as any other impacted soil onsite and must therefore be covered with indicator fabric and at least 6-inches of clean fill. For approximately \$3,500 per day a crusher can be rented that would crush all remaining brick and concrete to produce an aggregate that could be reused during Site redevelopment that would be a more manageable medium to work with. Dust management would be required to ensure any fugitive dust generated from this process is controlled.

The most cost effective approach to address LBP would be to perform LBP abatement concurrently with the ACM abatement. Some LBP is comingled with ACM and will be indirectly mitigated during ACM abatement. Lead containing surface coverings that are associated with the demolition waste stream would likely remain on the original material it was intended to cover and a representative sample of the waste stream would be collected and sent for toxicity characteristic leaching procedure (TCLP) analysis which is generally required by the receiving facility. It should be noted that Vermont Hazardous Waste Regulations lead limit for TCLP is 5.0 mg/L. If TCLP results exceed this limit the waste stream resulting from the demolition activities will need to be disposed of as lead containing hazardous waste. It has been assumed and is likely this waste stream will not exceed the TCLP threshold for lead.

For portions of the building that may be saved it will be necessary for the property owner to disclose to contractors the known lead hazards that may be working on the building. It will then be the responsibility of the of all informed contractors to comply with the Vermont Occupational Safety and Health Administration (VOSHA) regulations pertaining to lead based paint.

Assuming the ACM and LBP abatement efforts take place concurrently and waste stream analytical results do not exceed the TCLP threshold for lead, demolition waste stream sampling and project management are the only costs that would be incurred to perform LBP abatement, as any other materials would be incorporated with general construction and demolition debris or be disposed of with the ACM waste stream. It is anticipated that two TCLP samples will be required for an estimated cost of approximately $1,000. Should TCLP results identify the waste stream is in exceedance of the lead threshold, the material would need to be disposed of as hazardous, which would cost approximately $8,500 / 40 cy box. It is unknown how many 40 cy boxes would be filled; for cost estimation purposes disposal of one box has been assumed.

3.2 REC #2: THE AMMONIA REFRIGERATION SYSTEM

The ammonia refrigeration system at the Site is comprised of compressor(s), an unknown quantity of piping, an approximately 250-gallon receiver, and possibly an ice-maker. The receiver was confirmed to be approximately ½ full of anhydrous ammonia on April 14, 2009. The system was also inspected on February 27, 2012 and the presence of ammonia in the receiver was re-confirmed by J. Hogan Refrigeration & Mechanical, Inc, of Peru, New York. The room immediately north of the compressor room which may contain the ice maker could not be accessed; if an ice maker is present in this room it may contain an unknown amount of ammonia in piping and possibly a second receiver.

The ammonia in this abandoned refrigeration system presents a potential risk to human health and the environment in the event it is released. Although a slow leak would be unlikely to affect surrounding areas, ammonia vapors could gather in the building, potentially posing a health risk to trespassers. Anhydrous ammonia vapor is both flammable and caustic; a more catastrophic release could potentially affect surrounding areas. Possible causes of catastrophic releases include vandalism and building collapse. Higher-concentration vapors could also react with the water in the nearby sump, forming ammonia hydroxide (aqueous ammonia). In the event of a fire the receiver could rupture explosively, releasing flammable vapor.

The only practical response is to have this system properly decommissioned and documented by a licensed refrigeration contractor. Due to the deteriorated condition of the system and the estimated quantity of ammonia contained within it, decommissioning is not a trivial task. An ammonia tanker truck will be required and must remain at the Site during the entire ammonia removal process. Because the compressors have (reportedly) been removed from the system, the contractor will need to plumb in temporary compressors to move the ammonia from the receiver and/or ice maker to the tanker truck and to flush the pipes with an inert gas.

The cost presented below assumes the following:

- Ammonia is present in an ice maker
- Electrical service (230/460/3 phase capable of powering a 10-horsepower motor) will be connected or a generator provided prior to the ammonia removal effort
- Clean water (either from the former creamery building or some other sources) will be made available prior to the ammonia removal effort
- Two 14-hour days will be required to remove the ammonia from the entire system

The refrigeration contractor will remove ammonia from the system and certify that it is safe to remove the piping as C&D waste. The cost to remove the anhydrous ammonia from the system is $34,700 based on the assumptions above. If it is determined that the ice maker is free of ammonia, the refrigeration contractor has suggested the cost of decommissioning the system will be less (approximately $19,700.)

In addition to the ammonia, it is possible that compressor oil may have pooled within the pipes and, based on the age of the system, it is possible that PCB-containing compressor oil was used. Therefore when the system is dismantled, care should be taken to collect and appropriately containerize any oil in the system. Specifically, this oil should be placed in a DOT certified container and screened for PCBs. For cost estimating purposes, it is assumed that less than one drum (55 gallons) of oil will be collected and that PCBs will not be detected (a representative of J. Hogan stated that he did not think that PCB compressor oil had been used in refrigeration systems). The cost to sample and dispose of one drum of compressor oil has been included with REC #4 – Interior Hazardous Waste (see below). The cost to dismantle the system has not been included because the extent of the system is not known. Regardless of the analytical results of the compressor oil, a HAZWOPER-trained contractor should be retained to remove the piping and collect the compressor oil for appropriate disposal. Once the oil has been removed, the system could be dismantled entirely and disposed of as general construction and demolition debris or preferably recycled.

3.3 REC #3: INTERIOR SUMP

The analytical results of the sample collected from the interior sump reported an arsenic concentration of 0.012 mg/L, which is slightly in excess of the arsenic VGES (0.010 mg/L). Of the analyses performed (VOCs, SVOCs, and the Region 9 PRG metals: antimony, arsenic, barium, cadmium, chromium, lead, manganese, mercury, nickel, selenium, and thallium), no VOCs or SVOCs were detected above laboratory reporting limits and no other metals were detected in excess of VGES. The detected arsenic concentration in the sump is consistent with arsenic detections in groundwater elsewhere at the Site. Based on the observed similarities of groundwater elevation and water quality, the sump contents are likely groundwater. The risks posed by this sump include physical injury if someone were to fall into the sump, and ingestion of the water. These risks can be managed by either filling the sump with clean fill, hydraulic cement or crushed stone and constructing a permanent (non-removable) cover over the sump

For cost estimating purposes, the following assumptions were made:

- The sump is approximately 3 by 5 feet wide and 10 feet deep
- The sump will be filled with crushed stone to approximately 4 inches below the rim of the sump
- The remaining 4 inches will be finished with concrete
- The sump can be accessed with equipment to place the crushed stone

Based on these assumptions, the estimated cost to fill the sump is $1,050.

3.4 REC #4: INTERIOR HAZARDOUS WASTE

The bulk of the interior hazardous waste identified in the Johnson Company Phase II report has been removed. It should be noted that four mercury switches remain in the compressor room of the ammonia refrigeration system and (as discussed in Section 3.2) compressor oil may be present in the ammonia refrigeration system. No other switches or hazardous waste have been identified, but additional switches (potentially in the ice room) and/or small quantities of hazardous waste may still be present in areas that were previously inaccessible.

The mercury switches and any remaining oil in the ammonia refrigeration system must be removed, containerized and appropriately disposed of prior to building demolition or renovation. It should be noted that, the switches and oil cannot be removed until the ammonia system has been depressurized and decommissioned. This estimated cost to address the aforementioned interior hazardous debris assumes the following:

- The cost of dismantling the refrigeration system following removal of the ammonia is not included.
- One PCB screening sample will be required prior to disposal of the compressor oil
- The compressor oil is PCB-free
- No more than one drum (55-gallons) of compressor oil will be recovered from the refrigeration system
- Collection of oil and removal of mercury switches will take place during the same mobilization.

The cost for removal and disposal of the mercury switches and the testing and disposal of one drum of used PCB-free compressor oil is estimated to be $2,100.

3.5 REC #5: PCB BUILDING MATERIALS

To date, no PCB sampling of building materials such as paint, adhesives, cable insulation, adhesives, tape, felt, foam, cork, fiberglass, tile mastic, caulk/glazes, etc. at the Site has occurred, but given the age of the buildings, PCB-containing building materials may be present. For more information see the PCB suspect material list (http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/about.htm). Since the 2010 Phase II ESA was completed, the US EPA has started including PCB testing of building materials as standard practice for pre-1978 structures slated for renovation or demolition. As such, it is recommended that representative samples of building materials suspected of containing PCBs be collected and sent for laboratory analysis of PCBs. This proposed sampling is separate from the previous PCB sampling of bulk concrete which was initiated to identify and potentially delineate possible release(s) of PCB containing liquids inside the building.

For the purposes of this CAFI, it is estimated that 18 building material samples will be required to assess the presence of PCBs in building materials; however, the exact quantity of samples will be determined at the professional discretion of the building materials inspector which will be based on the number of unique building materials that may contain PCBs. Other than for quality control purposes, duplicate samples of like media will be avoided. Results will be compared with standards presented in the PCB Site Revitalization Guidance under Toxic Substances Control Act effective November 2005. The estimated cost to assess suspect building materials for PCB is $3,100 and assumes the assessment will be performed by the asbestos remediation contractor. This estimate does not include the cost of removal and disposal of PCB containing material.

If PCBs are confirmed in some or all of the aforementioned building materials, PCB-specific engineering controls would be implemented during renovation and demolition activities. For cost savings purposes it is recommended that removal of all PCB containing building material (if identified) occur in conjunction with the ACM abatement effort. All PCB containing material must be disposed of at an approved facility.

3.6 REC #6: HOLLOW PIT

The hollow pit is a concrete-lined, concrete-covered structure of unknown former use. The pit is located to the southeast of the building (see Figure 3). On March 23, 2009, an excavator was used to uncover the soil above the pit and penetrate the concrete cover. The contents of the pit were observed to be concrete rubble. To confirm the pit did not contain water or soil, a concrete corer was used to core a four inch hole at an additional location of the concrete pit cover on March 24, 2009. The depth to the top of rubble in the pit was measured at approximately 6 feet below the top of the cover. The pit footprint is approximately 100 ft^2. An extendable hand auger was inserted into the cored hole, and after multiple attempts, no sample was retrieved. After further inspection, it was confirmed that the bottom of the pit at both locations was covered with concrete rubble. A PID was lowered into the pit and only trace readings (0.2 ppmV) were observed; ambient air registered 0.4 ppmV during PID calibration. The historical contents of the tank are unknown, but no visual or olfactory evidence of petroleum products or chemical storage were observed. Two wells were installed in a presumed downgradient direction of the pit to the south; the results of the soil and groundwater analytical samples suggest that this pit is not a source of contamination.

No impacts were identified that appear to be directly linked to the hollow pit, and the pit does not contain materials which present a threat of release, therefore removal of the pit is not required. However, the pit presents a physical hazard (primarily to vehicular traffic) in its current condition: if the pit structure is to stay in place, it should be filled with clean, compacted fill to mitigate this risk. The cost to fill the tank with clean fill is approximately $1,650.

3.7 REC #7: METALS- AND PAH-IMPACTED SOIL

Both surficial (0-0.5 fbgs) and deeper (up to 18 fbgs) soil samples have been collected from the Site. These samples were analyzed for the following contaminant lists: PCBs (12 surficial samples), VOCs (11 surficial and 19 deeper samples), SVOCs (1 surficial and 7 deeper samples), PAHs (19 surficial and 23 deeper samples), and metals (aluminum, antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, nickel, selenium, silver, thallium, tin, vanadium, and zinc: 12 surficial and 13 deeper samples). No detections of PCBs were reported any sample. No VOCs or SVOCs (with the exception of the PAH list of SVOCs) were detected above residential RSLs. Elevated concentrations of PAHs and arsenic were detected above residential and industrial RSLs and lead, manganese, and mercury above residential RSLs were reported in soil samples from a variety of locations on the Site. It is likely that a portion of the PAH contamination at the Site is the result of atmospheric deposition given the proximity to an active rail line. In addition to aerial deposition, PAHs may have been introduced to the Site from imported fill which appears to have been used in the flat area to the south of the former cheese factory. It is also possible that some of the elevated concentrations of metals detected are naturally occurring.

Elevated PAH concentrations were detected across the Site and therefore delineation of PAHs that were likely introduced via deposition is often a futile effort. As such, only Site-wide remedial alternatives were considered to address PAH contamination. A Site-wide approach would also mitigate the exposure risk from localized metals contamination; however excavation of the area's most significantly impacted by metals is included as this would further mitigate the risk from metals contamination.

3.7.1 REC #7 Option 1: Excavate the Contaminated Soil & Dispose Off-Site

This option would involve excavation of impacted soils, and confirmation sampling. Currently-forested areas that are to remain forested under the final redevelopment plans would not be excavated. Instead, these areas would be identified in the notice to the land records. Because surficial PAH contamination appears to be present across the entire Site to a depth of 2 fbgs, a minimum of 24 inches would be excavated and transported offsite for disposal. Excavation to a depth of 2 fbgs across a 2.5-acre area would result in an estimated minimum of 8,500 cubic yards (cu yd) of contaminated soil. This option would also involve additional confirmatory sampling of the newly exposed surficial soils to ensure that the exposed final soil surface is not impacted above applicable RSLs.

Effectiveness for the Site

Excavation and off-site disposal of impacted soils would effectively manage the risk associated with the metals and PAH contamination assuming confirmatory soil sampling confirms that the proposed final surface is free of contamination.

Implementability for the Site

Although this option effectively removes the risk posed by the PAH and metals impacted soils, it is not practical or cost-effective. Excavation, disposal, and confirmatory sampling would be prohibitively expensive, and additional excavation would likely be required in some areas because much of the area to the south of the building appears to have been raised using fill of unknown quality. In addition, clean fill may be required to return the Site to the final grade which is likely to be required during redevelopment. Because other options provide adequate risk mitigation and are more practical, this is not considered to be a viable option and no costs were developed.

3.7.2 REC #7 Option 2: Risk Assessment

All the analytical soil data collected to date has been compared to screening levels prepared by the US EPA or the Vermont Department of Health (VDH). These screening levels provide a conservative assessment of the risk posed by contamination; if contaminant concentrations are below the screening levels then the risk level is acceptable. However, these screening levels are not site-specific and the conditions unique to the Site may allow for higher acceptable contaminant concentrations. Under this option, a risk assessor would perform a site-specific risk assessment to determine a list of Site-specific contaminants of concern (COCs) and to develop Site-specific remedial goal options (RGOs) based on proposed future Site reuse. This could potentially reduce the area requiring remediation. The ideal risk assessment outcome is that no further action is required, or that only isolated areas require remediation. Depending on the size and configuration of the remaining remediation areas, the redevelopment plans may be adjusted to place roads and/or buildings over the remaining areas of concern which could eliminate the need for either excavation or additional isolation barriers (indicator fabric and clean fill). However, there is no guarantee that the risk assessment will result in such an ideal outcome and reduce the area requiring remediation. Additionally, the risk assessor may determine that insufficient data is available to develop site specific RGOs and therefore additional sampling may be required.

If the risk assessment identifies areas in excess of site-specific RGOs and the soils in these areas are not entirely excavated and transported offsite for disposal, then these areas would be identified in a deed restriction placed on the Site. As a part of the deed restriction, an accurate survey of the Site would be conducted and a mylar map prepared to identify specific areas of residual contamination. If it is not possible to discretely identify areas with residual contamination a deed restriction on the entire Site may be needed to prevent excavation or other contaminated soils exposure scenarios.

<u>Effectiveness for the Site</u>

While a risk assessment would provide a Site-specific understanding of the risk posed by the various COCs at Site, and could potentially allow for a more focused (and possibly less expensive) remediation, this outcome is not certain. Other remedial alternatives (discussed in the following sections) offer adequate risk mitigation in a shorter time frame and with less cost uncertainty.

<u>Implementability for the Site</u>

A cost estimate to perform a risk assessment was developed using the following assumptions. The cost to perform a risk assessment may be substantially different if these assumptions are changed. In addition, even if the assumptions do not change, the cost to perform the risk assessment may increase over time. NOTE: the cost estimate presented below does not include the potential costs associated with remediating any areas of concern which remain after the risk assessment is completed.

Assumptions:

- Both trespasser and residential scenarios (70-year exposure duration at a 10^{-6} risk level) will be considered. An onsite worker scenario will not be considered because the Site redevelopment will likely include a residential component and residents will have the greatest exposure to on-site contaminants
- Only soil will be considered in the risk assessment; no other media will be evaluated
- An ecological risk assessment will not be performed
- The entire Site will be treated as one area
- No additional sample collection would be required prior to performing the risk assessment (the available data will be viewed as sufficient to perform the risk assessment)

The estimated cost to perform a risk assessment of the Former Richmond Creamery Site is $66,000.

3.7.3 REC #7 Option 3: Cover Impacted Soils with Engineered Isolation Barriers

Under this remedial alternative, non-forested areas of the Site would be covered with engineered barriers to isolate the impacted soils. In areas where roads, parking lots, or buildings are to be constructed, the pavement or building foundation would act as the isolation barrier. All other non-forested area would be covered with indicator fabric (standard geotextile) and six (6) inches (compacted depth) of clean fill. Forested areas would not be covered with an isolation barrier and would be addressed in the deed restriction via a limitation of land-use activities. The deed restriction would identify those areas that have not been adequately characterized and, based on Site data, may contain soils impacted by PAHs and metals.

Prior to the placement of the isolation barriers (roads/parking lots, building foundations, and indicator fabric and clean fill), the existing Site soil will need to be reshaped to an appropriate sub-grade and compacted as necessary. Because the redevelopment plans are not known, costs for this phase of work cannot be estimated at this time. Therefore, some generalized assumptions were made to arrive at a rough estimated cost to perform this phase of work. These assumptions are presented in the *Implementation* section below.

Once the existing Site soil has been graded appropriately, the roads, parking areas, and building foundations will be constructed. Indicator fabric will then be placed over the remaining un-forested areas of the Site, and six (6) inches of clean, compacted fill will be placed over the indicator fabric. Its assumed future redevelopment plans will incorporate stabilization of these areas through established vegetation (landscaping). Costs associated with any landscaping or other means of stabilization cannot be estimated at this time.

A deed restriction on the property would identify the contamination remaining at the Site, and would require VT DEC notification and approval prior to any intrusive sub-surface activity.

Effectiveness for the Site

Placing isolation barriers over impacted soils would effectively manage the risk associated with the metals and PAH contamination by preventing direct dermal contact and/or ingestion and by controlling fugitive dust from exposed contaminated soil. Any engineered isolation barrier that is placed must be inspected regularly and maintained in perpetuity to ensure effectiveness.

Implementability for the Site

A cost estimate to address the Site contamination was developed using the assumptions below. These assumptions are separated into three sections: assumptions relating to re-grading the existing Site soil to prepare for the placement of isolation barriers, road and parking lot construction, and placement of indicator fabric and clean fill.

Site Re-grading Assumptions:

- All Site workers involved with re-grading will be HAZWOPER 40 hour trained
- No material will be transported off-site
- No sub-grade fill will be required
- Re-grading will take 40 hours and will require a foreman, two operators, a bulldozer, a roller compactor, and an excavator
- Dust monitoring will be required at one up-wind and two down-wind locations. These monitors will be checked regularly throughout the day

- Dust mitigation will be required. If down-wind concentrations are more than 150 ug/m^3 greater than up-wind concentrations or if visible dust plumes are observed leaving the Site additional dust control measures will be implemented
- The maximum grade achieved during re-grading will be sufficiently shallow to allow for soil placed on geotextile to be stable
- All existing above grade structures on site will have been removed
- All debris (currently existing concrete debris, tires, brush, etc. and any new demolition debris) will be removed from the Site prior to re-grading.

Road/Parking Lot Assumptions:
- Roads and parking lots will cover approximately 25,000 ft^2
- An 18" base of crushed stone will be placed beneath all roads and parking lots. This is approximately 1,400 cuyd of crushed stone
- The in-place cost of crushed stone is $30/cu yd
- The asphalt will be 4" thick; approximately 625 tons of hot mix will be required
- The in-place cost of hot mix is approximately $100/ton

Construction of Engineered Barrier Assumptions:
- One HAZWOPER 40 hour trained foreman to provide health and safety oversight will be provided by the excavation contractor. HAZWOPER training may not be required for other Site workers
- Approximately 2.5 acres of the Site will be covered with indicator fabric and clean fill
- Dust monitoring will be required at one up-wind and two down-wind locations. These monitors will be checked regularly throughout the day
- Dust mitigation will be required if down-wind concentrations are more than 150 ug/m^3 greater than up-wind concentrations or if visible dust plumes are observed leaving the Site
- The indicator fabric and clean fill will be placed to abut existing roads and foundations
- Roads and foundations will be completed prior to placement of indicator fabric and clean fill
- The fill will be placed to a compacted depth of six (6) inches

The rough estimate of the cost to re-grade the Site in preparation for the placement of isolation barriers is approximately $25,000. Cost to construct the roads and parking areas is roughly estimated at $135,000 and the placement of indicator fabric and six (6) inches of compacted fill is estimated to cost $80,000. Therefore, the total cost of this option is approximately $240,000.

NOTE: The costs presented above may vary significantly if the assumptions are changed or if an extended period of time elapses between the preparation of this CAFI and implementation of remediation.

3.7.4 REC #7 Option 4: Limited Excavation & Cover Impacted Soils with Isolation Barriers

While Option 3 presented above provides adequate protection from the PAH and metals-impacted soils at the Site, excavation of the most highly impacted areas would provide additional risk mitigation. This alternative involves excavation of one truck load of mercury, arsenic, and manganese (provided in order of priority with mercury presenting the highest priority) contaminated soil, located between the southeast corner of the building and the hollow pit. Soil excavation would be directed using an x-ray florescence meter (XRF) to field screen soils for metals and target the zone of greatest impact. After screening efforts have identified that the excavation extents have reached deminimis concentrations, a confirmatory laboratory sample would be collected to confirm the effectiveness of excavation.

All existing monitoring wells should be decommissioned in advance of excavation (described in Section 3.8 below) in their vicinity. The general locations of these elevated metals in surficial soil are shown on Figure 3. Following excavation, the risk from the remaining surficial contamination would be addressed using isolation barriers in the same manner as described in Option 3.

Effectiveness for the Site

Placing isolation barriers over impacted soils would effectively manage the risk associated with the metals and PAH contamination by preventing direct dermal contact and/or ingestion and by controlling fugitive dust from exposed contaminated soil. Excavation of the specific areas where data suggests more localized metals impacts provides addition risk mitigation and potentially eliminates contaminant(s) of concern from the deed restriction.

Implementability for the Site

The estimated cost presented below was developed using all the assumptions stated under Option 3; the estimate is the cost to excavate and dispose of one truck load of metals-impacted soil in addition to the cost of Option 3. The excavation cost assumes that excavation is performed concurrently with the out of service storage tank removal effort by the tank-removal contractor.

The cost to excavate and dispose of one truck load of mercury-impacted soil is $11,000 assuming the TCLP concentration of the material is greater than 0.2 mg/L (if the soil contains mercury at a TCLP concentration of less than 0.2 mg/L the estimated disposal cost for this soil would be $5,000). The disposal cost added to the cost to implement Option 3 yields an approximate cost of $251,000 to implement this option (assuming TCLP concentrations are greater than 0.2 mg/L). NOTE: The costs presented above may vary significantly if the assumptions are changed or if an extended period of time elapses between the preparation of this CAFI and implementation of remediation.

3.8 REC #8: GROUNDWATER AND WATER SUPPLY WELL

Groundwater at the Site remains a recognized environmental condition because sampling has identified arsenic and manganese concentrations above VGES. However when the locations of elevated arsenic and manganese in soil are compared to groundwater samples there is no conclusive indication of a source area for either element. Manganese was detected at the highest concentrations immediately downgradient of the rock outcrop on the southwest portion of the property. Arsenic and manganese are both naturally-occurring, but alterations of soil and groundwater chemistry (possibly as a result of releases of petroleum products) may have increased the solubility of these metals and ultimately the concentration in groundwater. Releases of these elements is not expected to significantly impact the Site surface water, since exposure to high oxygen conditions would likely convert both metals to less soluble form, and therefore less bioavailable to aquatic biota.

The risk from impacted groundwater will be managed through a deed restriction identifying the contaminant concentrations in the groundwater at the Site and restrict its use. Considering the Site is connected to a municipal water system and the groundwater presently is not suitable as potable water, the onsite water supply well should be restricted from reuse as a potable source without treatment and clearly identified as such in the deed restriction. Water from this well should not be used for drinking purposes unless an appropriate treatment system is installed and sampling indicates that the treatment system is effective. In addition, the groundwater monitoring wells should be closed in accordance with applicable monitoring well closure requirements as no further groundwater monitoring is recommended. The cost to close the on-Site monitoring wells is approximately $6,000.

3.9 REC #9: OUT OF SERVICE STORAGE TANKS

Fuel Oil AST

A 10,000± gallon AST used to store heating oil is located approximately 50 feet northeast of the former boiler building. The tank contains approximately 6-inches of sludge and no fuel oil. The tank appears to be in good condition with only minor rust, minimal pitting, and no visible evidence of leaks or staining of the nearby soil. In the Environmental Questionnaire completed for the Phase I ESA, Mr. Scott Ingalls of Casing Development, LLC stated that minor releases may have occurred at the fuel oil tank while being filled, although he was never witness to any such release. Soil samples collected from locations at either end of the tank did not identify any potential releases. This AST appeared to have been formerly connected to the boiler house by overhead piping, but no pumps are present and it appears that the piping has been disconnected from the AST.

While this AST currently appears to be in good condition, steps should be taken to prevent future releases. The contents should be removed for proper disposal and the tank carcass should be cleaned, inerted, and transported offsite to a suitable recycling facility.

Partially Buried Waste Water UST

An abandoned tank previously used for wastewater (comprised mostly of whey water associated with the cheese-making process) at the factory remains onsite directly to the northeast of an earthen berm. According to Mr. Ingalls a larger wastewater UST, formerly located in the vicinity of the earthen berm, was removed between 2003 and 2004 for use at the Hinesburg Saputo Cheese Factory. After removal of this larger tank, the wastewater collection pipes on either side were connected and insulated with an earthen berm to prevent freezing. The smaller tank remains at the Site. This tank appears to contain only trace liquid and approximately 6-inches of solids at one end of the tanks. The Johnson Company Phase II report states that during installation of MW-6 (located at the south-west end of this tank), soils from the 7 to 12 foot depth interval appeared to be visually impacted, with odors, discoloration and elevated PID readings. A soil sample collected from this interval (7.5-8 fbgs) reported detections of six PAHs (acenaphthalene, fluorine, phenanthrene, fluoranthene, pyrene, and benzo(a)anthracene) at concentrations below residential RSLs. No VOCs were detected in this sample. A sample collected from 15-15.5 fbgs (the zone containing the most elevated XRF screening results) reported detections of arsenic, barium, chromium, cobalt, copper, iron, lead, manganese, mercury, nickel, tin, vanadium, and zinc. With the exception of arsenic, all detections were below applicable RSLs. The arsenic detection of 2.8 mg/kg is above both residential and industrial RSLs.

According to correspondence with the Richmond Town Administrator, the Richmond Creamery was connected to the municipal wastewater system in 1971, when Town of Richmond began providing municipal wastewater services. Prior to the 1971 connection, all wastes (process, sanitary) were discharged directly into the Winooski River. Because the odors and discoloration noted above do not seem to be associated with elevated contaminant levels, the odors and discoloration may be due to releases of whey water and/or sanitary waste.

The tank should be emptied, cleaned, and transported offsite for recycling. Because the contents of the tank has not been characterized, the contents collected during cleaning should be placed in drums with plastic liners and a total petroleum hydrocarbon (TPH) sample should be collected for disposal purposes. It is not known if the tank ever contained fuel oil. If the TPH results indicate the presence of fuel oil contamination, then the drums can be disposed of accordingly. If analytical results suggest an overall lack petroleum hydrocarbons, the plastic liners can be removed from the drums and disposed of accordingly based on the requirements of the receiving facility.

The cost to close both storage tanks is estimated to be $13,000. This estimate assumes that both tanks will be closed during the same mobilization and that contents of the wastewater tank can be disposed of in a land fill.

NOTES: the cost estimate above is based on the higher of the estimates received, discounting disposal costs of the wastewater tank contents, oversight cost and contingencies ($9,200). A less expensive estimate of $7,000 was also received, but again was missing several key tasks.

4.0 SEQUENCING & NEXT STEPS

Typically a CAFI is developed as a section within a corrective action plan (CAP); this CAFI was developed as a stand-alone document because there is currently no redevelopment plan for the Site and therefore it is intended to provide a basis for discussing and considering potential redevelopment alternatives. Once a redevelopment strategy has been selected, the remedial alternatives in this CAFI should be refined and re-framed within the context of a CAP specific to the redevelopment plans.

If an extended period of time is expected to elapse between the date of this CAFI and implementation of an approved CAP, interim measures will be required to mitigate risks to trespassers from surficial PAH and metals contamination as well risks associated with interior RECs:

1) The building is not currently secure; measures should be taken to prevent access to the building to prevent further vandalism and to limit exposure to trespassers from ACM, lead paint, ammonia, and mold
2) No controls prevent trespassers from encountering contaminated surficial soils. Potential controls include a temporary chain-link fence ($11,000 for installation/removal and 6-months rental; $2,000 per month rental after that), a risk assessment (see REC 7: Option 2 for estimated costs), and / or additional signage (approximately $2,000).

Once a redevelopment plan is in place and a CAP has been prepared, the order in which remediation occurs can be determined, but in general the storage tank closure, monitoring well closure, remediation of interior RECs, any excavation of contaminated soils, and any demolition will need to occur prior to Site re-grading. Once re-grading is complete, isolation barriers could be placed over impacted areas.

5.0 LIMITATIONS

This CAFI was developed based on professional judgment, experience with similar Site sand currently available information regarding Site conditions. Due to the uncertainty regarding future redevelopment and the historic status of the building, certain broad assumptions and generalizations were made when developing the cost estimates presented in the preceding sections and detailed in the Cost Estimation Spreadsheets (see Appendix 3). If these assumptions or generalizations are incompatible with the redevelopment plans of the Site, the cost estimates presented in this CAFI may change significantly and additional remedial alternatives may need to be developed and considered.

In addition, uncertainty regarding the redevelopment time frame may affect the cost estimates. The costs presented in this CAFI assume that the work will occur in the near future; it should be noted that the costs of disposal, labor, materials, etc. may increase significantly over time.

This Report was prepared pursuant to the most recent contract between The Johnson Company and Chittenden County Planning Commission dated January 21, 2012. All uses of this Report are subject to the conditions and restrictions contained in the Contract. The observations and investigations described in this Report are based solely on the Scope of Services provided pursuant to the Contract. The Johnson Company shall not be liable for the existence of any condition the discovery of which would have required the performance of services not authorized under the Agreement. This work has been undertaken in accordance with generally accepted consulting practices. No other warranty, expressed or implied, is made.

This Report reflects Site conditions observed and described by records available to The Johnson Company as of the date of report preparation. The passage of time may result in significant changes in Site conditions, technology, or economic conditions, which could alter the findings and/or recommendations of the Report. Accordingly, the Client (CCRPC) and any other parties to whom the Report is provided recognize and agree that The Johnson Company shall bear no liability for deviations from observed conditions or available records after the time of Report preparation.

APPENDIX 1

EXECUTIVE SUMMARIES FROM PREVIOUS REPORTS

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FORMER SAPUTO CHEESE FACTORY
634 BRIDGE STREET
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PHASE I ENVIRONMENTAL SITE ASSESSMENT

December 2, 2002

EXECUTIVE SUMMARY

This report presents the results of a Phase I Environmental Site Assessment (ESA) conducted at the Former Saputo Cheese Factory located at 634 Bridge Street in Richmond, Vermont. Heindel & Noyes (H&N) has been retained by Mr. Scott Ingalls of Casing Development, LLC to perform this ESA on the subject property. Mr. Bob Bart, former employee of the plant from the mid 1970's through its closing in 1999, was present during the inspection and answered questions as they arose to the best of his knowledge.

The subject property on which this ESA was conducted consists of the former Saputo Cheese Factory and grounds encompassing three separate parcels of land. The original facility was built in the early 1900's with numerous additions over the years. The factory has been out of use since 1999, at which time all manufacturing machinery was removed. Since its abandonment, the facility has fallen into disrepair, with much water damage and vandalism.

One area of the facility utilized an ammonia refrigeration system. The holding tank containing the ammonia is present and could potentially still contain ammonia. Mr. Bart believed the piping network leading from the tank to the refrigeration system had been cleared upon the abandonment of the facility, but was not certain. The pipes in the area were clearly marked as containing ammonia, and an ammonia material safety data sheet

(MSDS) was located at the doorway to the room. The environmental questionnaire states an ammonia leak occurred from a crack which developed in a compressor serving this system. The compressor was immediately repaired, and the leak was reported to the authorities. It is currently unknown when this leak occurred, and no record has been found on State databases regarding this past leak.

Approximately three containers were observed throughout the facility which contained an unknown substance. The substance was a dark brown color and was odorless. No elevated levels were recorded on the PID within these containers.

One room of the facility appeared to be used to store older equipment that was not often used. A 5-10 gallon drum and plastic tub container were present and were clearly marked as containing waste oil. An older parts-washing station containing waste oil was also observed within a maintenance shop area of the facility.

One room of the facility contained two holding tanks connected to each other. The precise use and contents of these tanks are unknown.

A cargo elevator is located in one area of the facility. The base is of concrete, and minor staining from the oils used in the lift was observed.

Within the boiler building an open pipe was observed that likely led underground from the boiler and served an unknown purpose. The exact use and connection point of this pipe is unknown at this time.

To the rear of the boiler building an empty and rusted above ground storage tank (AST) was observed. This tank was lying on its side and had pipes leading from the boiler into it. The purpose of this tank is unknown at this time.

A large (+/-) 10,000-gallon AST is present on the property. This tank previously contained #6 fuel oil used to generate the boilers serving the facility. This tank was taken out of service when a (+/-) 10,000-gallon propane AST was installed. Mr. Bart was unsure of the tank's age, but knew it was prior to his employment in the early 1970's. An opening was present into the tank which at one time had a pipe leading in. Upon closer inspection, fuel sludge was observed within the tank. A secondary containment is not present in the event of any leaks or spills occurring. No areas surrounding either tank appeared to be stained or compromised.

The New England Central Railroad borders the property on the east. A railroad tie was previously located through a portion of the driveway area which was removed in the 1970's.

The area along this existing railroad has been used as miscellaneous dumping area since the facility became vacant. Various abandoned ASTs, plastics, metals, old blacktop roadway, discarded washing machine and dryer as well as other miscellaneous trash is present.

Based on title information and H&N's review of historical documents, the subject property appears on 1926 and 1939 Sanborn Maps as a dairy processing facility. Prior to these dates, these maps do not include the subject area. Title deed information shows the Standard Oil Company at one time owned a portion of the subject property. The above Sanborn maps for the property show oil storage tanks were at one time present on land that appears to be bordering the railroad property and subject property. It is probable these tanks were located underground, although they were labeled only as storage tanks on the historic maps and without further investigation this cannot be definitively stated. There has been no known history of any spills occurring during the oil company's use of the lands and no evidence of any was found in the general vicinity of these former tanks during the site inspection; however, the storage tanks were present on the lands during a time when the hazards of oil and gas releases to the environment were unknown. Given the known history of fuel management at these types of facilities, it is probable an undocumented release could have occurred at some time in the past.

The property is currently connected to the municipal wastewater disposal facility serving the town of Richmond. All floor drains located throughout the facility are also connected to this system. A large equalization tank with an aerator system is present to the rear of the facility to maintain appropriate wastewater flow rates into the municipal system. During regular operations of the factory, the contents of the tank were routinely tested to make certain the contents were not in violation of the facility's wastewater disposal permit. The status of a former on-site septic system is unknown at this time.

Prior to the municipal water supply connection, the property was served by an on-site well. This well is located along the southeastern property boundary at the bottom of an embankment leading from the railroad line. It is contained within a concrete structure approximately 10 feet tall. The interior was not observed due to lack of site entry. The age of the well is unknown. However, Mr. Bart stated the municipal connection was in place when he started his employment in the 1970's, and to his knowledge the facility was no longer connected to this well. He had no knowledge as to whether or not the well had been capped and abandoned.

An old abandoned pit of unknown origin was observed within a portion of the rear driveway area. The top was concrete and contained a small opening with limited visibility within. A metal support beam as well as concrete blocks and other debris was observed in the pit area. The use of this pit is unknown at this time.

Five transformers were observed on the subject property. All but one of these has been determined to be PCB free, and upon inquiry to Green Mountain Power, the third has not been tested and was manufactured prior to the 1980 ban on PCBs.

A discharge drain was observed below an embankment in the vicinity of an outside trench drain located in the rear loading dock area whose beginning point is unknown. It is likely that this is a storm water drain, but may be from another point on the subject property.

There are no mapped or unmapped streams or bodies of surface water on the subject property. One area along the southeastern property boundary is located within a mapped wetland area, as well as within a small area inundated by the100-year floodplain. Neither of these areas is in close proximity to the structures located on the property.

According to federal and state environmental databases, there are two listed hazardous threats within a ½ mile radius of the subject property. Based on the locations in relation to the subject property, they do not appear to pose a threat at this time.

Given the original age of the facility, lead-based paint is likely to be present; however, it is unknown if an official lead paint survey has been conducted. The majority of the facility contained cracked and peeling paint.

Given the original age of the facility, it is likely asbestos containing materials (ACM) are present, and it was stated within the environmental questionnaire that an official asbestos inspection has not be conducted. A few areas of piping insulation were observed which could potentially contain ACMs; however, an official asbestos inspector did not make these observations.

In the course of conducting this Phase I ESA of the subject area, we have identified the following Recognized Environmental Conditions.

- It is likely that ammonia, a regulated substance, is still present in the refrigeration system's holding tank.

- The AST for #6 fuel oil could potentially still contain product and there is no secondary containment system in place. Is unknown if an SPCC plan is in effect regarding this tank, which is required if it to be utilized in the future.

- The presence of the receptacles containing an unknown substance does pose a threat, as the nature of their contents is unknown at this time.

- The use of the open pipe into the ground within the boiler building is currently unknown.

- The rusted AST located to the rear of the boiler building could be of concern, as its use and contents are unknown at this time.

- The presence of waste oil within the drum, plastic tub and parts washing station is a violation of current waste oil storage regulations.

- There are two holding tanks observed in the facility whose past use and contents are unknown.

- Given the past use of a portion of the property as a storage area for oil and or gas in an area appearing to border property owned by the railroad and the subject property, there is the probability a release of product occurred which could have impacted the soils surrounding the oil storage area and the subject property.

- Prior to the municipal disposal connection it is likely an on-site septic system was utilized to manage the facilities waste disposal needs. It is unknown if this previous system has been removed or is still present on the property.

- Since one transformer was manufactured prior to the ban on PCBs, it is assumed to contain PCB oils.

- Due to the presence of a railroad along the property border, it is possible polycyclic aromatic hydrocarbons (PAHs) often associated with railroad use have migrated onto the subject property and impacted the surrounding soils of the area. PAHs could also be present along the driveway area where a historic railroad tie was located until its removal in the 1970's.

- There is a large amount of trash of an unknown composition observed in one section of the property.

- The origin and former contents of the pit observed within the driveway area is unknown.

- There is a pipe coming out of an embankment whose beginning point is unknown. It is likely a storm water drain, but this opinion has not been confirmed.

- An on-site well is still present on the property which was utilized prior to the municipal connection. It is currently unknown if this well has been disconnected from the facility and capped, as is required by current groundwater protection rules.

- The likely presence of lead-based paint poses a threat to the environment as well as to human exposure.

- The likely presence of asbestos containing materials poses a threat to the environment as well as human health if a certified consultant does not remove it.

EXECUTIVE SUMMARY

The Johnson Company, Inc. of Montpelier, Vermont was retained by the Chittenden County Regional Planning Commission (CCRPC) of South Burlington Vermont to conduct a Phase I Environmental Site Assessment (ESA) of the former Saputo Cheese/Richmond Creamery facility located on two parcels at 74 Jolina Court (Parcel 1) and 125 Bridge Street (Parcel 2) in Richmond, Vermont (the Site). The Johnson Company understands that the potential redevelopment of the Site will include both commercial and residential use.

This ESA was performed by personnel from The Johnson Company who meet the definition of Environmental Professional as defined in 40 CFR Part 312. This ESA included reviewing existing information including available aerial photographs and topographic maps, determining the regulatory status of the Site, contacting appropriate personnel regarding past and present uses of the Site, investigating the potential for past releases of petroleum products and/or hazardous substances at the Site, and conducting a site reconnaissance to visually inspect accessible portions of the Site to ascertain the presence of recognized environmental conditions in the form of past, present or potential release(s) of hazardous substances or petroleum products.

The former Saputo Cheese/Richmond Creamery facility and surrounding land is located on approximately seven acres bordered by a cemetery and Bridge Street to the northwest and a gravel roadway (identified as Jolina Court) and railroad tracks to the northeast, and a wooded slope to the southwest. The property extends into an adjacent field to the southeast. The Site is currently composed of two parcels: Parcel 1 is currently owned by Scott and Elizabeth Ingalls, and Parcel 2 is owned by Casing Development, LLC. Mr. Ingalls has reported that a transfer of Parcel 1 to Casing Development is currently in progress.

The Site is classified under the Resource Conservation and Recovery Act (RCRA) as a conditionally exempt hazardous waste generator under the name Richmond Cheese, but this appears to be a relic since the Richmond Cheese factory was closed in 1999. Although Richmond Cheese should have notified the VT DEC that they were no longer a RCRA generator, the VT DEC has no record of this notification; however, as a conditionally exempt generator, Richmond Cheese was not required to undertake formal RCRA closure procedures. The Site is not listed on the Federal National Priority List (NPL) as a Superfund Site. The Site is not listed as a hazardous waste site on the federal Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) and is not a currently permitted underground storage tank (UST) facility. An ammonia release in 1997 was listed on the Federal Emergency Response Notification and VTDEC database. The release was contained within the building and is further discussed in Section 4.2.6.

A Site reconnaissance visit was conducted by The Johnson Company on September 23, 2008. The reconnaissance included interior and exterior inspections of the building and host property. A full inspection of the surrounding dense vegetation or fields was not performed. No evidence of underground storage tanks, uncontained spills, leaks, stressed vegetation or staining from release(s) of hazardous substances was observed.

Ms. Samantha Tilton of CCRPC and Mr. Scott Ingalls, owner of Parcel 1 and a partner in Casing Development, LLC (owner of Parcel 2), were both present during the time of the inspection and answered questions to the best of their knowledge.

A Phase I Environmental Site Assessment was prepared by Heindel and Noyes, Inc. of Burlington, Vermont (H&N), dated December 2, 2002. The H&N report was provided to The Johnson Company by CCRPC staff and reviewed as part of this ESA. In an effort to fully document all existing environmental conditions that may impact the potential for redevelopment and reuse of the Site, the findings presented in the 2002 H&N Phase I ESA report are individually addressed in Section 8 of this report.

This Phase I ESA was performed in general conformance with the scope and limitations of ASTM E 1527-05 in compliance with 40 CFR Part 312, Standards and Practices for All Appropriate Inquiries at the former Saputo Cheese/Richmond Creamery site at 74 Jolina Court and 125 Bridge Street in Richmond, Vermont.

Overall, the former use of the Site for dairy processing and cheesemaking does not appear to have resulted in gross contamination of environmental media. However, some discrete areas of concern exist as a result of the former industrial uses or the age of the building. The Johnson Company has identified the following RECs and associated recommendations for the Site:

- Containerized potentially hazardous materials in the former factory and storage buildings. Some of these containers were observed to be uncovered, which presents risk for spills or releases.

  Recommendation: *A licensed environmental contractor should characterize and remove all containerized potentially hazardous materials.*

- Onsite well, not abandoned or used since connection to Town of Richmond municipal water supply. If unsecured, this well can provide a conduit for hazardous materials to be released to groundwater.

  Recommendation: *If there is no proposed use for the groundwater from the on-site well, it should be properly abandoned. Since the facility is served by municipal water service, it is unlikely that the well will be permitted for future use. However, any use should be preceded by sampling for a variety of potential contaminants.*

- Property records indicate Standard Oil Company formerly owned a portion of the Site, and a 1926 Sanborn map shows the approximate location of three oil storage tanks.

  Recommendation: *The approximate location of the three former oil storage tanks associated with the Standard Oil Company should be inspected with a metal detector. Should this limited inspection indicate the presence of underground storage tank(s) on* *site, the tanks should be removed in accordance with VTDEC UST guidelines. A proper UST closure will include confirmatory soil sampling and will include groundwater sampling if soil samples show evidence of a release.*

- A hollow pit of unconfirmed contents, covered by a concrete slab, is present on the Site. Recommendation: *The contents of the pit should be determined. If there is evidence that the pit once contained oil, soil and/or groundwater sampling should be conducted immediately outside the pit.*

- Polynuclear aromatic hydrocarbons (PAHs) from idling rail cars may be present in the vicinity of the former rail spur that crossed the northeastern corner of the Site.

  Recommendation: Efforts should be made to conduct a limited near-surface soil investigation for the presence of PAHs.

- Potential impacts to soil and groundwater resulting from possible releases during ongoing factory operations. Due to the machinery formerly present at the Site, the use of lubricating oils and cleaning chemicals is suspected, although in many areas of the factory it is likely that these cleaning products were food-grade and not a major source of contamination to environmental media.

  Recommendation: A limited subsurface soil and groundwater investigation should be conducted in the building interior and exterior to evaluate potential contamination as a result of releases.

- The presence of hydraulic fluid buckets in the storage shed indicates that this product was used in some machinery or equipment at the Site. Some hydraulic fluids historically contained PCBs before their use in unenclosed systems was banned in the late-1970's. There is not evidence to suggest the widespread release of hydraulic fluids in a food-manufacturing facility.

  Recommendation: A limited surface soil and building flooring investigation for PCBs is warranted in and around the storage shed. A limited number of wipe or bulk concrete samples inside the building is also recommended to provide more information on the prevalence of PCBs at the Site.

Although not Recognized Environmental Conditions, the following items should be addressed in future investigations at the Site:

- A 10,000-gallon above ground storage tank containing some residual fuel oil sludge is present on the Site. The piping for this AST was routed overhead, and no staining or olfactory evidence of releases to the ground surface were observed.

Recommendation: *The sludge from the AST should be removed and the tank should be cleaned. This would remove the potential for releases to the environment if the AST fails. If the AST is to be reused, it must be inspected before being filled with oil.*

- Residual ammonia potentially present in the abandoned refrigeration system
  Recommendation: *Prior to any clean up efforts, a licensed environmental contractor should characterize and remove all containerized potentially hazardous materials.*

- Asbestos has been identified in the shingles that cover the outside of the factory building. Soils in unpaved areas immediately outside the building should be sampled for asbestos to determine if asbestos fibers are present at levels that would cause health risks to site users. Accessible areas of the building have been sampled for asbestos, but portions of the building may not have been assessed. In addition, sampling for lead paint has not been conducted.

  Recommendation: *Additional sampling should be conducted to assess all remaining areas of the building, including the roof, for asbestos-containing materials. Soil sampling outside the building should be completed to evaluate the potential for exposure to asbestos in soils. A lead paint assessment should be completed before the building is renovated or demolished.*

- Fluorescent light bulbs possibly containing mercury and lead in the factory building.

  Recommendation *Prior to any site reuse, a licensed environmental contractor should characterize and remove all out of service or unused fluorescent light bulbs and PCB-containing fluorescent light ballasts.*

In an effort to fully address environmental considerations at the Site, The Johnson Company reviewed all Recognized Environmental Conditions (RECs) identified in the 2002 H&N Report. Several of the 2002 H&N RECs were not identified by The Johnson Company and are summarized below with a follow-up response.

- 2002 H&N REC: The use of the open pipe into the ground within the boiler building is currently unknown.
  The Johnson Company Follow Up: *Based on observations at the Site and confirmation by Mr. Ingalls, the pipe led to a condensation tank that has been removed.*

- 2002 H&N REC: The rusted AST located to the rear of the boiler building could be of concern, as its use and contents are unknown.

  The Johnson Company Follow Up: *According to Mr. Ingalls, this AST was removed in 2005. The tank contained condensate from the boiler, and it was not perceived as a REC.*

- 2002 H&N REC: Since one transformer was manufactured prior to the ban on PCBs, it is assumed to contain PCB oils.

The Johnson Company Follow Up: *All transformers and overhead power lines at the Site have been removed, and are no longer a REC at the Site.*

- 2002 H&N Observation: There is a large amount of trash of an unknown composition observed in one section of the property.

  The Johnson Company Follow Up: *Although a pile of tires and small amounts of trash were observed, a "large amount of trash of unknown origin" was not observed by The Johnson Company. Mr. Ingalls indicated that, since the completion of the 2002 H&N ESA, he had removed and disposed of approximately 15 cubic yards of non-hazardous trash.*

- 2002 H&N Observation: There is a pipe coming out of an embankment whose beginning point is unknown. It is likely a storm water drain, but this opinion has yet to be confirmed.

  The Johnson Company Follow Up: *This pipe was not observed by The Johnson Company. It is possible that the pipe was obscured by vegetation.*

EXECUTIVE SUMMARY

The Johnson Company was contracted by the Chittenden County Regional Planning Commission (CCRPC) of Winooski, Vermont to perform Phase II Environmental Site Assessment (ESA) activities at the former Richmond Creamery site located at 74 Jolina Court in Richmond, Vermont (the Site). The Site is currently owned by Casing Development, LLC and formerly housed a dairy processing and cheesemaking facility, but the building is now vacant. CCRPC is utilizing United States Environmental Protection Agency (EPA) grant money to assess environmental conditions at the Site and thus assist in its redevelopment. This Phase II ESA follows a Phase I ESA Update prepared by The Johnson Company on October 29, 2008. The Phase II Environmental Site Assessment documented herein included sampling for metals, PCBs, asbestos, lead-based paint, VOCs, and SVOCs. The results of the investigation are summarized below.

Overview

The results of this ESA indicate that many of the compounds tested in soil and groundwater at the Site are not of significant concern, including PCBs, VOCs in most soil and all groundwater, SVOCs in some soils and all groundwater, and most metals in soils and groundwater.

Some metals and SVOCs were detected in soil above regulatory limits, and some metals were detected in groundwater above regulatory limits at the Site. In addition, the presence of asbestos containing building materials, lead-based paint, mold, ammonia and containerized materials were investigated in the factory building. These constituents of concern are discussed below.

Metals

Metals were field screened and selected samples were submitted for laboratory analysis. Residential soil screening levels were exceeded in surface soil samples submitted to the laboratory at locations near the factory building (3.7 mg/kg mercury in SS-FB-05), storage shed (700 mg/kg lead in SS-SS-03) and approximate location of mapped storage tanks (2,540 mg/kg manganese in SS-T-5). In addition, residential soil screening levels were exceeded in one slightly deeper soil boring sample (43 mg/kg arsenic in MW-3).

Arsenic at or above the Vermont Groundwater Enforcement Standard (VGES) of 0.01 mg/L was reported in monitoring wells MW-2 and MW-5, which are located approximately 50 feet north and 110 feet south of the factory building, respectively, and in the sample collected from the sump inside the building's eastern end. Based on the depth to the bottom of the sump and the depth to groundwater, the water in the Sump is assumed to be groundwater and connected to the groundwater in MW-2. There is no apparent correlation between the elevated arsenic concentration outside the southeastern corner of the building (at the MW-3 soil boring) and the groundwater samples, which were not located downgradient of MW-3. Therefore, the elevated arsenic concentrations in groundwater are likely to be naturally occurring. Since the Site is supplied by municipal water, groundwater is not likely to be used for drinking at the Site, although it is currently accessible via the sump.

Manganese was detected in groundwater samples from all but two sampled wells at the Site, but not detected in the Sump sample. As with arsenic, there was no apparent correlation between elevated manganese soil concentrations located in the former reported oil tank area and the widespread elevated manganese groundwater concentrations. Manganese is likely to be naturally occurring, since it is believed that cheesemaking processes did not incorporate significant quantities of manganese. There did not appear to be a correlation between pH levels and manganese detections; very acidic or very basic groundwater may have the potential to mobilize manganese, but this does not appear to be occurring.

The former water supply well in the well tower could not be safely accessed or sampled. However, based on the widely distributed presence of manganese and arsenic detections, if the well is screened in shallow groundwater, it may contain elevated concentrations of both of these elements above VGES limits.

Discrete areas where elevated metals concentrations should be addressed include the area between the southeast corner of the building and the hollow pit, at MW-3 and SS-FB-05, where the presence of elevated concentrations of mercury and arsenic indicate possible dumping or disposal. The extents of these soils have not been delineated, but are assumed to include the volume to a depth of 2 feet bounded by the building and road (approximately 280 square feet), resulting in a total volume of approximately 21 cubic yards of soil. A small area (approximately 160 square feet) of lead-impacted surficial soils is present on the eastern side of the storage shed to a depth of 0.5 feet; the estimated volume is 3 cubic yards. Additional sampling would refine these volume estimates. Although elevated concentrations of manganese were present in one soil sample near the western edge of the former oil storage area, as stated previously the source of this manganese is believed to be naturally occurring and a volume of impacted soils has not been calculated.

<u>SVOCs</u>

A Toxic Equivalent Factor (TEF) was applied to the carcinogenic polycyclic aromatic hydrocarbon (PAH) range of semi-volatile organic compound (SVOC) soil results. The products of the results multiplied by the TEF were summed and compared to the Vermont Department of Health (VDH) benzo(a)pyrene-TE criterion of 0.01 mg/kg. The VDH benzo(a)pyrene-TE screening value was exceeded in all samples where PAHs were reported in exceedance of laboratory detection limits, including all shallow soil sampling surface (0-0.5 foot depth) results. Surficial and near surface samples that contained the highest PAH concentrations are present near the former rail spur, and in the center of the former oil storage area. An area of approximately 7,600 square feet in the vicinity of the former rail spur appears to be impacted by PAHs to a depth of 2 feet, resulting in an estimated soil volume of 560 cubic yards; this area is currently well vegetated with grass, brush, and/or trees. The discrete area containing elevated PAHs in the former oil storage area is estimated to cover approximately 300 square feet to an average depth of 1.5 feet, which results in a soil volume of 17 cubic yards; however, this soil is immediately adjacent to an operating railroad, and is likely to receive PAH deposition after remediation and may require additional controls to control direct-contact risks.

VOCs
In addition, one SVOC (and VOC), naphthalene, was detected above the residential RSL (3.9 mg/kg) but below the VDH criterion of 1,070 mg/kg at two locations: SS-AST-2 (surficial and near surface soils to 2 feet below ground surface), and SB-08 (1.5-2.0 feet). Both locations had elevated photoionization detector readings and visual evidence of petroleum staining. These areas of impact are expected to be relatively limited in area, based on the lack of elevated detections at nearby sampling locations.

Asbestos-Containing Materials
The asbestos inspection reported the following asbestos-containing building materials (ACBM) associated with the factory building:

- Basement: gray ceiling/wall panels in milk receiving room; milk silo room; production areas #1, 2, and 3; storage area #5
- First floor:
    - gray ceiling panels in ammonia compressor room, storage room #6/culture room, closet under stairs,
    - tan 9 inch x 9 inch vinyl floor tile in lab
- Second floor:
    - tan 9 inch x 9 inch vinyl floor tile in reception area, conference room (including closet)
    - gray 9 inch x 9 inch vinyl floor tile in bathroom, office floor, storage room floor
    - gold adhesive beneath gray tile in front reception area
    - cream/green linoleum in office bathroom
    - sheetrock compound at hallway wall edge and stairs
    - blue vinyl floor tile near bathrooms
    - black tar on cork in ceiling in the attic stock room
    - exterior blue siding

Lead-Based Paint
There were positive detections of lead-based paints and coatings on surfaces on all parts of the factory building, with limited presence in the basement. Building exterior surfaces that exhibited lead detections include a first floor loading dock door, light blue shingles on an upper portion of the building, and slight positives associated with the coatings on the foundation.

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. Four mold types were identified: mycelial fragments, Aspergillus/Penicillium, Cladiosporium, and Basidiospores. Unidentified/other mold types were also reported in 3 of the 4 samples. All four of the identified mold types are prevalent in outdoor environments in northern New England and common to indoor environments with high moisture contents.

Containerized Materials
Numerous containerized materials in the factory building used for various cleaning, maintenance, and compressor- related purposes were observed and inventoried, and the majority were labeled. A Department of Transportation (D.O.T) fingerprint analysis was conducted for containerized materials that were not labeled.

Ammonia
Ammonia was confirmed to be present in a storage tank, and it is likely that residual ammonia is also present in the refrigeration system.

Recommendations
Based on the findings of this Phase II ESA, The Johnson Company provides the following recommendations:

- Although metals concentrations were detected in groundwater wells at concentrations exceeding Vermont Groundwater Enforcement Standards (VGES), VOCs and SVOCs were not detected above VGES, and there is no evidence to suggest existing impacts to groundwater from Site activities. The elevated concentrations of arsenic and manganese in groundwater appear to be related to the successful degradation of petroleum products at the Site, and groundwater is not a source of drinking water at the Site.
- No remedial actions are recommended for groundwater unless a use is identified for the existing water supply well, in which case additional sampling should be conducted in advance of use. No additional water supply wells should be installed on the property without advance coordination with the Sites Management Section of VT DEC.
- A hollow pit of concrete rubble does not appear to be impacting groundwater or soil and no remedial actions are recommended to address the pit. However, this pit could pose a safety hazard for future redevelopment activities and should be managed appropriately.
- Additional sampling should be conducted to delineate the areal and vertical extent of the soils impacted by metals (arsenic, lead, manganese, and mercury) outside of the southeastern corner of the building.
- Additional sampling should be conducted to delineate the areal extent of surficial soils impacted by PAHs and naphthalene. If residential redevelopment is planned, these results should be used as part of a risk assessment to evaluate the potential human health risks associated with PAHs and naphthalene at the Site.
- Since no groundwater remediation is recommended, the existing onsite monitoring wells should be closed to prevent a conduit for contamination during any future Site uses.
- Once the building plans for the Site have been finalized, a Corrective Action Plan (CAP) should be developed in accordance with the VT DEC guidelines to address the following issues of concern at the Site:
    - Metals and PAH impacted shallow soils
    - Ammonia present in the abandoned refrigeration system
    - Containerized materials present in the factory building, if they have not already been removed by the owners
    - The water supply well

- The sump inside the building
- Asbestos, lead paint, and mold

Details of the CAP recommendations listed above are provided as follows:

- Once the building plans for the Site have been finalized, a Corrective Action Plan (CAP) should be developed in accordance with the VT DEC guidelines to address the following issues of concern at the Site:
    - Metals and PAH impacted shallow soils
    - Ammonia present in the abandoned refrigeration system
    - The water supply well
    - The sump inside the building
    - Asbestos, lead paint, and mold

  Details of the CAP recommendations listed above are provided as follows:

- Metals (arsenic, lead, manganese, and mercury) were reported in four surface and near-surface soil samples at concentrations above soil screening levels for residential soils. The soils outside the southeast corner of the building should be removed or covered, as should the soils on the northeast side of the storage shed. In addition, PAHs were reported at concentrations exceeding residential and industrial screening levels in locations surrounding the former rail spur and in the reported vicinity of the former tanks, in addition to isolated locations in other portions of the property. Currently, a complete vegetative covering at the rail spur area limits exposure to PAH compounds; however, if the Site use changes, remediation or land use restrictions should be applied to limit future exposures. In the former tank area, no action is recommended due to its proximity to the functioning rail line, which will be a continuing source of PAHs in the future.
- The presence of ammonia was confirmed in the abandoned refrigeration system. In its current condition, the ammonia refrigeration system does not pose an environmental hazard. However, it could pose a health and safety risk for future redevelopment activities. Ammonia in the storage tank should be pumped and reclaimed, and any residual ammonia present in refrigeration system removed prior to demolition or reuse of the building.
- An onsite former water supply well could not be accessed during the Phase II field investigation. The well is not easily accessible and is unlikely to serve as a conduit for contamination into groundwater. However, elevated concentrations of arsenic and manganese have been detected in shallow groundwater at the Site. Although the screened interval of the supply well is not known, it should be sampled before any future uses. Alternatively, if it will not be used and future redevelopment activities would result in Site

modifications making the well more accessible, the well should be demolished and properly decommissioned.

- Concentrations of arsenic were observed above VGES in a sump located in the factory building. Metals concentrations were consistent with surrounding shallow groundwater, and no remedial actions are recommended. However, exposure to the water in the sump should be prevented during redevelopment activities by removing the sump. Alternatively, since the sump may be connected to groundwater and it may not be possible to completely pump out, the sump could also be covered to secure access and prevent ingestion of the water.
- Asbestos containing building materials and lead-based paint should be handled and disposed of appropriately during demolition or reuse of the building. Asbestos was not detected in soil samples analyzed with Polarized Light Microscopy (PLM). However, chrysotile was reported in both soil samples analyzed with Transmission Electron Microscopy. Although no remedial actions would be required due to the presence of asbestos, best-management practices should be employed to limit exposure to dust during soil-disturbing activities.
- The presence of four mold types was confirmed in the factory building mold inspection. Although no remedial actions are recommended, best-management practices should be employed to limit exposure to mold during demolition or renovation activities, and conditions conducive to mold growth should be addressed prior to building reuse.

APPENDIX 2

TABULAR CONTAMINANT CONCENTRATIONS

Table 1 PCB Concrete and Soil Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Concrete Samples

Parameter	Units	RSL Criterion (µg/kg)	CSFF-1		CSFF-2		CSFF-3		CSFF-3 (DUP)		CSFF-4		CSFF-5		CSFF-6		CSFF-7	
			3/23/2009		3/23/2009		3/23/2009		3/23/2009		3/23/2009		3/23/2009		3/23/2009		3/23/2009	
PCB-1016	µg/Kg	Total	<	170	<	160	<	160	<	160	<	160	<	170	<	160	<	160
PCB-1221	µg/Kg	Total	<	170	<	160	<	160	<	160	<	160	<	170	<	160	<	160
PCB-1232	µg/Kg	Total	<	170	<	160	<	160	<	160	<	160	<	170	<	160	<	160
PCB-1242	µg/Kg	Total	<	170	<	160	<	160	<	160	<	160	<	170	<	160	<	160
PCB-1248	µg/Kg	Total	<	170	<	160	<	160	<	160	<	160	<	170	<	160	<	160
PCB-1254	µg/Kg	Total	<	170	<	160	<	160	<	160	<	160	<	170	<	160	<	160
PCB-1260	µg/Kg	Total	<	170	<	160	<	160	<	160	<	160	<	170	<	160	<	160
PCB-1262	µg/Kg	Total	<	170	<	160	<	160	<	160	<	160	<	170	<	160	<	160
PCB-1268	µg/Kg	Total	<	170	<	160	<	160	<	160	<	160	<	170	<	160	<	160
Total PCBs	**µg/Kg**	**1000**		**ND**		**ND**		**ND**		**ND**		**ND**		**ND**		**ND**		**ND**

Parameter	Units	RSL Criterion	CSFF-8		CSFF-9		CSFF-10		CSS-1		CSS-2	
		(µg/kg)	3/23/2009		3/23/2009		3/23/2009		3/23/2009		3/23/2009	
PCB-1016	µg/Kg	Total	<	170	<	170	<	160	<	160	<	160
PCB-1221	µg/Kg	Total	<	170	<	170	<	160	<	160	<	160
PCB-1232	µg/Kg	Total	<	170	<	170	<	160	<	160	<	160
PCB-1242	µg/Kg	Total	<	170	<	170	<	160	<	160	<	160
PCB-1248	µg/Kg	Total	<	170	<	170	<	160	<	160	<	160
PCB-1254	µg/Kg	Total	<	170	<	170	<	160	<	160	<	160
PCB-1260	µg/Kg	Total	<	170	<	170	<	160	<	160	<	160
PCB-1262	µg/Kg	Total	<	170	<	170	<	160	<	160	<	160
PCB-1268	µg/Kg	Total	<	170	<	170	<	160	<	160	<	160
Total PCBs	**µg/Kg**	**1000**		**ND**		**ND**		**ND**		**ND**		**ND**

Table 1 PCB Concrete and Soil Results

Richmond Creamery, Richmond, VT

JCO Project #1-0346-3

Soil Samples

Parameter	Units	RSL Criterion (µg/kg)	Sub Slab 2		SS-SS-PCB-01		SS-SS-PCB-02		SS-SS-PCB-03		SS-AST-PCB-01		SS-FB-PCB-01		SS-FB-PCB-02		SS-FB-PCB-03	
			3/24/2009		3/24/2009		3/24/2009		3/24/2009		3/24/2009		3/24/2009		3/24/2009		3/24/2009	
PCB-1016	µg/Kg	Total	<	220	<	180	<	340	<	190	<	200	<	190	<	210	<	200
PCB-1221	µg/Kg	Total	<	220	<	180	<	340	<	190	<	200	<	190	<	210	<	200
PCB-1232	µg/Kg	Total	<	220	<	180	<	340	<	190	<	200	<	190	<	210	<	200
PCB-1242	µg/Kg	Total	<	220	<	180	<	340	<	190	<	200	<	190	<	210	<	200
PCB-1248	µg/Kg	Total	<	220	<	180	<	340	<	190	<	200	<	190	<	210	<	200
PCB-1254	µg/Kg	Total	<	220	<	180	<	340	<	190	<	200	<	190	<	210	<	200
PCB-1260	µg/Kg	Total	<	220	<	180	<	340	<	190	<	200	<	190	<	210	<	200
PCB-1262	µg/Kg	Total	<	220	<	180	<	340	<	190	<	200	<	190	<	210	<	200
PCB-1268	µg/Kg	Total	<	220	<	180	<	340	<	190	<	200	<	190	<	210	<	200
Total PCBs	**µg/Kg**	**120***		**ND**		**ND**		**ND**		**ND**		**ND**		**ND**		**ND**		**ND**

Parameter	Units	RSL Criterion (µg/kg)	SS-FB-PCB-04		SS-TR-PCB-01		SS-TR-PCB-02		SS-TR-PCB-03		SS-WR-01	
			3/24/2009		3/24/2009		3/24/2009		3/24/2009		3/24/2009	
PCB-1016	µg/Kg	Total	<	200	<	230	<	230	<	240	<	260
PCB-1221	µg/Kg	Total	<	200	<	230	<	230	<	240	<	260
PCB-1232	µg/Kg	Total	<	200	<	230	<	230	<	240	<	260
PCB-1242	µg/Kg	Total	<	200	<	230	<	230	<	240	<	260
PCB-1248	µg/Kg	Total	<	200	<	230	<	230	<	240	<	260
PCB-1254	µg/Kg	Total	<	200	<	230	<	230	<	240	<	260
PCB-1260	µg/Kg	Total	<	200	<	230	<	230	<	240	<	260
PCB-1262	µg/Kg	Total	<	200	<	230	<	230	<	240	<	260
PCB-1268	µg/Kg	Total	<	200	<	230	<	230	<	240	<	260
Total PCBs	**µg/Kg**	**120***		**ND**		**ND**		**ND**		**ND**		**ND**

* = Laboratory reporting limit exceeds screening level

Table 2 VOC Water Results

Richmond Creamery, Richmond, VT

JCO Project #1-0346-3

Sample ID	VGES		Sump		MW-1		MW-2		MW-3		MW-4		MW-5	
Date	Standard	Units	4/14/2009		4/20/2009		4/20/2009		4/20/2009		4/20/2009		4/20/2009	
Parameter														
Dichlorodifluoromethane	1,000	µg/L	<	5			<	1000	<	5	<	5	<	5
Chloromethane	-	µg/L	<	2			<	2	<	2	<	2	<	2
Vinyl chloride	2	µg/L	<	2			<	2	<	2	<	2	<	2
Bromomethane	10	µg/L	<	2			<	2	<	2	<	2	<	2
Chloroethane	-	µg/L	<	5			<	5	<	5	<	5	<	5
Trichlorofluoromethane	2,100	µg/L	<	5			<	5	<	5	<	5	<	5
Diethyl Ether	-	µg/L	<	5			<	5	<	5	<	5	<	5
Acetone	700	µg/L	<	10			<	10	<	10	<	10	<	10
1,1-Dichloroethene	70	µg/L	<	1			<	1	<	1	<	1	<	1
Methylene chloride	5	µg/L	<	5			<	5	<	5	<	5	<	5
Carbon disulfide	-	µg/L	<	5			<	5	<	5	<	5	<	5
Methyl-t-butyl ether(MTBE)	40	µg/L	<	5	<	5	<	5	<	5	<	5	<	5
trans-1,2-Dichloroethene	100	µg/L	<	2			<	2	<	2	<	2	<	2
1,1-Dichloroethane	70	µg/L	<	2			<	2	<	2	<	2	<	2
2,2-Dichloropropane	-	µg/L	<	2			<	2	<	2	<	2	<	2
cis-1,2-Dichloroethene	70	µg/L	<	2			<	2	<	2	<	2	<	2
2-Butanone(MEK)	4,200	µg/L	<	10			<	10	<	10	<	10	<	10
Bromochloromethane	90	µg/L	<	2			<	2	<	2	<	2	<	2
Tetrahydrofuran(THF)	-	µg/L	<	10			<	10	<	10	<	10	<	10
Chloroform	-	µg/L	<	2			<	2	<	2	<	2	<	2
1,1,1-Trichloroethane	200	µg/L	<	2			<	2	<	2	<	2	<	2
Carbon tetrachloride	5	µg/L	<	2			<	2	<	2	<	2	<	2
1,1-Dichloropropene	-	µg/L	<	2			<	2	<	2	<	2	<	2
Benzene	5	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
1,2-Dichloroethane	5	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
Trichloroethene	5	µg/L	<	2			<	2	<	2	<	2	<	2
1,2-Dichloropropane	5	µg/L	<	2			<	2	<	2	<	2	<	2
Dibromomethane	-	µg/L	<	2			<	2	<	2	<	2	<	2
Bromodichloromethane	90.0	µg/L	<	1			<	1	<	1	<	1	<	1
4-Methyl-2-pentanone(MIBK)	560.0	µg/L	<	10			<	10	<	10	<	10	<	10
cis-1,3-Dichloropropene	-	µg/L	<	1			<	1	<	1	<	1	<	1
Toluene	1,000	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
trans-1,3-Dichloropropene	-	µg/L	<	1			<	1	<	1	<	1	<	1
1,1,2-Trichloroethane	5.0	µg/L	<	2			<	2	<	2	<	2	<	2

* = Laboratory reporting limit exceeds screening level

Table 2 VOC Water Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Sample ID	VGES		Sump		MW-1		MW-2		MW-3		MW-4		MW-5	
Date	Standard	Units	4/14/2009		4/20/2009		4/20/2009		4/20/2009		4/20/2009		4/20/2009	
Parameter														
2-Hexanone	-	µg/L	<	10			<	10	<	10	<	10	<	10
Tetrachloroethene	5	µg/L	<	2			<	2	<	2	<	2	<	2
1,3-Dichloropropane	0.5*	µg/L	<	2			<	2	<	2	<	2	<	2
Dibromochloromethane	60	µg/L	<	2			<	2	<	2	<	2	<	2
1,2-Dibromoethane(EDB)	0.05*	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
Chlorobenzene	100	µg/L	<	2			<	2	<	2	<	2	<	2
1,1,1,2-Tetrachloroethane	70	µg/L	<	2			<	2	<	2	<	2	<	2
Ethylbenzene	700	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
mp-Xylene	-	µg/L	<	1	<	1		2	<	1	<	1	<	1
o-Xylene	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
Total Xylenes	10,000	ug/L	<	2	<	2		3	<	2	<	2	<	2
Styrene	100	µg/L	<	1			<	1	<	1	<	1	<	1
Bromoform	-	µg/L	<	2			<	2	<	2	<	2	<	2
IsoPropylbenzene	-	µg/L	<	1			<	1	<	1	<	1	<	1
Bromobenzene	-	µg/L	<	2			<	2	<	2	<	2	<	2
1,1,2,2-Tetrachloroethane	70	µg/L	<	2			<	2	<	2	<	2	<	2
1,2,3-Trichloropropane	5	µg/L	<	2			<	2	<	2	<	2	<	2
n-Propylbenzene	-	µg/L	<	1			<	1	<	1	<	1	<	1
2-Chlorotoluene	100	µg/L	<	2			<	2	<	2	<	2	<	2
4-Chlorotoluene	100	µg/L	<	2			<	2	<	2	<	2	<	2
1,3,5-Trimethylbenzene	-	µg/L	<	1	<	1		30	<	1	<	1	<	1
1,2,4-Trimethylbenzene	-	µg/L	<	1	<	1		16	<	1	<	1	<	1
Total Trimethylbenzenes	350	ug/L	<	2	<	2		46	<	2	<	2	<	2
tert-Butylbenzene	-	µg/L	<	1			<	1	<	1	<	1	<	1
sec-Butylbenzene	-	µg/L	<	1			<	1	<	1	<	1	<	1
1,3-Dichlorobenzene	600	µg/L	<	1			<	1	<	1	<	1	<	1
p-Isopropyltoluene	-	µg/L	<	1				1	<	1	<	1	<	1
1,4-Dichlorobenzene	75	µg/L	<	1			<	1	<	1	<	1	<	1
1,2-Dichlorobenzene	600	µg/L	<	1			<	1	<	1	<	1	<	1
n-Butylbenzene	-	µg/L	<	1			<	1	<	1	<	1	<	1
1,2-Dibromo-3-chloropropane	0.2*	µg/L	<	1			<	1	<	1	<	1	<	1
1,2,4-Trichlorobenzene	70	µg/L	<	1			<	1	<	1	<	1	<	1
Hexachlorobutadiene	1	µg/L	<	1			<	1	<	1	<	1	<	1
Naphthalene	20	µg/L	<	5	<	5	<	5	<	5	<	5	<	5
1,2,3-Trichlorobenzene	-	µg/L	<	1			<	1	<	1	<	1	<	1

* = Laboratory reporting limit exceeds screening level

Table 2 VOC Water Results

Richmond Creamery, Richmond, VT

JCO Project #1-0346-3

Sample ID	**VGES**		**MW-6**		**MW-7**		**MW-8**		**MW-9**		**MW-9 (DUP)**		**Trip Blank**	
Date	**Standard**	**Units**	**4/20/2009**		**4/20/2009**		**4/20/2009**		**4/20/2009**		**4/20/2009**		**3/10/2009**	
Parameter														
Dichlorodifluoromethane	1,000	µg/L	<	5	<	5	<	5	<	5	<	5	<	5
Chloromethane	-	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
Vinyl chloride	2	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
Bromomethane	10	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
Chloroethane	-	µg/L	<	5	<	5	<	5	<	5	<	5	<	5
Trichlorofluoromethane	2,100	µg/L	<	5	<	5	<	5	<	5	<	5	<	5
Diethyl Ether	-	µg/L	<	5	<	5	<	5	<	5	<	5	<	5
Acetone	700	µg/L	<	10	<	10	<	10	<	10	<	10	<	10
1,1-Dichloroethene	70	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
Methylene chloride	5	µg/L	<	5	<	5	<	5	<	5	<	5	<	5
Carbon disulfide	-	µg/L	<	5	<	5	<	5	<	5	<	5	<	5
Methyl-t-butyl ether(MTBE)	40	µg/L	<	5	<	5	<	5	<	5	<	5	<	5
trans-1,2-Dichloroethene	100	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
1,1-Dichloroethane	70	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
2,2-Dichloropropane	-	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
cis-1,2-Dichloroethene	70	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
2-Butanone(MEK)	4,200	µg/L	<	10	<	10	<	10	<	10	<	10	<	10
Bromochloromethane	90	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
Tetrahydrofuran(THF)	-	µg/L	<	10	<	10	<	10	<	10	<	10	<	10
Chloroform	-	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
1,1,1-Trichloroethane	200	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
Carbon tetrachloride	5	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
1,1-Dichloropropene	-	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
Benzene	5	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
1,2-Dichloroethane	5	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
Trichloroethene	5	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
1,2-Dichloropropane	5	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
Dibromomethane	-	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
Bromodichloromethane	90.0	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
4-Methyl-2-pentanone(MIBK)	560.0	µg/L	<	10	<	10	<	10	<	10	<	10	<	10
cis-1,3-Dichloropropene	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
Toluene	1,000	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
trans-1,3-Dichloropropene	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
1,1,2-Trichloroethane	5.0	µg/L	<	2	<	2	<	2	<	2	<	2	<	2

* = Laboratory reporting limit exceeds screening level

Table 2 VOC Water Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Sample ID	VGES		MW-6		MW-7		MW-8		MW-9		MW-9 (DUP)		Trip Blank	
Date	Standard	Units	4/20/2009		4/20/2009		4/20/2009		4/20/2009		4/20/2009		3/10/2009	
Parameter														
2-Hexanone	-	µg/L	<	10	<	10	<	10	<	10	<	10	<	10
Tetrachloroethene	5	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
1,3-Dichloropropane	0.5*	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
Dibromochloromethane	60	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
1,2-Dibromoethane(EDB)	0.05*	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
Chlorobenzene	100	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
1,1,1,2-Tetrachloroethane	70	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
Ethylbenzene	700	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
mp-Xylene	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
o-Xylene	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
Total Xylenes	10,000	ug/L	<	2	<	2	<	2	<	2	<	2	<	2
Styrene	100	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
Bromoform	-	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
IsoPropylbenzene	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
Bromobenzene	-	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
1,1,2,2-Tetrachloroethane	70	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
1,2,3-Trichloropropane	5	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
n-Propylbenzene	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
2-Chlorotoluene	100	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
4-Chlorotoluene	100	µg/L	<	2	<	2	<	2	<	2	<	2	<	2
1,3,5-Trimethylbenzene	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
1,2,4-Trimethylbenzene	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
Total Trimethylbenzenes	350	ug/L	<	2	<	2	<	2	<	2	<	2	<	2
tert-Butylbenzene	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
sec-Butylbenzene	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
1,3-Dichlorobenzene	600	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
p-Isopropyltoluene	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
1,4-Dichlorobenzene	75	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
1,2-Dichlorobenzene	600	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
n-Butylbenzene	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
1,2-Dibromo-3-chloropropane	0.2*	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
1,2,4-Trichlorobenzene	70	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
Hexachlorobutadiene	1	µg/L	<	1	<	1	<	1	<	1	<	1	<	1
Naphthalene	20	µg/L	<	5	<	5	<	5	<	5	<	5	<	5
1,2,3-Trichlorobenzene	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1

* = Laboratory reporting limit exceeds screening level

Table 3 SVOC Water Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Sample ID	VGES		Sump		MW-2		MW-5		MW-6		MW-7		MW-8		MW-9		MW-9 (DUP)	
Date	**Standard**	**Units**	**4/14/2009**		**5/15/2009**		**5/15/2009**		**5/15/2009**		**5/15/2009**		**5/15/2009**		**5/15/2009**		**5/15/2009**	
Parameter																		
Phenol	2,100	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
2-Chlorophenol	,	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
2,4-Dichlorophenol	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
2,4,5-Trichlorophenol	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
2,4,6-Trichlorophenol	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Pentachlorophenol	1*	µg/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
2-Nitrophenol	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
4-Nitrophenol	-	µg/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
2,4-Dinitrophenol	-	µg/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
2-Methylphenol	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
3/4-Methylphenol	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
2,4-Dimethylphenol	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
4-Chloro-3-methylphenol	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
4,6-Dinitro-2-methylphenol	-	µg/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
Benzoic Acid	1*	µg/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
N-Nitrosodimethylamine	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
n-Nitroso-di-n-propylamine	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
n-Nitrosodiphenylamine	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
bis(2-Chloroethyl)ether	300	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
bis(2-chloroisopropyl)ether	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
bis(2-Chloroethoxy)methane	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,3-Dichlorobenzene	600	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,4-Dichlorobenzene	75	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,2-Dichlorobenzene	600	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
1,2,4-Trichlorobenzene	70	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
2-Chloronaphthalene	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
4-Chlorophenyl-phenylether	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
4-Bromophenyl-phenylether	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Hexachloroethane	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Hexachlorobutadiene	1	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Hexachlorocyclopentadiene	50	µg/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
Hexachlorobenzene	1	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
4-Chloroaniline	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
2-Nitroaniline	-	µg/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
3-Nitroaniline	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
4-Nitroaniline	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Benzyl alcohol	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Nitrobenzene	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Isophorone	100	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
2,4-Dinitrotoluene	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
2,6-Dinitrotoluene	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Benzidine	-	µg/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
3,3'-Dichlorobenzidine	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Pyridine	-	µg/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
Azobenzene	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Carbazole	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Dimethylphthalate	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Diethylphthalate	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Di-n-butylphthalate	-	µg/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
Butylbenzylphthalate	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
bis(2-Ethylhexyl)phthalate	6	µg/L	<	5	<	5	<	5	<	5	<	5	<	5	<	5	<	5
Di-n-octylphthalate	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1
Dibenzofuran	-	µg/L	<	1	<	1	<	1	<	1	<	1	<	1	<	1	<	1

Note: Groundwater was resampled for SVOCs due to a lab error in preparing the 4/20/09 samples.
* = Laboratory reporting limit exceeds screening level

Table 4 PAH Water Results

Richmond Creamery, Richmond, VT

JCO Project #1-0346-3

Sample ID	VGES		Sump		MW-2		MW-5		MW-6	
Date	Standards	Units	4/20/2009		5/15/2009		5/15/2009		5/15/2009	
Parameter										
Naphthalene	20	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
2-Methylnaphthalene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Acenaphthylene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Acenaphthene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Fluorene	280	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Phenanthrene	280	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Anthracene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Fluoranthene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Pyrene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Benz[a]anthracene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Chrysene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Benzo[b]fluoranthene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Benzo[k]fluoranthene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Benzo[a]pyrene	0.2	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Indeno[1,2,3-cd]pyrene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Dibenz[a,h]anthracene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Benzo[g,h,i]perylene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1

Sample ID	VGES		MW-7		MW-8		MW-9		MW-9 (DUP)	
Date	Standards	Units	5/19/2009		5/15/2009		5/15/2009		5/15/2009	
Parameter										
Naphthalene	20	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
2-Methylnaphthalene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Acenaphthylene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Acenaphthene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Fluorene	280	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Phenanthrene	280	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Anthracene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Fluoranthene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Pyrene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Benz[a]anthracene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Chrysene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Benzo[b]fluoranthene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Benzo[k]fluoranthene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Benzo[a]pyrene	0.2	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Indeno[1,2,3-cd]pyrene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Dibenz[a,h]anthracene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1
Benzo[g,h,i]perylene	-	ug/l	<	0.1	<	0.1	<	0.1	<	0.1

Table 5 Metals Water Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Sample ID	VGES		Sump		MW-1		MW-2		MW-3		MW-4		MW-5	
Date	Standard		4/14/2009		4/20/2009		4/20/2009		4/20/2009		4/20/2009		4/20/2009	
Parameter														
Antimony	0.006	mg/L	<	0.001	<	0.001	<	0.001	<	0.001		NS	<	0.001
Arsenic	0.010	mg/L		**0.012**	<	0.001		**0.016**		0.002		NS		**0.010**
Barium	2.000	mg/L		0.033		0.012		0.028		0.050		NS		0.027
Cadmium	0.005	mg/L	<	0.001	<	0.001	<	0.001	<	0.001		NS	<	0.001
Chromium	0.100	mg/L		0.003	<	0.001	<	0.001	<	0.001		NS	<	0.001
Lead	0.015	mg/L	<	0.001		0.001	<	0.001		0.004		NS	<	0.001
Manganese	0.300	mg/L		0.016		**0.31**		0.23		**0.400**		NS		**0.86**
Mercury	0.002	mg/L	<	0.0001	<	0.0001	<	0.0001	<	0.0001		NS	<	0.0001
Nickel	0.100	mg/L	<	0.001		0.007		0.004		0.003		NS		0.005
Selenium	0.050	mg/L	<	0.001	<	0.001	<	0.001		0.005		NS	<	0.001
Thallium	0.002	mg/L	<	0.001	<	0.001	<	0.001	<	0.001		NS	<	0.001

Sample ID	VGES		MW-6		MW-7		MW-8		MW-9		MW-9 (DUP)		Relative
Date	Standard		4/20/2009		4/20/2009		4/20/2009		4/20/2009		4/20/2009		Percent
Parameter													Difference
Antimony	0.006	mg/L	<	0.001	<	0.001	<	0.001	<	0.001	<	0.001	0%
Arsenic	0.010	mg/L		0.004		0.003	<	0.001		0.002		0.002	0%
Barium	2.000	mg/L		0.028		0.006		0.029		0.046		0.046	0%
Cadmium	0.005	mg/L	<	0.001	<	0.001	<	0.001	<	0.001	<	0.001	0%
Chromium	0.100	mg/L	<	0.001	<	0.001	<	0.001	<	0.001	<	0.001	0%
Lead	0.015	mg/L	<	0.001	<	0.001	<	0.001	<	0.001	<	0.001	0%
Manganese	0.300	mg/L		**1.5**		**0.65**		**5.8**		**1.4**		**1.4**	0%
Mercury	0.002	mg/L	<	0.0001	<	0.0001	<	0.0001	<	0.0001	<	0.0001	0%
Nickel	0.100	mg/L		0.002		0.007		0.005		0.004		0.004	0%
Selenium	0.050	mg/L	<	0.001	<	0.001	<	0.001	<	0.001	<	0.001	0%
Thallium	0.002	mg/L	<	0.001	<	0.001	<	0.001	<	0.001	<	0.001	0%

White text/black cell = Result exceeds screening criterion
NS = Not sampled

Table 6 VOC Soil Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Parameter		RSL or VDH	SS-T-1		SS-T-2		SS-T-3		SS-T-3 (DUP)	SS-T-4		SS-T-5		SS-AST-1	
Sample Depth (Feet)		Criterion	0-0.5	1.5-2.0	0-0.5	1.5-2.0	0-0.5	1.5-2.0	0-0.5	0-0.5	1.5-2.0	0-0.5	1.5-2.0	0-0.5	1.5-2.0
Date	Units	(mg/kg)	4/20/2009	4/20/2009	4/20/2009	4/20/2009	4/20/2009	4/20/2009	4/20/2009	4/20/2009	4/20/2009	4/20/2009	4/20/2009	4/14/2009	4/14/2009
Parameter															
Dichlorodifluoromethane	mg/kg	190													
Chloromethane	mg/kg	1.7													
Vinyl chloride	mg/kg	0.06*													
Bromomethane	mg/kg	7.9													
Chloroethane (Ethyl chloride)	mg/kg	15,000													
Trichlorofluoromethane	mg/kg	800													
Diethyl Ether	mg/kg	16,000													
Acetone	mg/kg	61,000													
1,1-Dichloroethene	mg/kg	250													
Methylene chloride	mg/kg	11													
Carbon disulfide	mg/kg	670													
Methyl-t-butyl ether(MTBE)	mg/kg	39	< 0.10	< 0.10	< 0.20	< 0.20	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.20
trans-1,2-Dichloroethene [1]	mg/kg	135													
1,1-Dichloroethane	mg/kg	3.4													
2,2-Dichloropropane	mg/kg	None													
cis-1,2-Dichloroethene [1]	mg/kg	673													
2-Butanone(MEK) [1]	mg/kg	40,400													
Bromochloromethane	mg/kg	None													
Tetrahydrofuran(THF)	mg/kg	None													
Chloroform	mg/kg	0.3													
1,1,1-Trichloroethane	mg/kg	9,000													
Carbon tetrachloride	mg/kg	0.25													
1,1-Dichloropropene	mg/kg	None													
Benzene [1]	mg/kg	6.24	< 0.07	< 0.06	< 0.06	< 0.06	< 0.07	< 0.06	< 0.10	< 0.06	< 0.06	< 0.07	< 0.06	< 0.09	< 0.09
1,2-Dichloroethane	mg/kg	0.45	< 0.07	< 0.06	< 0.06	< 0.06	< 0.07	< 0.06	< 0.10	< 0.06	< 0.06	< 0.07	< 0.06	< 0.09	< 0.09
Trichloroethene [1]	mg/kg	0.86													
1,2-Dichloropropane	mg/kg	0.93													
Dibromomethane	mg/kg	780													
Bromodichloromethane	mg/kg	10													
4-Methyl-2-pentanone(MIBK)	mg/kg	5,300													
cis-1,3-Dichloropropene	mg/kg	1.70													
Toluene	mg/kg	5,000	< 0.07	< 0.06	< 0.06	< 0.06	< 0.07	< 0.06	< 0.10	< 0.06	< 0.06	< 0.07	< 0.06	< 0.09	0.13
trans-1,3-Dichloropropene	mg/kg	1.70													
1,1,2-Trichloroethane	mg/kg	1.10													
2-Hexanone	mg/kg	None													
Tetrachloroethene [1]	mg/kg	0.80													
1,3-Dichloropropane	mg/kg	1,600													
Dibromochloromethane	mg/kg	5.80													
1,2-Dibromoethane(EDB)	mg/kg	0.034*	< 0.07	< 0.06	< 0.06	< 0.06	< 0.07	< 0.06	< 0.10	< 0.06	< 0.06	< 0.07	< 0.06	< 0.09	< 0.09
Chlorobenzene	mg/kg	310													
1,1,1,2-Tetrachloroethane	mg/kg	2													
Ethylbenzene	mg/kg	5.7	< 0.07	< 0.06	< 0.06	< 0.06	< 0.07	< 0.06	< 0.10	< 0.06	< 0.06	< 0.07	< 0.06	< 0.09	< 0.09
mp-Xylene	mg/kg	4,500	< 0.07	< 0.06	< 0.06	< 0.06	< 0.07	< 0.06	< 0.10	< 0.06	< 0.06	< 0.07	< 0.06	< 0.09	0.16
o-Xylene	mg/kg	5,300	< 0.07	< 0.06	< 0.06	< 0.06	< 0.07	< 0.06	< 0.10	< 0.06	< 0.06	< 0.07	< 0.06	< 0.09	< 0.09

[1]=VDH value used for screening
*=Laboratory reporting limit exceeds screening level

Table 6 VOC Soil Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Parameter		RSL or VDH	SS-T-1		SS-T-2		SS-T-3		SS-T-3 (DUP)	SS-T-4		SS-T-5		SS-AST-1	
Sample Depth (Feet)		Criterion	0-0.5	1.5-2.0	0-0.5	1.5-2.0	0-0.5	1.5-2.0	0-0.5	0-0.5	1.5-2.0	0-0.5	1.5-2.0	0-0.5	1.5-2.0
Date	Units	(mg/kg)	4/20/2009	4/20/2009	4/20/2009	4/20/2009	4/20/2009	4/20/2009	4/20/2009	4/20/2009	4/20/2009	4/20/2009	4/20/2009	4/14/2009	4/14/2009
Parameter															
Styrene	mg/kg	6,500													
Bromoform	mg/kg	61													
IsoPropylbenzene (Cumene)	mg/kg	2,200													
Bromobenzene	mg/kg	94													
1,1,2,2-Tetrachloroethane	mg/kg	0.59													
1,2,3-Trichloropropane	mg/kg	0.091*													
n-Propylbenzene	mg/kg	None													
2-Chlorotoluene	mg/kg	1,600													
4-Chlorotoluene	mg/kg	5,500													
1,3,5-Trimethylbenzene	mg/kg	47	< 0.07	< 0.06	< 0.06	< 0.06	< 0.07	< 0.06	< 0.10	< 0.06	< 0.06	< 0.07	< 0.06	< 0.09	< 0.09
tert-Butylbenzene	mg/kg	None													
1,2,4-Trimethylbenzene	mg/kg	67	< 0.07	< 0.06	< 0.06	< 0.06	< 0.07	< 0.06	< 0.10	< 0.06	< 0.06	< 0.07	< 0.06	< 0.09	< 0.09
sec-Butylbenzene	mg/kg	None													
1,3-Dichlorobenzene	mg/kg	None													
p-Isopropyltoluene	mg/kg	None													
1,4-Dichlorobenzene	mg/kg	2.60													
1,2-Dichlorobenzene	mg/kg	2,000													
n-Butylbenzene	mg/kg	None													
1,2-Dibromo-3-chloropropane	mg/kg	0.0056*													
1,2,4-Trichlorobenzene	mg/kg	87													
Hexachlorobutadiene	mg/kg	6.2													
Naphthalene [1]	mg/kg	1,070	< 0.40	< 0.30	< 0.30	< 0.40	< 0.40	< 0.40	< 0.60	< 0.30	< 0.30	< 0.40	< 0.30	< 0.50	< 0.60
1,2,3-Trichlorobenzene	mg/kg	None													

[1]=VDH value used for screening
[*]=Laboratory reporting limit exceeds screening level

Table 6 VOC Soil Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Parameter		RSL or VDH	SS-AST-2				SS-BB-1				SS-PT-3		SS-PT-3		SS-PT-3 (DUP)				Sub Slab 2		SS-WR-01		SB-08	
Sample Depth (Feet)		Criterion	0-0.5		1.5-2.0		0-0.5		1.5-2.0		0-0.5		1.5-2.0		0-0.5		1.5-2.0		0-0.5		0-0.5		1.5-2.0	
Date	Units	(mg/kg)	4/20/2009		4/20/2009		4/20/2009		4/20/2009		4/20/2009		4/20/2009		4/20/2009		4/20/2009		3/24/2009		3/24/2009		4/15/2009	
Parameter																								
Dichlorodifluoromethane	mg/kg	190																	<	0.10	<	0.20	<	0.10
Chloromethane	mg/kg	1.7																	<	0.10	<	0.20	<	0.10
Vinyl chloride	mg/kg	0.06*																	<	0.10	<	0.20	<	0.10
Bromomethane	mg/kg	7.9																	<	0.10	<	0.20	<	0.10
Chloroethane (Ethyl chloride)	mg/kg	15,000																	<	0.10	<	0.20	<	0.10
Trichlorofluoromethane	mg/kg	800																	<	0.10	<	0.20	<	0.10
Diethyl Ether	mg/kg	16,000																	<	0.05	<	0.10	<	0.05
Acetone	mg/kg	61,000																	<	2.00	<	4.00	<	2.00
1,1-Dichloroethene	mg/kg	250																	<	0.05	<	0.10	<	0.05
Methylene chloride	mg/kg	11																	<	0.10	<	0.20	<	0.10
Carbon disulfide	mg/kg	670																	<	0.10	<	0.20	<	0.10
Methyl-t-butyl ether(MTBE)	mg/kg	39	<	0.10	<	0.10	<	0.10	<	0.20	<	0.20	<	0.10	<	0.20	<	0.10	<	0.10	<	0.20	<	0.10
trans-1,2-Dichloroethene [1]	mg/kg	135																	<	0.05	<	0.10	<	0.05
1,1-Dichloroethane	mg/kg	3.4																	<	0.05	<	0.10	<	0.05
2,2-Dichloropropane	mg/kg	None																	<	0.05	<	0.10	<	0.05
cis-1,2-Dichloroethene [1]	mg/kg	673																	<	0.05	<	0.10	<	0.05
2-Butanone(MEK) [1]	mg/kg	40,400																	<	0.50	<	1.00	<	0.50
Bromochloromethane	mg/kg	None																	<	0.05	<	0.10	<	0.05
Tetrahydrofuran(THF)	mg/kg	None																	<	0.50	<	< 1	<	0.50
Chloroform	mg/kg	0.3																	<	0.05	<	0.10	<	0.05
1,1,1-Trichloroethane	mg/kg	9,000																	<	0.05	<	0.10	<	0.05
Carbon tetrachloride	mg/kg	0.25																	<	0.05	<	0.10	<	0.05
1,1-Dichloropropene	mg/kg	None																	<	0.05	<	0.10	<	0.05
Benzene [1]	mg/kg	6.24	<	0.06	<	0.06	<	0.07	<	0.08	<	0.09	<	0.06	<	0.09	<	0.05	<	0.05	<	0.10	<	0.05
1,2-Dichloroethane	mg/kg	0.45	<	0.06	<	0.06	<	0.07	<	0.08	<	0.09	<	0.06	<	0.09	<	0.05	<	0.05	<	0.10	<	0.05
Trichloroethene [1]	mg/kg	0.86																	<	0.05	<	0.10	<	0.05
1,2-Dichloropropane	mg/kg	0.93																	<	0.05	<	0.10	<	0.05
Dibromomethane	mg/kg	780																	<	0.05	<	0.10	<	0.05
Bromodichloromethane	mg/kg	10																	<	0.05	<	0.10	<	0.05
4-Methyl-2-pentanone(MIBK)	mg/kg	5,300																	<	0.50	<	1.00	<	0.50
cis-1,3-Dichloropropene	mg/kg	1.70																	<	0.05	<	0.10	<	0.05
Toluene	mg/kg	5,000		0.14		0.05	<	0.07	<	0.08	<	0.09	<	0.06	<	0.09	<	0.05	<	0.05		0.10	<	0.05
trans-1,3-Dichloropropene	mg/kg	1.70																	<	0.05	<	0.10	<	0.05
1,1,2-Trichloroethane	mg/kg	1.10																	<	0.05	<	0.10	<	0.05
2-Hexanone	mg/kg	None																	<	0.10	<	0.20	<	0.10
Tetrachloroethene [1]	mg/kg	0.80																	<	0.05	<	0.10	<	0.05
1,3-Dichloropropane	mg/kg	1,600																	<	0.05	<	0.10	<	0.05
Dibromochloromethane	mg/kg	5.80																	<	0.05	<	0.10	<	0.05
1,2-Dibromoethane(EDB)	mg/kg	0.034*	<	0.06	<	0.06	<	0.07	<	0.08	<	0.09	<	0.06	<	0.09	<	0.05	<	0.05	<	0.10	<	0.05
Chlorobenzene	mg/kg	310																	<	0.05	<	0.10	<	0.05
1,1,1,2-Tetrachloroethane	mg/kg	2																	<	0.05	<	0.10	<	0.05
Ethylbenzene	mg/kg	5.7		0.07		0.37	<	0.07	<	0.08	<	0.09	<	0.06	<	0.09	<	0.05	<	0.05	<	0.10		0.18
mp-Xylene	mg/kg	4,500		1.30		2.30	<	0.07	<	0.08	<	0.09	<	0.06	<	0.09	<	0.05	<	0.05	<	0.10		0.18
o-Xylene	mg/kg	5,300		1.20		1.50	<	0.07	<	0.08	<	0.09	<	0.06	<	0.09	<	0.05	<	0.05	<	0.10		0.10

[1]=VDH value used for screening
*=Laboratory reporting limit exceeds screening level

Table 6 VOC Soil Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Parameter		RSL or VDH	SS-AST-2		SS-BB-1		SS-PT-3	SS-PT-3	SS-PT-3 (DUP)		Sub Slab 2	SS-WR-01	SB-08
Sample Depth (Feet)		Criterion	0-0.5	1.5-2.0	0-0.5	1.5-2.0	0-0.5	1.5-2.0	0-0.5	1.5-2.0	0-0.5	0-0.5	1.5-2.0
Date	Units	(mg/kg)	4/20/2009	4/20/2009	4/20/2009	4/20/2009	4/20/2009	4/20/2009	4/20/2009	4/20/2009	3/24/2009	3/24/2009	4/15/2009
Parameter													
Styrene	mg/kg	6,500									< 0.05	< 0.10	< 0.05
Bromoform	mg/kg	61									< 0.05	< 0.10	< 0.05
IsoPropylbenzene (Cumene)	mg/kg	2,200									< 0.05	< 0.10	0.72
Bromobenzene	mg/kg	94									< 0.05	< 0.10	< 0.05
1,1,2,2-Tetrachloroethane	mg/kg	0.59									< 0.05	< 0.10	< 0.05
1,2,3-Trichloropropane	mg/kg	0.091*									< 0.05	< 0.10	< 0.05
n-Propylbenzene	mg/kg	None									< 0.05	< 0.10	1.8
2-Chlorotoluene	mg/kg	1,600									< 0.05	< 0.10	< 0.05
4-Chlorotoluene	mg/kg	5,500									< 0.05	< 0.10	< 0.05
1,3,5-Trimethylbenzene	mg/kg	47	9.30	4.80	< 0.07	< 0.08	< 0.09	< 0.06	< 0.09	< 0.05	< 0.05	< 0.10	1.10
tert-Butylbenzene	mg/kg	None									< 0.05	< 0.10	< 0.05
1,2,4-Trimethylbenzene	mg/kg	67	5.10	9.70	< 0.07	< 0.08	< 0.09	< 0.06	< 0.09	< 0.05	< 0.05	< 0.10	7.90
sec-Butylbenzene	mg/kg	None									< 0.05	< 0.10	2.8
1,3-Dichlorobenzene	mg/kg	None									< 0.05	< 0.10	< 0.05
p-Isopropyltoluene	mg/kg	None									< 0.05	< 0.10	2.3
1,4-Dichlorobenzene	mg/kg	2.60									< 0.05	< 0.10	< 0.05
1,2-Dichlorobenzene	mg/kg	2,000									< 0.05	< 0.10	< 0.05
n-Butylbenzene	mg/kg	None									< 0.05	< 0.10	4.1
1,2-Dibromo-3-chloropropane	mg/kg	0.0056*									< 0.05	< 0.10	< 0.05
1,2,4-Trichlorobenzene	mg/kg	87									< 0.05	< 0.10	< 0.05
Hexachlorobutadiene	mg/kg	6.2									< 0.05	< 0.10	< 0.05
Naphthalene [1]	mg/kg	1,070	5.10	8.40	< 0.40	< 0.50	< 0.50	< 0.30	< 0.50	< 0.30	< 0.10	< 0.20	6.80
1,2,3-Trichlorobenzene	mg/kg	None									< 0.05	< 0.10	< 0.05

[1]=VDH value used for screening
*=Laboratory reporting limit exceeds screening level

Table 6 VOC Soil Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Parameter		RSL or VDH	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9
Sample Depth (Feet)		Criterion	15.5-16.0	12.0-13.0	13.0-14.0	13.0-14.0	11.0-12.0	7.5-8.0	6.5-7.0	7.0-7.5	4.5-5.0
Date	Units	(mg/kg)	4/14/2009	4/14/2009	4/14/2009	4/14/2009	4/14/2009	4/15/2009	4/15/2009	4/15/2009	4/15/2009
Parameter											
Dichlorodifluoromethane	mg/kg	190		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chloromethane	mg/kg	1.7		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Vinyl chloride	mg/kg	0.06*		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Bromomethane	mg/kg	7.9		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chloroethane (Ethyl chloride)	mg/kg	15,000		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Trichlorofluoromethane	mg/kg	800		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Diethyl Ether	mg/kg	16,000		< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
Acetone	mg/kg	61,000		< 2.00	< 3.00	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00
1,1-Dichloroethene	mg/kg	250		< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
Methylene chloride	mg/kg	11		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Carbon disulfide	mg/kg	670		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Methyl-t-butyl ether(MTBE)	mg/kg	39	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
trans-1,2-Dichloroethene [1]	mg/kg	135		< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
1,1-Dichloroethane	mg/kg	3.4		< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
2,2-Dichloropropane	mg/kg	None		< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
cis-1,2-Dichloroethene [1]	mg/kg	673		< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
2-Butanone(MEK) [1]	mg/kg	40,400		< 0.50	< 0.70	< 0.60	< 0.50	< 0.50	< 0.50	< 0.50	< 0.60
Bromochloromethane	mg/kg	None		< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
Tetrahydrofuran(THF)	mg/kg	None		< 0.50	< 0.70	< 0.60	< 0.50	< 0.50	< 0.50	< 0.50	< 0.60
Chloroform	mg/kg	0.3		< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
1,1,1-Trichloroethane	mg/kg	9,000		< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
Carbon tetrachloride	mg/kg	0.25		< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
1,1-Dichloropropene	mg/kg	None		< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
Benzene [1]	mg/kg	6.24	< 0.05	< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
1,2-Dichloroethane	mg/kg	0.45	< 0.05	< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
Trichloroethene [1]	mg/kg	0.86		< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
1,2-Dichloropropane	mg/kg	0.93		< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
Dibromomethane	mg/kg	780		< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
Bromodichloromethane	mg/kg	10		< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
4-Methyl-2-pentanone(MIBK)	mg/kg	5,300		< 0.50	< 0.70	< 0.60	< 0.50	< 0.50	< 0.50	< 0.50	< 0.60
cis-1,3-Dichloropropene	mg/kg	1.70		< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
Toluene	mg/kg	5,000	< 0.05	< 0.05	< 0.07	0.20	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
trans-1,3-Dichloropropene	mg/kg	1.70		< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
1,1,2-Trichloroethane	mg/kg	1.10		< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
2-Hexanone	mg/kg	None		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tetrachloroethene [1]	mg/kg	0.80		< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
1,3-Dichloropropane	mg/kg	1,600		< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
Dibromochloromethane	mg/kg	5.80		< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
1,2-Dibromoethane(EDB)	mg/kg	0.034*	< 0.05	< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
Chlorobenzene	mg/kg	310		< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
1,1,1,2-Tetrachloroethane	mg/kg	2		< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
Ethylbenzene	mg/kg	5.7	< 0.05	< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
mp-Xylene	mg/kg	4,500	< 0.05	< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06
o-Xylene	mg/kg	5,300	< 0.05	< 0.05	< 0.07	< 0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.06

[1]=VDH value used for screening
*=Laboratory reporting limit exceeds screening level

Table 6 VOC Soil Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Parameter		RSL or VDH	MW-1		MW-2		MW-3		MW-4		MW-5		MW-6		MW-7		MW-8		MW-9	
Sample Depth (Feet)		Criterion	15.5-16.0		12.0-13.0		13.0-14.0		13.0-14.0		11.0-12.0		7.5-8.0		6.5-7.0		7.0-7.5		4.5-5.0	
Date	Units	(mg/kg)	4/14/2009		4/14/2009		4/14/2009		4/14/2009		4/14/2009		4/15/2009		4/15/2009		4/15/2009		4/15/2009	
Parameter																				
Styrene	mg/kg	6,500			<	0.05	<	0.07	<	0.06	<	0.05	<	0.05	<	0.05	<	0.05	<	0.06
Bromoform	mg/kg	61			<	0.05	<	0.07	<	0.06	<	0.05	<	0.05	<	0.05	<	0.05	<	0.06
IsoPropylbenzene (Cumene)	mg/kg	2,200			<	0.05	<	0.07	<	0.06	<	0.05	<	0.05	<	0.05	<	0.05	<	0.06
Bromobenzene	mg/kg	94			<	0.05	<	0.07	<	0.06	<	0.05	<	0.05	<	0.05	<	0.05	<	0.06
1,1,2,2-Tetrachloroethane	mg/kg	0.59			<	0.05	<	0.07	<	0.06	<	0.05	<	0.05	<	0.05	<	0.05	<	0.06
1,2,3-Trichloropropane	mg/kg	0.091*			<	0.05	<	0.07	<	0.06	<	0.05	<	0.05	<	0.05	<	0.05	<	0.06
n-Propylbenzene	mg/kg	None			<	0.05	<	0.07	<	0.06	<	0.05	<	0.05	<	0.05	<	0.05	<	0.06
2-Chlorotoluene	mg/kg	1,600			<	0.05	<	0.07	<	0.06	<	0.05	<	0.05	<	0.05	<	0.05	<	0.06
4-Chlorotoluene	mg/kg	5,500			<	0.05	<	0.07	<	0.06	<	0.05	<	0.05	<	0.05	<	0.05	<	0.06
1,3,5-Trimethylbenzene	mg/kg	47	<	0.05	<	0.05	<	0.07	<	0.06	<	0.05	<	0.05	<	0.05	<	0.05	<	0.06
tert-Butylbenzene	mg/kg	None			<	0.05	<	0.07	<	0.06	<	0.05	<	0.05	<	0.05	<	0.05	<	0.06
1,2,4-Trimethylbenzene	mg/kg	67	<	0.05	<	0.05	<	0.07	<	0.06	<	0.05	<	0.05	<	0.05	<	0.05	<	0.06
sec-Butylbenzene	mg/kg	None			<	0.05	<	0.07	<	0.06	<	0.05	<	0.05	<	0.05	<	0.05	<	0.06
1,3-Dichlorobenzene	mg/kg	None			<	0.05	<	0.07	<	0.06	<	0.05	<	0.05	<	0.05	<	0.05	<	0.06
p-Isopropyltoluene	mg/kg	None			<	0.05	<	0.07	<	0.06	<	0.05	<	0.05	<	0.05	<	0.05	<	0.06
1,4-Dichlorobenzene	mg/kg	2.60			<	0.05	<	0.07	<	0.06	<	0.05	<	0.05	<	0.05	<	0.05	<	0.06
1,2-Dichlorobenzene	mg/kg	2,000			<	0.05	<	0.07	<	0.06	<	0.05	<	0.05	<	0.05	<	0.05	<	0.06
n-Butylbenzene	mg/kg	None			<	0.05	<	0.07	<	0.06	<	0.05	<	0.05	<	0.05	<	0.05	<	0.06
1,2-Dibromo-3-chloropropane	mg/kg	0.0056*			<	0.05	<	0.07	<	0.06	<	0.05	<	0.05	<	0.05	<	0.05	<	0.06
1,2,4-Trichlorobenzene	mg/kg	87			<	0.05	<	0.07	<	0.06	<	0.05	<	0.05	<	0.05	<	0.05	<	0.06
Hexachlorobutadiene	mg/kg	6.2			<	0.05	<	0.07	<	0.06	<	0.05	<	0.05	<	0.05	<	0.05	<	0.06
Naphthalene [1]	mg/kg	1,070	<	0.30	<	0.10	<	0.10		0.10	<	0.10	<	0.10	<	0.10	<	0.10	<	0.10
1,2,3-Trichlorobenzene	mg/kg	None			<	0.05	<	0.07	<	0.06	<	0.05	<	0.05	<	0.05	<	0.05	<	0.06

[1]=VDH value used for screening
*=Laboratory reporting limit exceeds screening level

Table 7 PAH Soil Results

Richmond Creamery, Richmond, VT

JCO Project #1-0346-3

Parameter		**Residential RSL or VDH Criterion**	**SS-WR-01**		**SS-NR-01**		**SS-NR-01**		**SS-NR-02**		**SS-NR-02**		**SS-RR-01**		**SS-RR-01**	
Depth (feet)			**0-0.5**		**0-0.5**		**1.5-2.0**		**0-0.5**		**1.5-2.0**		**0-0.5**		**1.5-2.0**	
Date	**Units**	**Criterion**	**3/23/2009**		**3/23/2009**		**3/23/2009**		**3/23/2009**		**3/23/2009**		**3/23/2009**		**3/23/2009**	
Naphthalene [1]	mg/kg	1,070	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02
2-Methylnaphthalene	mg/kg	310	<	0.02		0.03	<	0.02	<	0.02	<	0.02	<	0.02		0.02
Acenaphthylene	mg/kg	None		0.03	<	0.02	<	0.02		0.02	<	0.02	<	0.02	<	0.02
Acenaphthene	mg/kg	3,400	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02
Fluorene	mg/kg	2,300		0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02
Phenanthrene	mg/kg	None		0.24		0.04	<	0.02		0.16	<	0.02		0.04		0.03
Anthracene	mg/kg	17,000		0.06	<	0.02	<	0.02		0.03	<	0.02	<	0.02	<	0.02
Fluoranthene	mg/kg	1,700		0.54		0.08	<	0.02		0.49		0.05		0.09		0.04
The following PAH compounds are compared			to a VDH of 0.01 mg/kg[PAH] using Toxic Equivalency Factors in Table 8:													
		Industrial RSL														
PyrenePAH	mg/kg	***17,000***		0.47		0.07	<	0.02		0.49		0.04		0.10		0.04
Benzo[a]anthracene	mg/kg	***20***		0.27		0.05	<	0.02		0.26		0.03		0.07		0.04
Chrysene	mg/kg	***210***		0.28		0.04	<	0.02		0.24		0.02		0.05		0.03
Benzo[b]fluoranthene	mg/kg	***20***		0.40		0.06	<	0.02		0.33		0.03		0.07		0.04
Benzo[k]fluoranthene	mg/kg	***21***		0.14		0.02	<	0.02		0.13	<	0.02		0.02	<	0.02
Benzo[a]pyrene	mg/kg	***0.2***		**0.28**		0.04	<	0.01		**0.25**		0.02		0.05		0.03
Indeno[1,2,3-cd]pyrene	mg/kg	***20.1***		0.13		0.03	<	0.02		0.12	<	0.02		0.03	<	0.02
Dibenz[a,h]anthracene	mg/kg	***0.2***		0.04	<	0.02	<	0.02		0.04	<	0.02	<	0.02	<	0.02
Benzo[g,h,i]perylene	mg/kg	***None***		0.14		0.04	<	0.02		0.13	<	0.02		0.03	<	0.02

[1] VDH Value used for screening

[PAH] - PAH toxic equivalent factor applied to compare against VDH criterion (see Table 8); Industrial RSL shown for comparison

Table 7 PAH Soil Results

Richmond Creamery, Richmond, VT

JCO Project #1-0346-3

Parameter	Units	Residential RSL or VDH Criterion	SS-RR-02		SS-RR-02		SS-RR-03		SS-RR-03		SS-RR-04		SS-RR-04		SS-RR-05	
Depth (feet)			0-0.5		1.5-2.0		0-0.5		1.5-2.0		0-0.5		1.5-2.0		0-0.5	
Date			3/23/2009		3/23/2009		3/23/2009		3/23/2009		3/23/2009		3/23/2009		3/23/2009	
Naphthalene [1]	mg/kg	1,070		0.03	<	0.02	<	0.02		0.05		0.16		0.17		0.15
2-Methylnaphthalene	mg/kg	310		0.03	<	0.02	<	0.02		0.03		0.29		0.27		0.22
Acenaphthylene	mg/kg	None	<	0.02	<	0.02		0.04		0.09		0.14		0.16		0.24
Acenaphthene	mg/kg	3,400	<	0.02	<	0.02	<	0.02		0.09	<	0.02		0.05	<	0.02
Fluorene	mg/kg	2,300	<	0.02	<	0.02	<	0.02		0.13	<	0.02		0.06		0.02
Phenanthrene	mg/kg	None		0.05		0.03		0.16		1.70		0.31		0.95		0.43
Anthracene	mg/kg	17,000	<	0.02	<	0.02		0.02		0.37		0.08		0.14		0.09
Fluoranthene	mg/kg	1,700		0.21		0.10		0.59		2.90		0.82		1.80		1.50
The following PAH compounds are compared			to a VDH of 0.01 mg/kg[PAH] using Toxic Equivalency Factors in Table 8:													
		Industrial RSL														
PyrenePAH	mg/kg	***17,000***		0.22		0.10		0.43		1.90		0.72		1.20		1.40
Benzo[a]anthracene	mg/kg	***20***		0.13		0.06		0.25		1.10		0.37		0.71		0.78
Chrysene	mg/kg	***210***		0.13		0.07		0.30		1.20		0.35		0.85		0.92
Benzo[b]fluoranthene	mg/kg	***20***		0.21		0.11		0.46		1.70		1.10		1.20		1.70
Benzo[k]fluoranthene	mg/kg	***21***		0.06		0.03		0.15		0.49		0.37		0.43		0.55
Benzo[a]pyrene	mg/kg	***0.2***		0.13		0.06		**0.30**		**1.10**		**0.40**		**0.58**		**1.10**
Indeno[1,2,3-cd]pyrene	mg/kg	***20.1***		0.07		0.03		0.15		0.43		0.27		0.23		0.51
Dibenz[a,h]anthracene	mg/kg	***0.2***		0.02	<	0.02		0.05		0.14		0.09		0.08		0.14
Benzo[g,h,i]perylene	mg/kg	***None***		0.07		0.04		0.16		0.40		0.22		0.18		0.52

[1] VDH Value used for screening

[PAH] - PAH toxic equivalent factor applied to compare against VDH criterion (see Table 8); Industrial RSL shown for comparison

Table 7 PAH Soil Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Parameter		Residential RSL or VDH Criterion		SS-RR-05 (DUP)	Relative		SS-RR-05		SS-RR-05 (DUP)	Relative		SS-RR-06		SS-RR-07
Depth (feet)				0-0.5	Percent		1.5-2.0		1.5-2.0	Percent		0-0.5		0-0.5
Date	Units			3/23/2009	Difference		3/23/2009		3/23/2009	Difference		3/23/2009		3/23/2009
Naphthalene [1]	mg/kg	1,070		0.13	14%		0.10		0.15	40%	<	0.02	<	0.02
2-Methylnaphthalene	mg/kg	310		0.17	26%		0.11		0.16	37%	<	0.03	<	0.02
Acenaphthylene	mg/kg	None		0.37	43%		0.46		10.10	183%		0.02		0.05
Acenaphthene	mg/kg	3,400	<	0.02	0%	<	0.02		0.03	40%	<	0.02	<	0.02
Fluorene	mg/kg	2,300		0.03	40%		0.05		0.11	75%	<	0.02	<	0.02
Phenanthrene	mg/kg	None		0.47	9%		0.84		1.60	62%		0.05		0.05
Anthracene	mg/kg	17,000		0.14	43%		0.19		0.42	75%	<	0.02		0.02
Fluoranthene	mg/kg	1,700		1.90	24%		3.70		6.80	59%		0.17		0.28
The following PAH compounds are compared			to a VDH of 0.01 mg/kg[PAH] using Toxic Equivalency Factors in Table 8:											
		Industrial RSL												
PyrenePAH	mg/kg	***17,000***		2.00	35%		**3.5**		6.30	44%		0.13		0.28
Benzo[a]anthracene	mg/kg	***20***		1.00	25%		1.70		**30.10**	179%		0.09		0.19
Chrysene	mg/kg	***210***		1.30	34%		2.10		3.80	58%		0.11		0.19
Benzo[b]fluoranthene	mg/kg	***20***		20.10	169%		4.00		6.50	48%		0.18		0.34
Benzo[k]fluoranthene	mg/kg	***21***		0.77	33%		1.30		2.40	59%		0.05		0.11
Benzo[a]pyrene	mg/kg	***0.2***		**1.50**	31%		**2.70**		**4.60**	52%		0.09		**0.26**
Indeno[1,2,3-cd]pyrene	mg/kg	***20.1***		0.87	52%		1.30		2.20	51%		0.05		0.14
Dibenz[a,h]anthracene	mg/kg	***0.2***		**0.23**	49%		**0.36**		**0.59**	48%	<	0.02		0.04
Benzo[g,h,i]perylene	mg/kg	***None***		0.92	56%		1.40		2.20	44%		0.05		0.16

[1] VDH Value used for screening
[PAH] - PAH toxic equivalent factor applied to compare against VDH criterion (see Table 8); Industrial RSL shown for comparison

Table 7 PAH Soil Results

Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Parameter		**Residential RSL or VDH Criterion**		**SS-RR-07**		**SS-RR-08**		**SS-RR-08**		**SS-RR-09**		**SS-RR-10**		**SS-RR-10**		**MW-1**		**MW-2**
Depth (feet)				**1.5-2.0**		**0-0.5**		**1.5-2.0**		**0-0.5**		**0-0.5**		**1.5-2.0**		**3.5-4.0**		**12.0-13.0**
Date	**Units**			**3/23/2009**		**3/23/2009**		**3/23/2009**		**3/23/2009**		**3/23/2009**		**3/23/2009**		**4/14/2009**		**4/14/2009**
Naphthalene [1]	mg/kg	1,070	<	0.02		0.07		0.06		0.07	<	0.02		0.02	<	0.02	<	0.02
2-Methylnaphthalene	mg/kg	310	<	0.02		0.12		0.08		0.11		0.20		0.07	<	0.02	<	0.02
Acenaphthylene	mg/kg	None		0.09	<	0.02	<	0.02	<	0.02		0.04		0.06	<	0.02	<	0.02
Acenaphthene	mg/kg	3,400	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02
Fluorene	mg/kg	2,300	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02
Phenanthrene	mg/kg	None		0.14		0.11		0.16		0.15		0.13		0.29	<	0.02	<	0.02
Anthracene	mg/kg	17,000		0.05	<	0.02	<	0.02	<	0.02		0.04		0.05	<	0.02	<	0.02
Fluoranthene	mg/kg	1,700		0.54		0.10		0.20		0.24		0.34		0.56	<	0.02	<	0.02
The following PAH compounds are compared			to a VDH of 0.01 mg/kg^{PAH} using Toxic Equivalency Factors in Table 8:															
		Industrial RSL																
PyrenePAH	mg/kg	***17,000***		0.54		0.09		0.18		0.22		0.35		0.54	<	0.02	<	0.02
Benzo[a]anthracene	mg/kg	***20***		0.33		0.06		0.08		0.08		0.22		0.33	<	0.02	<	0.02
Chrysene	mg/kg	***210***		0.31		0.09		0.13		0.18		0.24		0.38	<	0.02	<	0.02
Benzo[b]fluoranthene	mg/kg	***20***		0.51		0.09		0.17		0.24		0.37		0.53	<	0.02	<	0.02
Benzo[k]fluoranthene	mg/kg	***21***		0.15		0.02		0.05		0.08		0.13		0.15	<	0.02	<	0.02
Benzo[a]pyrene	mg/kg	***0.2***		**0.38**		0.05		0.08		0.12		**0.25**		**0.36**	<	0.01	<	0.01
Indeno[1,2,3-cd]pyrene	mg/kg	***20.1***		0.23		0.03		0.05		0.10		0.17		0.21	<	0.02	<	0.02
Dibenz[a,h]anthracene	mg/kg	***0.2***		0.06	<	0.02	<	0.02		0.03		0.05		0.06	<	0.02	<	0.02
Benzo[g,h,i]perylene	mg/kg	***None***		0.27		0.04		0.06		0.10		0.18		0.23	<	0.02	<	0.02

[1] VDH Value used for screening
[PAH] - PAH toxic equivalent factor applied to compare against VDH criterion (see Table 8); Industrial RSL shown for comparison

Table 7 PAH Soil Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Parameter	Units	Residential RSL or VDH Criterion	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	SB-08	SS-AST-1
Depth (feet)			13.0-14.0	13.0-14.0	11.0-12.0	7.5-8.0	6.5-7.0	7.0-7.5	4.5-5.0	1.5-2.0	0-0.5
Date			4/14/2009	4/14/2009	4/14/2009	4/15/2009	4/15/2009	4/15/2009	4/15/2009	4/15/2009	4/14/2009
Naphthalene[1]	mg/kg	1,070	< 0.02	0.05	< 0.02	< 0.04	< 0.02	< 0.02	< 0.02	1.50	0.05
2-Methylnaphthalene	mg/kg	310	< 0.02	0.05	< 0.02	< 0.04	< 0.02	< 0.02	< 0.02	11.00	0.10
Acenaphthylene	mg/kg	None	< 0.02	0.07	< 0.02	< 0.04	< 0.02	< 0.02	0.06	0.21	0.07
Acenaphthene	mg/kg	3,400	< 0.02	< 0.02	< 0.02	0.05	< 0.02	< 0.02	< 0.02	0.54	< 0.02
Fluorene	mg/kg	2,300	< 0.02	0.04	< 0.02	0.34	< 0.02	< 0.02	0.03	1.90	< 0.02
Phenanthrene	mg/kg	None	< 0.02	0.28	< 0.02	0.52	< 0.02	< 0.02	0.27	4.20	0.05
Anthracene	mg/kg	17,000	< 0.02	0.08	< 0.02	< 0.04	< 0.02	< 0.02	0.09	< 0.08	0.13
Fluoranthene	mg/kg	1,700	< 0.02	0.52	< 0.02	0.04	< 0.02	< 0.02	0.62	0.20	0.02
The following PAH compounds are compared			to a VDH of 0.01 mg/kg[PAH] using Toxic Equivalency Factors in Table 8:								
		Industrial RSL									
PyrenePAH	mg/kg	***17,000***	< 0.02	0.45	< 0.02	0.10	< 0.02	< 0.02	0.46	0.60	0.05
Benzo[a]anthracene	mg/kg	***20***	< 0.02	0.24	< 0.02	0.04	< 0.02	< 0.02	0.28	< 0.08	< 0.02
Chrysene	mg/kg	***210***	< 0.02	0.29	< 0.02	< 0.04	< 0.02	< 0.02	0.30	< 0.08	0.02
Benzo[b]fluoranthene	mg/kg	***20***	< 0.02	0.43	< 0.02	< 0.04	< 0.02	< 0.02	0.41	< 0.08	0.03
Benzo[k]fluoranthene	mg/kg	***21***	< 0.02	0.16	< 0.02	< 0.04	< 0.02	< 0.02	0.14	< 0.08	< 0.02
Benzo[a]pyrene	mg/kg	***0.2***	< 0.01	**0.29**	< 0.01	< 0.04	< 0.01	< 0.01	**0.28**	< 0.08	0.02
Indeno[1,2,3-cd]pyrene	mg/kg	***20.1***	< 0.02	0.16	< 0.02	< 0.04	< 0.02	< 0.02	0.15	< 0.08	0.05
Dibenz[a,h]anthracene	mg/kg	***0.2***	< 0.02	0.04	< 0.02	< 0.04	< 0.02	< 0.02	0.04	< 0.08	< 0.02
Benzo[g,h,i]perylene	mg/kg	***None***	< 0.02	0.14	< 0.02	< 0.04	< 0.02	< 0.02	0.13	< 0.08	0.07

[1] VDH Value used for screening
[PAH] - PAH toxic equivalent factor applied to compare against VDH criterion (see Table 8); Industrial RSL shown for comparison

Table 7 PAH Soil Results

Richmond Creamery, Richmond, VT

JCO Project #1-0346-3

Parameter	Units	Residential RSL or VDH Criterion	SS-AST-1	SS-AST-2	SS-AST-2	SS-T-1	SS-T-1	SS-T-2	SS-T-2	SS-T-3
Depth (feet)			1.5-2.0	0-0.5	1.5-2.0	0-0.5	1.5-2.0	0-0.5	1.5-2.0	0-0.5
Date			4/14/2009	4/20/2009	4/20/2009	4/20/2009	4/20/2009	4/20/2009	4/20/2009	4/20/2009
Naphthalene[1]	mg/kg	1,070	0.06	4.10	7.30	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
2-Methylnaphthalene	mg/kg	310	0.13	38.00	47.00	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Acenaphthylene	mg/kg	None	0.12	1.80	0.55	0.12	< 0.02	0.08	< 0.02	0.10
Acenaphthene	mg/kg	3,400	< 0.02	16.00	2.90	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Fluorene	mg/kg	2,300	< 0.02	30.00	7.20	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Phenanthrene	mg/kg	None	0.04	48.00	11.00	0.07	< 0.02	0.04	< 0.02	0.06
Anthracene	mg/kg	17,000	0.09	< 0.80	< 0.07	0.04	< 0.02	0.03	< 0.02	0.05
Fluoranthene	mg/kg	1,700	0.05	8.50	1.50	0.41	< 0.02	0.23	< 0.02	0.30
The following PAH compounds are compared	to a VDH of 0.01 mg/kg[PAH] using Toxic Equivalency Factors in Table 8:									
		Industrial RSL								
PyrenePAH	mg/kg	***17,000***	0.07	37.00	4.60	0.58	< 0.02	0.28	< 0.02	0.35
Benzo[a]anthracene	mg/kg	***20***	< 0.02	2.00	0.52	0.23	< 0.02	0.13	< 0.02	0.16
Chrysene	mg/kg	***210***	0.23	1.30	0.40	0.28	< 0.02	0.15	< 0.02	0.18
Benzo[b]fluoranthene	mg/kg	***20***	0.08	1.40	0.46	0.59	< 0.02	0.29	< 0.02	0.38
Benzo[k]fluoranthene	mg/kg	***21***	0.02	< 0.80	0.15	0.19	< 0.02	0.10	< 0.02	0.13
Benzo[a]pyrene	mg/kg	***0.2***	0.07	**1.30**	**0.39**	**0.40**	< 0.01	**0.21**	< 0.01	**0.25**
Indeno[1,2,3-cd]pyrene	mg/kg	***20.1***	0.17	< 0.80	0.16	0.28	< 0.02	0.13	< 0.02	0.16
Dibenz[a,h]anthracene	mg/kg	***0.2***	0.03	< **0.80**	< 0.07	0.05	< 0.02	0.03	< 0.02	0.03
Benzo[g,h,i]perylene	mg/kg	***None***	0.20	< 0.80	0.18	0.28	< 0.02	0.13	< 0.02	0.16

[1] VDH Value used for screening

[PAH] - PAH toxic equivalent factor applied to compare against VDH criterion (see Table 8); Industrial RSL shown for comparison

Table 7 PAH Soil Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Parameter		**Residential RSL or VDH Criterion**		**SS-T-3 (DUP)**	**Relative**		**SS-T-3**		**SS-T-4**		**SS-T-4**		**SS-T-5**		**SS-T-5**		**SS-BB-1**
Depth (feet)				**0-0.5**	**Percent**		**1.5-2.0**		**0-0.5**		**1.5-2.0**		**0-0.5**		**1.5-2.0**		**0-0.5**
Date	**Units**			**4/20/2009**	**Difference**		**4/20/2009**		**4/20/2009**		**4/20/2009**		**4/20/2009**		**4/20/2009**		**4/20/2009**
Naphthalene [1]	mg/kg	1,070	<	0.02	0%	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02
2-Methylnaphthalene	mg/kg	310	<	0.02	0%	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02		0.02
Acenaphthylene	mg/kg	None		0.06	50%	<	0.02	<	0.02	<	0.02		0.10	<	0.02	<	0.02
Acenaphthene	mg/kg	3,400	<	0.02	0%	<	0.02		0.11	<	0.02	<	0.02	<	0.02	<	0.02
Fluorene	mg/kg	2,300	<	0.02	0%	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02
Phenanthrene	mg/kg	None		0.05	18%	<	0.02		0.14	<	0.02		0.06		0.14		0.03
Anthracene	mg/kg	17,000	<	0.02	86%	<	0.02		0.06	<	0.02		0.05		0.04	<	0.02
Fluoranthene	mg/kg	1,700		0.23	26%		0.02		0.42		0.04		0.34		0.18		0.10
The following PAH compounds are compared				to a VDH of 0.01 mg/kgPAH using a Toxic Equivalency Factor in Table 8:													
		Industrial RSL															
PyrenePAH	mg/kg	***17,000***		0.31	12%		0.04		0.46		0.04		0.39		0.16		0.11
Benzo[a]anthracene	mg/kg	***20***		0.12	29%	<	0.02		0.20	<	0.02		0.18		0.08		0.05
Chrysene	mg/kg	***210***		0.15	18%		0.02		0.24		0.02		0.22		0.08		0.06
Benzo[b]fluoranthene	mg/kg	***20***		0.30	24%		0.03		0.47		0.04		0.46		0.11		0.11
Benzo[k]fluoranthene	mg/kg	***21***		0.10	26%	<	0.02		0.14	<	0.02		0.16		0.04		0.03
Benzo[a]pyrene	mg/kg	***0.2***		0.20	22%		0.02		**0.32**		0.02		**0.29**		0.08		0.07
Indeno[1,2,3-cd]pyrene	mg/kg	***20.1***		0.16	0%	<	0.02		0.22	<	0.02		0.18		0.05		0.04
Dibenz[a,h]anthracene	mg/kg	***0.2***		0.03	0%	<	0.02		0.04	<	0.02		0.04	<	0.02	<	0.02
Benzo[g,h,i]perylene	mg/kg	***None***		0.17	6%		0.02		0.21		0.02		0.17		0.05		0.04

[1] VDH Value used for screening
[PAH] - PAH toxic equivalent factor applied to compare against VDH criterion (see Table 8); Industrial RSL shown for comparison

Table 7 PAH Soil Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Parameter				SS-BB-1		SS-PT-3		SS-PT-3 (DUP)	Relative		SS-PT-3		SS-PT-3 (DUP)
Depth (feet)		Residential RSL or VDH		1.5-2.0		0-0.5		0-0.5	Percent		1.5-2.0		1.5-2.0
Date	Units	Criterion		4/20/2009		4/20/2009		4/20/2009	Difference		4/20/2009		4/20/2009
Naphthalene[1]	mg/kg	1,070	<	0.02	<	0.02	<	0.02	0%	<	0.02	<	0.02
2-Methylnaphthalene	mg/kg	310		0.03	<	0.02		0.02	0%	<	0.02	<	0.02
Acenaphthylene	mg/kg	None		0.02	<	0.02	<	0.02	0%	<	0.02	<	0.02
Acenaphthene	mg/kg	3,400	<	0.02	<	0.02	<	0.02	0%	<	0.02	<	0.02
Fluorene	mg/kg	2,300	<	0.02	<	0.02	<	0.02	0%	<	0.02	<	0.02
Phenanthrene	mg/kg	None		0.10		0.02		0.03	40%	<	0.02	<	0.02
Anthracene	mg/kg	17,000		0.02	<	0.02	<	0.02	0%	<	0.02	<	0.02
Fluoranthene	mg/kg	1,700		0.19		0.04		0.05	22%	<	0.02	<	0.02
The following PAH compounds are compared			to a VDH of 0.01 mg/kg[PAH] using a Toxic Equivalency Factor in Table 8:										
		Industrial RSL											
Pyrene[PAH]	mg/kg	***17,000***		0.22		0.04		0.05	22%	<	0.02	<	0.02
Benzo[a]anthracene	mg/kg	***20***		0.10	<	0.02		0.02	0%	<	0.02	<	0.02
Chrysene	mg/kg	***210***		0.12		0.02		0.03	40%	<	0.02	<	0.02
Benzo[b]fluoranthene	mg/kg	***20***		0.21		0.04		0.05	22%	<	0.02	<	0.02
Benzo[k]fluoranthene	mg/kg	***21***		0.07	<	0.02	<	0.02	0%	<	0.02	<	0.02
Benzo[a]pyrene	mg/kg	***0.2***		0.12		0.02		0.03	40%	<	0.01	<	0.01
Indeno[1,2,3-cd]pyrene	mg/kg	***20.1***		0.07	<	0.02	<	0.02	0%	<	0.02	<	0.02
Dibenz[a,h]anthracene	mg/kg	***0.2***	<	0.02	<	0.02	<	0.02	0%	<	0.02	<	0.02
Benzo[g,h,i]perylene	mg/kg	***None***		0.06	<	0.02	<	0.02	0%	<	0.02	<	0.02

[1] VDH Value used for screening
[PAH] - PAH toxic equivalent factor applied to compare against VDH criterion (see Table 8); Industrial RSL shown for comparison

Table 8 Toxicity Equivalent PAHs
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Sample ID	B(a)P	SS-WR-01			SS-NR-01			SS-NR-01			SS-NR-02			SS-NR-02		
Sample Depth (Feet)	**TE[1]**	**0-0.5**			**0-0.5**			**1.5-2.0**			**0-0.5**			**1.5-2.0**		
	Factor		**Result**	**B(a)P TE**		**Result**	**B(a)P TE**		**Result**	**B(a)P TE**		**Result**	**B(a)P TE**		**Result**	**B(a)P TE**
		(mg/kg)			**(mg/kg)**			**(mg/kg)**			**(mg/kg)**			**(mg/kg)**		
Benzo(a)anthracene	0.100		0.27	0.03		0.05	0.01	<	0.02	0		0.26	0.03		0.03	0.003
Chrysene	0.001		0.28	0.0003		0.04	0.00004	<	0.02	0		0.24	0.0002		0.02	0.00002
Benzo(b)fluoranthene	0.100		0.4	0.04		0.06	0.01	<	0.02	0		0.33	0.03		0.03	0.003
Benzo(k)fluoranthene	0.010		0.1	0.00		0.02	0.0002	<	0.02	0		0.13	0.0013	<	0.02	0
Benzo(a)pyrene	1.000		0.28	0.28		0.04	0.04	<	0.01	0		0.25	0.25		0.02	0.02
Indeno(1,2,3-cd)pyrene	0.100		0.1	0.01		0.03	0.003	<	0.02	0		0.12	0.01	<	0.02	0
Dibenz(a,h)anthracene	1.000		0.0	0.04	<	0.02	0	<	0.02	0		0.04	0.04	<	0.02	0
Total B(a)P-TE (mg/kg)[2]				**0.40**			**0.05**			0			**0.36**			**0.03**

Sample ID	B(a)P	SS-RR-01			SS-RR-01			SS-RR-02			SS-RR-02			SS-RR-03		
Sample Depth (Feet)	**TE[1]**	**0-0.5**			**1.5-2.0**			**0-0.5**			**1.5-2.0**			**0-0.5**		
	Factor		**Result**	**B(a)P TE**		**Result**	**B(a)P TE**		**Result**	**B(a)P TE**		**Result**	**B(a)P TE**		**Result**	**B(a)P TE**
		(mg/kg)			**(mg/kg)**			**(mg/kg)**			**(mg/kg)**			**(mg/kg)**		
Benzo(a)anthracene	0.100		0.07	0.007		0.04	0.004		0.13	0.013		0.06	0.006		0.25	0.025
Chrysene	0.001		0.05	0.00005		0.03	0.00003		0.13	0.00013		0.07	0.00007		0.30	0.00030
Benzo(b)fluoranthene	0.100		0.07	0.007		0.04	0.004		0.21	0.021		0.11	0.011		0.46	0.046
Benzo(k)fluoranthene	0.010		0.02	0.0002	<	0.02	0		0.06	0.001		0.03	0.000		0.15	0.002
Benzo(a)pyrene	1.000		0.05	0.05		0.03	0.03		0.13	0.13		0.06	0.06		0.30	0.30
Indeno(1,2,3-cd)pyrene	0.100		0.03	0.003	<	0.02	0		0.07	0.007		0.03	0.003		0.15	0.015
Dibenz(a,h)anthracene	1.000	<	0.02	0	<	0.02	0		0.02	0.020	<	0.02	0		0.05	0.05
Total B(a)P-TE (mg/kg)[2]				**0.07**			**0.04**			**0.19**			**0.08**			**0.44**

Sample ID	B(a)P	SS-RR-03			SS-RR-04			SS-RR-04			SS-RR-05			SS-RR-05		
Sample Depth (Feet)	**TE[1]**	**1.5-2.0**			**0-0.5**			**1.5-2.0**			**0-0.5**			**1.5-2.0**		
	Factor		**Result**	**B(a)P TE**		**Result**	**B(a)P TE**		**Result**	**B(a)P TE**		**Result**	**B(a)P TE**		**Result**	**B(a)P TE**
		(mg/kg)			**(mg/kg)**			**(mg/kg)**			**(mg/kg)**			**(mg/kg)**		
Benzo(a)anthracene	0.100		1.1	0.110		0.37	0.037		0.71	0.071		0.78	0.078		1.7	0.170
Chrysene	0.001		1.2	0.00120		0.35	0.00035		0.85	0.00085		0.92	0.0009		2.1	0.0021
Benzo(b)fluoranthene	0.100		1.7	0.170		1.1	0.110		1.2	0.120		1.7	0.170		4.0	0.400
Benzo(k)fluoranthene	0.010		0.49	0.005		0.37	0.004		0.43	0.004		0.55	0.006		1.3	0.013
Benzo(a)pyrene	1.000		1.1	1.10		0.40	0.40		0.58	0.58		1.1	1.10		2.7	2.70
Indeno(1,2,3-cd)pyrene	0.100		0.43	0.043		0.27	0.027		0.23	0.023		0.51	0.051		1.3	0.130
Dibenz(a,h)anthracene	1.000		0.14	0.140		0.09	0.090		0.08	0.080		0.14	0.140		0.36	0.360
Total B(a)P-TE (mg/kg)[2]				**1.57**			**0.67**			**0.88**			**1.55**			**3.78**

Note: Where the result did not exceed the reporting limit, a 0 value has been used in the TE calculation because using 1/2 the reporting limit results in an exceedence of the criterion
[1] = Toxicity Equivalent Factor (TEF) for comparison to benzo(a)pyrene = B(a)P TE
[2] = Total B(a)P TE is the sum of all toxicity equivalents; white text in black cell indicates TE > 0.01 mg/kg Vermont Department of Health criterion

Table 8 Toxicity Equivalent PAHs
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Sample ID	B(a)P		SS-RR-05 (Dup)			SS-RR-05 (Dup)			SS-RR-06			SS-RR-07			SS-RR-07	
Sample Depth (Feet)	TE[1]		0-0.5			1.5-2.0			0-0.5			0-0.5			0.5-1.0	
	Factor		Result	B(a)P TE		Result	B(a)P TE		Result	B(a)P TE		Result	B(a)P TE		Result	B(a)P TE
			(mg/kg)			(mg/kg)			(mg/kg)			(mg/kg)			(mg/kg)	
Benzo(a)anthracene	0.100		1.0	0.100		3.1	0.310		0.09	0.009		0.19	0.019		0.33	0.033
Chrysene	0.001		1.3	0.0013		3.8	0.0038		0.11	0.0001		0.19	0.0002		0.31	0.0003
Benzo(b)fluoranthene	0.100		2.1	0.210		6.5	0.650		0.18	0.018		0.34	0.034		0.51	0.051
Benzo(k)fluoranthene	0.010		0.77	0.0077		2.4	0.0240		0.05	0.001		0.11	0.001		0.15	0.002
Benzo(a)pyrene	1.000		1.5	1.50		4.6	4.60		0.09	0.09		0.26	0.26		0.38	0.38
Indeno(1,2,3-cd)pyrene	0.100		0.87	0.087		2.2	0.220		0.05	0.005		0.14	0.014		0.23	0.023
Dibenz(a,h)anthracene	1.000		0.23	0.23		0.59	0.59	<	0.02	0		0.04	0.040		0.06	0.060
Total B(a)P-TE (mg/kg)[2]				**2.14**			**6.40**			**0.12**			**0.37**			**0.55**

Sample ID	B(a)P		SS-RR-08			SS-RR-08			SS-RR-09			SS-RR-10			SS-RR-10	
Sample Depth (Feet)	TE[1]		0-0.5			1.5-2.0			0-0.5			0-0.5			1.5-2.0	
	Factor		Result	B(a)P TE		Result	B(a)P TE		Result	B(a)P TE		Result	B(a)P TE		Result	B(a)P TE
			(mg/kg)			(mg/kg)			(mg/kg)			(mg/kg)			(mg/kg)	
Benzo(a)anthracene	0.100		0.06	0.006		0.08	0.008		0.08	0.008		0.22	0.022		0.33	0.033
Chrysene	0.001		0.09	0.0001		0.13	0.0001		0.18	0.0002		0.24	0.0002		0.38	0.0004
Benzo(b)fluoranthene	0.100		0.09	0.009		0.17	0.017		0.24	0.024		0.37	0.037		0.53	0.053
Benzo(k)fluoranthene	0.010		0.02	0.0002		0.05	0.0005		0.08	0.0008		0.13	0.0013		0.15	0.0015
Benzo(a)pyrene	1.000		0.05	0.05		0.08	0.08		0.12	0.12		0.25	0.25		0.36	0.36
Indeno(1,2,3-cd)pyrene	0.100		0.03	0.003		0.05	0.005		0.10	0.010		0.17	0.017		0.21	0.021
Dibenz(a,h)anthracene	1.000	<	0.02	0	<	0.02	0		0.03	0.03		0.05	0.05		0.06	0.06
Total B(a)P-TE (mg/kg)[2]				**0.07**			**0.11**			**0.19**			**0.38**			**0.53**

Sample ID	B(a)P		SS-AST-1			SS-AST-1			SS-AST-2			SS-AST-2			SB-08	
Sample Depth (Feet)	TE[1]		0-0.5			1.5-2.0			0-0.5			1.5-2.0			1.5-2.0	
	Factor		Result	B(a)P TE		Result	B(a)P TE		Result	B(a)P TE		Result	B(a)P TE		Result	B(a)P TE
			(mg/kg)			(mg/kg)			(mg/kg)			(mg/kg)			(mg/kg)	
Benzo(a)anthracene	0.100	<	0.02	0.00	<	0.02	0.0000		2.00	0.20		0.52	0.0520	<	0.08	0
Chrysene	0.001		0.02	0.00002		0.23	0.0002		1.30	0.00		0.40	0.0004	<	0.08	0
Benzo(b)fluoranthene	0.100		0.03	0.003		0.08	0.0080		1.40	0.14		0.46	0.0460	<	0.08	0
Benzo(k)fluoranthene	0.010	<	0.02	0.00		0.02	0.0002	<	0.80	0.00		0.15	0.0015	<	0.08	0
Benzo(a)pyrene	1.000		0.02	0.02		0.07	0.0700		1.30	1.30		0.39	0.3900	<	0.08	0
Indeno(1,2,3-cd)pyrene	0.100		0.05	0.005		0.17	0.0170	<	0.80	0.00		0.16	0.0160	<	0.08	0
Dibenz(a,h)anthracene	1.000	<	0.02	0.00		0.03	0.0300	<	0.80	0.00	<	0.07	0.0000	<	0.08	0
Total B(a)P-TE (mg/kg)[2]				**0.03**			**0.13**			**1.64**			**0.51**			0

Note: Where the result did not exceed the reporting limit, a 0 value has been used in the TE calculation because using 1/2 the reporting limit results in an exceedence of the criterion

[1] = Toxicity Equivalent Factor (TEF) for comparison to benzo(a)pyrene = B(a)P TE

[2] = Total B(a)P TE is the sum of all toxicity equivalents; white text in black cell indicates TE > 0.01 mg/kg Vermont Department of Health criterion

Table 8 Toxicity Equivalent PAHs
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Sample ID	B(a)P	MW-1			MW-2			MW-3			MW-4			MW-5		
Sample Depth (Feet)	TE[1]	3.5-4.0			12.0-13.0			13-14			13-14			11-12		
	Factor	Result		B(a)P TE	Result		B(a)P TE	Result		B(a)P TE	Result		B(a)P TE	Result		B(a)P TE
		(mg/kg)			(mg/kg)			(mg/kg)			(mg/kg)			(mg/kg)		
Benzo(a)anthracene	0.100	<	0.02	0	<	0.02	0	<	0.02	0		0.24	0.024	<	0.02	0
Chrysene	0.001	<	0.02	0	<	0.02	0	<	0.02	0		0.29	0.000	<	0.02	0
Benzo(b)fluoranthene	0.100	<	0.02	0	<	0.02	0	<	0.02	0		0.43	0.043	<	0.02	0
Benzo(k)fluoranthene	0.010	<	0.02	0	<	0.02	0	<	0.02	0		0.16	0.002	<	0.02	0
Benzo(a)pyrene	1.000	<	0.01	0	<	0.01	0	<	0.01	0		0.29	0.290	<	0.01	0
Indeno(1,2,3-cd)pyrene	0.100	<	0.02	0	<	0.02	0	<	0.02	0		0.16	0.016	<	0.02	0
Dibenz(a,h)anthracene	1.000	<	0.02	0	<	0.02	0	<	0.02	0		0.04	0.040	<	0.02	0
Total B(a)P-TE (mg/kg)[2]				0			0			0			**0.41**			0

Sample ID	B(a)P	MW-6			MW-7			MW-8			MW-9			SS-T-1		
Sample Depth (Feet)	TE[1]	7.5-8.0			6.5-7.0			7-7.5			4.5-5.0			0-0.5		
	Factor	Result		B(a)P TE	Result		B(a)P TE	Result		B(a)P TE	Result		B(a)P TE	Result		B(a)P TE
		(mg/kg)			(mg/kg)			(mg/kg)			(mg/kg)			(mg/kg)		
Benzo(a)anthracene	0.100		0.04	0.004	<	0.02	0	<	0.02	0		0.28	0.0280		0.23	0.0230
Chrysene	0.001	<	0.04	0	<	0.02	0	<	0.02	0		0.30	0.0003		0.28	0.0003
Benzo(b)fluoranthene	0.100	<	0.04	0	<	0.02	0	<	0.02	0		0.41	0.0410		0.59	0.0590
Benzo(k)fluoranthene	0.010	<	0.04	0	<	0.02	0	<	0.02	0		0.14	0.0014		0.19	0.0019
Benzo(a)pyrene	1.000	<	0.04	0	<	0.01	0	<	0.01	0		0.28	0.2800		0.40	0.4000
Indeno(1,2,3-cd)pyrene	0.100	<	0.04	0	<	0.02	0	<	0.02	0		0.15	0.0150		0.28	0.0280
Dibenz(a,h)anthracene	1.000	<	0.04	0	<	0.02	0	<	0.02	0		0.04	0.0400		0.05	0.0500
Total B(a)P-TE (mg/kg)[2]				0.004			0			0			**0.41**			**0.56**

Sample ID	B(a)P	SS-T-1			SS-T-2			SS-T-2			SS-T-3			SS-T-3 (DUP)		
Sample Depth (Feet)	TE[1]	1.5-2.0			0-0.5			1.5-2.0			0-0.5			0-0.5		
	Factor	Result		B(a)P TE	Result		B(a)P TE	Result		B(a)P TE	Result		B(a)P TE	Result		B(a)P TE
		(mg/kg)			(mg/kg)			(mg/kg)			(mg/kg)			(mg/kg)		
Benzo(a)anthracene	0.100	<	0.02	0		0.13	0.0130	<	0.02	0		0.16	0.0160		0.12	0.0120
Chrysene	0.001	<	0.02	0		0.15	0.0002	<	0.02	0		0.18	0.0002		0.15	0.0002
Benzo(b)fluoranthene	0.100	<	0.02	0		0.29	0.0290	<	0.02	0		0.38	0.0380		0.30	0.0300
Benzo(k)fluoranthene	0.010	<	0.02	0		0.10	0.0010	<	0.02	0		0.13	0.0013		0.10	0.0010
Benzo(a)pyrene	1.000	<	0.01	0		0.21	0.2100	<	0.01	0		0.25	0.2500		0.20	0.2000
Indeno(1,2,3-cd)pyrene	0.100	<	0.02	0		0.13	0.0130	<	0.02	0		0.16	0.0160		0.16	0.0160
Dibenz(a,h)anthracene	1.000	<	0.02	0		0.03	0.0300	<	0.02	0		0.03	0.0300		0.03	0.0300
Total B(a)P-TE (mg/kg)[2]				0			**0.30**			0			**0.35**			**0.29**

Note: Where the result did not exceed the reporting limit, a 0 value has been used in the TE calculation because using 1/2 the reporting limit results in an exceedence of the criterion
[1] = Toxicity Equivalent Factor (TEF) for comparison to benzo(a)pyrene = B(a)P TE
[2] = Total B(a)P TE is the sum of all toxicity equivalents; white text in black cell indicates TE > 0.01 mg/kg Vermont Department of Health criterion

Table 8 Toxicity Equivalent PAHs
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Sample ID	B(a)P	SS-T-3			SS-T-4			SS-T-4			SS-T-5			SS-T-5		
Sample Depth (Feet)	TE[1]	1.5-2.0			0-0.5			1.5-2.0			0-0.5			1.5-2.0		
	Factor	Result		B(a)P TE	Result		B(a)P TE	Result		B(a)P TE	Result		B(a)P TE	Result		B(a)P TE
		(mg/kg)			(mg/kg)			(mg/kg)			(mg/kg)			(mg/kg)		
Benzo(a)anthracene	0.100	<	0.02	0		0.20	0.0200	<	0.02	0		0.18	0.0180		0.08	0.0080
Chrysene	0.001		0.02	0.0000		0.24	0.0002		0.02	0.00002		0.22	0.0002		0.07	0.0001
Benzo(b)fluoranthene	0.100		0.03	0.0030		0.47	0.0470		0.04	0.004		0.46	0.0460		0.11	0.0110
Benzo(k)fluoranthene	0.010	<	0.02	0		0.14	0.0014	<	0.02	0		0.16	0.0016		0.04	0.0004
Benzo(a)pyrene	1.000		0.02	0.0200		0.32	0.3200		0.02	0.02		0.29	0.2900		0.04	0.0400
Indeno(1,2,3-cd)pyrene	0.100	<	0.02	0		0.22	0.0220	<	0.02	0		0.18	0.0180		0.05	0.0050
Dibenz(a,h)anthracene	1.000	<	0.02	0		0.04	0.0400	<	0.02	0		0.04	0.0400	<	0.02	0.0000
Total B(a)P-TE (mg/kg)[2]				0.02			0.45			0.02			0.41			0.06

Sample ID	B(a)P	SS-BB-1			SS-BB-1			SS-PT-3			SS-PT-3 (DUP)			SS-PT-3		
Sample Depth (Feet)	TE[1]	0-0.5			1.5-2.0			0-0.5			0-0.5			1.5-2.0		
	Factor	Result		B(a)P TE	Result		B(a)P TE	Result		B(a)P TE	Result		B(a)P TE	Result		B(a)P TE
		(mg/kg)			(mg/kg)			(mg/kg)			(mg/kg)			(mg/kg)		
Benzo(a)anthracene	0.100		0.05	0.0050		0.10	0.0100	<	0.02	0		0.02	0.0020	<	0.02	0
Chrysene	0.001		0.06	0.0001		0.12	0.0001		0.02	0.00		0.03	0.0000	<	0.02	0
Benzo(b)fluoranthene	0.100		0.11	0.0110		0.21	0.0210		0.04	0.00		0.05	0.0050	<	0.02	0
Benzo(k)fluoranthene	0.010		0.03	0.0003		0.07	0.0007	<	0.02	0	<	0.02	0	<	0.02	0
Benzo(a)pyrene	1.000		0.07	0.0700		0.12	0.1200		0.02	0.02		0.03	0.0300	<	0.01	0
Indeno(1,2,3-cd)pyrene	0.100		0.04	0.0040		0.07	0.0070	<	0.02	0	<	0.02	0	<	0.02	0
Dibenz(a,h)anthracene	1.000	<	0.02	0	<	0.02	0	<	0.02	0	<	0.02	0	<	0.02	0
Total B(a)P-TE (mg/kg)[2]				0.09			0.16			0.02			0.04			0

Sample ID	B(a)P	SS-PT-3 (DUP)		
Sample Depth (Feet)	TE[1]	1.5-2.0		
	Factor	Result		B(a)P TE
		(mg/kg)		
Benzo(a)anthracene	0.100	<	0.02	0
Chrysene	0.001	<	0.02	0
Benzo(b)fluoranthene	0.100	<	0.02	0
Benzo(k)fluoranthene	0.010	<	0.02	0
Benzo(a)pyrene	1.000	<	0.01	0
Indeno(1,2,3-cd)pyrene	0.100	<	0.02	0
Dibenz(a,h)anthracene	1.000	<	0.02	0
Total B(a)P-TE (mg/kg)[2]				0

Mean of SS-NR-01 and SS-NR-02 (0-0.5') = 0.208 mg/kg
Standard deviation = 0.218 mg/kg
95% confidence value = 0.3021 mg/kg

Upper confidence limit for surficial background = 0.51 mg/kg

Note: Where the result did not exceed the reporting limit, a 0 value has been used in the TE calculation because using 1/2 the reporting limit results in an exceedence of the criterion
[1] = Toxicity Equivalent Factor (TEF) for comparison to benzo(a)pyrene = B(a)P TE
[2] = Total B(a)P TE is the sum of all toxicity equivalents; white text in black cell indicates TE > 0.01 mg/kg Vermont Department of Health criterion

Table 9 Metals XRF Soil Screening Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Parameter			Silver		Arsenic		Barium		Cadmium		Cobalt		Chromium		Copper	
Location	**Sample Depth (feet)**	**Date**														
MW-9	2.5-3	4/16/2009	<	37	<	13.0	<	475	<	49	<	195	<	101	<	23
MW-9	7.5-8	4/16/2009	<	68	<	22.0	<	723	<	89	<	230	<	169	<	44
MW-6	1-1.5	4/16/2009	<	64	<	22.0	<	763	<	83	<	281	<	187	<	41
MW-6	7.5-8	4/16/2009	<	48	<	15.0	<	562	<	63	<	227	<	133	<	31
MW-6	11.5-12	4/16/2009	<	109	<	36.0	<	1031	<	134	<	314	<	263	<	67
MW-6*	15-15.5	4/16/2009	<	40	<	12.0		756	<	53	<	210	<	112	<	24
MW-5	3.5-4	4/16/2009	<	220	<	84.0	<	2062	<	246	<	424	<	426	<	182
MW-5*	3.5-4	4/16/2009	<	36		15.0		553	<	47	<	184	<	99		24
MW-5	7.5-8	4/16/2009	<	32	<	9.0	<	368	<	42	<	140	<	79	<	20
MW-5	11.5-12	4/16/2009	<	33	<	10.0	<	389	<	44	<	162	<	92	<	21
MW-5	15.5-16	4/16/2009	<	33	<	10.0		514	<	44	<	154	<	88	<	21
MW-3	0-0.5	4/16/2009	<	34	<	13.0	<	437	<	44	<	167	<	91		78
MW-5	3.5-4	4/16/2009	<	34	<	12.0		602	<	45	<	142	<	90		35
MW-3*	1.5-2	4/16/2009	<	37		76.0	<	547	<	48	<	292		153		123
MW-3	15.5-16	4/16/2009	<	35		35.0	<	480	<	46	<	257		154		38
MW-3	16-20	4/16/2009	<	33	<	11.0		539	<	43	<	182	<	93		37
MW-4	0-0.5	4/16/2009	<	41	<	16.0	<	496	<	54	<	194	<	113	<	26
MW-4	2-2.5	4/16/2009	<	39	<	19.0		841	<	51	<	228		133		38
MW-4	11.5-12	4/16/2009	<	33	<	11.0		445	<	44	<	136	<	83	<	21
MW-4*	15.5-16	4/16/2009	<	36	<	12.0	<	480	<	48	<	215	<	109		45
MW-4	19.5-20	4/16/2009	<	33	<	10.0	<	377	<	44	<	138	<	85	<	20
MW-2	0-0.5	4/16/2009	<	34	<	11.0		453	<	44	<	171	<	93	<	21
MW-2	3-3.5	4/16/2009	<	34	<	10.0	<	416	<	45	<	132	<	88	<	21
MW-2	11.5-12	4/16/2009	<	34	<	10.0	<	400	<	44	<	143	<	88	<	20
MW-2	15.5-16	4/16/2009	<	32	<	9.0	<	373	<	42	<	126	<	74	<	19
MW-2	16-18	4/16/2009	<	38	<	11.0	<	474	<	49	<	198	<	110	<	24
MW-1*	0-0.5	4/16/2009	<	38	<	24.0	<	476	<	50	<	167	<	106	<	23
MW-1	3.5-4	4/16/2009	<	32	<	10.0	<	358	<	43	<	125	<	78		22
MW-1	7.5-8	4/16/2009	<	33	<	10.0	<	354	<	44	<	126	<	85	<	21
MW-1	15.5-16	4/16/2009	<	32	<	10.0	<	331	<	42	<	115		90	<	20
MW-7*	1.5-2	4/16/2009	<	33	<	10.0	<	403	<	43	<	142	<	83	<	21
MW-7	6.5-7	4/16/2009	<	32	<	9.0	<	363	<	43	<	110	<	78	<	20
MW-7	9.5-10	4/16/2009	<	36	<	11.0	<	438	<	48	<	146	<	92	<	21
MW-8*	1.5-2	4/16/2009	<	34	<	12.0	<	447	<	45	<	175	<	96	<	22
MW-8	7-7.5	4/16/2009	<	34	<	11.0		434	<	45	<	164	<	95	<	21

* = Sample selected for laboratory analysis

Table 9 Metals XRF Soil Screening Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Parameter			Iron	Mercury		Manganese		Nickel		Lead		Selenium		Tin		Zinc	
Location	**Sample Depth (feet)**	**Date**															
MW-9	2.5-3	4/16/2009	28358	<	12		531		60		23	<	4	<	77		105
MW-9	7.5-8	4/16/2009	12467	<	24		203	<	59	<	21	<	9	<	143	<	29
MW-6	1-1.5	4/16/2009	19899	<	20		266	<	55		28	<	7	<	132	<	30
MW-6	7.5-8	4/16/2009	23476	<	15		183	<	43	<	15	<	5	<	100		31
MW-6	11.5-12	4/16/2009	10905	<	43	<	215	<	82	<	38	<	13	<	206	<	52
MW-6*	15-15.5	4/16/2009	28106	<	12		476	<	39	<	12	<	5	<	85		43
MW-5	3.5-4	4/16/2009	6988	<	60	<	365	<	169	<	93	<	23	<	356	<	116
MW-5*	3.5-4	4/16/2009	26968	<	10		365		50		27	<	4	<	75		92
MW-5	7.5-8	4/16/2009	19535	<	10		309		56	<	9		4	<	67		47
MW-5	11.5-12	4/16/2009	22763	<	10		307		42		18	<	3	<	70		60
MW-5	15.5-16	4/16/2009	20489	<	10		323	<	32	<	10	<	4	<	70		55
MW-3	0-0.5	4/16/2009	24510	<	10		381	<	32		45	<	4	<	70		251
MW-5	3.5-4	4/16/2009	17505	<	10		299	<	31		26	<	4	<	73		52
MW-3*	1.5-2	4/16/2009	62147	<	14		758		63		223	<	5		117		186
MW-3	15.5-16	4/16/2009	53380	<	11		2100		43	<	11	<	4	<	72		79
MW-3	16-20	4/16/2009	29938	<	10		364		56		17	<	4	<	70		60
MW-4	0-0.5	4/16/2009	22954	<	12		440	<	38		44	<	5	<	86		141
MW-4	2-2.5	4/16/2009	34846	<	13		395	<	40		80	<	5	<	82		84
MW-4	11.5-12	4/16/2009	16526	<	10		216	<	29		19	<	4	<	70		66
MW-4*	15.5-16	4/16/2009	35008	<	10		364	<	38		17	<	4	<	77		85
MW-4	19.5-20	4/16/2009	17294	<	10		262		35	<	9	<	4	<	69		31
MW-2	0-0.5	4/16/2009	25688	<	10		549		36		19	<	4	<	70		77
MW-2	3-3.5	4/16/2009	15112	<	9		332		33		11	<	4	<	72		28
MW-2	11.5-12	4/16/2009	18365	<	10		335		43		11	<	4	<	70		17
MW-2	15.5-16	4/16/2009	15759	<	9		225		39	<	9	<	3	<	67		21
MW-2	16-18	4/16/2009	26454	<	11		332	<	34	<	11	<	4	<	78		16
MW-1*	0-0.5	4/16/2009	19547	<	12		386	<	35		167	<	4	<	81		81
MW-1	3.5-4	4/16/2009	14561	<	10		288		29		14	<	4	<	68		29
MW-1	7.5-8	4/16/2009	14499	<	9		306		46		14	<	3	<	68		20
MW-1	15.5-16	4/16/2009	12256	<	9		231		31		17	<	3	<	68		17
MW-7*	1.5-2	4/16/2009	18265	<	10		300	<	31	<	9	<	4	<	69		29
MW-7	6.5-7	4/16/2009	11607	<	9		138	<	27		10	<	3	<	68		29
MW-7	9.5-10	4/16/2009	16199	<	12		205		39		14	<	4	<	77		38
MW-8*	1.5-2	4/16/2009	26485	<	10		359		66		27	<	3	<	72		279
MW-8	7-7.5	4/16/2009	22796	<	10		381		44		13	<	4	<	72		40

* = Sample selected for laboratory analysis

Table 9 Metals XRF Soil Screening Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Parameter			Silver		Arsenic		Barium		Cadmium		Cobalt		Chromium		Copper	
Location	Sample Depth (feet)	Date														
SS-RR-06	0-0.5	3/24/2009	<	40	<	7	<	5	<	40		15		12		11
SS-RR-03	0-0.5	3/24/2009	<	39	<	7	<	5	<	40	<	14		7		8
SS-RR-05	0-0.5	3/24/2009	<	42		10	<	7	<	43		36		8		16
SS-RR-04	0-0.5	3/24/2009	<	41	<	9	<	6	<	41		35		5		18
SS-RR-07	0-0.5	3/24/2009	<	41		7	<	6	<	42		31		9		14
SS-RR-09	0-0.5	3/24/2009	<	48	<	10	<	9	<	50		32		13		12
SS-RR-07	0-0.5	3/24/2009	<	45	<	9	<	7	<	46		24		10		14
SS-RR-08*	0-0.5	3/24/2009	<	42		24	<	7	<	43	<	23		6		24
SS-RR-10	0-0.5	3/24/2009	<	37	<	6	<	5	<	37		15		9		13
SS-RR-01	0-0.5	3/24/2009	<	30	<	4	<	3	<	30	<	5		6	<	4
SS-NR-01	0-0.5	3/24/2009	<	43	<	7	<	8	<	44		36	<	5		9
SS-BB-01	0-0.5	3/24/2009	<	41	<	7	<	6	<	43	<	16		8		11
SS-BB-02	0-0.5	3/24/2009	<	38	<	7	<	5	<	39		19		7		10
SS-BB-03	0-0.5	3/24/2009	<	44	<	9	<	7	<	46	<	20		9		33
SS-FB-ACM-05*	0-0.5	3/24/2009	<	43	<	9	<	7	<	45		33		9		35
SS-FB-ACM-07	0-0.5	3/24/2009	<	36	<	6	<	4	<	36		13		8		13
SS-FB-ACM-04	0-0.5	3/24/2009	<	43	<	9	<	7	<	45	<	19		10		20
SS-FB-ACM-08	0-0.5	3/24/2009	<	42	<	8	<	7	<	43		30		8		9
SS-FB-ACM-02	0-0.5	3/24/2009	<	42	<	8	<	7	<	43		33		10		13
SS-FB-ACM-05	0-0.5	3/24/2009	<	42	<	9	<	7	<	43	<	20		9		56
SS-FB-ACM-01	0-0.5	3/24/2009	<	44		9	<	7	<	45	<	18		12		11
SS-FB-ACM-03	0-0.5	3/24/2009	<	41	<	8	<	6	<	42		21		8		12
SS-FB-ACM-06	0-0.5	3/24/2009	<	48	<	8	<	8	<	49		39		8		23
SS-CB-02	0-0.5	3/24/2009	<	42	<	8	<	6	<	43	<	15		8		11
SS-CB-01*	0-0.5	3/24/2009	<	40	<	22	<	5	<	41		21		9		44
SS-RR-02 1.5-2.0	0-0.5	3/24/2009	<	55	<	10	<	9	<	57	<	23		17		9
SS-NR-01 1-0.5	0-0.5	3/24/2009	<	56	<	9	<	8	<	56	<	20		18		8
SS-NR-02 1.5-2.0	0-0.5	3/24/2009	<	61	<	10	<	10	<	62	<	26		14	<	8
SS-AST-PCB-01	0-0.5	3/24/2009	<	48	<	9	<	8	<	49	<	21		15		12
SS-SS-PCB-01	0-0.5	3/24/2009	<	58	<	9	<	9	<	59	<	25		15	<	8
SS-SS-PCB-02	0-0.5	3/24/2009	<	41	<	8	<	5	<	40	<	13		6		9
SS-SS-PCB-03*	0-0.5	3/24/2009	<	49		67	<	9	<	49	<	27		10		11

* = Sample selected for laboratory analysis

Table 9 Metals XRF Soil Screening Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Location	Sample Depth (feet)	Date	Iron	Mercury	Manganese	Nickel	Lead	Selenium	Tin	Zinc
SS-RR-06	0-0.5	3/24/2009	1085	7	14	< 6	25	9	56	20
SS-RR-03	0-0.5	3/24/2009	1284	9	17	8	26	12	54	27
SS-RR-05	0-0.5	3/24/2009	2677	11	17	8	46	15	72	30
SS-RR-04	0-0.5	3/24/2009	2921	7	14	< 7	46	12	45	18
SS-RR-07	0-0.5	3/24/2009	1901	11	19	10	22	17	84	15
SS-RR-09	0-0.5	3/24/2009	3999	8	21	14	36	9	86	45
SS-RR-07	0-0.5	3/24/2009	2052	9	17	8	32	15	73	36
SS-RR-08*	0-0.5	3/24/2009	3134	11	13	12	165	15	78	49
SS-RR-10	0-0.5	3/24/2009	1083	6	12	< 5	29	13	68	23
SS-RR-01	0-0.5	3/24/2009	206	3	< 3	< 4	13	8	49	10
SS-NR-01	0-0.5	3/24/2009	2516	8	18	10	21	11	60	31
SS-BB-01	0-0.5	3/24/2009	1452	6	21	7	20	12	65	33
SS-BB-02	0-0.5	3/24/2009	1134	8	15	< 6	28	11	53	59
SS-BB-03	0-0.5	3/24/2009	2133	10	23	9	38	15	< 45	62
SS-FB-ACM-05*	0-0.5	3/24/2009	2230	14	19	< 7	43	15	67	734
SS-FB-ACM-07	0-0.5	3/24/2009	857	7	10	6	30	14	77	29
SS-FB-ACM-04	0-0.5	3/24/2009	2046	11	21	12	40	13	65	57
SS-FB-ACM-08	0-0.5	3/24/2009	1833	10	24	13	32	14	67	86
SS-FB-ACM-02	0-0.5	3/24/2009	1919	11	18	7	33	17	65	32
SS-FB-ACM-05	0-0.5	3/24/2009	2287	16	12	10	46	11	56	792
SS-FB-ACM-01	0-0.5	3/24/2009	1726	9	23	11	22	17	65	21
SS-FB-ACM-03	0-0.5	3/24/2009	1749	12	20	11	38	16	51	31
SS-FB-ACM-06	0-0.5	3/24/2009	3565	13	45	9	21	13	< 49	65
SS-CB-02	0-0.5	3/24/2009	1334	8	18	7	31	13	82	29
SS-CB-01*	0-0.5	3/24/2009	1825	20	24	9	378	21	244	221
SS-RR-02 1.5-2.0	0-0.5	3/24/2009	1991	11	41	< 9	25	14	< 57	13
SS-NR-01 1-0.5	0-0.5	3/24/2009	1371	9	23	< 8	15	11	72	27
SS-NR-02 1.5-2.0	0-0.5	3/24/2009	2041	10	19	< 9	19	11	89	16
SS-AST-PCB-01	0-0.5	3/24/2009	2013	6	13	< 7	26	11	94	72
SS-SS-PCB-01	0-0.5	3/24/2009	1962	7	18	10	18	10	< 59	15
SS-SS-PCB-02	0-0.5	3/24/2009	970	4	15	< 6	33	8	< 38	93
SS-SS-PCB-03*	0-0.5	3/24/2009	3021	13	23	14	292	15	< 46	91

* = Sample selected for laboratory analysis

Table 10 Metals Soil Laboratory Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Sample ID		**RSL or VDH Criterion**		**SS-RR-08**		**Sub Slab 2**		**SS-CB-01**		**SS-WR-01**		**SS-FB-05**		**SS-SS-03**
Sample Depth (Feet)				**0-0.5**		**0-0.5**		**0-0.5**		**0-0.5**		**0-0.5**		**0-0.5**
Date				**3/23/2009**		**3/24/2009**		**3/23/2009**		**3/24/2009**		**3/23/2009**		**3/24/2009**
Parameter														
Aluminum	mg/kg	77,000		4,600		4,100		6,500		11,000		6,700		5,300
Antimony	mg/kg	31.0	<	1	<	1	<	1	<	1	<	1	<	1
Arsenic*	mg/kg	12		4.5		1.8		4.7		4.3		4.4		4.1
Barium	mg/kg	15,000		42		10		62		68		47		130
Beryllium	mg/kg	160.0	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Cadmium [1]	mg/kg	34.5	<	0.5	<	0.5		1.1	<	0.5		1.4		0.6
Chromium	mg/kg	280		7.5		9.3		19		16		14		13
Cobalt	mg/kg	23		5.0		17		4.9		7.7		4.7		5.1
Copper	mg/kg	3,100		17		7.4		37		20		93		41
Iron	mg/kg	55,000		13,000		8,400		13,000		18,000		18,000		15,000
Lead	mg/kg	400		110		4		290		28		88		**700**
Manganese	mg/kg	1,800		210		120		260		360		200		230
Mercury	mg/kg	0.67	<	0.1	<	0.1	<	0.1		0.1		**3.7**		0.1
Nickel	mg/kg	1,600		11		14		13		18		14		42
Selenium	mg/kg	390	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Silver	mg/kg	39	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Thallium	mg/kg	5.1	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Tin	mg/kg	47,000		1.8		0.3		18		1.4		1.5		4.8
Vanadium	mg/kg	390		9.1		8.8		12		21		16		180
Zinc	mg/kg	23,000		69		24		150		110		2,100		190

* = Typical Vermont background arsenic value of 12 mg/kg used as a screening level
White text/black cell = Result exceeds screening criterion
1 =VDH Value Applied; RSL Action Limit Applied for all other compounds

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Table 10 Metals Soil Laboratory Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Sample ID		**RSL or VDH Criterion**	**MW-1**		**MW-2**		**MW-3**		**MW-4**		**MW-5**		**MW-6**	
Sample Depth (Feet)			**0-0.5**		**16-18**		**1.5-2.0**		**15.5-16.0**		**3.5-4.0**		**15-15.5**	
Date			**4/16/2009**		**4/16/2009**		**4/16/2009**		**4/16/2009**		**4/16/2009**		**4/16/2009**	
Parameter														
Aluminum	mg/kg	77,000		5,700		4,600		7,500		18,000		13,000		11,000
Antimony	mg/kg	31.0	<	1	<	1	<	1	<	1	<	1	<	1
Arsenic*	mg/kg	12		4.9		9.0		43		6.5		4.9		2.8
Barium	mg/kg	15,000		31		14		200		93		59		38
Beryllium	mg/kg	160.0	<	0.5	<	0.5		1.2		0.6	<	0.5	<	0.5
Cadmium [1]	mg/kg	34.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Chromium	mg/kg	280		12		17		11		29		19		17
Cobalt	mg/kg	23		4.8		6.9		5.7		12.0		8.0		7.0
Copper	mg/kg	3,100		11		15		49		25		21		13
Iron	mg/kg	55,000		13,000		18,000		15,000		26,000		19,000		20,000
Lead	mg/kg	400		160		5		72		12		25		6
Manganese	mg/kg	1,800		240		190		330		330		310		440
Mercury	mg/kg	0.67		0.1		0.1		0.1		0.1		0.2	<	0.1
Nickel	mg/kg	1,600		13		20		12		28		21		15
Selenium	mg/kg	390	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Silver	mg/kg	39	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Thallium	mg/kg	5.1	<	0.5	<	0.5		1.0	<	0.5	<	0.5	<	0.5
Tin	mg/kg	47,000		1.6	<	0.2		4.2		0.43		2.6		0.28
Vanadium	mg/kg	390		13		17		20		30		23		10
Zinc	mg/kg	23,000		52		20		75		79		71		19

* = Typical Vermont background arsenic value of 12 mg/kg used as a screening level
White text/black cell = Result exceeds screening criterion
1 =VDH Value Applied; RSL Action Limit Applied for all other compounds

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Table 10 Metals Soil Laboratory Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Sample ID		RSL or VDH Criterion	MW-7		MW-8		MW-9		SS-T-1		SS-T-1		SS-T-2	
Sample Depth (Feet)			1.5-2.0		1.5-2.0		2.5-3.0		0-0.5		1.5-2.0		0-0.5	
Date			4/16/2009		4/16/2009		4/16/2009		4/20/2009		4/20/2009		4/20/2009	
Parameter														
Aluminum	mg/kg	77,000		8,800		8,100		6,900		3,800		3,800		3,800
Antimony	mg/kg	31.0	<	1	<	1	<	1	<	0.5	<	0.5	<	0.5
Arsenic*	mg/kg	12		3.6		7.0		3.5		2.4		4.8		4.1
Barium	mg/kg	15,000		35		55		31		19		11		17
Beryllium	mg/kg	160.0	<	0.5		0.6	<	0.5	<	0.5	<	0.5	<	0.5
Cadmium [1]	mg/kg	34.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Chromium	mg/kg	280		15		13		12		7.7		8.7		8.0
Cobalt	mg/kg	23		6.8		6.8		5.4		3.5		5.2		4.8
Copper	mg/kg	3,100		12		15		10		8.7		11		12
Iron	mg/kg	55,000		16,000		13,000		14,000		9200		9,600		9,100
Lead	mg/kg	400		5		28		9		18		4.5		11.0
Manganese	mg/kg	1,800		280		240		290		210		230		210
Mercury	mg/kg	0.67	<	0.1	<	0.1	<	0.1	<	0.1	<	0.1	<	0.1
Nickel	mg/kg	1,600		19		16		13		9.2		16		13
Selenium	mg/kg	390	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Silver	mg/kg	39	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Thallium	mg/kg	5.1	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Tin	mg/kg	47,000		0.29		2.0		0.49		0.5	<	0.2		0.3
Vanadium	mg/kg	390		16		16		14		7.7		8.5		7.9
Zinc	mg/kg	23,000		29		96		81		46.0		23		30

* = Typical Vermont background arsenic value of 12 mg/kg used as a screening level
White text/black cell = Result exceeds screening criterion
1 =VDH Value Applied; RSL Action Limit Applied for all other compounds

Table 10 Metals Soil Laboratory Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Sample ID		**RSL or**	**SS-T-2**		**SS-T-3**		**SS-T-3 (DUP)**		**Relative**	**SS-T-3**		**SS-T-4**	
Sample Depth (Feet)		**VDH**	**1.5-2.0**		**0-0.5**		**0-0.5**		**Percent**	**1.5-2.0**		**0-0.5**	
Date		**Criterion**	**4/20/2009**		**4/20/2009**		**4/20/2009**		**Difference**	**4/20/2009**		**4/20/2009**	
Parameter													
Aluminum	mg/kg	77,000		3,100		4,000		3,700	**45%**		3,300		4,500
Antimony	mg/kg	31.0	<	0.5	<	0.5	<	0.5	**0%**	<	0.5	<	0.5
Arsenic*	mg/kg	12		5.0		3.5		4.2	**85%**		5.0		3.1
Barium	mg/kg	15,000		8		16		14	**41%**		8		26
Beryllium	mg/kg	160.0	<	0.5	<	0.5	<	0.5	**0%**	<	0.5	<	0.5
Cadmium [1]	mg/kg	34.5	<	0.5	<	0.5	<	0.5	**0%**	<	0.5	<	0.5
Chromium	mg/kg	280		8.2		10.0		8.2	**55%**		7.5		8.4
Cobalt	mg/kg	23		4.9		4.4		4.2	**60%**		4.7		4.1
Copper	mg/kg	3,100		10		11		12	**34%**		12		11
Iron	mg/kg	55,000		8,000		9,200		9,200	**51%**		8,200		10,000
Lead	mg/kg	400		3.2		10.0		8.5	**63%**		3.1		20.0
Manganese	mg/kg	1,800		220		210		170	**156%**		240		190
Mercury	mg/kg	0.67	<	0.1	<	0.1	<	0.1	**0%**	<	0.1	<	0.1
Nickel	mg/kg	1,600		16		13		14	**44%**		15		17
Selenium	mg/kg	390	<	0.5	<	0.5	<	0.5	**0%**	<	0.5	<	0.5
Silver	mg/kg	39	<	0.5	<	0.5	<	0.5	**0%**	<	0.5	<	0.5
Thallium	mg/kg	5.1	<	0.5	<	0.5	<	0.5	**0%**	<	0.5	<	0.5
Tin	mg/kg	47,000	<	0.2		0.3		0.3	**7%**	<	0.2		0.4
Vanadium	mg/kg	390		6.8		8.1		7.7	**30%**		7.1		8.8
Zinc	mg/kg	23,000		18		31		28	**31%**		18		56

* = Typical Vermont background arsenic value of 12 mg/kg used as a screening level
White text/black cell = Result exceeds screening criterion
1 =VDH Value Applied; RSL Action Limit Applied for all other compounds

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Table 10 Metals Soil Laboratory Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Sample ID		**RSL or VDH Criterion**		**SS-T-4**		**SS-T-5**		**SS-T-5**
Sample Depth (Feet)				**1.5-2.0**		**0-0.5**		**1.5-2.0**
Date				**4/20/2009**		**4/20/2009**		**4/20/2009**
Parameter								
Aluminum	mg/kg	77,000		14,000		7,600		12,000
Antimony	mg/kg	31.0	<	0.5	<	0.5	<	0.5
Arsenic*	mg/kg	12		4.1		3.0		7.4
Barium	mg/kg	15,000		63		39		59
Beryllium	mg/kg	160.0	<	0.5	<	0.5	<	0.5
Cadmium [1]	mg/kg	34.5	<	0.5	<	0.5	<	0.5
Chromium	mg/kg	280		19.0		12.0		21.0
Cobalt	mg/kg	23		10.0		5.1		9.5
Copper	mg/kg	3,100		14		12		17
Iron	mg/kg	55,000		24,000		13,000		22,000
Lead	mg/kg	400		8.0		23.0		12.0
Manganese	mg/kg	1,800		480		**2,540**		310
Mercury	mg/kg	0.67	<	0.1	<	0.1	<	0.1
Nickel	mg/kg	1,600		26		16		25
Selenium	mg/kg	390	<	0.5	<	0.5	<	0.5
Silver	mg/kg	39	<	0.5	<	0.5	<	0.5
Thallium	mg/kg	5.1	<	0.5	<	0.5	<	0.5
Tin	mg/kg	47,000		0.3		0.6		0.5
Vanadium	mg/kg	390		21.0		14.0		19.0
Zinc	mg/kg	23,000		63		43		59

* = Typical Vermont background arsenic value of 12 mg/kg used as a screening level
White text/black cell = Result exceeds screening criterion
1 =VDH Value Applied; RSL Action Limit Applied for all other compounds

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Table 11 Metals XRF Soil Screening Compared to Laboratory Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Sample ID		SS-RR-08			SS-CB-01			MW-1			MW-2		
Sample Depth (Feet)		0-0.5			0-0.5			0-0.5			16-18		
Date		3/23/2009			3/23/2009			4/16/2009			4/16/2009		
		LAB	XRF	RPD	LAB	XRF	RPD	LAB	XRF	RPD	LAB	XRF	RPD
Parameter													
Arsenic	mg/kg	4.5	24.5	138%	4.7	< 22.2	130%	4.9	< 24.0	132%	9.0	< 11.0	20%
Barium	mg/kg	42	< 7	146%	62	< 5	168%	31	< 476	176%	14	453	188%
Cadmium	mg/kg	< 0.5	< 43.0	195%	1.1	< 41	190%	< 0.5	< 50.0	196%	< 0.5	< 49.0	196%
Chromium	mg/kg	7.5	6.0	22%	19	9	71%	12	< 106	159%	17	< 110	146%
Cobalt	mg/kg	5.0	< 23.0	129%	4.9	21.0	124%	4.8	< 167.0	189%	6.9	< 198.0	187%
Copper	mg/kg	17	24	34%	37	< 44	17%	11	< 23	71%	15	< 24	46%
Iron	mg/kg	13,000	3,134	122%	13,000	1,825	151%	13,000	19,547	40%	18,000	26,454	38%
Lead	mg/kg	110	165	40%	290	378	26%	160	167	4%	5	< 11	78%
Manganese	mg/kg	210	13	177%	260	24	166%	240	386	47%	190	332	54%
Mercury	mg/kg	< 0.1	11.0	196%	< 0.1	20.0	198%	0.1	< 12.0	197%	0.1	< 11.0	196%
Nickel	mg/kg	11	12	9%	13	9	36%	13	< 35	92%	20	< 34	52%
Selenium	mg/kg	< 0.5	15.0	187%	< 0.5	21.0	191%	< 0.5	< 4.0	156%	< 0.5	< 4.0	156%
Silver	mg/kg	< 0.5	< 42.0	195%	< 0.5	< 39.9	195%	< 0.5	< 38.0	195%	< 0.5	< 38.0	195%
Tin	mg/kg	1.8	78.0	191%	18	244	173%	1.6	< 81.0	192%	< 0.2	< 78.0	199%
Zinc	mg/kg	69	49	34%	150	221	38%	52	81	44%	20	16	22%

Sample ID		SS-FB-05			SS-SS-03			MW-3			MW-4		
Sample Depth (Feet)		0-0.5			0-0.5			1.5-2.0			15.5-16.0		
Date		3/23/2009			3/24/2009			4/16/2009			4/16/2009		
		LAB	XRF	RPD	LAB	XRF	RPD	LAB	XRF	RPD	LAB	XRF	RPD
Parameter													
Arsenic	mg/kg	4.4	< 9.2	71%	4.1	66.7	177%	43	76	55%	6.5	< 12.0	59%
Barium	mg/kg	47	< 7	148%	130	< 9	175%	200	< 547	93%	93	< 480	135%
Cadmium	mg/kg	1.4	< 45.0	188%	0.6	< 49.0	195%	< 0.5	< 48.0	196%	< 0.5	< 48.0	196%
Chromium	mg/kg	14	9	43%	13	10	26%	11	153	173%	29	< 109	116%
Cobalt	mg/kg	4.7	33.0	150%	5.1	< 27.0	136%	5.7	292.0	192%	12.0	< 215.0	179%
Copper	mg/kg	93	35	91%	41	11	115%	49	123	86%	25	45	57%
Iron	mg/kg	18,000	2,230	156%	15,000	3,021	133%	15,000	62,147	122%	26,000	35,008	30%
Lead	mg/kg	88	43	69%	700	292	82%	72	223	102%	12	17	34%
Manganese	mg/kg	200	19	165%	230	23	164%	330	758	79%	330	364	10%
Mercury	mg/kg	3.7	14.0	116%	0.1	13.0	197%	0.1	< 14.0	197%	0.1	< 10.0	196%
Nickel	mg/kg	14	< 7	67%	42	14	100%	12	63	136%	28	< 38	30%
Selenium	mg/kg	< 0.5	15.0	187%	< 0.5	15.0	187%	< 0.5	< 5.0	164%	< 0.5	< 4.0	156%
Silver	mg/kg	< 0.5	< 43.3	195%	< 0.5	< 49.2	196%	< 0.5	< 37.0	195%	< 0.5	< 39.0	195%
Tin	mg/kg	1.5	67.0	191%	4.8	< 46.0	162%	4.2	117.0	186%	0.43	< 77.00	198%
Zinc	mg/kg	2,100	734	96%	190	91	70%	75	186	85%	79	85	7%

Table 11 Metals XRF Soil Screening Compared to Laboratory Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Sample ID		**MW-5**					**MW-6**					**MW-9**				
Sample Depth (Feet)		**3.5-4.0**					**15-15.5**					**2.5-3.0**				
Date		**4/16/2009**					**4/16/2009**					**4/16/2009**				
			LAB		**XRF**	**RPD**		**LAB**		**XRF**	**RPD**		**LAB**		**XRF**	**RPD**
Parameter																
Arsenic	mg/kg		4.9		15.0	102%		2.8	<	12.0	124%		3.5	<	13.0	115%
Barium	mg/kg		59		553	161%		38		756	181%		31	<	475	175%
Cadmium	mg/kg	<	0.5	<	47.0	196%	<	0.5	<	53.0	196%	<	0.5	<	49.0	196%
Chromium	mg/kg		19	<	99	136%		17	<	112	147%		12	<	101	158%
Cobalt	mg/kg		8.0	<	184.0	183%		7.0	<	210.0	187%		5.4	<	195.0	189%
Copper	mg/kg		21		24	13%		13	<	24	59%		10	<	23	80%
Iron	mg/kg		19,000		26,968	35%		20,000		28,106	34%		14,000		28,358	68%
Lead	mg/kg		25		27	8%		6	<	12	73%		9		23	86%
Manganese	mg/kg		310		365	16%		440		476	8%		290		531	59%
Mercury	mg/kg		0.2	<	10.0	192%	<	0.1	<	12.0	197%	<	0.1	<	12.0	197%
Nickel	mg/kg		21		50	82%		15	<	39	89%		13		60	129%
Selenium	mg/kg	<	0.5	<	4.0	156%	<	0.5	<	5.0	164%	<	0.5	<	4.0	156%
Silver	mg/kg	<	0.5	<	36.0	195%	<	0.5	<	36.0	195%	<	0.5	<	37.0	195%
Tin	mg/kg		2.6	<	75.0	187%		0.28	<	85.00	199%		0.49	<	77.0	197%
Zinc	mg/kg		71		92	26%		19		43	77%		81		105	26%

Sample ID		**MW-7**					**MW-8**				
Sample Depth (Feet)		**1.5-2.0**					**1.5-2.0**				
Date		**4/16/2009**					**4/16/2009**				
			LAB		**XRF**	**RPD**		**LAB**		**XRF**	**RPD**
Parameter											
Arsenic	mg/kg		3.6	<	10.0	94%		7.0	<	12.0	53%
Barium	mg/kg		35	<	403	168%		55	<	447	156%
Cadmium	mg/kg	<	0.5	<	43.0	195%	<	0.5	<	45.0	196%
Chromium	mg/kg		15	<	83	139%		13	<	96	152%
Cobalt	mg/kg		6.8	<	142.0	182%		6.8	<	175.0	185%
Copper	mg/kg		12	<	21	55%		15	<	22	38%
Iron	mg/kg		16,000		18,265	13%		13,000		26,485	68%
Lead	mg/kg		5	<	9	54%		28		27	4%
Manganese	mg/kg		280		300	7%		240		359	40%
Mercury	mg/kg	<	0.1	<	10.0	196%	<	0.1	<	10.0	196%
Nickel	mg/kg		19	<	31	48%		16		66	122%
Selenium	mg/kg	<	0.5	<	4.0	156%	<	0.5	<	3.0	143%
Silver	mg/kg	<	0.5	<	33.0	194%	<	0.5	<	34.0	194%
Tin	mg/kg		0.29	<	69.00	198%		2.0	<	72.0	189%
Zinc	mg/kg		29		29	0%		96		279	98%

Table 12 SVOC Soil Results

Richmond Creamery, Richmond, VT

JCO Project #1-0346-3

Sample ID		RSL or VDH	SS-WR-01		SB-08		MW-2		MW-3		MW-4		MW-5		MW-6		MW-7	
Sample Depth (Feet)		Criterion	0-0.5		1.5-2.0		12-13		13-14		13-14		11-12		7.5-8.0		6.5-7.0	
Date	Units	(mg/kg)	3/24/2009		4/15/2009		4/14/2009		4/14/2009		4/14/2009		4/14/2009		4/15/2009		4/15/2009	
Parameter																		
Phenol	mg/kg	18,000	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
2-Chlorophenol	mg/kg	390	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
2,4-Dichlorophenol	mg/kg	180	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
2,4,5-Trichlorophenol	mg/kg	6,100	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
2,4,6-Trichlorophenol	mg/kg	44	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
Pentachlorophenol	mg/kg	3	<	1.0	<	4.0	<	1.0	<	1.0	<	1.0	<	1.0	<	2.0	<	1.0
2-Nitrophenol	mg/kg	None	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
4-Nitrophenol	mg/kg	None	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
2,4-Dinitrophenol	mg/kg	120	<	1.0	<	20.0	<	1.0	<	1.0	<	1.0	<	1.0	<	10.0	<	1.0
2-Methylphenol (o-Cresol)	mg/kg	3,100	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
3/4-Methylphenol (m,p-Cresol)	mg/kg	310	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
2,4-Dimethylphenol	mg/kg	1,200	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
4-Chloro-3-methylphenol	mg/kg	None	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
4,6-Dinitro-2-methylphenol	mg/kg	6.1	<	1.0	<	4.0	<	1.0	<	1.0	<	1.0	<	1.0	<	2.0	<	1.0
Benzoic Acid	mg/kg	240,000	<	1.0		7.0	<	1.0	<	1.0	<	1.0	<	1.0	<	2.0	<	1.0
N-Nitrosodimethylamine	mg/kg	0.0023*	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
n-Nitroso-di-n-propylamine	mg/kg	0.069*	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
n-Nitrosodiphenylamine	mg/kg	99	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
bis(2-Chloroethyl)ether	mg/kg	0.19*	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
bis(2-chloroisopropyl)ether	mg/kg	3.5	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
bis(2-Chloroethoxy)methane	mg/kg	180	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
1,3-Dichlorobenzene	mg/kg	None	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
1,4-Dichlorobenzene	mg/kg	2.6	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
1,2-Dichlorobenzene	mg/kg	2,000	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
1,2,4-Trichlorobenzene	mg/kg	87	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
2-Chloronaphthalene	mg/kg	6,300	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
4-Chlorophenyl-phenylether	mg/kg	None	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
4-Bromophenyl-phenylether	mg/kg	None	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
Hexachloroethane	mg/kg	35	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
Hexachlorobutadiene	mg/kg	6.2	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
Hexachlorocyclopentadiene	mg/kg	370	<	1.0	<	4.0	<	1.0	<	1.0	<	1.0	<	1.0	<	2.0	<	1.0
Hexachlorobenzene	mg/kg	0.3	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
4-Chloroaniline	mg/kg	9	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
2-Nitroaniline	mg/kg	None	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
3-Nitroaniline	mg/kg	18	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
4-Nitroaniline	mg/kg	23	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
Benzyl alcohol	mg/kg	31,000	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
Nitrobenzene	mg/kg	31	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
Isophorone	mg/kg	510	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
2,4-Dinitrotoluene	mg/kg	120	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
2,6-Dinitrotoluene	mg/kg	61	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
Benzidine	mg/kg	0.0005	<	0.4	<	0.8	<	0.4	<	0.4	<	0.4	<	0.4	<	0.4	<	0.4
3,3'-Dichlorobenzidine	mg/kg	1.1	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
Pyridine	mg/kg	78	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
Azobenzene	mg/kg	4.9	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
Carbazole	mg/kg	None	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
Dimethylphthalate	mg/kg	None	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
Diethylphthalate	mg/kg	49,000	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
Di-n-butylphthalate (Dibutyl phtl	mg/kg	6,100	<	0.5	<	0.8	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5	<	0.5
Butylbenzylphthalate	mg/kg	260	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
bis(2-Ethylhexyl)phthalate [1]	mg/kg	19.2	<	1.0	<	1.0	<	1.0	<	1.0	<	1.0	<	1.0	<	1.0	<	1.0
Di-n-octylphthalate	mg/kg	None	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2
Dibenzofuran	mg/kg	None	<	0.3	<	0.8	<	0.2	<	0.2	<	0.2	<	0.2	<	0.4	<	0.2

* = Laboratory reporting limit exceeds screening level

[1] =VDH Value Applied; RSL Action Limit Applied for all other compounds

Table 13 Pesticide Soil Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Parameter		RSL Criterion	SS-PS-01		SS-PS-02	
Sample Depth (feet)			0-0.5		0-0.5	
Date	Units	(mg/kg)	3/23/2009		3/23/2009	
Parameter						
Aldrin	mg/kg	0.0029	<	0.01	<	0.01
alpha-BHC (alpha-hexachlorocyclohexane)	mg/kg	0.077	<	0.01	<	0.01
beta-BHC (beta-hexachlorocyclohexane)	mg/kg	0.27	<	0.01	<	0.01
Lindane (gamma-BHC)	mg/kg	0.52	<	0.01	<	0.01
delta-BHC	mg/kg	0.27	<	0.01	<	0.01
Chlordane	mg/kg	1.6	<	0.1	<	0.1
4,4'-DDT	mg/kg	1.7	<	0.01	<	0.01
4,4'-DDE	mg/kg	1.4	<	0.01	<	0.01
4,4'-DDD	mg/kg	2.0	<	0.01	<	0.01
Dieldrin*	mg/kg	0.03	<	0.01	<	0.01
Endosulfan I	mg/kg	370	<	0.01	<	0.01
Endosulfan II	mg/kg	370	<	0.01	<	0.01
Endosulfan Sulfate	mg/kg	370	<	0.01	<	0.01
Endrin	mg/kg	18	<	0.01	<	0.01
Endrin Aldehyde	mg/kg	18	<	0.01	<	0.01
Endrin Ketone	mg/kg	18	<	0.01	<	0.01
Heptachlor	mg/kg	0.11	<	0.01	<	0.01
Heptachlor Epoxide*	mg/kg	0.053	<	0.01	<	0.01
Methoxychlor	mg/kg	310	<	0.01	<	0.01
Toxaphene*	mg/kg	0.44	<	0.10	<	0.10

* = Laboratory reporting limit exceeds screening level

Table 14 Asbestos Soil Results
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

Parameter	SS-RR-01	SS-RR-04	SS-RR-05*	SS-RR-08	SS-RR-09	SS-FB-ACM-01	SS-FB-ACM-02	SS-FB-ACM-03
Sample Depth (feet)	**0-0.5**	**0-0.5**	**0-0.5**	**0-0.5**	**0-0.5**	**0-0.5**	**0-0.5**	**0-0.5**
Date	**3/23/2009**	**3/23/2009**	**3/23/2009**	**3/23/2009**	**3/23/2009**	**3/23/2009**	**3/23/2009**	**3/23/2009**
Asbestos	ND	ND	ND	ND	ND	ND	ND	ND

Paramater	SS-FB-ACM-04	SS-FB-ACM-05*	SS-FB-06	SS-FB-07	SS-FB-08	SS-CB-01	SS-CB-02
Sample Depth (feet)	**0-0.5**	**0-0.5**	**0-0.5**	**0-0.5**	**0-0.5**	**0-0.5**	**0-0.5**
Date	**3/23/2009**	**3/23/2009**	**3/23/2009**	**3/23/2009**	**3/23/2009**	**3/23/2009**	**3/23/2009**
Asbestos	ND	ND	ND	ND	ND	ND	ND

Chrysotile was reported as "Present" in TEM Results for both samples SS-FB-ACM-05 and SS-RR-05

Table 15 Groundwater Elevation Levels
Richmond Creamery, Richmond, VT
JCO Project #1-0346-3

		4/20/2009		5/15/2009	
Well	**Top of Casing Elevation (ft)**	**Depth To Water (ft)**	**Groundwater Elevation (ft)**	**Depth To Water (ft)**	**Groundwater Elevation (ft)**
MW-1	101.64	11.88	89.76	11.78	89.86
MW-2	100.00	10.66	89.34	10.62	89.38
MW-3	91.26	18.56	72.70	18.52	72.74
MW-4	89.23	17.14	72.09	16.93	72.30
MW-5	79.53	6.42	73.11	6.3	73.23
MW-6	81.93	6.32	75.61	7.25	74.68
MW-7	91.15	6.48	84.67	5.93	85.22
MW-8	83.54	4.98	78.56	4.92	78.62
MW-9	78.14	5.52	72.62	7.11	71.03

Note: All elevations are measured off an arbitrary top of casing datum of
MW-2 TOC = 100'

APPENDIX 3

COST ESTIMATION SPREADSHEETS

Appendix 3
General Cost Estimation Assumptions
Former Richmond Creamery, Richmond, Vermont
JCO #: 1-0346-3

General Cost Estimation Assumptions:

1. *Easy access is provided to contractor for the work.*
2. *Pricing does not include any federal, state or local taxes.*
3. *A representative must be present for the signing of all shipping documents.*
4. *Work will conform to all local, state, and federal regulations.*
5. *Pricing is subject to facility's approval of waste streams*
6. *Estimates are for planning purposes only.*
7. *Assumes that fall protection or confined space is not needed for the work.*
8. *JCO includes 10% surcharge on subcontractor fees, this can be omitted should the property owner elect to act as the General Contractor and contract directly with subcontractors.*
9. *Subcontractor fees are based on quotes received between Jan - March 2012*
10. *In order to present a conservative cost estimate the* ***highest subcontractor estimate*** *was selected for each task and a 15% contingency was added to the bid value in anticipation of overages.*

12 *The costs provided are based on current rental, labor, material, and disposal rates.*

Appendix 3
Cost Estimates by REC
Former Richmond Creamery, Richmond, Vermont
JCO #: 1-0346-3

Description	Billing Rate/Unit		# Units	Units	Est. Cost	Notes
1.0 Asbestos, Lead, and Mold (REC #1)						
See assumptions presented in ACM Abatement quotes						
Assumes cost does not include: oversight by JCO, monitoring and additional building evaluation by the structural engineer, or contingency for overages,						
JCO Oversight						
Project Sci/Eng IV	$80	hr	24	hrs	$1,920	review and oversight
Staff Sci/Eng II	$68	hr	24	hrs	$1,632	oversight of well closure
Communications fee		each	1	each	$53	1.5% of JCO labor
Mileage	$0.51	mile	168	miles	$86	3 RTs
Sub-contractor Costs						
ACM Professional Consulting	$13,000	event	1	event	$13,000	includes additional inspection, project design, permitting, workplan, air monitoring, oversight by ACM contractor only
ACM Abatement (no demo)	$97,000	event	1	event	$97,000	
Demolition / Disposal of C&D waste	$135,000	event	1	event	$135,000	assumes brick and concrete can be buried and clean capped on site.
Pb Based Paint waste stream sampling	$500	sample	2	samples	$1,000	
Pb paint air monitoring	$1,000	sample	1	task	$1,000	
Disposal of Pb paint material > 5% /40 cy box	$8,500	event	1	event	$8,500	assumes one box
Contingency on sub-contractor quotes		event	1	event	$38,325	15% contingency on subcontractor fees
Subcontractor fees 10 %		event	1	event	$29,383	Includes 10% surcharge on subcontractor fees
			Asbestos and Lead Abatement		***$323,208***	

Description	Billing Rate/Unit		# Units	Units	Est. Cost	Notes
2.0 Ammonia Refrigeration System (REC #2)						
Includes removal of ammonia to the point where the system can be safely dismantled						
DOES NOT INCLUDE physical removal or disposal of the ammonia refrigeration system components						
Assumes ammonia is present in the ice maker						
JCO Oversight						
Project Manager	$87	hr	1	hrs	$87	review and oversight
Staff Scientist/Engineer	$70	hr	12	hrs	$840	oversight & coordination of tank removal
Communications fee		each	1	each	$14	1.5% of JCO labor
Mileage	$0.51	mile	112	miles	$58	Round trip mileage, 2 days
Preparation Phase Sub-contractor Costs						
Master Electrician / Generator (230/460/ 3 phase) rental	$1,000	day	1	day	$1,000	provide electrical service for pump-out compressor
Plumber/Water Truck	$1,000	day	1	day	$1,000	provide water service for worker safety & compressor cooling
Removal Phase Sub-contractor Costs						
De-gas truck & driver		event	1	event	$10,584	Includes first 6 hours onsite
De-gas truck & driver hourly rate	$250	hr	22	hrs	$5,500	Remaining 22hrs onsite
Two-man refrigeration contractor team	$170	hr	28	hrs	$4,760	Two 14-hour days
Additional Equipment Expenses		event	1	event	$3,000	Assumed value: estimated not received from contractor
Contingency on sub-contractor quotes		event	1	event	$3,877	15% contingency on subcontractor fees
JCO Subcontractor fee		event	1	event	$2,972	10% surcharge on subcontractor fees
				Sub Total	***$33,692***	**ASSUMING AMMONIA IS PRESENT IN ICE MAKER**
Includes removal of ammonia to the point where the system can be safely dismantled						
DOES NOT INCLUDE physical removal or disposal of the ammonia refrigeration system components						
Assumes ammonia is NOT present in the ice maker						
JCO Oversight						
Project Manager	$87	hr	1	hrs	$87	review and oversight
Staff Scientist/Engineer	$70	hr	8	hrs	$560	oversight & coordination of tank removal
Communications fee		each	1	each	$10	1.5% of JCO labor
Mileage	$0.51	mile	56	miles	$29	Round trip mileage, 1 day
Removal Phase Sub-contractor Costs						
De-gas truck & driver		event	1	event	$10,584	Includes first 6 hours onsite
De-gas truck & driver hourly rate	$250	hr	8	hrs	$2,000	Remaining 8hrs onsite
Two-man refrigeration contractor team	$170	hr	14	hrs	$2,380	one 14-hour day
Contingency on sub-contractor quotes		event	1	event	$2,245	15% contingency on subcontractor fees
JCO Subcontractor fee		event	1	event	$1,721	10% surcharge on subcontractor fees
				Sub Total	***$19,615***	**ASSUMING NO AMMONIA PRESENT IN ICE MAKER**

Appendix 3
Cost Estimates by REC
Former Richmond Creamery, Richmond, Vermont
JCO #: 1-0346-3

Description	Billing Rate/Unit		# Units	Units	Est. Cost	Notes
3.0 Interior Sump (REC #3)						
Includes placement of a 4" concrete slab (no reinforcing) on crushed stone in the interior sump. Stone and concrete to be placed by sub-contractor						
JCO Oversight						
Project Manager	$87	hr	1	hrs	$87	review and oversight
Staff Scientist/Engineer	$70	hr	6	hrs	$420	oversight of stone and concrete placement
Communications fee		each	1	each	$8	1.5% of JCO labor
Mileage	$0.51	mile	56	miles	$29	Round trip mileage, 1 day
Sub-contractor Costs						
Crushed Stone (in-place cost)	$30	cu.yd.	6	cu.yds	$180	
5 cu.ft. concrete (in-place cost)	$192	each	1	each	$192	
Contingency on sub-contractor quotes		event	1	event	$56	15% contingency on subcontractor fees
JCO Subcontractor fee		event	1	event	$43	10% surcharge on subcontractor fees
				Sub Total	***$1,014***	
4.0 Interior Hazardous Materials (REC #4)						
Includes removal and disposal of four mercury switches and sampling & disposal of one 55-gallon drum of non-PCB used compressor oil						
JCO Oversight						
Project Manager	$87	hr	1	hrs	$87	review and oversight
Staff Scientist/Engineer	$70	hr	6	hrs	$420	oversight & coordination of removal
Communications fee		each	1	each	$8	1.5% of JCO labor
Sub-contractor Costs						
PCB screening sample	$75	each	1	each	$75	
13 PP metals analysis for disposal	$180	sample	1	sample	$180	
Disposal of switches & compressor oil (subcontracted)		event	1	event	$1,000	$600 for switches and $400 for compressor oil
Contingency on sub-contractor quotes		event	1	event	$188	15% contingency on subcontractor fees
JCO Subcontractor fee		event	1	event	$144	10% surcharge on subcontractor fees
				Sub Total	***$2,102***	
5.0 Inspection of PCB Building Materials (REC #5)						
Includes subcontracted inspection and sampling of suspect building materials						
Assumes the PCB Building materials inspection will be performed by the asbestos contractor						
JCO Oversight						
Project Manager	$87	hr	6	hrs	$522	Project oversight and Preparatory Coordination
Staff Scientist/Engineer	$70	hr	2	hrs	$140	Field Effort (Limited Coordination During Sampling)
Communications fee		each	1	each	$10	1.5% of JCO labor
Sub-contractor Costs						
Subcontracted PCB Building Inspection		event	1	event	$1,890	
Contingency on sub-contractor quotes		event	1	event	$284	15% contingency on subcontractor fees
JCO Subcontractor fee		event	1	event	$217	10% surcharge on subcontractor fees
				Sub Total	***$3,063***	

Description	Billing Rate/Unit		# Units	Units	Est. Cost	Notes
6.0 Filling Exterior Hollow Pit (REC #6)						
Includes placement of clean compacted fill in the exterior hollow pit.						
JCO Oversight						
Project Manager	$87	hr	1	hrs	$87	review and oversight
Staff Scientist/Engineer	$70	hr	10	hrs	$700	oversight of fill placement & compaction
Communications fee		each	1	each	$12	1.5% of JCO labor
Mileage	$0.51	mile	56	miles	$29	Round trip mileage, 1 day
Sub-contractor Costs						
Compacted clean fill (in-place cost)	$25	cu.yd.	25	cu.yds	$625	
Contingency on sub-contractor quotes		event	1	event	$94	15% contingency on subcontractor fees
JCO Subcontractor fee		event	1	event	$72	10% surcharge on subcontractor fees
				Sub Total	***$1,618***	

Description	Billing Rate/Unit		# Units	Units	Est. Cost	Notes
7.0 Metals- and PAH-Impacted Soil (REC #7)						
Option 1: Excavate Contaminated Soil & Dispose Off-Site						
This is not a practical option and would likely be prohibitively costly						
No cost estimate was developed for this option						
Option 2: Risk Assessment						
This includes preparation & evaluation of existing analytical data to determine if sufficient data are available to perform a risk assessment and a human-health risk assessment evaluating a residential and a trespasser scenario						
JCO Oversight						
Project Manager	$87	hr	8	hrs	$696	review and oversight
Staff Scientist/Engineer	$70	hr	20	hrs	$1,400	Data & Mapping support/organization/formatting/coordination
Communications fee		each	1	each	$31	1.5% of JCO labor
Sub-contractor Costs						
Analytical Data Quality Evaluation		event	1	event	$5,000	Assumed value: estimated not received from contractor
Risk Assessment		event	1	event	$45,000	
Contingency on sub-contractor quotes		event	1	event	$7,500	15% contingency on subcontractor fees
JCO Subcontractor fee		event	1	event	$5,750	10% surcharge on subcontractor fees
				Sub Total	***$65,377***	

Appendix 3
Cost Estimates by REC
Former Richmond Creamery, Richmond, Vermont
JCO #: 1-0346-3

Description	Billing Rate/Unit		# Units	Units	Est. Cost	Notes
Option 3: Cover Impacted Soil with Clean Fill						
This includes a rough estimate of costs to re-grade the Site in preparation of capping, placement of roads/parking areas, and placement of 6" of compacted clean fill over indicator fabric						
Site Regrading Costs (assumes work to be completed in five 8-hour days)						
JCO Oversight						
Project Manager	$87	hr	2	hrs	$174	review and oversight
Staff Scientist/Engineer	$70	hr	30	hrs	$2,100	oversight of re-grading effort (3 days on-site)
Communications fee		each	1	each	$34	1.5% of JCO labor
Mileage	$0.51	mile	168	miles	$86	Round trip mileage, Dig-safe + 3 days
Sub-contractor Costs						
Dust monitoring, decon, PPE, etc	$200	day	5	days	$1,000	
Excavator	$135	hr	40	hrs	$5,400	
Compactor	$50	hr	24	hrs	$1,200	
Bull-dozer	$90	hr	40	hrs	$3,600	
HAZWOPER-trained operator	$50	hr	80	hrs	$4,000	2 operators to regrade before placing isolation barrier
HAZWOPER-trained foreman	$70	hr	40	hrs	$2,800	to oversee installation of fabric and 6" soil barrier
Contingency on sub-contractor quotes		event	1	event	$2,700	15% contingency on subcontractor fees
JCO Subcontractor fee		each	1	each	$2,070	10% surcharge on subcontractor fees
			Re-grading Sub Total		*$25,164*	
Construction of Asphalt Roads & Parking Areas (assumes work to be completed in five 8-hour days)						
JCO Oversight						
Project Manager	$87	hr	2	hrs	$174	review and oversight
Staff Scientist/Engineer	$70	hr	30	hrs	$2,100	oversight of paving effort (3 days on-site)
Communications fee		each	1	each	$34	1.5% of JCO labor
Mileage	$0.51	mile	168	miles	$86	Round trip mileage, 3 days
Sub-contractor Costs						
18" road base of crushed stone (in-place cost)	$30	cu.yd.	1400	cu.yds	$42,000	
4" asphalt (in-place cost)	$100	ton	625	tons	$62,500	
Contingency on sub-contractor quotes		event	1	event	$15,675	15% contingency on subcontractor fees
JCO Subcontractor fee		each	1	each	$12,018	10% surcharge on subcontractor fees
			Paving Sub Total		*$134,587*	

Appendix 3
Cost Estimates by REC
Former Richmond Creamery, Richmond, Vermont
JCO #: 1-0346-3

Description	Billing Rate/Unit		# Units	Units	Est. Cost	Notes
Placement of indicator fabric and 6" compacted clean fill (assumes work to be completed in five 8-hour days)						
JCO Oversight						
Project Manager	$87	hr	2	hrs	$174	review and oversight
Staff Scientist/Engineer	$70	hr	35	hrs	$2,450	oversight of fill placement effort (3 days on-site)
Communications fee		each	1	each	$39	1.5% of JCO labor
Mileage	$0.51	mile	168	miles	$86	Round trip mileage, Dig-safe + 3 days onsite
Sub-contractor Costs						
placement of indicator fabric & clean fill		event	1	event	$61,100	
Contingency on sub-contractor quotes		event	1	event	$9,165	15% contingency on subcontractor fees
JCO Subcontractor fee		each	1	each	$7,027	10% surcharge on subcontractor fees
				Indicator Fabric & Clean Fill Sub Total	*$80,041*	
<u>Option 3 Cost Summary</u>						
				Regrading & general Site preparation	*$25,164*	
				Asphalt Pavement Placement	*$134,587*	
				Indicator fabric & compacted clean fill	*$80,041*	
				Option 3 Sub Total	***$239,792***	
<u>Option 4: Limited Excavation Prior to Cover Impacted Soil with Clean Fill</u>						
This includes excavation & disposal of 1 truck load of metals-impacted soil in addition to regrading & capping as described in Option 3						
Assumes that this excavation will be performed concurrently with AST removal						
JCO Oversight						
Project Manager	$87	hr	2	hrs	$174	review and oversight
Staff Scientist/Engineer	$70	hr	4	hrs	$280	oversight of excavation
Communications fee		each	1	each	$7	1.5% of JCO labor
Sub-contractor Costs						
Dust monitoring, decon, PPE, etc	$200	day	1	days	$200	
Excavation & Disposal (subcontracted)		event	1	event	$7,600	
Analytical confirmatory sampling	$125	sample	3	samples	$375	
Contingency on sub-contractor quotes		event	1	event	$1,170	15% contingency on subcontractor fees
JCO Subcontractor fee		event	1	event	$935	10% surcharge on subcontractor fees
				Excavation & Disposal Sub Total	*$10,740*	
<u>Option 4 Cost Summary</u>						
				Excavation & Disposal of Metals-Impacted soil	*$10,740*	
				Regrading, Paving, & capping costs (from Option 3)	*$239,792*	
				Option 4 Sub Total	***$250,532***	

Description	Billing Rate/Unit		# Units	Units	Est. Cost	Notes
8.0 Groundwater Monitoring Well Closure(REC #8)						
Includes closure of all on-site groundwater monitoring wells in accordance with Vermont State regulations						
JCO Oversight						
Project Manager	$87	hr	1	hrs	$87	review and oversight
Staff Scientist/Engineer	$70	hr	24	hrs	$1,680	oversight of well closure
Communications fee		each	1	each	$27	1.5% of JCO labor
Mileage	$0.51	mile	112	miles	$58	Round trip mileage, dig-safe & 2 days onsite
Sub-contractor costs						
Well Closure (subcontracted)		event	1	event	$3,000	
Contingency on sub-contractor quotes		event	1	event	$450	15% contingency on subcontractor fees
JCO Subcontractor fee		event	1	event	$345	10% surcharge on subcontractor fees
				Sub Total	***$5,647***	
9.0 Out of Service Storage Tanks (REC #9)						
Includes cleaning and recycling of the out-of-service ASTs & disposal of contents						
Assumes the wastewater AST contents will be non-hazardous						
JCO Oversight						
Project Manager	$87	hr	1	hrs	$87	review and oversight
Staff Scientist/Engineer	$70	hr	16	hrs	$1,120	oversight of fill placement & compaction
Communications fee		each	1	each	$18	1.5% of JCO labor
Mileage	$0.51	mile	112	miles	$58	Round trip mileage, 2 days
Sub-contractor costs						
AST Closure & Cleaning (subcontracted)	$9,200	each	1	cu.yds	$9,200	
Contingency on sub-contractor quotes		event	1	event	$1,380	15% contingency on subcontractor fees
JCO Subcontractor fee		event	1	event	$1,058	10% surcharge on subcontractor fees
				Sub Total	***$12,921***	

APPENDIX 4

SUB-CONTRACTOR ESTIMATES

ACM, PCB Building Materials, Lead Paint, and Building Demolition Estimates

1) Alderson Environmental Contractor, dated February 15, 2012
2) Clay Point Associates, Inc, dated February 13, 2012

Ammonia Refrigeration System Estimate

1) J. Hogan Refrigeration & Mechanical, dated March 6, 2012

Interior Hazardous Debris Estimate

1) Precision Industrial Maintenance, dated March 5, 2012

Placement of Indicator Fabric & Clean Fill Estimates

1) John Scott Excavating, Inc, dated March 2, 2012
2) Munson Earth Moving Corp., dated February 23, 2012

Limited Excavation of metals-impacted soils

1) Precision Industrial Maintenance

Groundwater Monitoring Well Closure Estimates

1) Eastern Analytical, Inc, dated February 17, 2012

Out of Service ASTs

1) Daly Environmental Contracting, dated February 22, 2012
2) Precision Industrial Maintenance, dated February 23, 2012

APPENDIX 4

SUB-CONTRACTOR QUOTES

ACM, PCB Building Materials, Lead Paint, and Building Demolition

- Alderson Environmental Contractor, dated February 15, 2012
- Clay Point Associates, Inc, dated February 13, 2012

Ammonia Refrigeration System

- J. Hogan Refrigeration & Mechanical, dated March 6, 2012

Interior Hazardous Debris

- Precision Industrial Maintenance, dated March 5, 2012

Placement of Indicator Fabric & Clean Fill

- John Scott Excavating, Inc, dated March 2, 2012
- Munson Earth Moving Corp., dated February 23, 2012

Limited Excavation of metals-impacted soils

- Precision Industrial Maintenance, dated March 9, 2012

Groundwater Monitoring Well Closure

- Eastern Analytical, Inc, dated February 17, 2012

Out of Service ASTs

- Daly Environmental Contracting, dated February 22, 2012
- Precision Industrial Maintenance, dated February 23, 2012

ACM, PCB Building Materials, Lead Paint, and Building Demolition

Alderson Environmental Contractor, dated February 15, 2012

February 15, 2012

Kurt Muller
The Johnson Company
100 State Street, Suite 600
Montpelier, Vermont 05602

ALDERSON
ENVIRONMENTAL CONTRACTOR

RE: Professional Environmental Services @ The Former Richmond Creamery Building Richmond, Vermont.

Dear Mr. Muller,

Alderson, Inc. environmental contractors is pleased to provide you with this proposal for select asbestos removal, decontamination services, demolition services and consulting services based on site conditions on Tuesday February 07, 2012. Our proposal is primarily based upon an asbestos survey completed by Anglo American dated April 6, 2009. It is recommended that additional bulk sample collection be completed prior to demolition / renovation necessary to determine the absence or presence of asbestos building materials that were never tested which include but are not limited to sheetrock wall board, plaster ceilings, joint compounds, caulking, adhesives, residue under fiberglass pipe insulation, vermiculite in wall cavities, roofing and window glazing. The additional testing will assist in determination if asbestos is present, and whether it is considered friable or non-friable, which is a component when determining abatement methods and disposal. Additional testing must be completed by a licensed state asbestos inspector. Our proposal includes a written work plan from Alderson, Inc. submitted to the Vermont Department of Health Asbestos Control Division that seeks either a waiver or modification of traditional work practices due to the buildings current dilapidated condition. Alderson will work with our selected demolition sub-contractor, experienced with heavy construction materials, when asbestos is present. Removal of asbestos containing building materials in locations that are considered unsafe to enter and are scheduled for demolition will be demolished with asbestos containing materials and disposed of accordingly. Demolition waste stream debris mixed with asbestos containing debris will be placed in lined forty (40) – one hundred (100) cubic yard containers for disposal as either friable or non-friable waste.

Asbestos Clearance: Asbestos clearance shall be in accordance with (VRAC) section 2.4.2 (Q), (S) & (T) which indicate how the work area will be cleared. It is not a standard operating procedure for clearance of a work area with soil sample collection. Our previous experiences with the State of Vermont working on projects to be demolished when asbestos containing materials are present include traditional air sampling of the containment work area based upon square and linear footage, always a visual inspection of the work area with a project monitor and / or background air sampling when demolition is in progress necessary to document that Alderson has not exceeded the permissible exposure limit.

Demolition: Our proposal is based upon the entire building being demolished. A separate add alternate price has been provided if concrete debris are pulverized or crushed to remain on-site. Prior to building demolition, it would be necessary to provide a waste stream characterization with collection of building materials by a certified lead based paint inspector. Bulk materials will be forwarded to an accredited laboratory necessary to provide a toxicity characteristic leachate procedure (TCLP). The TCLP will determine whether a solid waste is classified as a hazardous waste. Waste with 5.0 parts per million or greater TCLP exhibit the toxicity characteristic for lead and require management as a hazardous waste. Should portions of the building be identified as historical in nature and not subject to demolition, a credit can be negotiated on the basis of non-demolition already included. Our proposal does not include placement of rigging / shoring materials or equipment necessary to secure any building structure elected to remain.

Polychlorinated Biphenyl Inspection: Our proposal does not address suspected PCB materials. It will be necessary to confirm that PCB's either are or are not present in suspect building materials that were domestically manufactured from 1929 until their manufacture ban in 1979. PCB's were used in hundreds of industrial and commercial applications including electrical, heat transfer, hydraulic equipment, plastics and caulking. Alderson, Inc. maintains on staff employees who are trained and annually refreshed with OSHA 29 CFR 1910 Hazardous Waste Operations.

Creating Safe Environments

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P.O. Box 484
Burlington, VT
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Ammonia Tank: A separate price is provided necessary for the decommissioning of one (1) ammonia tank visually identified within the building. The ammonia tank will be drained and disposed of prior to asbestos removal and demolition.

Alderson, Inc. agrees to the following scope of work:

1. To construct containment work areas in the building supplied with a sufficient quantity of negative pressure ventilation units equipped with high efficient particulate air (HEPA) filtration. As part of our scope, Alderson will utilize high efficient particulate air (HEPA) vacuums and wet wiping methods to decontaminate contents within the building. If the building is determined not to be structurally safe, no containments will be constructed and additional alternate work practices will be sought from the Vermont Department of Health.

2. To completely collapse and dismantle the former creamery structure which includes but is not limited to the brick structure, raised blue structure, surrounding metal structure and loading dock area. The partially collapse building closest to the road is also included. The building owner must notify Alderson in advance if any component of the building is on the historic registry and cannot be demolished or if specific building components must be salvaged. Alderson will make every attempt to reduce our waste stream though recycling of building materials where applicable. Brick / concrete will remain on site. A separate price is provided necessary to crush concrete down. The building owner will have the option to remove and dispose of brick and concrete or crush the materials which can be distributed at a later time. Please note that our proposal for demolition does not take into account capping or securing water, sewer, cable and / or electrical services prior to excavation. Alderson will notify Dig Safe prior to excavation. Disposal of general construction debris is included. This proposal does not address final grading or back filling with other materials.

3. To remove asbestos containing materials identified within the Anglo American Inventory utilizing controlled conditions utilizing sufficient wetting methods and negative pressure machines.

4. To provide a comprehensive cleaning & decontamination of containment areas utilizing wet methods and vacuums equipped with high efficient particulate air (HEPA) filters.

5. To properly package asbestos waste / debris in labeled (RQ.) Hazardous substance solid nos (asbestos) ORM-E NA 91888 containers. Asbestos waste will be transported and disposed of at an approved asbestos disposal facility that can accept friable and / or non-friable asbestos waste.

6. To schedule with an independent asbestos consulting air quality company to provide post-abatement visual inspections and air quality testing in compliance with state and federal regulations. Personal air monitoring and exposure assessments will be conducted on a daily basis. Payment for post-abatement clearance testing is included within this proposal.

7. To pay for notifications and permits with the State of Vermont and Environmental Protection Agency and provide the building owner with a copy of the notifications. Our proposal does not address any local zoning permit applications. Alderson will submit a detailed work plan to the State of Vermont as a general requirement for obtaining a permit. Should the Vermont Department of Health decline the work plan submitted with alternate work practices and modifications this proposal will become null and void.

8. To provide state of the art tools, materials, equipment and personal air monitoring analysis necessary to complete the project in full.

9. To provide asbestos removal work in accordance with federal and state regulations governing asbestos removal activity. Employees working on this project will be Vermont certified asbestos workers and / or supervisors. In the event that Alderson is working with lead based materials, we shall abide by the Lead in the Construction Industry Standard 1926.62. Alderson will implement engineering and work practices including administrative controls, to reduce and maintain employee exposure to lead at or below the permissible exposure limit to the extent that such controls are feasible. Alderson's proposal does not consider this to be a lead abatement project due to the nature of work activities involving demolition.

The Owner Agrees:

1. To furnish the contractor with 1 hose bib water connection necessary for use throughout the asbestos and demolition project. A larger alternate source may be necessary during demolition to control dust from the Town of Richmond or Fire Department.

2. To not hold Alderson responsible for additional services not included within this proposal. To not hold Alderson responsible for removal of other hazardous materials not identified as a condition for this project. Should additional services be required a service charge of $46.00 per hour per person will be applied on a change order basis as agreed upon with the building owner. Additional materials, equipment and rentals outside of this scope of work will be invoiced out at cost + 15%.

3. To refrain from demolition and / or renovation activity until completion of the asbestos removal. Outside dust generated will be carried into the asbestos containment creating overloaded post air samples or failed air results.

4. To completely disconnect and cap all fuel, water, sewer, cable and electric utility lines to the building.

5. To furnish the contractor with a 200 amp breaker panel with minimum of 10 separate 20 amp electrical circuits from a station within 50 feet of the existing structure.

6. Alderson is not responsible for replacement of any items which were disposed of as asbestos or general construction debris. Any items which are to be salvaged from the building should be placed in writing and made available to Alderson prior to the start of this project.

7. The building owner / representative must be available every work day to participate in a tailgate meeting to discuss the day's work and allow employees to share safety problems or concerns.

8. Alderson is not aware of any prevailing wage determination at the time of estimating a cost proposal for this project. Additional posting of any Davis Bacon Requirement was not made to Alderson.

Additional Asbestos Inspection / Testing:	$1,900.00 One thousand nine hundred
Vermont state asbestos removal permit:	$300.00 Three hundred
Vermont state work plan:	$535.00 Five hundred thirty-five
Independent post-abatement air testing per containment:	$495.00 Four hundred ninety-five
Independent Project Monitor daily charge: (During demolition only)	$645.00 Six hundred forty-five
Asbestos Removal:	$76.900.00 Seventy-six thousand nine hundred
Asbestos Disposal:	$19,865.00 (an estimated 400 cubic yards) Nineteen thousand eight hundred sixty-five
TCLP Testing: (2) seperate tests	$965.00 Nine hundred sixty-five

General demolition:	$62,500.00 Sixty-two thousand five hundred
General Construction Disposal per waste container:	$350.00 Three hundred fifty
General Construction Disposal per ton:	$125.00 One hundred twenty-five
Cost for disposal excluding concrete: **Estimate only	550 tons @ $125.00/ton = $68,750.00 Sixty-eight thousand seven hundred fifty
Air monitoring during demolition for Pb:	$900.00 Nine hundred
Ammonia concentration >10%: No more than 400 gallons	$8,700.00 Eight thousand seven hundred
Crushing of concrete with machine:	$3,500.00 daily rental charge
Additional Excavation / Grading: Operator with machine	$640.00 daily rental charge
Disposal of Pb lead based paint components greater than 5% per 40 cubic yard box:	$8,463.00 Eight thousand four hundred sixty-three

Total estimated time is 90 days from start excluding weekends and holidays. Weather permitting conditions may create delays from heavy rains, snow storms and ice.

Payment terms to be agreed upon with return of signed proposal and prior to start of work. This proposal is valid for a period of 60 days.

Acceptance:

Printed name Signature Date

All invoices are due payable upon delivery. Payments made by credit card must be scheduled in advance and are subject to a 3% processing fee. In the event that this invoice is not paid in full within (30) days of the date of the invoice, then a finance charge shall accrue at the rate of 2% per month. In addition, the purchaser shall be responsible for all court cost and attorneys fees in the event that Alderson must utilize an attorney to collect any amounts due.

Sincerely,

Charles A. Catlett
President
Alderson, Inc.

Vermont Asbestos Entity License #AE017153
Vermont Lead Inspector & Supervisor
Vermont Asbestos Inspector & Supervisor

ACM, PCB Building Materials, Lead Paint, and Building Demolition

Clay Point Associates, Inc, dated February 13, 2012

Clay Point Associates, Inc.
www.claypointassociates.com

February 13, 2012

Mr. Kurt Muller
The Johnson Company, Inc.
100 State Street, Suite 600
Montpelier, Vermont 05602

RE: Estimated Budget - Environmental Consulting & Contracting Activities
Former Richmond Creamery Complex, 125 Bridge Street, Richmond, Vermont

Dear Mr. Muller:

This correspondence is provided in response to your request for a preliminary budget related to environmental consulting/contracting activities and planned renovation and/or demolition of structures comprising the former Richmond Creamery Complex, 125 Bridge Street, Richmond, Vermont. Based on information you forwarded regarding previous environmental inspections, and our site visit on February 7, 2012, Clay Point Associates, Inc. (CPAI) provides the following budget for your consideration. Please note that this budget does not address the investigation, characterization or remediation of any subsurface (soil & groundwater) contamination that may be present at the site.

CPAI is a Vermont owned corporation and considered a small business enterprise. CPAI emphasizes quality. We provide sound and sensible services at reasonable cost. During the past twenty-three (23) years, CPAI has provided professional environmental consulting services to a diverse clientele throughout Vermont and New Hampshire. A representative list of professional references is available upon request. Please note that CPAI carries professional liability insurance covering all of our professional operations. Documentation of insurance coverage is available upon request.

ASBESTOS CONTAINING MATERIALS

Previous asbestos inspection activities were performed by Anglo-American Environmental (AAE) in 2009. While the AAE report was fairly comprehensive, CPAI has determined that it will be necessary to collect an estimated fifty (50) additional bulk samples in order to meet the requirements set forth in the U.S. EPA National Emissions Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 61, prior to renovation/demolition. This will include collection of representative samples of suspect asbestos containing materials not evaluated by AAE, and collection of additional samples of suspect asbestos containing materials that were evaluated by AAE.

Upon completion of asbestos inspection activities, CPAI recommends that a Vermont certified asbestos project designer be retained to prepare specifications for abatement prior to renovation/demolition. The design process will entail collaboration with the VT Department of Health, Asbestos & Lead Regulatory Program (ALRP), to ensure compliance with the Vermont

Regulations for Asbestos Control (VRAC), V.S.A. Title 18, Chapter 26. Due to the fact that the structural integrity of certain structures/portions of the complex have been compromised, it will be necessary to petition ALRP for approval for alternative work practices to designated sections of VRAC. The design process should include administration of an on-site walkthrough with qualified asbestos abatement contractors.

Based on observations during our site visit, it is likely that asbestos abatement will entail the use of traditional abatement methods in structurally sound areas of the complex, and non traditional methods in other areas. Non traditional methods, assuming approval from the ALRP, will include the use of excavation equipment to carefully segregate asbestos containing materials from construction and demolition waste during demolition. Notifications to EPA Region 1 and the ALRP will be required ten (10) working days prior to the start of any on-site asbestos abatement and/or demolition activities.

A Vermont certified asbestos project monitor will need to be employed to perform the following activities during the abatement process:

- Collection of pre/during abatement air samples
- Oversight of abatement contractor's activities
- Oversight of demolition contractor's activities as they pertain to segregation of asbestos containing materials from the demolition waste stream
- Performance of final visual inspections upon completion of each phase of abatement
- Performance of asbestos clearance air monitoring (where required by VRAC)
- Preparation of a comprehensive report document detailing all activities related to asbestos abatement/project monitoring

LEAD-BASED PAINT

A lead-based paint inspection was performed by Evergreen Health & Safety, Inc. (EHS) in April 2009. In general, the presence of lead-based paint was confirmed in designated locations throughout the complex. For sections of the complex that may be saved, it is the responsibility of the building owner to disclose known lead hazards to any contractors that will be doing work at the site. It is the responsibility of all contractors to comply with applicable VT Occupational and Health Administration (VOSHA) regulations pertaining to lead-based paint and worker safety. This may require the performance of an initial exposure assessment by a qualified consultant to determine appropriate work practices and personal protective equipment to be employed by the contractor.

For areas of the building that are to be demolished, CPAI recommends performance of the Toxicity Characterization Leachate Procedure (TCLP) for lead in order to characterize the demolition waste steam. VT Hazardous Waste Regulations list a limit for lead of 5.0 milligrams per liter (mg/L). Materials that are subject to a TCLP test and exceed this limit must be considered as hazardous waste.

Based on our observations at the site, and a review of the EHS lead-based inspection report, it is unlikely that the waste stream resulting from demolition activities at the site will need to be disposed of as lead hazardous waste.

POLYCHLORINATED BIPHENYLS (PCBs)

PCBs were domestically manufactured from 1929 until their manufacture was banned in 1979. They were used in hundreds of industrial and commercial applications due to their unique properties including fire resistance, chemical stability, insulating properties, high boiling point, elasticity and durability. Uses of PCBs included, but were not necessarily limited to, the following:

- Transformers and capacitors
- Other electrical equipment (i.e. voltage regulators, switches, reclosers, bushings, etc.)
- Oil used in motors and hydraulic equipment
- Old electronic devices or appliances containing PCB capacitors
- Fluorescent light ballasts
- Cable insulation
- Thermal insulation materials (i.e. fiberglass, felt, foam, cork, etc.)
- Adhesives and tapes
- Oil based paint
- Caulking
- Plastics
- Carbonless copy paper
- Floor finish

It is our understanding that an evaluation of transformers, capacitors and other electrical/ hydraulic equipment for the presence of PCBs has been/will be performed by others, including an evaluation of designated building surfaces for contamination resulting from past releases of PCB containing fluids. Prior to renovation/demolition activities at the site, CPAI recommends an evaluation of building materials for the presence of PCBs. This evaluation should include the collection of representative samples from designated building materials and analysis according to EPA SW-846 Method 8082 via Soxhlet Extraction. Based on our site visit, CPAI estimates the collection/analysis of eighteen (18) samples.

If the presence of PCBs in building materials is confirmed, certain engineering controls may need to be implemented during renovation/demolition activities. Furthermore, PCB containing building materials must be disposed of at an approved facility. If present, CPAI recommends

that proper removal/disposal of building materials containing PCBs occur in conjunction with asbestos abatement activities.

MISCELLANEOUS & UNIVERSAL WASTE

Prior to renovation/demolition, all potentially hazardous materials will need to be removed for proper disposal or recycling. This includes, but is not necessarily limited to, ballasts associated with fluorescent light fixtures, fluorescent light tubes, mercury containing thermostats/switches, industrial batteries and fire extinguishers. Our estimate for removal/disposal of miscellaneous/ universal waste materials includes removal of the above ground storage tank (AST) presumed to contain ammonia located in the Ammonia Compressor Room. Please note that we have assumed that this AST if full, and is not pressurized.

DEMOLITION OF STRUCTURES

For the purposes of this estimated budget, CPAI is assuming that all structures at the Former Richmond Creamery Complex will be demolished. It is our expectation that demolition at certain portions of the complex will need to be coordinated with an asbestos consultant/ abatement contractor to ensure that all asbestos containing materials are segregated from the demolition waste stream. It is not anticipated that the presence of lead-based paint or PCBs in building materials will impact demolition activities or the disposal of construction and demolition waste. Our estimate for demolition assumes that all construction and demolition waste will be removed from the site and clean fill will be trucked in to return the site to grade.

Please note that our estimate for demolition does not include removal/disposal of concrete slabs/footings associated with buildings at the site. Additional investigation activities will need to occur in order to determine the composition, thickness and extent of contamination (if any), which will directly impact disposal options/cost. Furthermore, as previously stated, budget estimates do not include consideration of any subsurface contamination which may be present at the site.

PROPOSED TIMELINE AND PRICING

All recommended asbestos, lead-based paint and PCB inspection activities can generally be performed within 2 weeks of being given a notice to proceed. Verbal results from all testing activities should be available approximately 2 – 3 weeks after performance of on-site work, and reports issued within 2 weeks of receipt of laboratory results. The design/bid administration process will take approximately 1 month to complete. This process includes preparation of bid

documents/specifications, administration of the on-site pre bid walkthrough, review of bid submittals and preparation of an updated project budget.

At this time we estimate that the abatement and demolition process will take approximately 3 weeks to complete. Please note that this does not include the 10 business day waiting period between notification to EPA Region 1 and the VT Department of Health and the start of on-site abatement/demolition.

Estimated costs are presented in the attached Table 1. Please note that these figures do not represent a proposal or bid for services, but rather are intended to be budget numbers for planning purposes only. CPAI is available to provide proposals for environmental consulting services upon request.

Thank you for considering Clay Point Associates, Inc. to perform professional environmental management services on your behalf. If you have questions concerning CPAI or this proposal, please contact us at (802) 879-2600, or by email at austin@claypointassociates.com.

Sincerely,
CLAY POINT ASSOCIATES, INC.

Kyle B. Austin
Environmental Associate

Clay Point Associates, Inc.
www.claypointassociates.com

TABLE 1
ESTIMATED BUDGET
ENVIRONMENTAL ACTIVITIES AND DEMOLITION OF STRUCTURES

BUILDING/ADDITION:	FORMER RICHMOND CREAMERY COMPLEX 125 BRIDGE STREET RICHMOND, VERMONT
ACTIVITY	**ESTIMATED COST**
ASBESTOS – PROFESSIONAL CONSULTING	
Inspection	2,195.00
Project Design/Bid Administration	1,595.00
Project Monitoring/Project Management	8,490.00
ASBESTOS – CONTRACTING	
Asbestos Abatement	55,000.00
LEAD-BASED PAINT	
Lead TCLP Testing/Analysis	475.00
POLYCHLORINATED BIPHENYLS	
Inspection for PCBs in Building Materials	1,890.00
MISCELLANEOUS/UNIVERSAL WASTE	
Removal and Disposal/Recycling	5,950.00
DEMOLITION/DISPOSAL	
Demolition/Disposal of existing structures*	118,000.00
	ESTIMATED TOTAL: $ 193,595.00

P.O. BOX 1254 • WILLISTON, VERMONT • 05495-1254 • 802-879-2600

Ammonia Refrigeration System

J. Hogan Refrigeration & Mechanical, dated March 6, 2012

From: Daniel Bonner [mailto:dan@jhoganrefrigeration.com]
Sent: Wednesday, March 07, 2012 8:17 AM
To: Jeremy Matt
Subject: RE: Richmond Creamery closure

The driver and truck only get paid while on the site working. The chances are that the ice builder has no ammonia in it. I only bring it up so that no one is surprised if it does. We do have a pump out compressor, but it is 230/460/ 3phase unit requiring water cooling, it has a 10 hp motor to operate it. From what I saw I do not think our compressor could be utilized easily. Also JHR would have to supply a cylinder(s) to pump the ammonia into, then transport it, and get rid of it (probably resell).

Dan Bonner
J. Hogan Refrigeration & Mechanical Inc.
518-643-6687 Phone
518-643-2001 Fax

From: Jeremy Matt [mailto:JEM@jcomail.com]
Sent: Tuesday, March 06, 2012 6:14 PM
To: Dan@jhoganrefrigeration.com
Subject: RE: Richmond Creamery closure

Thanks Dan, I appreciate the work you've put into this.

A couple questions: if two days are required, would the truck & driver be on the clock the entire time (from arrival on the first day to departure at the end of the second day)? Assuming you need to pump out the ice builder, do you have a compressor which could be run from a generator, and how much would that cost?

Thanks,
-Jeremy

Jeremy Matt
Staff Engineer
The Johnson Company
(802) 229-4600
jem@jcomail.com

From: Daniel Bonner [mailto:dan@jhoganrefrigeration.com]
Sent: Tuesday, March 06, 2012 6:03 PM
To: Jeremy Matt
Subject: RE: Richmond Creamery closure

Ok, here we go. One man with degas truck on site for 6 hrs, $9450.00, additional hrs $250.00 per. If the truck is hired by and is paid for by J HOGAN REFRIGERATION add 12% to the T and M rate of the truck and driver. JHR will require 2 men on site for set up, pump out, and tear down, they are $170.00 total per hr port to port, including the truck. I did not include VT. sales tax in this estimate. JHR would require a pre payment and guarantee of final payment, both to be determined, before proceeding with any work. If there is no ammonia in the ice builder this pump out could be done in a day, if there is ammonia held it could take 2 days. Some of the difficulty in doing a pump out of the ice builder (if required) and for that matter the high pressure receiver is poor accessibility, both present a hazard beyond the actual work requirement. If you have additional questions let me know, I will be out of office 3/8 – 3/12.

Dan Bonner
J. Hogan Refrigeration & Mechanical Inc.
518-643-6687 Phone
518-643-2001 Fax

From: Jeremy Matt [mailto:JEM@jcomail.com]
Sent: Tuesday, March 06, 2012 9:56 AM
To: Dan@jhoganrefrigeration.com
Cc: Kurt Muller
Subject: Richmond Creamery closure

Dan:
Have you made any progress with the cost estimate for Richmond Creamery?

Thanks for taking the time to visit the Site,
-Jeremy

Jeremy Matt

Staff Engineer

The Johnson Company

100 State Street Suite 600

Montpelier, Vermont 05602

(802) 229-4600

jem@jcomail.com

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Interior Hazardous Debris

Precision Industrial Maintenance, dated March 5, 2012

Precision Industrial Maintenance

12 Mill Street, Barre, VT 05641
Phone: (802) 477-2470 Fax: (802) 479-0048
jguzelak@pim-inc.com

Kurt Muller March 5, 2012
The Johnson Company, Inc.
100 State Street
Montpelier, VT 05602

Re: Richmond Creamery – removal and disposal of mercury switches

Kurt,

Precision Industrial Maintenance is pleased to present this cost estimate for removal and disposal of the (4) mercury switches located at the previous Richmond Creamery, Richmond, VT..

- $ 600.00 (based on 5 gallon container)

To accept this quote as understood, please sign, date and return by fax to (802) 479-0048.

Signature:_________________________________ Date:_______________

Thank you in for integrating Precision Industrial Maintenance as a valued contractor for your problem solving. Please feel free to call me at (802) 479-0046 with any questions.

Sincerely,

Joe Guzelak
Project Manager

Placement of Indicator Fabric & Clean Fill

John Scott Excavating, Inc, dated March 2, 2012

John Scott Excavating Inc.
1486 Main Rd. Huntington, VT 05462
802-434-4480

The Johnson Company
100 State Street
Montpelier, VT 05602

Bid Proposal for Fill Placement at
Former Saputo Cheese/ Richmond creamery plant
74 Jolina Court, Richmond, VT

Supply and install geotextile fabric Mirafi 500x over 2.5 acres.
$ 13,200

Supply Install and compact 6" of granular fill (2420 yds.) on top of Mirafi 500x fabric @ $9/yd in place.
$ 21,780

Supply Install and compact 12" of granular fill (4840 yds.) on top of Mirafi 500x fabric @ $9/yd in place.
$ 43,560

Total 6" with fabric	$ 34,980
Total 12" with fabric	$ 56,760

Dust control and Hazwoper by Johnson Company

Placement of Indicator Fabric & Clean Fill

Munson Earth Moving Corp., dated February 23, 2012

From: Court Perry [mailto:cperry@munsonearth.com]
Sent: Thursday, February 23, 2012 9:38 AM
To: Jeremy Matt
Subject: RE: Richmond Creamery Quote

Jeremy,

Our price to provide the fabric and clean compacted fill for the approximate 2-1/2 acres of cover would be as follows:

6” cover	Sub-grade separator fabric	12,100 SY @ $1.00/SY	$ 12,100.00
	6” clean compacted fill	2,000 CY @ $ 24.50/CY	$ 49,000.00
		Total for 6”	$ 61,100.00

Or

12” cover	Sub-grade separator fabric	12,100 SY @ $1.00/SY	$ 12,100.00
	12” clean compacted fill	4,000 CY @ $ 24.50/CY	$ 98,000.00
		Total for 12”	$110,100.00

We would have a foreman overseeing the work that is HAZMAT trained.

Thanks for the opportunity,

Court

MUNSON EARTH-MOVING CORP.
Courtland E. Perry Jr.
Vice President/Chief Estimator

Ph: (802) 863-6391 Cell: (802) 343-9301
Fax (802) 863-6395
E-mail: cperry@munsonearth.com
----
85 Shunpike Road, Williston, VT 05495

Limited Excavation of metals-impacted soils

Precision Industrial Maintenance, dated March 9, 2012

Precision Industrial Maintenance

12 Mill Street, Barre, VT 05641
Phone: (802) 477-2470   Fax: (802) 479-0048
jguzelak@pim-inc.com

Jeremy Matt
The Johnson Company, Inc.
100 State Street
Montpelier, VT 05602

March 9, 2012

Re: Richmond Creamery mercury soils

Jeremy,

Precision Industrial Maintenance is pleased to present these costs for removal of approximately 15 cu. Yds. mercury contaminated soils from the previous Richmond Creamery site in Richmond, VT..

The terms are based as follows:

- Excavation and loading of soils.
- Manifest and permitting of shipment.
- Transport and disposal of contaminated soils.
- Backfill and grade excavation with sand.

> 0.2 ppm Mercury

- $ 750.00 - excavation, loading and grading
- $ 175.00 / ton disposal
- $ 2350.00 - transportation and demurrage
- $ 25.00 / yd backfill
- $ 125.00 - liner

- $ 7537.50 Total based on 15 yds.

<0.2 ppm mercury

- $ 750.00 – excavation, loading and grading
- $ 90.00 / ton disposal
- $ 250.00 – transportation and demurrage
- $ 25.00 / yd backfill

- $ 3400.00 Total based on 15 yds

Prices are current and valid for 30 days.

To accept this quote as understood, please sign, date and return by fax to (802) 479-0048.

Signature:____________________________________ Date:________________

Thank you in for integrating Precision Industrial Maintenance as a valued contractor for your problem solving. Please feel free to call me at (802) 479-0046 with any questions.

Sincerely,

Joe Guzelak
Project Manager

<u>Groundwater Monitoring Well Closure</u>

Eastern Analytical, Inc, dated February 17, 2012

eastern analytical, inc.

professional laboratory services

Quotation 1009761

Jeremy Matt
The Johnson Company
100 State Street
Montpelier , VT 05602
802-229-4600

Quotation Date: 2/17/2012

Project ID: Richmond Well Closure

EAI Project ID:

Dear Mr. Matt :

Thank you in advance for the opportunity to provide this quotation.

Qty.	Description	Discountable Y/N	List Price	Disc Unit Price	Net Ext Price
1	Geoprobe Mob/Demobe	N	$300.00	$300.00	$300.00
1	Geoprobe Per Diem	N	$300.00	$300.00	$300.00
180	Well Decommissioning 2" ID (per foot)	N	$4.00	$4.00	$720.00
2	Grout Pump (per day)	N	$300.00	$300.00	$600.00
12	Well Decommissioning Labor and Equipment (hourly)	N	$75.00	$75.00	$900.00

Gross Quotation Amount $2,820.00-

Total: $2,820.00

Geoprobe®/Direct Push scope includes: Decommissioning of 9, 2" diameter wells.
Wells shall be tremie grouted, finished with concrete plug and topped with native soil.
Thank you for the opportunity to provide this quotation. Feel free to contact me if you have questions regarding this quotation or the capabilities of Eastern Analytical. Please keep EAI updated on the status of this quotation.

Sincerely,

Jeff Gagne
Eastern Analytical, Inc.

ACCREDITED IN ACCORDANCE WITH nelac

This quotation is valid for 90 days from the date quoted.

Out of Service ASTs

Daly Environmental Contracting, dated February 29, 2012

Phone: (802) 296-1796
Fax: (802) 763-7035

DALY ENVIRONMENTAL CONTRACTING, LLC

P.O. Box 894
S. Royalton, VT 05068
EnvironmentalContracting@gmail.com

February 29, 2012

Jeremy Matt
The Johnson Company
100 State St., Suite 600
Montpelier, VT 05602

Re: Estimate: Remove 10K #6 Oil AST at Richmond Creamery site, Richmond, VT.
Remove 10K Washwater UST at Creamery.

Daly Environmental Contracting (DEC) is happy to provide you with this time and materials based estimate to: Mobilize, inert, empty, cut, clean and dispose one 10000 gallon steel, single walled #2 fuel oil AST. Drum, transport and dispose up to 6 drums of # 6 fuel oil tank bottoms from the tank at $300/55 gallon drum. Dispose empty tank shell. Work to be done in two days for $5480.00.

Mobilize, inert, empty, cut, clean excavate, and dispose one 10000 gallon steel, single walled washwater UST. Drum, transport and dispose up to 6 drums of non-haz tank bottoms from the tank at $300/55 gallon drum. Dispose empty tank shell. Berm adjacent to tank is used to partially backfill tank grave. No additional fill is quoted. Work to be done in two days for $5480.00.

Assumptions:
-Free and clear access.
-Site ground conditions are firm enough to support trucks, workers and excavator without the need for stone fill.
-No permits or special conditions required.
-Brush and trees cut for access to be piled on site.
-Does not address or take responsibility for bank erosion or stabilization as a result of removing the partially buried tank from the toe of the bank.

Estimate does not include:
-Responsibility for, or impacts of, or repairs to overhead or underground utilities.
-Site restoration, landscaping, paving.
-Estimate is valid for 90 days.
-Terms: Net 30 days, after which interest and collection fees apply.
-To accept this quote, please sign, date and return a copy of this letter by fax or mail.

_____________________________________Signed. ________________________Dated.

Daly Environmental Contracting thanks you in advance for trusting us as a valued contractor for your problem solving needs. Please call me if you have any questions at (802) 296-1796.

Sincerely, Paul T. Daly

Out of Service ASTs

Precision Industrial Maintenance, dated February 23, 2012

Precision Industrial Maintenance
12 Mill Street, Barre, VT 05641
Phone: (802) 477-2470 Fax: (802) 479-0048
jguzelak@pim-inc.com

Jeremy Matt
The Johnson Company, Inc.
100 State Street
Montpelier, VT 05602

February 23, 2012

Re: Richmond Creamery – 10,000g AST cleaning/removal

Jeremy,

Precision Industrial Maintenance is pleased to present this cost estimate for cleaning and removal of the (2) 10,000g fuel oil ASTs located at the previous Richmond Creamery, Richmond, VT..

The terms are based as follows:

- $ 3000.00 cleaning (both ASTs)
- $ 250.00 per 55g drum disposal (VT02)
- $ 63.00 per 55g drum supplied
- $ 100.00 TPH analysis of 'whey' residue

Waste from previous 'whey tank' will be bagged and placed into drums. If no TPH results, bags may be disposed of as regular garbage and drums returned.

- $ 2000.00 removal of both ASTs

To accept this quote as understood, please sign, date and return by fax to (802) 479-0048.

Signature:______________________________________ Date:_________________

Thank you in for integrating Precision Industrial Maintenance as a valued contractor for your problem solving. Please feel free to call me at (802) 477-2470 with any questions.

Sincerely,

Joe Guzelak
Project Manager

APPENDIX 5

ASBESTOS AND LEAD PAINT INSPECTIONS

CLAY POINT, 2006

Drawer 30
PO Box 70
Burlington, VT 05402-0070
1-800-439-8550

AGENCY OF HUMAN SERVICES

Vermont Department of Health

Asbestos and Lead Regulatory Program

PERMIT TO OPERATE
TITLE 18, CHAPTER 26

PROJECT PERMIT NUMBER
406050
FEE: $50.00

ABATEMENT LOCATION:

Abandoned Shed, Bathroom

Bridge Street Richmond

ABATEMENT CONTRACTOR:

Environmental Hazards Management Inc

Special Provisions:
VRAC 2.4.2 (d) Floor Poly Waiver

THIS PERMIT WILL BE IN FORCE
FROM: 4/10/2006 **TO:** 4/11/2006
UNLESS SOONER REVOKED

THIS LICENCE SHALL BE CONSPICUOUSLY POSTED NOT TRANSFERABLE VALID ONLY FOR THE ABOVE PROJECT NUMBER AND DATE

OCT 2 0

VERMONT DEPARTMENT OF HEALTH
Asbestos & Lead Regulatory Program
PERMIT APPLICATION FOR ASBESTOS ABATEMENT PROJECT
(Refer to Vermont Regulations for Asbestos Control for complete rules on notification)

Name of Abatement Entity: Environmental Hazards Management, Inc. **Ph:** 802-862-4537 **Fax:** 802-860-4903

Address of Abatement Entity: P.O. Box 785, 23 Commerce Street

City, State, Zip: Williston, Vermont 05495

Asbestos Abatement Entity License #: AEO14231

Name and Street Address of Building: Abandoned Shed, off Bridge Street,

City, State, Zip: Richmond, Vermont 05477

Building Owner & Address: Casing Development, LLC, 18 Arlington Street

City, State, Zip: Essex Junction, Vermont 05402

Building is (circle one): Commercial Industrial School/University Public Private Rental Other

Specify location and type of asbestos containing materials involved:

Bathroom: Linoleum.

Type of abatement activity to be performed: Please circle.

Removal Repair Encapsulate Enclosure Cleanup Demolition Emergency

Amount of asbestos containing material involved: _____ Ln. ft. 25 Sq. ft. Other_____ Units_____

PLEASE ATTACH A DRAWING OF THE WORK AREA TO INCLUDE CONTAINMENT, NEG. AIR, AND DECON. LOCATIONS

Starting Date: ~~03/20/06~~ ~~4/10/06~~ 4/11/06 **Completion Date:** ~~03/21/06~~ 4/11/06

Name of on-site supervisor & VT Certification No: Bill Babcock, #14266; Steve Osborne, #17442; Paul Pelletier, #16293.

Name of Consultant/Consulting Company: ~~To Be Determined.~~ Clay Point Associates

Work practices to be used according to the following VRAC Sections: Comprehensive work practices will be utilized according to all applicable VRAC regulations except for Section 2, Subsection 2.4.2 (D).

Alternative work procedures requested? Yes No

Does the project fall under a waste waiver? Yes No **Waste Waiver #:** 2006EHM0~~1~~2

Name and address of final disposal site: Turnkey Landfill
90 Rochester Neck Rd, Rochester NH 03839

Notification sent to the following agencies: ~~n/a~~ EPA

Print: Joyce E. Rublee **Signature** Joyce E. Rublee **Date:** 03/02/2006
Name and signature of Notification Preparer

Revised 3/31/06
Revised 4/2/06
Revised 4/7/06

Clay Point Associates, Inc.

February 22, 2006

Mr. Ken Morton
Environmental Hazards Management, Inc.
P.O. Box 785
Williston, Vermont 05495

RE: Asbestos Bulk Sample Analysis
Ingall's, Shed
CPAI Project #9353

Dear Mr. Morton:

The following correspondence is in reference to professional asbestos management services performed by Clay Point Associates, Inc. (CPAI) on February 10, 2006 relative to bulk sample analysis of two (2) samples of suspect asbestos containing materials.

On February 10, 2006, you provided CPAI with two (2) bulk samples of suspect asbestos containing material. CPAI submitted the samples to a Vermont certified analytical service for asbestos content analysis. All bulk samples were analyzed by Polarized Light Microscopy (PLM) (Visual Estimation Method) according to EPA Method 600/R-93/116. Identification of asbestos by PLM is based on optical crystallographic properties, and gives a qualitative differentiation between types of asbestos and other fibrous materials. It also allows for a quantitative estimate of percent asbestos using EPA approved methods.

The Bulk Sample Analysis Inventory (Table 1), analytical service bulk sample analysis report, and CPAI/analytical service certification information are attached to this report.

Thank you for the opportunity to service your professional asbestos management needs. If you have any questions concerning this correspondence or require additional assistance, please contact us at 879-2600.

Sincerely,
CLAY POINT ASSOCIATES, INC.

Kyle B. Austin
Environmental Associate

P.O. BOX 1254 • WILLISTON, VERMONT • 05495-1254 • 802-879-2600

Clay Point Associates, Inc.

Table 1
Bulk Sample Analysis Inventory
(1 of 1)

Building/Addition: Ingall's, Shed

Homogeneous Area	Sample No.	Date Collected	Lab I.D. No.	Sample Location	Result
Linoleum Floor Covering, green	0210069353-02	02/10/06	130600292-0001	Sample provided by client, specific location not provided.	40% Chrys.
Linoleum Floor Covering, brown	0210069353-03	02/10/06	130600292-0002	Sample provided by client, specific location not provided.	ND

Chrys. = Chrysotile Asbestos
ND = None Detected (Asbestos)

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EMSL Analytical, Inc.
7 Constitution Way. Suite 107, Woburn, MA 01801
Phone: 781-933-8411 Fax: 7819338412 Email: bostonlab@emsl.com

Attn: **Todd C Hobson**
Clay Point Associates, Inc.
P.O. Box 1254
Williston, VT 05495

Fax: (802) 879-0766 Phone: (802) 879-2600
Project: **CPAI Project #9353**

Customer ID: CLAY53
Customer PO:
Received: 02/13/06 10:45 AM
EMSL Order: 130600292

EMSL Proj:
Analysis Date: 2/13/2006
Report Date: 2/14/2006

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos				Asbestos
Sample	**Location**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**% Type**
0210069353-02 *130600292-0001*	Not Given	Gray/Beige Fibrous Heterogeneous			60%	Non-fibrous (other)	**40% Chrysotile**
0210069353-03 *130600292-0002*	Not Given	Gray/Tan Fibrous Heterogeneous	40%	Cellulose	60%	Non-fibrous (other)	**None Detected**

Analyst(s)

Kevin Pine (2)

Karin Nelson
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. Samples reported as <1% or none detected may require additional testing by TEM to confirm asbestos quantities. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. The test results contained within this report meet the requirements of NELAC unless otherwise noted.
Analysis performed by EMSL Boston NVLAP# 101147-0 MA# AA000188

THIS IS THE LAST PAGE OF THE REPORT.

ASBESTOS CONSULTING ENTITY

CLAY POINT ASSOCIATES, INC.
P.O. BOX 1254
WILLISTON VT 05495-1254

Vermont Dept. of Health
Division of Health Protection
108 Cherry St., P.O. Box 70
Burlington, VT 05402

LICENSE: CE018341 EXPIRES: Thursday, April 06, 2006

CERIFICATE OF LICENSE
VERMONT ASBESTOS REGULATORY PROGRAM

THIS CERTIFICATE SHALL REMAIN IN FORCE UNTIL THE EXPIRATION DATE UNLESS REVOKED OR VOIDED BEFORE THAT TIME.
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THIS CERTIFICATE IS FOR OFFICE USE ONLY.

Patricia Sharpe

ASBESTOS ANALYTICAL SERVICES

EMSL ANALYTICAL, INC.
432 COLUMBIA ST. SUITE 16A
CAMBRIDGE MA 02141

Vermont Dept. of Health
Division of Health Protection
108 Cherry St., P.O. Box 70
Burlington, VT 05402

LICENSE: AL357102 EXPIRES: Friday, May 05, 2006

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Patricia Sheehan

ASBESTOS PLM ANALYST

KEVEN PINE
EMSL ANALYTICAL 432 COLUMBIA STREET
CAMBRIDGE MA 02141

Vermont Dept of Health
Division of Health Protection
108 Cherry St, PO Box 70
Burlington, VT 05402

LICENSE: PB017559 EXPIRES: Tuesday, May 23, 2006

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Patricia Spafor

Clay Point Associates, Inc.

April 20, 2006

Mr. Scott Ingalls
Casing Development, LLC
18 Arlington Street
Essex Jct., Vermont 05452

Re: Report of Asbestos Project Clearance Activity
Abandoned Structure, Bridge Street, Richmond, Vermont
CPAI Project #9408/VDH Project Permit #406050

Dear Mr. Ingalls:

The following provides information detailing asbestos project clearance activities performed by Clay Point Associates, Inc. (CPAI) within the Bathroom of the abandoned structure located southwest of the former Blue Seal Feeds Building, Bridge Street, Richmond, Vermont. The clearance activity was performed on April 11, 2006.

The on-site clearance activities were conducted in order to properly complete the asbestos abatement response actions (removal) in accordance with the Vermont Regulations for Asbestos Control (VRAC). Environmental Hazards Management, Inc. (EHM) of Williston, Vermont was the selected asbestos abatement contractor for this work.

On April 11, 2006, EHM informed CPAI that their abatement work area cleaning activities had been completed. At this time, CPAI performed a comprehensive inspection of accessible surfaces within the abatement work area for visible dust, dirt, debris, and residue. Surfaces behind critical and containment barriers were not accessible, and therefore, not visually inspected.

Upon successful completion of the visual inspection, two (2) clearance air monitoring samples were collected from randomly selected locations within the abatement work area. This activity was performed in order to assess the concentration of airborne fibers within the abatement work area at the time of sample collection. Clearance air samples were collected using aggressive methods. All surfaces within the abatement work area were dry at the time of clearance air sample collection. Visual inspection/clearance air sampling activities were conducted by Christopher R. Walker. Mr. Walker is a Vermont certified Asbestos Project Monitor (PM017423).

The two (2) clearance air monitoring samples were prepared and analyzed by Phase Contrast Microscopy (PCM) in accordance with NIOSH Method 7400, Revision #4 (8/94). This method does not differentiate between asbestos and non-asbestos fibers, but includes all fibers greater than 5 microns long with a length-to-width aspect ratio of at least 3:1. Analysis was conducted by CPAI employee Kyle B. Austin. Mr. Austin is a Vermont certified Asbestos PCM/Field Analyst (PA016658/FA016659). CPAI is a successful participant in the Proficiency Analytical Testing Program (PAT).

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In accordance with VRAC, an asbestos project is successfully completed if all air samples collected within the abatement work area indicate a fiber level of less than or equal to 0.010 fibers per cubic centimeter (f/cc) of air. All clearance air samples collected from within the abatement work area in the Bathroom of the abandoned structure located southwest of the former Blue Seal Feeds Building, Bridge Street, Richmond, Vermont were determined to be less than 0.010 f/cc.

Included with this report are the collection/analysis summary pages and appropriate CPAI certifications.

Thank you for the opportunity to service your professional asbestos management needs. If you have any questions concerning this report, or require additional information, please contact us at 879-2600.

Sincerely,
CLAY POINT ASSOCIATES, INC.

Kyle B. Austin

Kyle B. Austin
Environmental Associate

cc: Vernon Nelson/Vermont Department of Health
Ken Morton/Environmental Hazards Management, Inc.

Clay Point Associates, Inc.

Clearance Air Monitoring
Air Sample Collection/Analysis Summary

Client:	Casing Development, LLC
CPAI Project No.:	9408
Abatement Site Location:	Abandoned Structure - Bathroom Bridge St. (southwest of Former Blue Seal Feeds Bldg.) Richmond, Vermont

Analysis Results Summary

Date Collected	Sample #	Lab I.D. #	Sample Location	PCM Analysis Result
11 Apr. '06	0411069408-01	06-8095	Bathroom, 3 ft. 4 in. from north wall, 2 ft. 2 in. from east wall, 4 ft. 6 in. from floor.	0.005 f/cc
11 Apr. '06	0411069408-02	06-8096	Bathroom, 2 ft. 9 in. from south wall, 3 ft. 1 in. from west wall, 4 ft. 6 in. from floor.	0.004 f/cc

PCM = Phase Contrast Microscopy
f/cc = fibers per cubic centimeter

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Clay Point Associates, Inc.

Clearance Air Monitoring
Air Sample Collection/Analysis Summary

Client: Casing Development, LLC
CPAI Project No.: 9408
Abatement Site Location: Abandoned Structure - Bathroom
Bridge St. (southwest of Former Blue Seal Feeds Bldg.)
Richmond, Vermont

Technical Data Related to Air Sample Collection

Sample #	H.V. Pump #	Start Flow LPM	End Flow LPM	Flow LPM	Start Time	End Time	Total Time Min.	Total Volume Liters
0411069408-01	10	13.13	13.13	13.13	12:33	14:15	102	1,339.26
0411069408-02	8	13.13	13.13	13.13	12:33	14:15	102	1,339.26

H.V. = High Volume
LPM = Liters Per Minute

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ASBESTOS CONSULTING ENTITY

CLAY POINT ASSOCIATES, INC.
P.O. BOX 1254
WILLISTON VT 05495-1254

Vermont Dept of Health
Division of Health Protection
108 Cherry St, PO Box 70
Burlington, VT 05402

LICENSE: CE018341 EXPIRES: Friday, April 06, 2007

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Patricia [illegible]

ASBESTOS PROJECT MONITOR

Vermont Dept of Health
Division of Health Protection
108 Cherry St, PO Box 70
Burlington, VT 05402

KYLE B. AUSTIN
CLAY POINT ASSOCIATES, INC. P.O. BOX 1254
WILLISTON VT 05495-1254

LICENSE: PM018070 EXPIRES: Wednesday, September 27, 2006

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Patricia Hunter

ASBESTOS ANALYTICAL SERVICES

CLAY POINT ASSOCIATES, INC.
P.O. BOX 1254
WILLISTON VT 05495-1254

Vermont Dept of Health
Division of Health Protection
108 Cherry St, PO Box 70
Burlington, VT 05402

LICENSE: AL016662

EXPIRES: Tuesday, December 19, 2006

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Patricia Sputo

ASBESTOS PCM ANALYST

Vermont Dept of Health
Division of Health Protection
108 Cherry St, PO Box 70
Burlington, VT 05402

KYLE B. AUSTIN
CLAY POINT ASSOCIATES, INC. P.O. BOX 1254
WILLISTON VT 05495-1254

LICENSE: PA016658 EXPIRES: Tuesday, December 19, 2006

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Patricia Spector

ASBESTOS FIELD ANALYST

Vermont Dept of Health
Division of Health Protection
108 Cherry St, PO Box 70
Burlington, VT 05402

KYLE B. AUSTIN
CLAY POINT ASSOCIATES, INC. P.O. BOX 1254
WILLISTON VT 05495-1254

LICENSE: FA016659 EXPIRES: Tuesday, December 19, 2006

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Patricia Spector

ANGLO-AMERICAN, 2009

ANGLO - AMERICAN
ENVIRONMENTAL
Philip Cornock, Certified Vermont State Asbestos Inspector

RECEIVED
APR - 8 2009
THE JOHNSON COMPANY, INC.

April 6th, 2009

Mr. Mike Marotto
Staff Scientist
The Johnson Company, Inc
100 State St, Suite 600
Montpelier
VT 05602.

Re: Inspection for Asbestos Containing Materials at the Former Richmond Creamery Facility, 125 Bridge St, Richmond, VT, 05477.
AAE Project # 0958.

Dear Mr. Marotto,

Enclosed is documentation related to professional asbestos inspection activities performed by the Anglo-American Environmental Company (AAE) on March 23rd and 24th within the Former Richmond Creamery Facility located at 125 Bridge St, Richmond, VT, 05477. Inspection activities were carried out as per your request which involved sampling and evaluation of suspect asbestos-containing materials (acm's) within the facility. The inspection was performed in accordance with the Vermont Regulations for Asbestos Control (VRAC) VSA Title 18, Chapter 26, and 40 CFR Part 763, "Asbestos Containing Materials in Schools: Final Rule and Notice" (EPA/ AHERA Model Accreditation Plan). Inspection duties were performed by a Vermont Certified Asbestos Inspector. AAE's Standard Operating Procedures (SOP's) also follow the OSHA 29 CFR Part 1910, "Asbestos Standards for General Industry)".

On March 23rd and 24th, 2009, AAE collected sixty nine (69) bulk samples of suspect asbestos-containing materials from within the facility. All bulk samples were submitted to a Vermont Certified Analytical Service (EMSL, Woburn, MA) of which 68 were analyzed by Polarized Light Microscopy (PLM Visual Estimation Method) according to the EPA Method 600/R-93/116. One sample was subjected to the Point Counting method approved by the EPA.

Drawings depicting AAE's Area Numbers (Storage Areas) and bulk sampling locations (only sampling locations where suspect materials proved positive for asbestos) are attached to this report along with EMSL's complete Bulk Sampling Report and pertinent Vermont Certifications.

(802) 917-1393 (C)
(802) 888-4112 (H) Web: asbestosaae.com email: xukcop@aol.com
19 HOWARD STREET • MORRISVILLE, VT 05661

ANGLO - AMERICAN
ENVIRONMENTAL
Philip Cornock, Certified Vermont State Asbestos Inspector

Thank-you for the opportunity to service your professional environmental management needs. If you have any questions concerning this inspection report, please contact me at 802-888-4112 or by cell at 802-917-1393.

Sincerely

Philip Cornock
Owner..Anglo-American Environmental

(802) 917-1393 (C)
(802) 888-4112 (H)
Web: asbestosaae.com
email: xukcop@aol.com

19 HOWARD STREET • MORRISVILLE, VT 05661

INVENTORY OF POSITIVE ASBESTOS -CONTAINING MATERIALS.

BASEMENT AREA:

1. Sample RC-5…1,750 sq.ft of asbestos transite panels on ceiling and upper wall areas of "Milk Receiving".
2. Sample RC-8…400 sq.ft of asbestos transite panels on ceiling of "Milk Silo Room".
3. Sample RC-12..900 sq.ft of asbestos transite panels on ceiling of "Production Area # 1".
4. Sample RC-19..1,080 sq.ft of asbestos transite panels on ceiling of "Production Area # 2"
5. Sample RC-57..1,625 sq.ft of asbestos transite panels on ceiling of "Production Area # 3"
6. Sample RC-26..120 sq.ft of asbestos transite ceiling/wall panels in Storage Area #5.
7. Sample RC-26A..108 sq.ft of asbestos transite ceiling/wall panels in Storage Area # 5A.

1st FLOOR AREA:

8. Sample RC-27..30 sq.ft of asbestos transite ceiling panels in "Ammonia Compressor Room."
9. Sample RC-31..875 sq.ft of asbestos transite ceiling panels in Storage Area # 6 and into "Culture Room".
10. Sample RC-34..100 sq.ft of 9"x9" vinyl asbestos floor tile (not adhesive) on floor of "Laboratory".

10A Sample RC-56..110 sq.ft of asbestos transite ceiling/wall panels in closet area under stairwell opposite Laboratory entrance.

2nd FLOOR AREA (TOWER BLOCK):

11. Sample RC-40..80 sq.ft of 9"x9" vinyl asbestos floor tile (not adhesive) on floor of "Reception Office".
12. Sample RC-42..15 sq.ft of 9"x9" vinyl asbestos floor tile (not adhesive) on closet floor of "Conference Room".
13. Sample RC-43..195 sq.ft of 9"x9" vinyl asbestos floor tile (not adhesive) on floor of "Conference Room".
13. Sample RC- 45..15 sq.ft of 9"x9" vinyl asbestos floor tile (not adhesive) on bathroom floor.

14. Sample RC-46..58 sq.ft of adhesive contaminated 9"x9" vinyl floor tile on hallway floor in front of "Reception Area".
15. Sample RC-47..58 sq.ft of gold adhesive compound under Sample # RC-46.
16. Sample RC-49..270 sq.ft of 9"x9" vinyl asbestos floor tile and adhesive on floor of "Office".
17. Sample RC- 50..126 sq.ft of 9"x9" vinyl asbestos floor tile and adhesive on floor of Storage Room # 12.
18. Sample RC-51..20 sq.ft of 9"x9" vinyl asbestos linoleum on Bathroom floor (not adhesive).
19. Sample RC-53..2,350 sq.ft of exterior asbestos cement blue siding.

2nd FLOOR AREA (RED BRICK EXTERIOR BUILDING).

20. Sample RC-60..sheetrock joint compound found positive after point-counting.....further sample investigation required if material's disturbed.
21. Sample RC-64..56 sq.ft of 12"x12" blue vinyl asbestos floor tile(not adhesive) on floor in front of bathrooms.
22. Sample RC-69..50 sq.ft of black tar coating adhering to corklike material on ceiling of a Stock Room in the Attic area.

ADDENDUM.

If positive flooring material is not visible the material will be located under loose carpeting.
The Basement Area floor contained 2-3" of ice on the day of the survey. It is possible that previously fallen/broken areas of asbestos transite and other suspect asbestos-containing materials maybe located underneath the ice.
No adhesive could be located underneath carpeting.

130900990

13090099 0

ANGLO-AMERICAN ENVIRONMENTAL

(1)

CHAIN OF CUSTODY RECORD

19 Howard Street
Morrisville, VT 05661
PHONE: (802) 888-4112 E-MAIL: xukcop@aol.com

[redacted] Name: FORMER RICHMOND CREAMERY	Purchase Order: AAE10959	[redacted] Comments: POINT COUNT IF <2% WHEN POSSIBLE.	Turnaround Time: ☒ Standard ☐ Other; Rush: ☐ 24 hr ☐ 48 hr ☐ 6-10 days
Address: 125 BRIDGE ST	Phone:		Compliance Monitoring: ☐ Yes ☒ No ☐ Partial
City: RICHMOND State: VT Zip: 05477	Report Attention: PHIL CORNOCK		
Sampled by: PHIL CORNOCK	Signature: [signature]		

Date Sampled	Sample Number	Sample Identification	Remarks
3-23-09	RC-1	BASEMENT - VERMICULITE IN STORAGE ROOM # 2	✓
	" -2	" " " " " "	✓ * PLM ONLY ON ALL
	" -3	" " " " " "	✓ SAMPLES PLEASE.
	" -4	" BLACK FIBERGLASS INSULATION UNDERLAY - STORAGE RM # 2	✓ [redacted]
	" -5	" CEILING PANELS - MILK RECEIVING ROOM	✓ 6-10 DAY TURNROUND
	" -6	" WHITE PAINT - " " " WALL	✓
	" -7	" GRAY PAINT - " " " "	✓
	" -8	" CEILING PANELS - MILK SILO ROOM	✓
	" -9	" WIRE CABLE INSULATION - MILK SILO ROOM	✓
	" -10	" WHITE COMPOUND ON FIBERGLASS TSI ENDS - MILK SILO ROOM	✓
"	" -11	" BLACK BACKING ON STYROFOAM INSULATION - " " " FLOOR	✓
	" -12	" CEILING PANELS IN PRODUCTION AREA # 1	✓
	" -13	" PLASTER CEILING " " " " " (UNDER SAMPLE 12)	✓

	SIGNATURE	PRINT NAME	DATE	TIME
Relinquished By:	[signature]	PHILIP CORNOCK	3-24-09	2:30 pm USPS
Received By Laboratory:	Stephanie Anderson	Stephanie Anderson	3-25-09	10:40 AM

Custody Seal Intact ☐ Yes ☐ No ☐ None Sample Temperature Degrees C ______	Further Comments: Please ensure you sign this Receipt column on all pages! PAGES 2 THRU 6 SAME INFO AS COVER PAGE.	Sampling Time: 6 hrs

130900990

130900990

(2)

ANGLO-AMERICAN ENVIRONMENTAL

19 Howard Street
Morrisville, VT 05661
PHONE: (802) 888-4112 E-MAIL: xukcop@aol.com

CHAIN OF CUSTODY RECORD

Client Name	Purchase Order	LAB. Comments	Turnaround Time	Compliance Monitoring
Address	Phone		☐ Standard ☐ Other Rush: ☐ 24 hr ☐ 48 hr	☐ Yes ☐ No ☐ Partial
City State Zip	Report Attention: PHIL CORNOCK			
Sampled by: PHIL CORNOCK	Signature: [signature]			

Date Sampled	Sample Number	Sample Identification	Remarks
1 3-23-09	RC- 14	BASEMENT - PLASTER CEILING IN PRODUCTION AREA #1 (UNDER SAMPLE 12)	✓
2	15	" - INSULATION ABOVE PACKAGING AREA CEILING (+WALLS)	✓
3	16	" - " " " " " "	✓
4	17	" - WHITE COMPOUND ON CEMENT CEILING NEXT TO PRODUCTION AREA	✓
5	18	" - " " " " " " " " "	✓
6	19	" - CEILING PANELS - PRODUCTION AREA #2	✓
7	20	" - WHITE COMPOUND - FIBERGLAS TSI ENDS - PRODUCTION #3	✓
8	21	" - MUD ON PIPE JOINT - PRODUCTION #3 AREA	✓
9	22	" - GRAY PLASTER ON CEILING OF MILKO SCAN ROOM	✓
10	23	" - " " " " " " " "	✓
11	24	" - WHITE SKIM COAT ON TOP OF SAMPLE #22	✓
12	25	" - " " " " " " #23	✓
13	26	" - CEILING PANELS (+WALL) STORAGE AREA #5	✓

	SIGNATURE	PRINT NAME	DATE	TIME
Relinquished By:	[signature]	PHILIP CORNOCK	3-24-09	2:30pm USPS
Received By Laboratory:	Stephanie Anderson	Stephanie Anderson	3/25/09	10:40

Custody Seal Intact ☐ Yes ☐ No ☐ None Sample Temperature Degrees C ______	Further Comments:	Sampling Time:

130900990

130900990

(3)

ANGLO-AMERICAN ENVIRONMENTAL
19 Howard Street
Morrisville, VT 05661
PHONE: (802) 888-4112 E-MAIL: xukcop@aol.com

CHAIN OF CUSTODY RECORD

Client Name	Purchase Order	LAB. Comments	Turnaround Time	Compliance Monitoring
Address	Phone		☐ Standard ☐ Other	☐ Yes
City State Zip	Report Attention: PHIL CORNOCK		Rush: ☐ 24 hr ☐ 48 hr	☐ No
Sampled by: PHIL CORNOCK	Signature:			☐ Partial

Date Sampled	Sample Number	Sample Identification	Remarks
3-23-09	RC-26A	BASEMENT - CEILING/WALL PANELS IN STORAGE AREA # 5	✓
	-27	1st FLOOR - CEILING PANELS IN AMMONIA COMPRESSOR ROOM	✓
	28	" - BLACK BACKING TO FIBERGLASS INSULATION - AMM. COMP. ROOM	✓
	29	" - 12"x12" VINYL TILE IN SHIPPING/REC'G OFFICE	✓
	30	" - 2'x4' SUSPENDED CEILING TILES IN SHIPPING/REC'G OFFICE	✓
	31	" CEILING PANELS IN STORAGE RM 6 + INTO CULTURE RM	✓
	32	" 12"x12" FIBROUS CEILING TILES IN LAB	✓
	33	" WIRE CABLE INSULATION IN CULTURE ROOM	✓
	34	" 9"x9" VINY TILE ON FLOOR OF LAB	✓
	35	" BLACK ADHESIVE ON BACK OF SAMPLE # 34	✓
	36	" WIRE CABLE INSULATION IN STARTER ROOM	✓
	37	" BLACK TAR FALLEN CEILING IN STORAGE ROOM # 6	✓
	38	" " " PAPER " " " " " "	✓

SIGNATURE	PRINT NAME	DATE	TIME
Relinquished By:	Philip Cornock	3-24-09	2:30 PM USPS
Received By Laboratory: Stephanie Anderson	Stephanie Anderson	3/25/09	1040

Custody Seal Intact ☐ Yes ☐ No ☐ None Sample Temperature Degrees C ______	Further Comments:	Sampling Time:

130900990

130900990

(4)

ANGLO-AMERICAN ENVIRONMENTAL
19 Howard Street
Morrisville, VT 05661
PHONE: (802) 888-4112 E-MAIL: xukcop@aol.com

CHAIN OF CUSTODY RECORD

Client Name	Purchase Order	LAB. Comments	Turnaround Time	Compliance Monitoring
Address	Phone		☐ Standard ☐ Other	☐ Yes
City State Zip	Report Attention: PHIL CORNOCK		Rush: ☐ 24 hr ☐ 48 hr	☐ No
Sampled by: PHIL CORNOCK	Signature: [signature]			☐ Partial

	Date Sampled	Sample Number	Sample Identification	Remarks
1	3-23-09	RC-39	1st FLOOR - INSULATION IN LOFT AREA	✓
2		-40	2nd FLOOR - 9"x9" VINYL FLOOR TILE IN RECEPTION OFFICE	✓
3	"	-41	" " - GOLD ADHESIVE UNDER SAMPLE #40	✓
4		-42	" " - 9"x9" VINYL FLOOR TILE ON CLOSET FLOOR OF CONF. ROOM	✓
5		-43	" " - 9"x9" " " " " FLOOR OF CONFERENCE "	✓
6	"	-44	" " GOLD ADHESIVE UNDER SAMPLE # 43	✓
7		-45	" " 9"x9" VINYL TILE ON BATHROOM FLOOR	✓
8		-46	" " 9"x9" " " " HALLWAY FLOOR - FRONT OF RECEPTION	✓
9		-47	" " GOLD ADHESIVE UNDER SAMPLE # 46	✓
10	"	-48	" " CREAM LINOLEUM ON KITCHEN FLOOR	✓
11		-49	" " 9"x9" VINYL TILE ON OFFICE FLOOR	✓
12		-50	" " 9"x9" " " " " STORAGE ROOM FLOOR	✓
13		-51	" " LINOLEUM IN OFFICE BATHROOM (CREAM/GREEN)	✓

	SIGNATURE	PRINT NAME	DATE	TIME
Relinquished By:	[signature]	PHILIP CORNOCK	3-24-09	2:30pm USPS
Received By Laboratory:	Stephanie Anderson	Stephanie Anderson	3/25/09	1040

Custody Seal Intact
☐ Yes ☐ No ☐ None

Sample Temperature

Degrees C ______

~~Further Comments~~:
* RC-40 thru RC-58 2nd FLOOR TOWER BLOCK SECTION
* IF SAMPLE 44 is (+) ALL ADESIVE UNDER TILES ASSUMED (+)?
Personal Notes only

(TEST ALL SAMPLES)

Sampling Time:

130900990

130900990
(5)

ANGLO-AMERICAN ENVIRONMENTAL
19 Howard Street
Morrisville, VT 05661
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CHAIN OF CUSTODY RECORD

Client Name	Purchase Order	LAB. Comments	Turnaround Time	Compliance Monitoring
Address	Phone		❑ Standard ❑ Other	❑ Yes
City State Zip	Report Attention: PHIL CORNOCK		Rush: ❑ 24 hr ❑ 48 hr	❑ No
Sampled by: PHIL CORNOCK	Signature:			❑ Partial

Date Sampled	Sample Number	Sample Identification	Remarks
3.23.09	RC-52	2nd FLOOR - GOLD ADHESIVE UNDER SAMPLE #51	✓
	" -53	EXTERIOR BLUE SIDING AROUND TOWER BLOCK	✓
	" -54	" ASPHALT ROOFING TAR - ROOF OUTSIDE WINDOW OF CONF RM	✓
	" -55	" " " TAR PAPER " " " " " "	✓
	" -56	1st FLOOR - CEILING/WALL PANELS - CLOSET AREA UNDER STAIRS	✓
	" -57	BASEMENT " PANELS IN PRODUCTION AREA # 3	✓
3.24.09	" -58	SHEETROCK COMPOUND - STORAGE ROOM WALL [2nd FLOOR]	✓
	" -59	" " - EMPLOYEE " CEILING "	✓
	" -60	" " - HALLWAY WALL EDGE NEAR STAIRS "	✓
	" -61	SHEETROCK ON EMPLOYEE ROOM WALL "	✓
	" -62	12"x12" VINYL TILE ON HALLWAY FLOOR "	✓
	" -63	GOLD ADHESIVE UNDER SAMPLE # 62 "	✓
	" -64	12"x12" BLUE VINYL TILE ON FLOOR NEAR BATHROOMS "	✓

	SIGNATURE	PRINT NAME	DATE	TIME
Relinquished By:		Philip Cornock	3-24-09	2:30pm USPS
Received By Laboratory:	Stephanie Andersen	Stephanie Anderson	3/25/09	1040

Custody Seal Intact
❑ Yes ❑ No ❑ None

Sample Temperature

Degrees C ______

Further Comments:
Personal Notes: Samples 58-69 ON 2nd FLOOR OF BRICK BUILDING NEXT TO TOWER BLOCK.

Sampling Time:

130900990

130900990

130900990

(6)

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Morrisville, VT 05661
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CHAIN OF CUSTODY RECORD

Client Name | Purchase Order | LAB. Comments | Turnaround Time | Compliance Monitoring

Address | Phone

City | State | Zip | Report Attention: PHIL CORNOCK

Sampled by: PHIL CORNOCK Signature: [signature]

Turnaround Time: ☐ Standard ☐ Other
Rush: ☐ 24 hr ☐ 48 hr

Compliance Monitoring: ☐ Yes ☐ No ☐ Partial

	Date Sampled	Sample Number	Sample Identification	Remarks
1	3.24.09	RC-65	2nd FLOOR - 12"x12" VINYL TILE ON FLOOR OF EMPLOYEE ROOM	✓
2		" 66	" " " " " " " " " STORAGE ROOM # 11	✓
3		" 67	" " " " " " " " " " " #11	✓
4	"	" 68	WHITE SKIM COAT PLASTER ON CEILING ABOVE EMPLOYEE RM.	✓
5		" 69	BLACK TAR ON CORK - CEILING STOCK ROOM IN ATTIC	✓
6				
7				
8				
9				
10				
11				
12				
13				

	SIGNATURE	PRINT NAME	DATE	TIME
Relinquished By:	[signature]	PHILIP CORNOCK	3.24.09	2:30pm USPS
Received By Laboratory:	Stephanie Anderson	Stephanie Anderson	3/25/09	1040

Custody Seal Intact
☐ Yes ☐ No ☐ None

Sample Temperature
Degrees C ______

Further Comments:
Personal Notes: Check if sample # 68 is (+) — plenty more plaster in this area to be counted.

Sampling Time:

Attn: **Philip Cornock**
Anglo-American Environmental
19 Howard Street
Morrisville, VT 05661

Fax: Phone: (802) 888-4112

Project: **Former Richmond Creamery; 125 Bridge St.; Richmond, VT**

Customer ID: ANGL78
Customer PO: AAE/0958
Received: 03/25/09 10:40 AM
EMSL Order: 130900990

EMSL Proj:
Analysis Date: 4/2/2009
Report Date: 4/2/2009

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Location	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
RC-1 *130900990-0001*	Basement; Vermiculite in Storage Rm #2	Tan/Silver Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
			Vermiculite is a known problem matrix, negative results cannot beguaranteed. Conventional TEM method analysis w/ CARB 435 milling prep isrecommended for proper quantification of asbestos in vermiculite.		
RC-2 *130900990-0002*	Basement; Vermiculite in Storage Rm #2	Tan/Silver Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
			Vermiculite is a known problem matrix, negative results cannot beguaranteed. Conventional TEM method analysis w/ CARB 435 milling prep isrecommended for proper quantification of asbestos in vermiculite.		
RC-3 *130900990-0003*	Basement; Vermiculite in Storage Rm #2	Tan/Silver Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
			Vermiculite is a known problem matrix, negative results cannot beguaranteed. Conventional TEM method analysis w/ CARB 435 milling prep isrecommended for proper quantification of asbestos in vermiculite.		
RC-4 *130900990-0004*	Basement; Black FG Insul Underlay; Storage Rm #2	Black/Silver Non-Fibrous Heterogeneous	2% Glass	98% Non-fibrous (other)	**None Detected**
RC-5 *130900990-0005*	Basement; Ceiling Panels; Mile Receiving Rm	Gray Fibrous Homogeneous		80% Non-fibrous (other)	**20% Chrysotile**
RC-6 *130900990-0006*	Basement; White Paint; Mile Receiving Rm Wall	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
RC-7 *130900990-0007*	Basement; Gray Paint; Mile Receiving Rm Wall	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**

Analyst(s)

Kevin Pine (70)

Renaldo Drakes
or other approved signatory

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NVLAP Lab Code 101147-0, AIHA IHLAP 180179, MA AA000188

Attn: **Philip Cornock**
Anglo-American Environmental
19 Howard Street
Morrisville, VT 05661

Fax: Phone: (802) 888-4112

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EMSL Proj:
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Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Location	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
RC-8 *130900990-0008*	Basement; Ceiling Panels; Milk Silo Rm	Gray Fibrous Homogeneous		80% Non-fibrous (other)	**20% Chrysotile**
RC-9 *130900990-0009*	Basement; Wire Cable Insulation; Milk Silo Rm	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
RC-10 *130900990-0010*	Bsmt; White Compound on FG TSI Ends; Milk Silo Rm	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
RC-11 *130900990-0011*	Bsmt; Blk Back on Styrofoam Insul; Milk Silo Floor	Gray Fibrous Homogeneous	90% Cellulose 5% Glass	5% Non-fibrous (other)	**None Detected**
RC-12 *130900990-0012*	Basement; Ceiling Panels in Production Area #1	Gray Fibrous Homogeneous		80% Non-fibrous (other)	**20% Chrysotile**
RC-13 *130900990-0013*	Basement; Plaster Ceiling in Production Area #1	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
RC-14 *130900990-0014*	Basement; Plaster Ceiling in Production Area #1	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
RC-15 *130900990-0015*	Basement; Insul abv Packaging Area Ceiling/Walls	Tan Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (other)	**None Detected**

Analyst(s)

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Report Date:	4/2/2009

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Location	Appearance	Non-Asbestos %	Non-Asbestos Fibrous	Non-Asbestos %	Non-Asbestos Non-Fibrous	Asbestos % Type
RC-16 *130900990-0016*	Basement; Insul abv Packaging Area Ceiling/Walls	Tan Fibrous Homogeneous	95%	Cellulose	5%	Non-fibrous (other)	**None Detected**
RC-17 *130900990-0017*	Bsmt; Wht Compound on Cement Ceiling next to Prod	White Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
RC-18 *130900990-0018*	Bsmt; Wht Compound on Cement Ceiling next to Prod	White Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
RC-19 *130900990-0019*	Basement; Ceiling Panels; Production Area #2	White Fibrous Homogeneous			80%	Non-fibrous (other)	**20% Chrysotile**
RC-20 *130900990-0020*	Bsmt; White Compound; FG TSI Ends; Production #3	White Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
RC-21 *130900990-0021*	Basement; Mud on Pipe Joint; Production Area #3	Tan Non-Fibrous Heterogeneous			100%	Non-fibrous (other)	**None Detected**
RC-22 *130900990-0022*	Basement; Gray Plaster on Ceiling; Milko Scan Room	Gray Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**

Analyst(s)

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Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Location	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
RC-23 *130900990-0023*	Basement; Gray Plaster on Ceiling; Milko Scan Room	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
RC-24 *130900990-0024*	Basement; White Skim Coat on Top of Sample #22	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
RC-25 *130900990-0025*	Basement; White Skim Coat on Top of Sample #23	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
RC-26 *130900990-0026*	Basement; Ceiling Panels/Wall; Storage Area #5	Gray Fibrous Homogeneous		80% Non-fibrous (other)	**20% Chrysotile**
RC-26A *130900990-0027*	Basement; Ceiling Panels/Wall; Storage Area #5	Gray Fibrous Homogeneous		80% Non-fibrous (other)	**20% Chrysotile**
RC-27 *130900990-0028*	1st Fl; Ceiling Panels in Ammonia Compressal Rm	Gray Fibrous Homogeneous		80% Non-fibrous (other)	**20% Chrysotile**
RC-28 *130900990-0029*	1st Fl; Black Back to FG Insulation; Amm Comp Rm	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
RC-29 *130900990-0030*	1st Fl; 12x12 VT; Shipping/Receiving Office	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**

Analyst(s)

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Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Location	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
RC-30 *130900990-0031*	1st Fl; 2x2 Susp CT; Shipping/Receiving Office	Gray Fibrous Homogeneous	50% Cellulose 30% Min. Wool	20% Non-fibrous (other)	**None Detected**
RC-31 *130900990-0032*	1st Fl; Ceiling Panels; Storage Rm #6/Culture Rm	Gray Fibrous Homogeneous		80% Non-fibrous (other)	**20% Chrysotile**
RC-32 *130900990-0033*	1st Fl; 12x12 Fibrous Ceiling Tiles; Lab	Tan Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (other)	**None Detected**
RC-33 *130900990-0034*	1st Fl; Wire Cable Insulation; Culture Rm	Brown Fibrous Heterogeneous	90% Cellulose	10% Non-fibrous (other)	**None Detected**
RC-34 *130900990-0035*	1st Fl; 9x9 Vinyl Tile; Floor of Lab	Tan Non-Fibrous Homogeneous		95% Non-fibrous (other)	**5% Chrysotile**
RC-35 *130900990-0036*	1st Fl; Black Adhesive on back of Sample #34	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
RC-36 *130900990-0037*	1st Fl; Wire Cable Insulation; Starter Rm	Tan Fibrous Homogeneous	70% Cellulose 20% Glass	10% Non-fibrous (other)	**None Detected**
RC-37 *130900990-0038*	1st Fl; Black Tar Fallen Ceiling; Storage Rm #6	Black Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (other)	**None Detected**

Analyst(s)

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Analysis Date: 4/2/2009
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Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Location	Appearance	Non-Asbestos % Fibrous		Non-Asbestos % Non-Fibrous	Asbestos % Type
RC-38 *130900990-0039*	1st Fl; Blk Tar Paper Fallen Ceiling; Stg Rm #6	Black Fibrous Heterogeneous	30%	Cellulose	70% Non-fibrous (other)	**None Detected**
RC-39 *130900990-0040*	1st Fl; Insulation in Loft Area	Tan Fibrous Homogeneous	95%	Cellulose	5% Non-fibrous (other)	**None Detected**
RC-40 *130900990-0041*	2nd Fl; 9x9 Vinyl Floor Tile; Reception Area	Tan Non-Fibrous Homogeneous			95% Non-fibrous (other)	**5% Chrysotile**
RC-41 *130900990-0042*	2nd Fl; Gold Adhesive under Sample #40	Yellow Non-Fibrous Homogeneous	10%	Cellulose	90% Non-fibrous (other)	**None Detected**
RC-42 *130900990-0043*	2nd Fl; 9x9 VFT; Closet Floor; Conference Rm	Tan Non-Fibrous Homogeneous			98% Non-fibrous (other)	**2% Chrysotile**
RC-43 *130900990-0044*	2nd Fl; 9x9 VFT; Conference Rm Floor	Gray Non-Fibrous Homogeneous			98% Non-fibrous (other)	**2% Chrysotile**
RC-44 *130900990-0045*	2nd Fl; Gold Adhesive under Sample #43	Yellow Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
RC-45 *130900990-0046*	2nd Fl; 9x9 Vinyl Floor Tile; Bathroom Floor	Gray Non-Fibrous Homogeneous			98% Non-fibrous (other)	**2% Chrysotile**

Analyst(s)

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Renaldo Drakes
or other approved signatory

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Analysis Date:	4/2/2009
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Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Location	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
RC-46 *130900990-0047*	2nd Fl; 9x9 VFT; Hallway Floor; Front Reception	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
RC-47 *130900990-0048*	2nd Fl; Gold Adhesive under Sample #46	Yellow Non-Fibrous Homogeneous		98% Non-fibrous (other)	**2% Chrysotile**
RC-48 *130900990-0049*	2nd Fl; Cream Linoleum; Kitchen Floor	Gray/White Fibrous Heterogeneous	30% Cellulose	70% Non-fibrous (other)	**None Detected**
RC-49 *130900990-0050*	2nd Fl; 9x9 Vinyl Floor Tile; Office Floor	Gray Non-Fibrous Homogeneous		98% Non-fibrous (other)	**2% Chrysotile**
RC-50 *130900990-0051*	2nd Fl; 9x9 Vinyl Floor Tile; Storage Rm Floor	Gray Non-Fibrous Homogeneous		98% Non-fibrous (other)	**2% Chrysotile**
RC-51 *130900990-0052*	2nd Fl; Cream/Green Linoleum; Office Bathroom	Tan Fibrous Heterogeneous		70% Non-fibrous (other)	**30% Chrysotile**
RC-52 *130900990-0053*	2nd Fl; Gold Adhesive under Sample #51	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
RC-53 *130900990-0054*	Ext Blue Siding around Tower Block	Gray Fibrous Homogeneous		80% Non-fibrous (other)	**20% Chrysotile**

Analyst(s)

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Received: 03/25/09 10:40 AM
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Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Location	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
RC-54 *130900990-0055*	Ext Asphalt Roofing Tar; Outside Window of Conf Rm	Black Non-Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (other)	**None Detected**
RC-55 *130900990-0056*	Ext Asphalt Roof Tar Paper; O/S Window of Conf Rm	Black Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (other)	**None Detected**
RC-56 *130900990-0057*	1st Fl; Ceiling/Wall Panels; Closet under Stairs	Gray Fibrous Homogeneous		80% Non-fibrous (other)	**20% Chrysotile**
RC-57 *130900990-0058*	Basement; Ceiling Panels; Production Area #3	Gray Fibrous Heterogeneous		80% Non-fibrous (other)	**20% Chrysotile**
RC-58 *130900990-0059*	2nd Fl; Sheetrock Compound; Storage Rm Wall	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
RC-59 *130900990-0060*	2nd Fl; Sheetrock Compound; Employee Rm Ceiling	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
RC-60 *130900990-0061*	2nd Fl; Sheetrock Compound; Hwy Wall Edge; Stairs	White Non-Fibrous Homogeneous		98% Non-fibrous (other)	**2% Chrysotile**

Analyst(s)

Kevin Pine (70)

Renaldo Drakes
or other approved signatory

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NVLAP Lab Code 101147-0, AIHA IHLAP 180179, MA AA000188

Attn: **Philip Cornock**
Anglo-American Environmental
19 Howard Street
Morrisville, VT 05661

Fax: Phone: (802) 888-4112

Project: **Former Richmond Creamery; 125 Bridge St.; Richmond, VT**

Customer ID:	ANGL78
Customer PO:	AAE/0958
Received:	03/25/09 10:40 AM
EMSL Order:	130900990
EMSL Proj:	
Analysis Date:	4/2/2009
Report Date:	4/2/2009

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos			Asbestos
Sample	**Location**	**Appearance**	**%**	**Fibrous**	**% Non-Fibrous**	**% Type**
RC-61 *130900990-0062*	Sheetrock on Employee Rm Wall	White Fibrous Homogeneous	5%	Glass	95% Non-fibrous (other)	**None Detected**
RC-62 *130900990-0063*	12x12 Vinyl Floor Tile; Hallway Floor	Tan Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
RC-63 *130900990-0064*	Gold Adhesive under Sample #62	Yellow Non-Fibrous Homogeneous	5%	Cellulose	95% Non-fibrous (other)	**None Detected**
RC-64 *130900990-0065*	12x12 Blue Vinyl Tile; Floor near Bathrooms	Blue Non-Fibrous Homogeneous			98% Non-fibrous (other)	**2% Chrysotile**
RC-65 *130900990-0066*	2nd Fl; 12x12 Vinyl Tile; Floor of Employee Rm	Tan Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
RC-66 *130900990-0067*	2nd Fl; 12x12 Vinyl Tile; Floor of Storage Rm #11	Tan Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
RC-67 *130900990-0068*	2nd Fl; 12x12 Vinyl Tile; Floor of Storage Rm #11	Gray Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
RC-68 *130900990-0069*	White Skim Coat Plaster; Ceiling abv Employee Rm	White Non-Fibrous Heterogeneous			100% Non-fibrous (other)	**None Detected**

Analyst(s)

Kevin Pine (70)

Renaldo Drakes
or other approved signatory

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Attn: **Philip Cornock**
Anglo-American Environmental
19 Howard Street
Morrisville, VT 05661

Fax: Phone: (802) 888-4112

Project: **Former Richmond Creamery; 125 Bridge St.; Richmond, VT**

Customer ID: ANGL78
Customer PO: AAE/0958
Received: 03/25/09 10:40 AM
EMSL Order: 130900990

EMSL Proj:
Analysis Date: 4/2/2009
Report Date: 4/2/2009

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos				Asbestos
Sample	**Location**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**% Type**
RC-69 *130900990-0070*	Black tar on Cork; Ceiling Stock Rm; Attic	Black Non-Fibrous Homogeneous			90%	Non-fibrous (other)	**10% Chrysotile**

Analyst(s)

Kevin Pine (70)

Renaldo Drakes
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. Samples reported as <1% or none detected may require additional testing by TEM to confirm asbestos quantities. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client.Samples received in good condition unless otherwise noted.
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EMSL Analytical, Inc.
7 Constitution Way, Suite 107, Woburn, MA 01801
Phone: (781) 933-8411 Fax: (781) 933-8412 Email: bostonlab@emsl.com

Attn: **Philip Cornock**
Anglo-American Environmental
19 Howard Street
Morrisville, VT 05661

Fax: Phone: (802) 888-4112

Project: **Former Richmond Creamery; 125 Bridge St.; Richmond, VT**

Customer ID: ANGL78
Customer PO: AAE/0958
Received: 03/25/09 10:40 AM
EMSL Order: 130900990

EMSL Proj:
Analysis Date: 4/6/2009
Report Date: 4/6/2009

Asbestos Analysis of Bulk Material via EPA 600/R-93/116. Quantitation using 400 Point Count Procedure.

			Non-Asbestos		Asbestos
Sample	**Location**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
RC-60 *130900990-0061*	2nd Fl; Sheetrock Compound; Hwy Wall Edge; Stairs	White Non-Fibrous Homogeneous		98.50% Non-fibrous (other)	**1.50% Chrysotile**

Analyst(s)

Renaldo Drakes (1)

Renaldo Drakes
or other approved signatory

Unless otherwise noted, the results in this report have not been blank corrected.Samples received in good condition unless otherwise noted.
NVLAP Lab Code 101147-0, AIHA IHLAP 180179, MA AA000188

THIS IS THE LAST PAGE OF THE REPORT.

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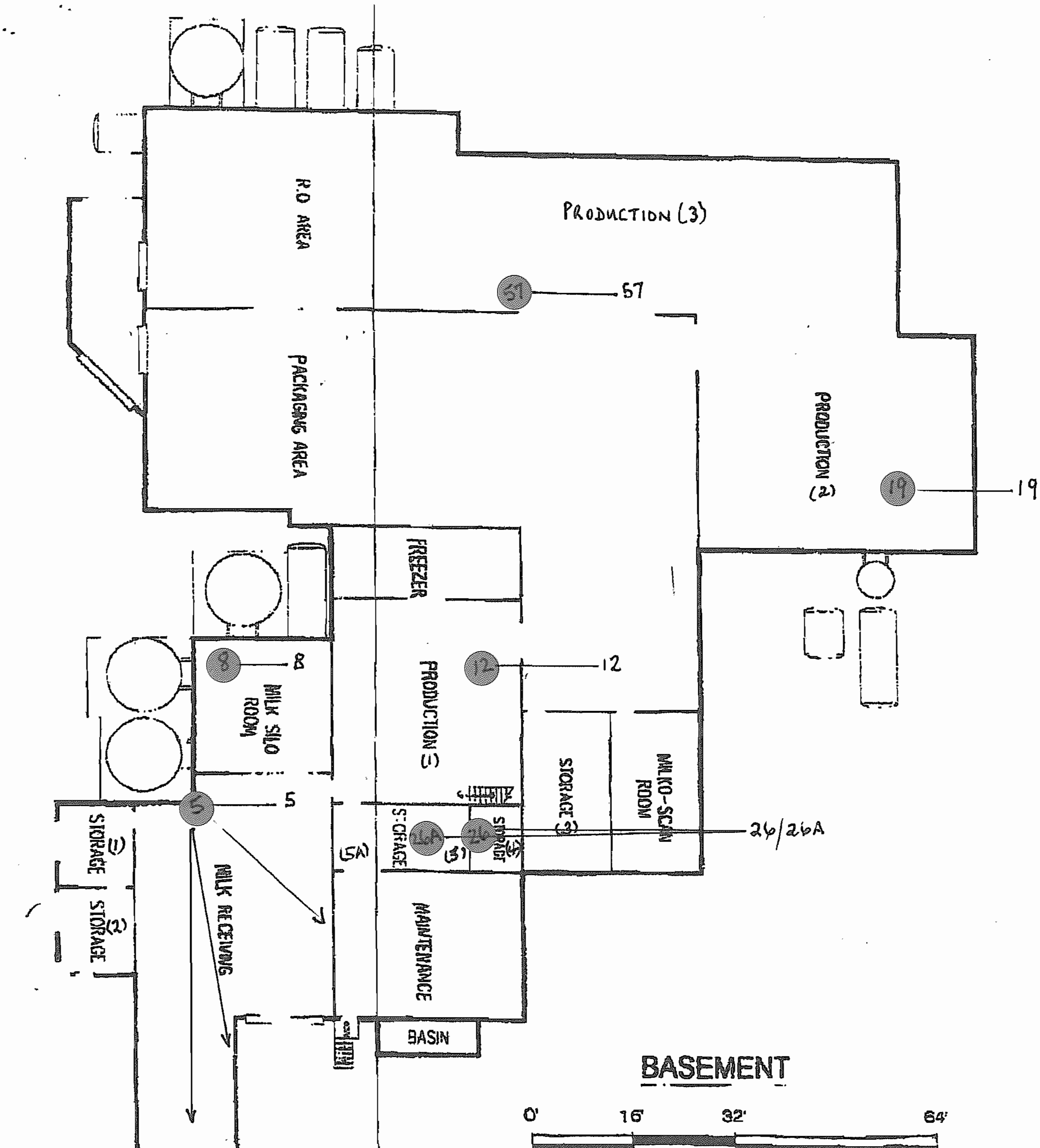

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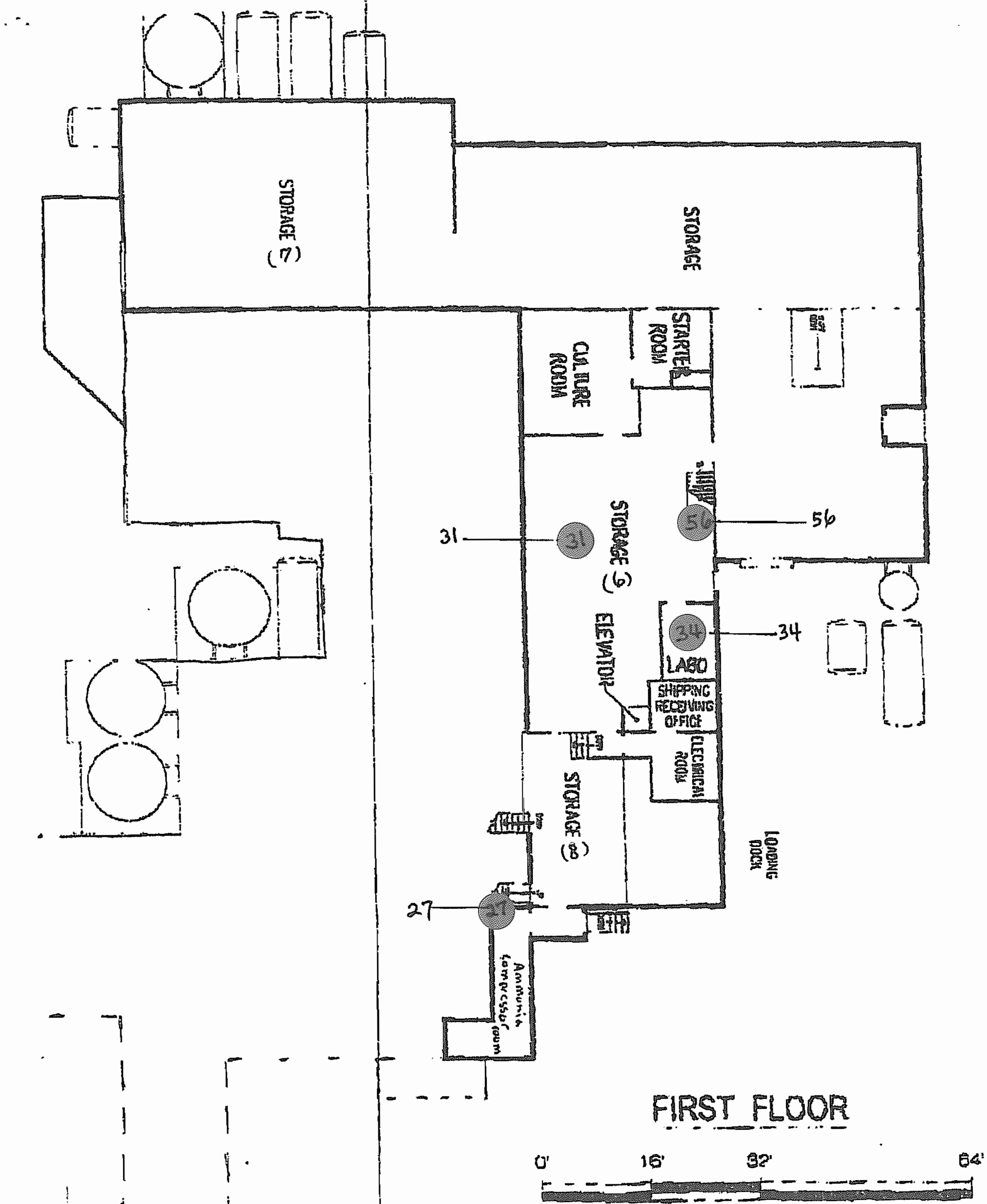
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STORAGE
CULTURE ROOM
STARTER ROOM
STORAGE (6)
31
56
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ELEVATOR
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SHIPPING RECEIVING OFFICE
ELECTRICAL ROOM
STORAGE (8)
LOADING DOCK
27
Ammonia compressor room
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16'
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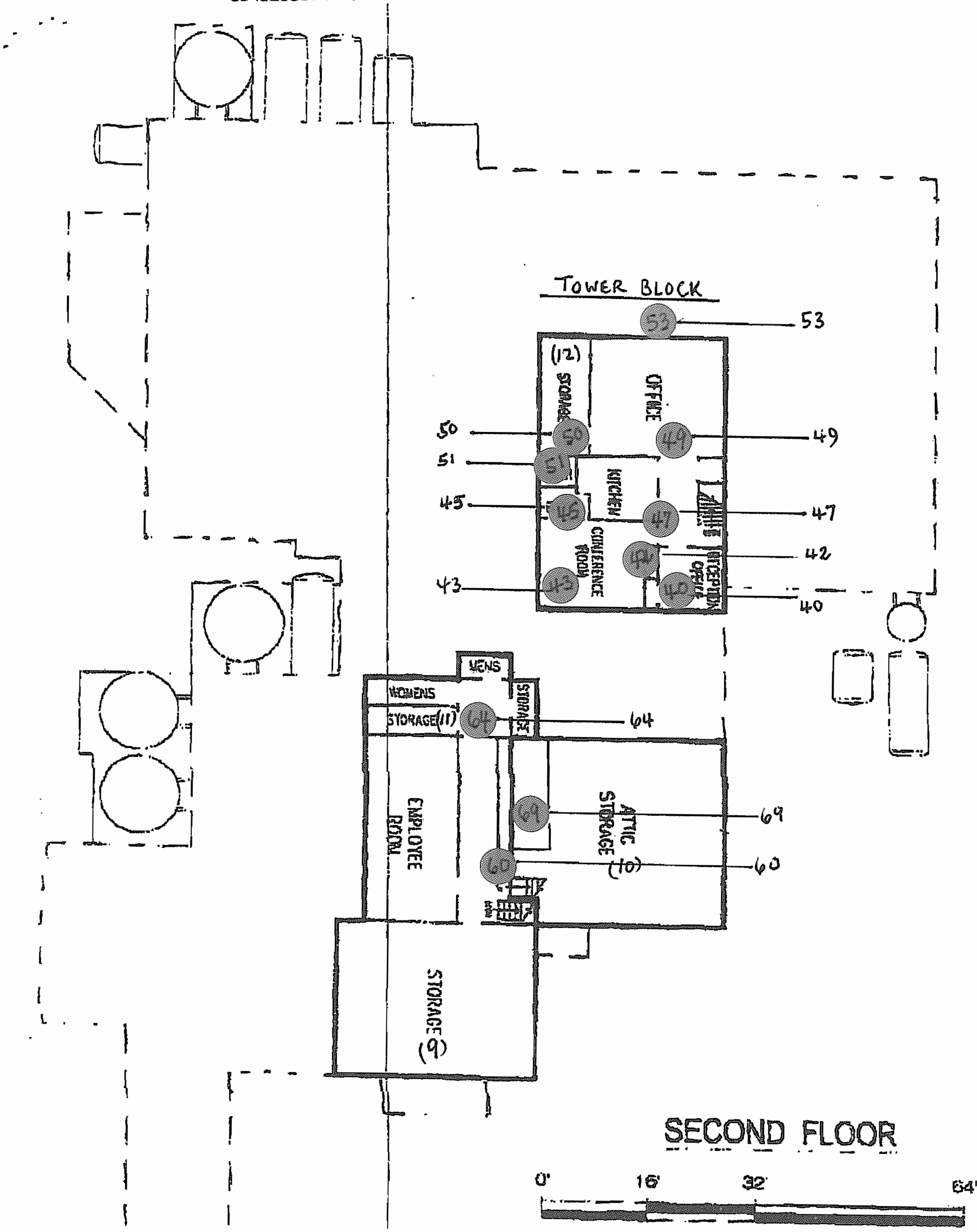
FIRST FLOOR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(12)
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OFFICE
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49
51
KITCHEN
45
47
CONFERENCE ROOM
42
RECEPTION OFFICE
43
40
MENS
WOMENS
STORAGE
STORAGE(11)
64
EMPLOYEE ROOM
ATTIC STORAGE (10)
69
60
STORAGE (9)
SECOND FLOOR
0'
16'
32'
64'

ASBESTOS SITE INSPECTOR

Vermont Department of Health
Drawer 30
P.O. Box 70
Burlington, VT 05402

PHILIP CORNOCK
ANGLO-AMERICAN ENVIRONMENTAL 19 HOWARD STREET
MORRISVILLE VT 05661

LICENSE: AI582648 EXPIRES: Saturday, June 13, 2009

CERIFICATE OF LICENSE
VERMONT ASBESTOS REGULATORY PROGRAM

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Vermont Department of Health
Drawer 30
P.O. Box 70
Burlington, VT 05402

ASBESTOS ANALYTICAL SERVICES

EMSL ANALYTICAL, INC.
7 CONSTITUTION WAY SUITE 107
WOBURN MA 01801

LICENSE: AL357102 EXPIRES: Saturday, May 16, 2009

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Lindsey Wells

ASBESTOS TEM-BULK ANALYST

RENALDO DRAKES
EMSL ANALYTICAL INC. 7 CONSITUTION WAY, STE. 107
WOBURN MA 01801

Vermont Department of Health
Drawer 30
P.O. Box 70
Burlington, VT 05402

LICENSE: TB785510 EXPIRES: Monday, July 13, 2009

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ASBESTOS PLM ANALYST

Vermont Department of Health
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P.O. Box 70
Burlington, VT 05402

KEVIN PINE
EMSL ANALYTICAL 7 CONSTITUTION WAY, SUITE 107
WORBURN MA 01801

LICENSE: PB017559 EXPIRES: Saturday, May 23, 2009

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Lindsey Wells

EVERGREEN ENVIRONMENTAL, 2009

Richmond Vermont Brownfield Site

Former Saputo Cheese Facility

Lead Based Paint & Mold Inspection

Performed under Contract for:
The Johnson Company, Inc.
100 State Street, Suite 600
Montpelier, VT 05602

April 24, 2009

EverGreen
Environmental Health & Safety, Inc
345 May Farm Road
Barton, Vermont 05822

Table of Contents

TABLES

1.0 INTRODUCTION

This report details a mold and lead based paint inspection performed at a Brownfield Site located in Richmond, Vermont. The inspection was completed on March 24, 2009 by EverGreen Environmental Health and Safety, Inc., (EverGreen) under contract to The Johnson Company, Inc. (JCO) of Montpelier, Vermont.

1.1 BACKGROUND INFORMATION

The Richmond, Vermont Brownfield Site under investigation by JCO is a former a dairy plant that was most recently operated by Saputo Cheese. As a cheese processing plant, several wall, floor, and ceiling surfaces had to meet Federal Food and Drug Administration standards to insure food safety. However, the building as a whole was constructed before 1978, so it is possible that lead based paint may have been used as a coating product in building locations removed from the cheese production activities.

Visible roofing leaks in the building have allowed water and moisture to penetrate into the interior. These conditions are favorable to mold growth if suitable substrates are present. During an initial walkthrough of the building, mold growth was observed.

2.0 MATERIALS AND METHODS

2.1 MOLD SAMPLING

The objective of the mold sampling for this inspection was to identify the type of mold present. Bulk samples of visible mold growth on interior building components were selected, bagged, labeled, and submitted under a chain of custody procedure to an accredited laboratory for identification. Mold identification was performed by a validated in-house microscopy method at Galson Laboratories. Laboratory results are compiled in Appendix A.

2.2 LEAD BASED PAINT SAMPLING

Lead based paint sampling was conducted using two methods:

a. An X-Ray Fluorescence (XRF) Instrument: A direct reading method that uses x-ray energy to measure the amount of lead present coating the tested material. The type of instrument used for this inspection was an Innovx tube type XRF that does not carry a radioactive source. The performance characteristic sheet and other information about the unit are located in Appendix B.

b. Paint Chip analysis: Using a dedicated scraping tool, additional samples were taken of coatings that had been previously tested via the XRF method. These samples served as a quality assurance test of XRF operation. The coating scrapings were selected, bagged, labeled, and submitted under a chain of custody procedure to an accredited laboratory. Paint Chips were analyzed using a modified EPA method – SW 846 6010C / 6020A – Lead analysis by Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP/AES). Laboratory results are compiled in Appendix A.

3.0 STANDARDS

3.1 MOLD STANDARDS

Mold and mold spores are generally recognized as biological source of toxins, and are capable of producing an allergic response in humans. The extent of the toxic and allergenic response is determined by the type of mold, and the sensitivity of the person who is experience the exposure to the mold or mold spores. The growth of mold on interior surfaces of inhabited buildings is considered to be a key indicator of moisture problems within the structure. Standards or Threshold

Limit Values (TLVs) for airborne concentrations of mold, or mold spores, have not been set. Currently, there are no EPA regulations or standards for airborne mold contaminants.

3.2 LEAD STANDARDS

Lead is a recognized health hazard. Exposures to lead are regulated by the Occupational Health and Safety Administration (OSHA) in the workplace, and by the Environmental Protection Agency (EPA) in soil, water, air, and solid waste. Residential lead hazard standards have been promulgated and adopted by both the EPA and the US. Department of Housing and Urban Development (HUD), and are targeted towards preventing lead poisoning in children.

In 1992, U.S. Federal legislature enacted into law the Housing and Community Development Act of 1992. Title ten (Title X) of this Act is known as the “Residential Lead-based Paint Hazard Reduction Act of 1992”. This law defines Lead -based Paint as paint that contains lead $\geq$ 1.0 mg /cm^2 or has a lead content at or greater than 0.5% by weight. Under the HUD / EPA regulations, lead is considered a hazard when equal to or exceeding 40 micrograms of lead in dust per square foot on floors, 250 micrograms of lead in dust per square foot on interior window sills, and 400 parts per million (ppm) of lead in bare soil in children’s play areas, or 1200 ppm average for bare soil in the rest of the yard. The use of lead in paint was regulated by the U.S. Consumer Product Safety Commission in 1978; the legal maximum lead content of paint sold after this date is limited to no more than 0.06% by weight.

4.0 RESULTS AND DISCUSSION

4.1 MOLD RESULTS

Bulk samples locations and analysis results are as listed in the Table 1 below:

Table 1: Mold Identification Results

Sample ID	Sample Location	Substrate Type	Results
Mold-01-1	Bathroom Shower Ceiling, 2nd floor office area, “Tower Block”	Pressed particle board	- mycelial fragments, light - Aspergillus/Penicillium-like, light - Cladosporium, light - Other/Unidentified, light
Mold-01-2	Bathroom wall, 2nd floor office area, “Tower Block”	Drywall / wood combination	- Mycelial fragments, light - Aspergillus/Penicillium-like, moderate - Cladosporium, light - Other/Unidentified, light
Mold-01-3	Conference Rm ceiling, 2nd floor office area, “Tower Block”	Ceiling tile, particleboard	- Mycelial fragments, light - Aspergillus/Penicillium-like, light - Basidiospores, light - Cladosporium, light
Mold-01-4	Basement, Production Room ceiling	Formica /transite -type surface	- Mycelial fragments, light - Cladosporium, light - Other/Unidentified, light

It should be noted that although the sampling results indicate “light” contamination, some sampling locations were visually determined to be heavily covered with mold-like substances.

4.2 Mold Discussion

All four mold types identified are ubiquitous, common to indoor environments that have moisture problems, and prevalent in outdoor environments in Northern New England. Aspergillus and Penicillium have similar morphology; they are grouped together for reporting purposes. Cladiosporium grows extremely well on cellulose-based materials. The Aspergillus / Penicillium-like molds are capable of producing toxic material that could be inhaled when disturbed; Cladiosporium is relatively non-toxic, but does elicit a significant allergenic response in affected individuals.

It should be noted that for identification purposes only, bulk materials speckled lightly with presumed mold were submitted to the laboratory; heavy growths of mold – like substances in the interior of the site were evident. If a decision is made to remediate or demolish the structure at the site, appropriate respiratory protection is highly recommended. Disturbance of the visible fungal growth will liberate spores, and has the potential to expose workers to fungal toxins.

4.3 Lead Based Paint Result - XRF

The XRF analyses of interior and exterior coated surfaces throughout the building are tabulated in Table 2 below. Please note that the sampling numbers correspond to the labeled locations with regard to the site map as depicted in Appendix C.

Table 2: Lead Based Paint Results, XRF[1]

Sample ID	Location	Coating Identification	mg /cm^2
	Basement / Main Production Areas:		
1	Milk receiving, east wall	Grey / White paint	0
2	Milk receiving, south wall toward east corner	White paint	0
3	Milk receiving, floor, yellow stripe, south end	Yellow stripe paint	0
4	Milk receiving, west wall at south end	Grey paint	0
5	Milk receiving, west wall, middle	White paint	0
6	Milk receiving, west wall, north end	White paint	0
7	Milk receiving, east wall, north end	Green graffiti spray paint	0
8	Milk receiving, east wall, brick	White paint	0
9	Storage room, east side of milk receiving, east wall	White paint	0
10	Storage room 1 east side of milk receiving, window sill	White paint	0
11	Maintenance, east wall, where fire extinguisher hung	Red paint patch	0
12	Maintenance, east wall, by exit door	White paint	0
13	Storage room, south side of maintenance, north wall	White paint	>1.0
14	Storage room, south side of maintenance, door trim	White paint	>1.52
15	Storage room adjacent to Micro-Scan room, west wall	White paint	0
16	Same location as above, different paint color	Grey paint	0
17	Micro-Scan room, east wall	White paint	4.98
18	Micro-Scan room, east wall, north end	Grey paint	0
19	Micro-Scan room, west wall, window trim	White paint	0
20	Production room, north wall	White paint	0
21	Iron stairway in Production room	Green paint	>1.0
22	Production room, north wall	Grey paint	0

Sample ID	Location	Coating Identification	mg /cm^2
23	Production room, freezer door	Green paint	0
24	Packaging area, south wall, formica-like board	White coating	0
25	Packaging area, east wall formica-like board	White coating	0
26	Reverse Osmosis (RO) room formica-like board	White coating	0
27	RO room, east wall, brick	White	0
28	RO room, east wall brick	Grey	0
29	RO room, east wall, window casing	Green paint	0
30	Production room, brick behind formica-like south wall	White coating	0
31	Production room, north wall, west end of room, brick	White coating	0
32	Production room, west wall, coating on cement behind formica-like wall covering	White coating	>1.0
33	Door in production area near maintenance	Grey paint	0
	First Floor Storage Rms, maintenance, lab		
34	Ammonia Compressor Room, door and casing	White paint	0
35	Ammonia Compressor room north end of east wall, brick	Red	0
36	Exit door off Ammonia Compressor room, exits west	Grey paint	0
37	Same door as above, white casing	White paint	0
38	Storage A, west wall, brick	White paint	0
39	Storage A, west wall, window casing (inside window)	Grey paint	4.13
40	Storage A, west wall between window	Grey paint	0
41	Storage A, west wall, window frame / trim	Grey paint	0
42	Storage A, door through north wall	Grey paint	1.24
43	Storage A, window on north wall, casing	White paint	0
44	Storage A, ceiling, I-beam	Grey paint	0
45	Storage B, door jamb, north entryway of room	Grey paint	>1.0
46	Storage B, door panel, north entryway of room	Grey paint	0
47	Storage B, Electrical room, south wall	White paint	1.00
48	Storage B, wood wall next to elevator	White paint	1.22
49	Storage B, west cinder block wall outside Lab	White paint	0
50	Storage B, ceiling, wood lathe above transite layer	Peeling wood	0
51	Storage B, Lab, cinder block on east wall	Pink paint	0
52	Same as above, different color paint	White paint	0
53	Storage B, Lab, brick, west wall	White paint	0
54	Storage B, stairwell on west end, closet, brick	White paint	0
55	Same as above, door to closet, door panel	Grey paint	1.04
56	Same as above, door to closet, door jamb	Grey paint	0
57	Storage B, east wall, brick	White paint	1.0
58	Storage B, south wall cinder block	White paint	0
59	Culture room, east wall, brick, 2 ft up from floor	White paint	0
60	Same as above, 5 ft up from floor	White paint	1.75

Sample ID	Location	Coating Identification	mg /cm^2
61	Culture room, south wall, brick	White paint	0
62	Storage C, north wall, brick	Red paint	0
63	Storage C, window in north wall, fascia above window	White paint	>1.0
64	Storage C, same as above, window casing near floor	White paint	0
65	Storage D, I-beam	Red paint	0
66	Storage C, west wall, door, jamb	Grey paint	0
	Second Floor "Tower Block"		
67	Tower, stairwell, treads	Brown paint	0
68	Tower, wooden mopboard at top of stairwell	Beige paint	0
69	Tower, west wall, wood, near reception area	White paint	0
70	Tower, reception area, west wall window sill	White paint	0
71	Same as above, window casing	White paint	0
72	Same as above, exterior window sill	White paint	0
73	Tower, Conference room, north window, sill	White paint	0
74	Tower building, exterior cement shingles, north side	Blue paint	>1.0
75	Tower, bathroom, east wall window sill	White paint	0
76	Tower, kitchen, north wall, fiberboard	Light blue paint	0
77	Tower building, exterior cement shingle, south side	Blue paint	>1.0
78	Tower, main office, window, south side, casing	White paint	0
79	Tower, main office, window, south side, sill	White paint	0
80	Tower, main office, south wall, lathe behind paneling	White paint	0
	Red brick building 2nd floor		
81	Storage E, west wall, wood	Cream paint	0
82	Same as above, drywall	Cream paint	0
83	Storage E, south wall, door jamb	White paint	0
84	Employee break room, plywood flooring	Grey paint	0
85	Employee break room, north wall, drywall	White paint	0
86	Employee break room, east wall window, sill	White paint	0
87	Employee break room, east wall window, casing 20" up from sill	White paint	4.30
88	Same as above, casing right at sill level	White paint	0
89	Same as above, window casing on north end of window	White paint	3.34
90	Women's room, south wall, wood	Grey paint	>1.0
91	Women's room, south wall, wood	White paint	0
92	Men's room, south wall, wood	Grey paint	>1.0
93	Men's room, entrance door	White paint	>1.0
94	South end of building section, Storage G, door	Brown paint	0
95	Attic Storage F, door jamb	White paint	0
96	Attic Storage F, stairwell to attic extension, door jamb	Blue / grey paint	2.81
97	Attic Storage F, north wall, former window casing	Dark blue paint	1.41
98	Exterior brick, west exterior wall, Attic Storage F	Red paint	0

Sample ID	Location	Coating Identification	mg /cm^2
99	Attic Storage F, west wall, window, casing	White paint	3.81
100	Attic Storage F, north wall, lath / plaster	White paint	>1.0
101	Attic Storage F, stairwell from employee room, north wall	Dark blue paint	2.12
102	Same as above, lath / plaster above door entry	Cream paint	2.12
103	Stairwell from Storage A to employee room, all walls	White paint	0
	Building exterior		
104	Loading dock to first floor, door, panel	Grey paint	1.72
105	Red brick, exterior of building, 48" up from floor level	Red paint	0
106	Foundation	Red paint	>1.0
107	Addendum to sample # 104 door casing, same location	White paint	0

[1] Positive results are highlighted in light red.

4.4 Lead Based Paint Results – Lead Paint Chip Analysis

For Quality Assurance / Quality Control purposes, samples of paint chips from XRF tested surfaces were analyzed by ICP/AES to ensure repeatability of results. Quality Control XRF testing results are included in the XRF information located in Appendix B. Please note that coatings which tested both negative and positive via XRF method were included in the QA/QC round. The results of laboratory analysis are listed in Table 3.

Table 3: Lead Paint Chip Results, Laboratory Analysis

Sample ID	Location	XRF Results mg /cm^2	% Lead by weight, lab analysis
4	Milk receiving, west wall at south end	**0**	**<0.0025**
11	Maintenance, east wall, where fire extinguisher hung	**0**	**0.0082**
87	Employee break room, east wall window, casing 20" up from sill	**4.3**	**6.8**
89	Same as above, window casing on north end of window	**3.34**	**3.5**
96	Attic Storage F, stairwell to attic extension, door jamb	**2.81**	**14**
104	Loading dock to first floor, door, panel	**1.72**	**1.5**

4.5 Lead Based Paint Discussion

The use of lead based paint as a coating material in older structures is very common. At this site, the basement area where food production activities were conducted, much of the cement, brick, cinder block, formica-like wall panels, and drywall are relatively free from lead content, with the exception of four positive areas adjacent to food production (two in a maintenance storage area, one in the Micro-Scan room, and a positive lead paint coating on an iron stairway) and one positive reading in the Production room, on painted cement block located behind the formica-like paneling.

The first floor of the building is comprised of Storage Rooms A-D and utility rooms. Lead based coatings were found in 28% of the building components tested on this floor. Of the nine positives, five are associated with door & window components (door panels, jambs, window fascia and casings) and the other four were associated with either wood wall or brick wall coatings.

The second floor "Tower Block" section of the site, which housed the main office, conference room, kitchen and bathroom, was free of any lead based paint on the interior of this section. Testing on exterior light blue shingle material was performed on the north and south facing exterior walls; two positive results (one at each location) were recorded for this exterior shingle material.

The area of the building with the most positive results was the second floor, separate from the "Tower Block", and identified on the site map as the "Red Brick second floor" section. This area held the employee break and locker rooms, and an Attic Storage area that was once used as a maintenance room. Of the twenty – three tests taken in this area, eleven were positive (48%). The majority of the positive were confined to the Attic Storage area, where six of the eleven positives were detected. Much of the walls, doors, and window components in this area tested positive. The other five positives outside of the Attic Storage area were associated with the window components in the employee break room, and the wall and doors of the woman's and men's bathrooms.

The exterior of the building had a few positives, to include a door on the loading dock, first floor, the light blue shingles on the exterior of the Tower Block, and slight positives associated with the coatings on the foundation. Red brick and white paint on the exterior tested negative.

Overall, the pattern of lead based paint testing results matches the perceived age of the building and /or building component, and the use of the space where testing was performed. Areas where testing gave positive but low readings (>1.0 mg /cm^2) indicate areas where lead paint may have been used in the past, but was removed and the building component re-coated with a more lead-friendly product. When lead based paint is stripped, commonly a residue is left behind that has enough lead content to test positive.

Demolition of this building will liberate lead dust that could contaminate the surrounding soil. In addition, both respiratory and personal protective equipment (coveralls, etc) and best hygiene practices need to be employed to safeguard workers when renovation or demolition activities take place. Special attention to the Red Brick second floor area is highly recommended to limit the amount of lead contaminated dust that could be released to the environment.

4.6 Lead Testing Quality Assurance / Quality Control (QA/QC)

Good correlation of test results (positive vs. negative) occurred between the XRF testing and the analysis of paint chips performed in the laboratory. Two samples in the milk receiving bay that tested negative for lead using the XRF were validated by the laboratory analysis. In addition, all samples that tested positive with the XRF also tested positive through laboratory analysis. For purposes of this report, the QA/QC field procedure verified the XRF positives. It should be noted that the units of measure between the XRF (mg /cm^2) and the laboratory analysis (% by weight) are not the same, however the HUD definition of lead – based paint includes any paint that tests greater than 0.5% by weight of lead. Laboratory analysis shows that the four XRF positive samples meet this criterion.

APPENDIX A: LABORATORY RESULTS

LABORATORY ANALYSIS REPORT

GALSON LABORATORIES
6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.galsonlabs.com

Client	: EverGreen Env. Health & Safety, Inc.		
Site	: Richmond VT Brownfield		
Project No.	: LBP-01-033109		
Date Sampled	: 31-MAR-09	Account No.:	21064
Date Received	: 10-APR-09	Login No. :	L191286
Date Analyzed	: 14-APR-09		
Report ID	: 607915		

Lead

Sample ID	Lab ID	Weight g	Total ug	Conc mg/kg	Percent %
LBP-01-4	L191286-1	0.099	<2.5	<25	<0.0025
LBP-01-11	L191286-2	0.10	8.3	82	0.0082
LBP-01-87	L191286-3	0.10	6800	68000	6.8
LBP-01-89	L191286-4	0.10	3600	35000	3.5
LBP-01-96	L191286-5	0.10	15000	140000	14
LBP-01-104	L191286-6	0.10	1500	15000	1.5

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Level of quantitation: 25. mg/kg
Analytical Method : mod. OSHA 125G/SW846 6010B/C;ICP;PAINT
OSHA PEL (TWA) : NA
Collection Media : Paint

Submitted by: MLR/CRG
Approved by : crd
Date : 15-APR-09 NYS DOH # : 11626
QC by: Tony D'Amico

< -Less Than	mg -Milligrams	m3 -Cubic Meters	kg -Kilograms
> -Greater Than	ug -Micrograms	l -Liters	NS -Not Specified
NA -Not Applicable	ND -Not Detected	ppm -Parts per Million	

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Client	: EverGreen Env. Health & Safety, Inc.		
Site	: Richmond VT Brownfield		
Project No.	: LBP-01-033109		
Date Sampled	: 31-MAR-09	Account No.:	21064
Date Received	: 10-APR-09	Login No.	: L191286
Date Analyzed	: 14-APR-09	Incubation Temp	: NA
Report ID	: 607925		

Client ID : MOLD-01-1 **Lab ID : L191286-7**
Analysis : Screen

Parameter	Level of contamination
Mycelial Fragments	Light
Acremonium-like	ND
Alternaria	ND
Ascospores	ND
Aspergillus/Penicillium-like	Light
Basidiospores	ND
Bipolaris/Drechslera	ND
Chaetomium	ND
Cladosporium	Light
Curvularia	ND
Epicoccum	ND
Fusarium	ND
Memnoniella	ND
Nigrospora	ND
Paecilomyces-like	ND
Pithomyces	ND
Rusts/Smuts	ND
Scopulariopsis	ND
Stachybotrys	ND
Torula	ND
Trichoderma-like	ND
Ulocladium	ND
Other/Unidentified	Light

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Level of Quantitation: 1 Spore	Submitted by: CDT
Analytical Method : GALSON IB-BULKS	Approved by : RCF
Sampler : Bulk	Date: 14-APR-09
	QC by: Tony D'Amico

< -Less Than	> -Greater Than	m3 -Cubic Meters	NA -Not Applicable
cm2 -Square Centimeters	CFU -Colony forming units	g -Grams	NS -Not Specified
ND -Not Detected			

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www.galsonlabs.com

Client : EverGreen Env. Health & Safety, Inc.
Site : Richmond VT Brownfield
Project No. : LBP-01-033109

Date Sampled : 31-MAR-09
Date Received : 10-APR-09
Date Analyzed : 14-APR-09
Report ID : 607925

Account No.: 21064
Login No. : L191286
Incubation Temp : NA

Client ID : MOLD-01-2 **Lab ID : L191286-8**
Analysis : Screen

Parameter	Level of contamination
Mycelial Fragments	Light
Acremonium-like	ND
Alternaria	ND
Ascospores	ND
Aspergillus/Penicillium-like	Moderate
Basidiospores	Light
Bipolaris/Drechslera	ND
Chaetomium	ND
Cladosporium	Light
Curvularia	ND
Epicoccum	ND
Fusarium	ND
Memnoniella	ND
Nigrospora	ND
Paecilomyces-like	ND
Pithomyces	ND
Rusts/Smuts	ND
Scopulariopsis	ND
Stachybotrys	ND
Torula	ND
Trichoderma-like	ND
Ulocladium	ND
Other/Unidentified	Light

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Level of Quantitation: 1 Spore
Analytical Method : GALSON IB-BULKS
Sampler : Bulk

Submitted by: CDT
Approved by : RCF
Date: 14-APR-09
QC by: Tony D'Amico

< -Less Than
> -Greater Than
m3 -Cubic Meters
NA -Not Applicable
cm2 -Square Centimeters
CFU -Colony forming units
g -Grams
NS -Not Specified
ND -Not Detected

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Client	: EverGreen Env. Health & Safety, Inc.		
Site	: Richmond VT Brownfield		
Project No.	: LBP-01-033109		
Date Sampled	: 31-MAR-09	Account No.:	21064
Date Received	: 10-APR-09	Login No.	: L191286
Date Analyzed	: 14-APR-09	Incubation Temp	: NA
Report ID	: 607925		

Client ID : MOLD-01-3 **Lab ID : L191286-9**
Analysis : Screen

Parameter	Level of contamination
Mycelial Fragments	Light
Acremonium-like	ND
Alternaria	ND
Ascospores	ND
Aspergillus/Penicillium-like	Light
Basidiospores	Light
Bipolaris/Drechslera	ND
Chaetomium	ND
Cladosporium	Light
Curvularia	ND
Epicoccum	ND
Fusarium	ND
Memnoniella	ND
Nigrospora	ND
Paecilomyces-like	ND
Pithomyces	ND
Rusts/Smuts	ND
Scopulariopsis	ND
Stachybotrys	ND
Torula	ND
Trichoderma-like	ND
Ulocladium	ND
Other/Unidentified	ND

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Level of Quantitation: 1 Spore	Submitted by: CDT
Analytical Method : GALSON IB-BULKS	Approved by : RCF
Sampler : Bulk	Date: 14-APR-09
	QC by: Tony D'Amico

< -Less Than	> -Greater Than	m3 -Cubic Meters	NA -Not Applicable
cm2 -Square Centimeters	CFU -Colony forming units	g -Grams	NS -Not Specified
ND -Not Detected			

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Client	: EverGreen Env. Health & Safety, Inc.		
Site	: Richmond VT Brownfield		
Project No.	: LBP-01-033109		
Date Sampled	: 31-MAR-09	Account No.:	21064
Date Received	: 10-APR-09	Login No.	: L191286
Date Analyzed	: 14-APR-09	Incubation Temp	: NA
Report ID	: 607925		

Client ID : MOLD-01-4 **Lab ID : L191286-10**
Analysis : Screen

Parameter	Level of contamination
Mycelial Fragments	Light
Acremonium-like	ND
Alternaria	ND
Ascospores	ND
Aspergillus/Penicillium-like	ND
Basidiospores	ND
Bipolaris/Drechslera	ND
Chaetomium	ND
Cladosporium	Light
Curvularia	ND
Epicoccum	ND
Fusarium	ND
Memnoniella	ND
Nigrospora	ND
Paecilomyces-like	ND
Pithomyces	ND
Rusts/Smuts	ND
Scopulariopsis	ND
Stachybotrys	ND
Torula	ND
Trichoderma-like	ND
Ulocladium	ND
Other/Unidentified	Light

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Level of Quantitation:	1 Spore	Submitted by: CDT
Analytical Method	: GALSON IB-BULKS	Approved by : RCF
Sampler	: Bulk	Date: 14-APR-09
		QC by: Tony D'Amico

< -Less Than	> -Greater Than	m3 -Cubic Meters	NA -Not Applicable
cm2 -Square Centimeters	CFU -Colony forming units	g -Grams	NS -Not Specified
ND -Not Detected			

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Client Name : EverGreen Env. Health & Safety, Inc.
Site : Richmond VT Brownfield
Project No. : LBP 01-033109

Date Sampled : 31-MAR 09
Date Received: 10 APR 09
Date Analyzed: 14-APR 09

Account No.: 21064
Login No. : L191286

Unless otherwise noted below, all quality control results associated with the samples were within established control limits.

Unrounded results are carried through the calculations that yield the final result and the final result is rounded to the number of significant figures appropriate to the accuracy of the analytical method. Please note that results appearing in the columns preceeding the final result column may have been rounded in order to fit the report format and therefore, if carried through the calculations, may not yield an identical final result to the one reported.

The stated LOQs for each analyte represent the demonstrated LOQ concentrations prior to correction for desorption efficiency (if applicable).

L191286 (Report ID: 607915) : The Lead results are considered accurate to within 100% +/-13.3 based on a 95% confidence interval. The estimated uncertainty relates only to the analytical procedure and does not account for the uncertainty associated with the sampling process. Reported results reflect elemental analysis of the requested metals. Certain compounds may not be solubilized during digestion, resulting in data that is biased low.
SOPs: MT-SOP-5(5), MT-SOP-9(3)
LOQ may vary due to actual sample weight used for preparation.

L191286 (Report ID: 607925) : SOPs: ib bulks(6)

< -Less Than	mg -Milligrams	m3 Cubic Meters	kg -Kilograms
> -Greater Than	ug -Micrograms	l Liters	NS -Not Specified
NA Not Applicable	ND -Not Detected	ppm -Parts per Million	

GALSON LABORATORIES
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East Syracuse, NY 13057
Tel: (315) 432-5227
888-432-LABS (5227)
Fax: (315) 437-0571
www.galsonlabs.com

☐ Check if change of address
New Client ? ☑ yes ☐ no

Report To : Terese Churchill
345 May Farm Rd
Barton, Vt 05822
Phone No. : 802-673-3369
Fax No. :

73

Invoice To : EverGreen Environment Health & Safety Inc.
345 May Farm Road
Barton, Vt 05822
Phone No. : 802-673-3369
Fax No. :

Site Name : Richmond VT Brownfield Project : LBP-01-033109 Sampled By : TMC

Need Results By:	(surcharge)
☑ 5 Business Days	0%
☐ 4 Business Days	35%
☐ 3 Business Days	50%
☐ 2 Business Days	75%
☐ Next Day by 6pm	100%
☐ Next Day by Noon	150%
☐ Same Day	200%

☐ **Samples submitted using the FreePumpLoan™ Program** ☐ **Samples submitted using the FreeSamplingBadges™ Program.**

Client Account No. :
Purchase Order No. :
Credit Card No.* : 4147 3400 1403 1294 Card Holder Name : Terese Churchill Exp. : 06/11

Email / Fax Results To : Terese Churchill
Email Address : tchurchill@evergreen-environment.com Fax No. :

Sample Identification	Date Sampled	Collection Medium	*Air Volume (Liters)	Passive Monitors (Min)	Analysis Requested	Method Reference	Specific DL Needed
LBP-01-4	03/31/09	Paint Bulk chips			Lead (Paint) Mod SW 846	6060C / 6020A	
LBP-01-11							
LBP-01-87							
LBP-01-89							
LBP-01-96							
LBP-01-104							
Mold-01-1	03/31/09	Bulk substrate			Spores / Mycelial Fragments	Microscopy	
Mold-01-2							
Mold-01-3							
Mold-01-4							

☑ **Yes** ☐ **No** **We normally add a laboratory blank for each analyte. We will charge you for this at our normal rate. If you agree please check "Yes" otherwise check "No".**

List description of industry or process / interference's present in sampling area : Include a lab blank for the lead analysis only, please.

Comments :

Chain of Custody	Print Name	Signature	Date/Time
Relinquished by :	Terese Churchill	[signature]	04-03-2009
Received by LAB :	A Costello	[signature]	4/10/09 1107

Samples received after 3pm will be considered as next day's business *** sample collection time X LPM = Air Vol.** Page 1 of 1

GALSON
LABORATORIES

6601 Kirkville Road
East Syracuse, NY 13057-0369
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Fax: (315) 437-0571
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Analytical Notes for Microbiology

Air-O-Cell™ Cassettes

Air-O-Cell™ cassettes and other spore traps may trap particles that can interfere with spore counts. Galson Laboratories provides an estimation of the density of these particles, referred to as a Crowding Factor. The Crowding Factor ranges from 0 to 4 and is explained below.

Crowding Factor	*Explanation*
0	No particles detected.
1	Particles are far apart and in low numbers; spore counts not affected.
2	Particles are close together and/or overlapping, occasionally obscuring spores; spore counts may be biased low.
3	Particles are crowded, frequently obscuring spores; spore counts are likely biased low.
4	Particles are overcrowded making analysis impossible; no spore counts provided. If certain spores are readily detectable, they are reported as "Detected".

Counts for any genus that exceed 300 spores are estimated to two significant figures.

Direct Microscopic Examination (Screens)

- Due to the inherent nature of screen samples, a spore count is not performed.
- Upon special request counts may be performed on swab, liquid, or bulk screens. Counts are never performed on tape lifts due to the nature of the samples to not have uniform distribution of spores.
- The amount of a particular spore detected is reported as a "Level of contamination": Light, Moderate, or Heavy.
- The level of contamination is a subjective measurement and corresponds to the general quantity of spores present in a sample. It also describes the amount of spores relative to one another.

Viable Fungi Analysis

- Standard growing conditions for viable fungi are 25°C $\pm$ 1°C for 7 days.
- Standard growing conditions for viable thermophilic fungi are 37°C $\pm$ 1°C for 7 days.
- Results are reported in colony forming units (CFUs). A CFU can originate from one or many spores.
- Galson Laboratories uses and provides Potato Dextrose agar for all cultureable fungal methods. We have found Potato Dextrose agar to be suitable for the culture of the widest range of organisms. Other agars submitted or requested by clients are grown under the above standard conditions unless otherwise requested by the client.
- Some fungi may not produce identifiable structures in culture or under standard growing conditions. These fungi will be considered sterile hyphae and reported as such.
- Lack of growth under standard conditions does not preclude the presence of fungi or its viability in a sample.
- Samples taken with impactor samplers are not corrected for a positive hole correction factor.
- Identification of fungal organisms is based on visual microscopic examination at up to seven days of growth under standard conditions. Due to the large numbers of different species that may comprise them, certain genera may appear similar due to variations in stages of their life cycles, growth requirements, and/or environmental stress. A very limited amount of identification overlap may occur due to morphological similarities.
- Final interpretation of results is up to the person(s) responsible for conducting the sampling.

Quality Assurance

Galson Laboratories maintains quality assurance through the following steps. There is a daily QC program for all analysts. Samples are QC reviewed on a daily basis. A second analyst reexamines samples that have no observable spores. All reports are reviewed prior to release by the section supervisor as well as by the QA department. In addition, Galson Laboratories is AIHA accredited for fungal analysis (air culturable, bulk culturable, surface culturable, air direct exam, bulk direct exam, and surface direct exam).

APPENDIX B: XRF PERFORMANCE CHARACTERIZATION SHEET

Pine

Vrh-001 (06/01/04)

New Jersey Department of Environmental Protection
Bureau of Radiological Health, PO Box 415, Trenton, NJ 08625-0415
Phone:(609)984-5463 Fax: (609) 984-5811

Check One:
___Register 1st x-ray machine in facility
___Register 2nd x-ray machine, 3rd x-ray machine, etc
___Change information on current registration.

119114
Facility Number
104948
Registration Number

RADIATION PRODUCING MACHINE REGISTRATION APPLICATION

NOTE: *Replacement of existing unit with new unit is NOT an update. A replacement x-ray machine needs a new registration form*

FACILITY NAME & ADDRESS (Print or type only)

Full Business Name Pine Environmental Services Inc

Owner's Name Roger (First) ___ (M. Init.) Pinheiro (Last) President (Title (MD, DDS, DVM, etc))

Physical Address of x-ray unit Windsor Industrial Park 92 N. Main Street

Windsor (City) NJ (State) 08561 (Zip Code + 4 digit) Mercer (County)

Telephone 609 (Area Code) - 371 - 9663 Fax 609 (Area Code) - 371 - 1663

Bill To Address-if different from above: P.O. BOX 943 Hightstown NJ 08520

MACHINE INFORMATION- MUST BE COMPLETED IN FULL

(A separate registration is required for each x-ray tube)

ENTER Machine Category (see machine source fee schedule for descriptions) 20 N

Manufacturer Xenox System Model Name AT A-4000

Console Model No. N/A Console Serial No. 8065 Tube Serial No. 8265

Date Acquired ___ Max kVp: 35 Max mA 0.05 Max MeV ___ (if needed)

Location (Room ID, Building, Color, etc) if applicable: ___

RETAIN THIS FORM FOR PERMANENT RECORDS
N.J. STATE DEPT OF ENVIRONMENTAL PROTECTION

MUST CIRCLE ONE: Type of X-ray Processing:

A = Automatic-film M = Manual- film CR = Computed Radiography

DR = Digital Radiography P = Polaroid N = No film (industrial x-ray units)

REGULATORY REQUIREMENTS

1 The New Jersey Administrative Code 7:28-3.12 requires owners of all x-ray equipment to register within 30 days of acquisition.
2 NJAC 7:28 requires such owners have a radiation safety surveys performed on the equipment within 60 days of acquisition. See NJAC 7:28 for specifics. Owners are responsible for ensuring compliance with all regulations of NJAC 7:28 et seq

DO NOT SEND CHECK WITH REGISTRATION APPLICATION.
You will receive an invoice once the registration is complete.

ROGER PINHEIRO
Print Name (Owner/Representative)

President
Title

[signature] President
Signature (Owner/Representative)

6/27/07
Date

Date Received JUN 27 [illegible] For Bureau Use Only Date Returned JUL - 3 2007

[illegible] EXPIRES

National Institute of Standards & Technology

Certificate of Analysis

Standard Reference Material® 2573

Lead Paint Film
For Portable X-Ray Fluorescence Analyzers – Nominal 1.0 mg/cm^2
(Color Code: Red)

This Standard Reference Material (SRM) is intended for checking the calibration of portable, hand-held, x-ray fluorescence analyzers when testing for lead in paint coatings on interior and exterior building surfaces. A unit of SRM 2573 consists of a white polyester sheet, approximately 7.6 cm wide, 10.2 cm long, and 0.2 mm thick, coated with a single, red-colored paint layer, approximately 0.04 mm thick. A blank, SRM 2570, is also provided. The blank is coated with a lead-free, lacquer layer on a white polyester sheet of the same thickness as the lead paint samples. All sheets are over-coated with a clear, thin, plastic laminate to protect the surface from abrasion. SRM 2573 and SRM 2570 are two of a set of six paint films (SRM 2570 to SRM 2575) available as SRM 2579a.

The certified values for lead for this SRM and others in the series are reported in Table 1 in units of mg/cm^2. These values are based on measurements by isotope dilution inductively-coupled plasma mass spectrometry.

Table 1. Certified Lead Values

Level	Color Code	Lead Concentration, in mg/cm^2
SRM 2570	White (Blank)	<0.001
SRM 2571	Yellow	3.58 ± 0.39
SRM 2572	Orange	1.527 ± 0.091
SRM 2573	**Red**	**1.040 ± 0.064**
SRM 2574	Gold	0.714 ± 0.083
SRM 2575	Green	0.307 ± 0.021

The uncertainty of each certified value is expressed as an expanded uncertainty, U, at the 95 % level of confidence and is calculated according to the method described in the ISO Guide to the Expression of Uncertainty in Measurement [1,2]. Because of variability in the paint film between different sheets of each SRM, the uncertainties are 95 % prediction intervals. The expanded uncertainty is calculated as $U = ku_c$, where u_c is intended to represent, at the level of one standard deviation, the combined uncertainty due to material variability and measurement uncertainty. The coverage factor, k, is determined from the Student's t-distribution corresponding to the calculated effective degrees of freedom and 95 % level of confidence.

Expiration of Certification: The certification of this SRM is valid until **01 July 2009**, within the uncertainty specified provided the SRM is handled and stored in accordance with the instructions given in this certificate (see Use and Handling). However, the certification will be nullified if the SRM is damaged, contaminated, or otherwise modified.

The support aspects involved in the preparation, certification, and issuance of this SRM were coordinated through the NIST Standard Reference Materials Program by B.S. MacDonald.

Willie E. May, Chief
Analytical Chemistry Division

Gaithersburg, MD 20899
Certificate Issue Date: 29 November 1999

Thomas E. Gills, Director
Office of Measurement Services

Innovx XRF Calibration Checksheet

Innovx Model # A-4000
Serial # 8065

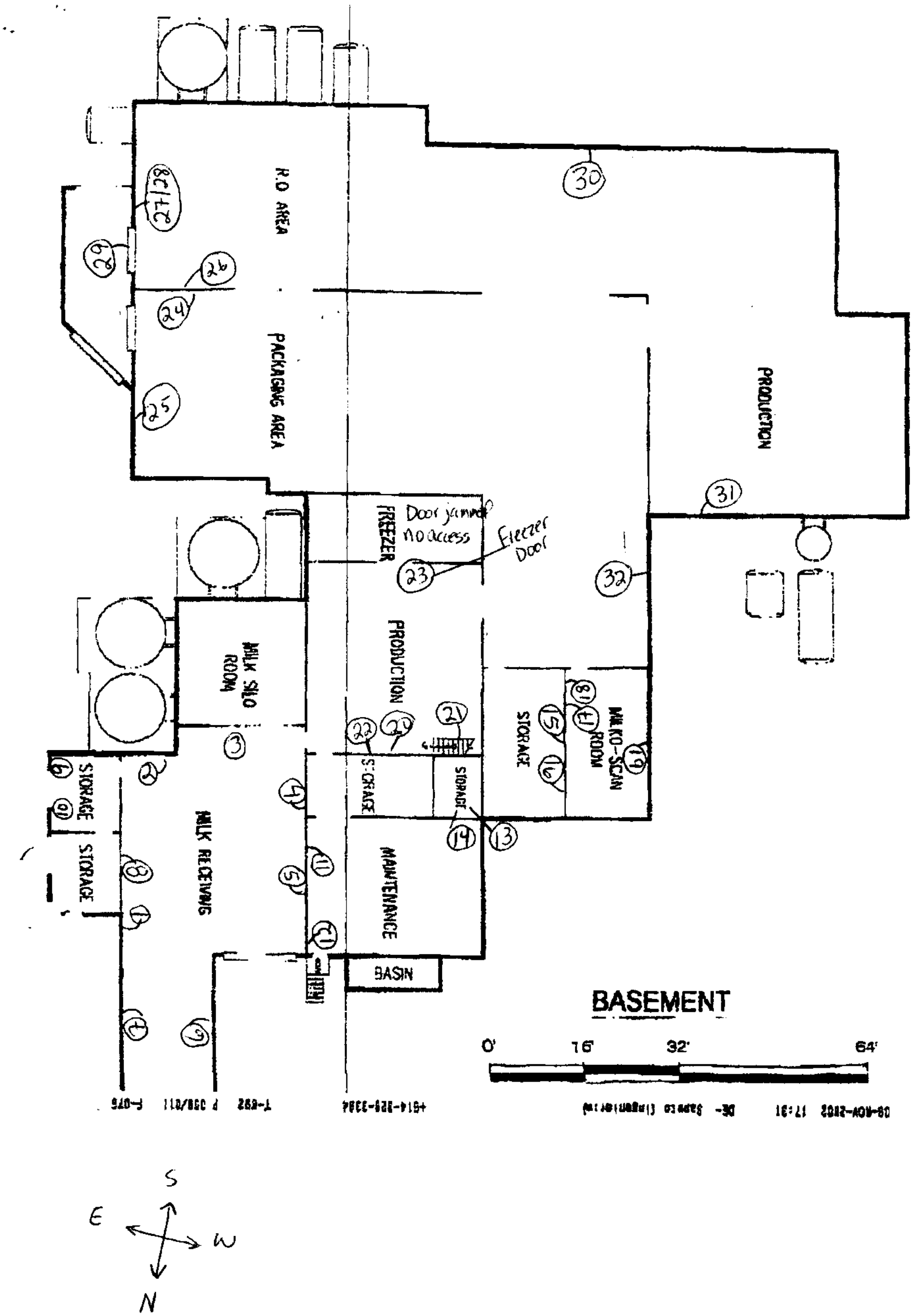
Date of Use: March 31, 2009
Analyst: Terese Churchill

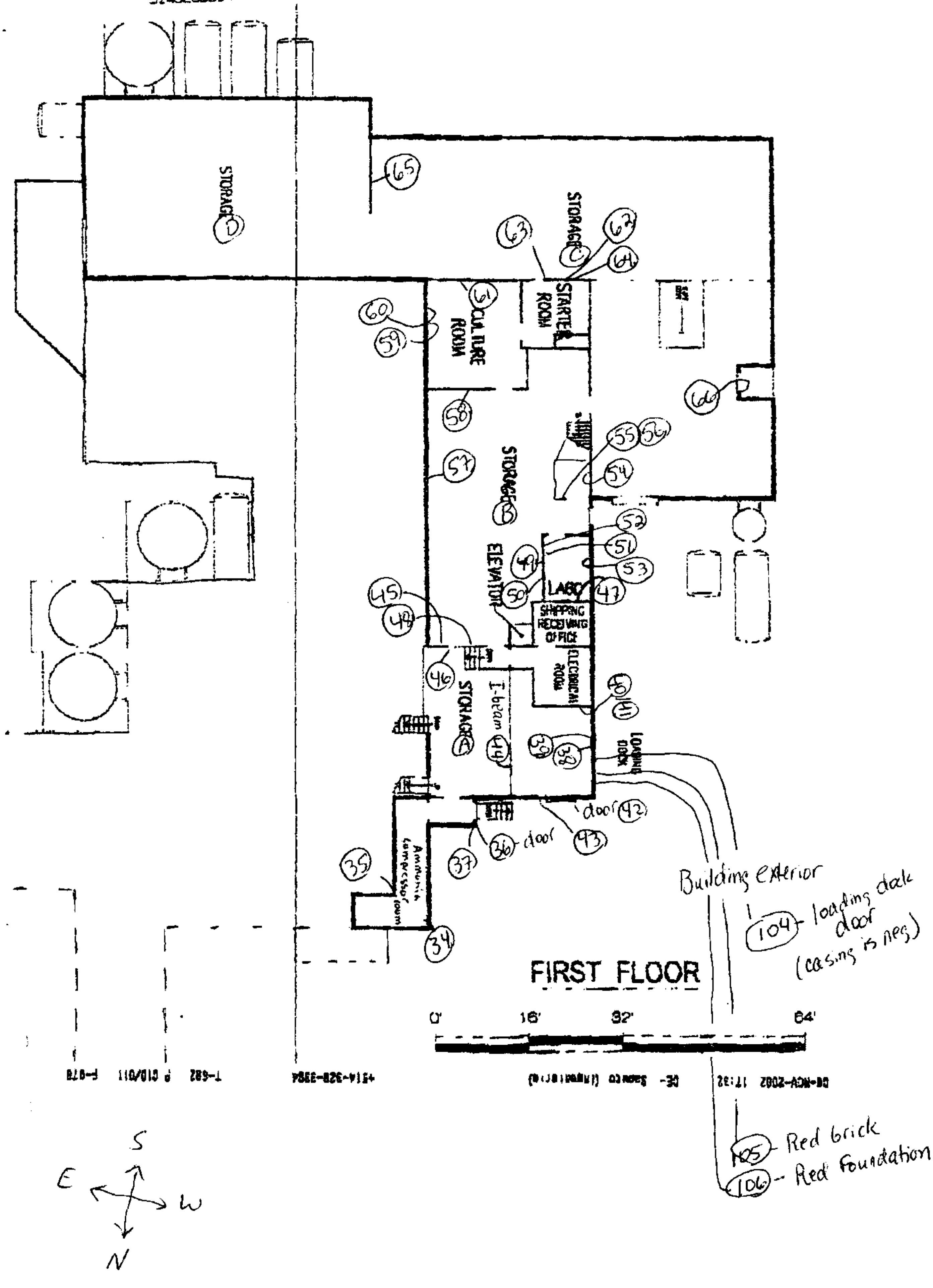
Signature: Terese Churchill

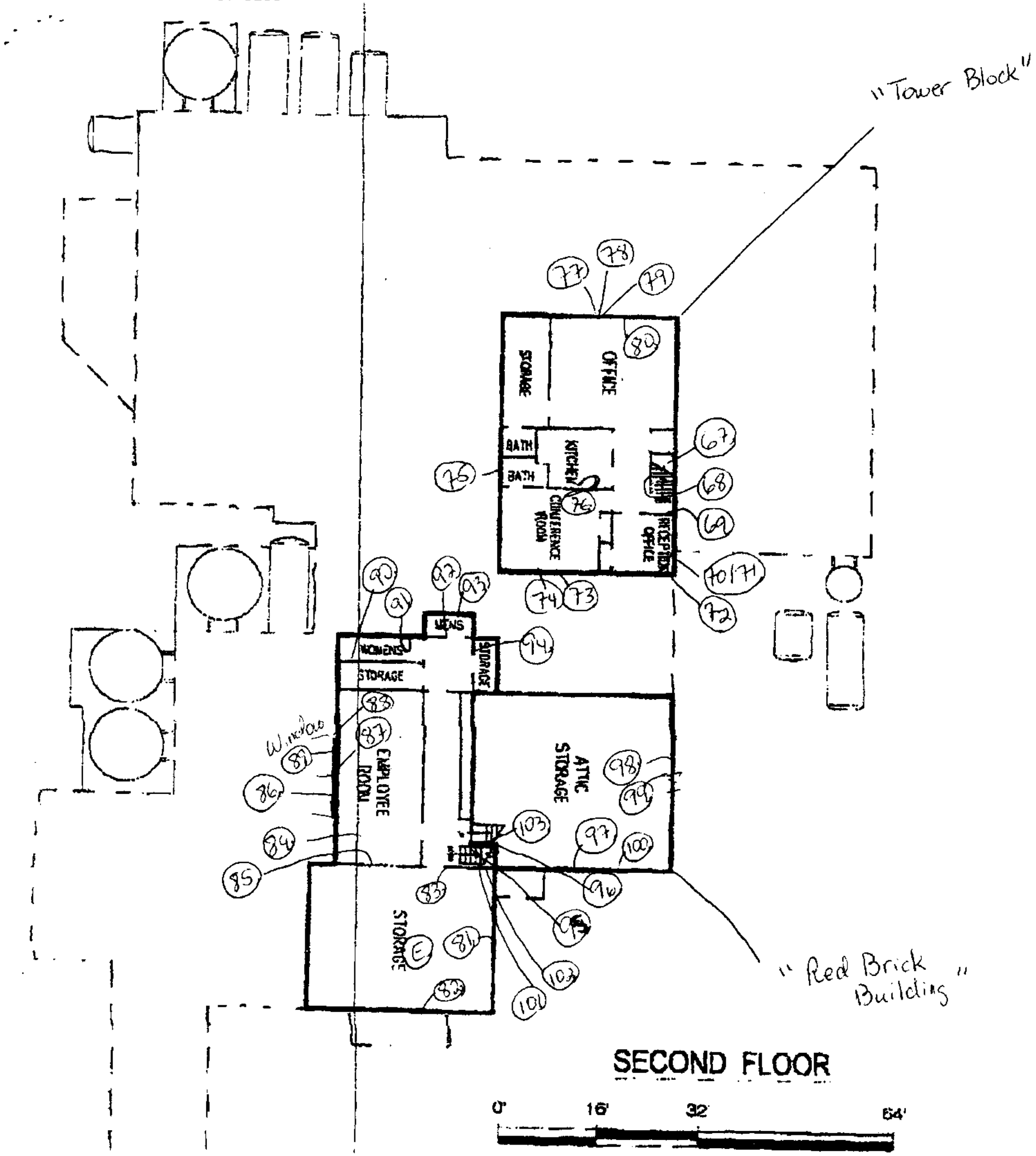
Calibration check method: Supplied NIST Standard Reference Material 2573
Lead Paint Film – Nominal 1.0 mg /cm^2
Reference range: 0.97 – 1.12 mg / cm^2

Pre Calibrations	1.12 mg / cm^2
Control check 1	1.13 mg / cm^2
Control check 2 (Battery change)	1.10 mg / cm^2
Final Calibration	1.04 mg / cm^2

APPENDIX C: SITE MAP


R.O AREA
27/28
29
26
24
PACKAGING AREA
25
30
PRODUCTION
31
FREEZER
Door jammed no access
Freezer Door
23
32
MILK SILO ROOM
PRODUCTION
3
2
22
20
21
STORAGE
STORAGE
STORAGE
MILKO-SCAN ROOM
18
17
15
16
19
14
13
6
10
STORAGE
STORAGE
MILK RECEIVING
4
5
11
12
8
7
MAINTENANCE
BASIN
BASEMENT
0'
16'
32'
64'
S
E
W
N


STORAGE D
65
STORAGE C
63
62
64
STARTER ROOM
CULTURE ROOM
61
60
59
58
57
STORAGE B
55
56
54
66
52
51
53
49
50
ELEVATOR
LAB
47
SHIPPING RECEIVING OFFICE
45
48
46
STORAGE A
I-beam 44
ELECTRICAL ROOM
40
41
39
38
LOADING DOCK
door 42
43
36 door
37
35
Ammonia compressor room
34
Building exterior
104 - loading dock door (casing is neg)
FIRST FLOOR
0'
16'
32'
64'
105 - Red brick
106 - Red foundation
S
E
W
N


"Tower Block"
OFFICE
STORAGE
BATH
BATH
KITCHEN
CONFERENCE ROOM
RECEPTION OFFICE
77
78
79
80
67
68
69
70/71
72
73
74
75
76
WOMENS
MENS
STORAGE
STORAGE
EMPLOYEE ROOM
Window
ATTIC STORAGE
STORAGE
E
81
82
83
84
85
86
87
88
89
90
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92
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94
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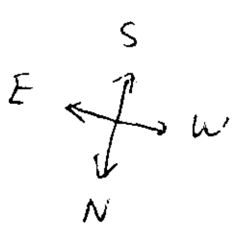
100
101
102
103
"Red Brick Building"
SECOND FLOOR
0'
16'
32'
64'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APPENDIX D: LABORATORY ACCREDITATION / INSPECTOR QUALIFICATIONS

AIHA®

Protecting Worker Health

The American Industrial Hygiene Association

acknowledges that

Galson Laboratories

6601 Kirkville Road, East Syracuse, NY 13057

Laboratory ID: 100324

has fulfilled the requirements of the AIHA Laboratory Quality Assurance Programs (LQAP), thereby, conforming to the ISO/IEC 17025:2005 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories*. The above named laboratory, along with all premises from which key activities are performed, as listed above, have been accredited by AIHA in the following:

ACCREDITATION PROGRAMS

✓	**INDUSTRIAL HYGIENE**	Accreditation Expires: 10/1/2010
✓	**ENVIRONMENTAL LEAD**	Accreditation Expires: 10/1/2010
✓	**ENVIRONMENTAL MICROBIOLOGY**	Accreditation Expires: 10/1/2010
❑	**FOOD**	Accreditation Expires:

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached **Scope of Accreditation**. Continued accreditation is contingent upon successful on-going compliance with LQAP requirements. This certificate is not valid without the attached **Scope of Accreditation**. Please review the AIHA website for the most current status of the scope of accreditation.

Laura R. McMahon

Laura R. McMahon
Chairperson, Analytical Accreditation Board

Lindsay E. Booher

Lindsay E. Booher, CIH, CSP
President, AIHA

Date Issued: 09/30/2008

LEAD INSPECTOR TECHNICIAN I

Vermont Department of Health
Drawer 30
P.O. Box 70
Burlington, VT 05402

TERESE CHURCHILL
345 MAY FARM ROAD
BARTON VT 05822

LICENSE: IT115722 EXPIRES: Friday, March 05, 2010

CERTIFICATE OF LICENSE
VERMONT LEAD REGULATORY PROGRAM

THIS CERTIFICATE SHALL REMAIN IN FORCE UNTIL THE EXPIRATION DATE UNLESS REVOKED OR VOIDED BEFORE THAT TIME. THIS CERTIFICATE IS NOT TRANSFERABLE AND IS VALID ONLY FOR THE ABOVE PARTY.

Lindsey Wells

THIS CERTIFICATE IS FOR OFFICE USE ONLY. PHOTO ID CARD MUST BE ON SITE AT ALL TIMES

APPENDIX 6

STRUCTURAL ENGINEERS ASSESSMENT

ENGINEERING VENTURES PC

208 Flynn Avenue, Suite 2A, Burlington, VT 05401 · Tel: 802-863-6225 · Fax: 802-863-6306
85 Mechanic Street, Suite 350A, Lebanon, NH 03766 · Tel: 603-442-9333 · Fax: 603-442-9331

March 15, 2012

Kurt Muller
The Johnson Company
100 State St # 600
Montpelier, VT 05602

Re: Richmond Creamery Building EV # 12072
Preliminary Structural Evaluation

Dear Kurt:

A preliminary structural evaluation of the Creamery Complex in Richmond, VT has been completed. The complex is comprised of a variety of building construction types and dates. The complexity of the buildings and limited nature of this report require an overview of each section, rather than a detailed evaluation. Some locations were not entered either due to limited access or the appearance of unsafe conditions.

The discussions in this report are based on observations made on February 25, 2012. No further evaluation or calculations have been made to determine carrying capacity or detailed evaluation of compliance with current codes. For the orientation of the reader, a rough site plan of the complex is attached with a lettering system showing portions of the complex Buildings A through H. These delineations are rough and are not to be construed as “to scale” plans of the areas.

It is understood that the original building (B) is the original red sided gable roof structure and may have extended to the west and formed the foundation for Building A which is the prominent blue rectangle that towers above the rest of the site.

A- West Four Story Structure- "Blue Box"

Observations:

This building is the most visually prominent section of the complex. It is a four level rectangular structure. The lower levels of the structure are part of a ca. 1920 addition to the original building. The upper levels are a ca. 1940 upward expansion.

The lower level floors are steel and concrete and are in fair to good condition. The structures appear to be stable, but the steel has substantial rust and the concrete has been exposed to substantial moisture and freeze-thaw cycles that have caused cracking and spalling.

The upper floor is a lightly framed wood structure that is partially hung from the roof.

The roof structure consists of dimensional wood framing, wood planks, and steel beams. The roof is moderately sloping and appears stable, but also lightly framed. The eaves are in poor condition having been exposed to substantial water damage. Based on water damage observed, it is likely that there are some roofing failures that have led to moderate structural damage.

The brick walls at the lower level appear stable, but have been damaged from penetrations and attachments at adjacent structures. The upper level walls are wood framed and appear in good condition. The lower level walls have been removed on the west and south and replaced with steel beams. This configuration creates a weak shear level in resistance to seismic resistance.

Re-Use Recommendations:

The lower floors would require moderate rehabilitation and reinforcing and should be further documented and evaluated to determine the level of work needed. The upper/loft level framing will likely require substantial improvements to be occupied.

The roof framing appears substantially undersized to support code required snow loads and the hung upper level floor and will require substantial reinforcing. Repairs to damaged areas will also be required including rotted framing at roof leaks and at the eaves.

Improvements to the seismic resisting system at the basement level will be required. This may be simply filling in the open spaces with new concrete foundation as adjacent areas are demolished.

B- Pitched Roof Original 1916 Red Building:

Observations:

This Building consists of two wings: a northern wing with a prominent gable that faces Jolina Court and a southern wing with a ridge line perpendicular to the front section.

The floors of the northern portion of this building are constructed of steel and concrete while the floors of the southern section appear mostly wood framed. The steel and concrete sections are in fair condition with cracking and water damage noted. The wood framed sections are in fair condition and some sagging and water damage was noted. A section of floor at the south-east section was originally concrete and a large section was removed and in-filled with dimensional lumber framing.

The roof framing is wood framed with wood decking and slate roofing and is in poor condition. The slate roofing has failed in several locations and substantial water damage/rotting framing was observed. The intersection of the front north-south gable and the rear east-west gable is framed with several overbuild conditions that do not appear stable. The roof framing at the south-east has been modified substantially with steel beams added- possibly in concert with modifications to the floor below. This area also shows signs of water infiltration and rotted structure. From the exterior, substantial sagging of the roof can be observed as well as missing slate shingles and holes in the roof from missing and deteriorated sheathing.

Exterior walls appear to be solid brick up to the eave level and wood framed gable walls above. The brick appears to be stable without significant bowing or major collapses. However, the brick has been damaged from freeze-thaw action near the base of the walls, and from penetrations through the wall from the attachment of utilities and subsequent additions.

Re-Use Recommendations:

The floor structures should be further evaluated and could potentially be re-used with a moderate level of rehabilitation and likely reinforcement. The roof structures require complete reconstruction or wide-spread reinforcing. Substantial repointing and partial replacement of brick will be necessary.

C- One story- Loading Dock

Observations:

This structure appears to be an industrial style metal building as evidenced by the metal exterior siding, but the roof structure was not able to be observed due to a ceiling in place. The northern section (C-1) appears to be a wood overbuild to form a valley. This area is in poor condition and is collapsing.

Re-Use Recommendations:

The collapsed areas should be removed and the entire structural system in this area appears unsafe. Further removal of finishes, documentation, and evaluation is required to confirm this assessment.

D- Metal Manufactured Building

Observations:

This structure is an industrial style pre-manufactured metal building and appears to consist of one story. The building was not accessed since the path to the building was through collapsed structures. This building appears to be structurally stable. However, significant damage to the exterior metal panels and roofing was noted.

Re-Use Recommendations:

Prior to re-use, a thorough structural evaluation should be made as many of these types of buildings were not designed to current codes and there will be higher snow loads due to drifting from higher adjacent roofs. Replacement of exterior siding and roofing will likely be necessary in addition to reinforcing of the frame and purlins.

E- Low Roof Wrap Around

Observations:

This structure is wood framed with dimensional lumber. There is no roof sheathing (plywood or boards) and instead utilizes 2x4 wood strapping and corrugated metal "barn" roofing. A section of foundation at the west end has collapsed. Several sections of framing have collapsed.

Re-Use Recommendations:

This section of building is not safe to enter and is not considered re-usable.

F- Wood Frame Connector

Observations:

This area appears to have multiple layers of construction. The original structure has been covered in some areas with wood framed roof overbuild structures. This roof of this section is in poor condition and in process of collapse. The floor construction is similar to that of building A.

Re-Use Recommendations:

The roof framing in this area is in the process of collapse and should be removed and replaced. See Building A for floor level recommendations.

G- South Garage Buildings

Observations:

These buildings are one story shed roof structures framed of dimensional lumber with wood columns and exterior bearing walls of concrete masonry units (CMU) and wood stud. The wood roof framing appears in stable condition; however the beams show signs of deflection. The masonry is in poor condition with several large holes. The exterior wood siding is T1-11 and is in fair condition. The eaves and soffits are deteriorated

Re-Use Recommendations:

These areas would require substantial reinforcing of the roof framing and repair/rebuilding of portions of the exterior wall.

H- 1960-1970 Additions.

This area is a one story, wood framed area that was not accessed.

I- Not Used

J- Storage Shed-

This is a small wood framed shed. The roof structure is in poor condition with undersized and failing roof framing. The walls are wood stud with wood clapboard siding that is in good condition. A small section of masonry enclosure was observed at the east side of the shed. The masonry is in poor condition.

Re-Use Recommendations:

The roof framing should be reinforced and repaired. The masonry section is not suitable for re-use.

K- Boiler Building-

This is a small outbuilding at the west end of the site. The building was not accessed. The exterior is metal siding and appears stable.

Summary/Recommendations

The site is a complex arrangement of buildings dating from 1916 to the mid to late 1900's. The buildings are generally in fair to poor condition. Some areas of the complex have portions of the structure that are unsafe or in the process of collapse. Prior to construction/abatement crews entering, a plan should be developed to remove or shore collapsing structures. A structural engineer and/or site safety manager should be assigned to further evaluate and monitor the structures for occupancy.

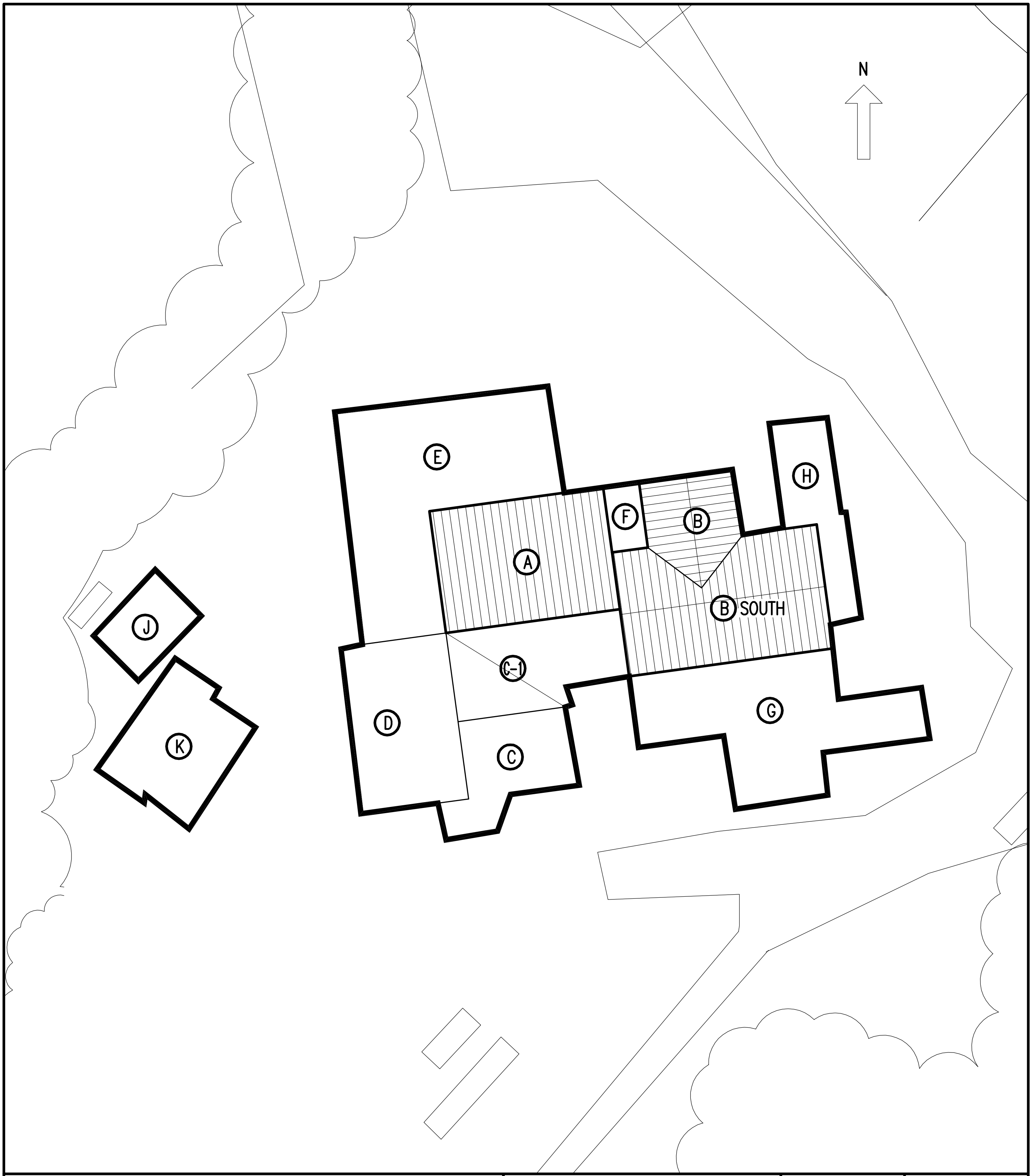
The mid 20th century buildings C through H have little economic or historic value. The original 1916 building and the subsequent vertical addition ca. 1940 (Buildings A and B) listed on the Vermont State Register of Historic Places Historic Sites and Structures Survey in 1980. These buildings will need substantial structural work to be able to be occupied and several sections will likely need to be replaced. The floor structures appear stable, but the wood framed upper levels and roof are in fair to poor condition.

This report is a preliminary analysis based on a ½ day walk through of the complex. Due to the complexity of the numerous structural systems, limited access due to collapsing structures, and the presence of finishes that could not be removed due to hazardous materials, much of the structure could not be directly observed. A more detailed documentation and evaluation process is required to determine specific remediation measures.

Respectfully

Robert Neeld

Robert Neeld, PE- President
Engineering Ventures, PC



SCHEMATIC BUILDING LAYOUT	ENGINEERING VENTURES PC	Checked By: RAN	Scale: N.T.S.
		Drawn By: CA	Project No.: 12072
RICHMOND CREAMERY	208 Flynn Avenue, Suite 2A Burlington, VT 05401 tel. 802.863.6225 • fax 802.863.6306 85 Mechanic Street, Suite 350A, Lebanon, NH 03766 tel. 603.442.9333 • fax 603.442.9331 *www.engineeringventures.com*	Date: 3/8/12	Drawing No.: SK–1

BLDG B North View

BLDG B from North

BLDG B Roof from South

BLDG A from West

BLDG A with Low Roof of BLDG E

BLDG C

BLDG D

BLDG E collapsed foundation and roof

BLDG F - BLDG C-1 Collapsing roof beyond


BLDG F Water damaged roof - collapsing


BLDG G from South with Gable of BLDG B beyond


BLDG G from South-East

BLDG G - Upper B in Background

BLDG H

BLDG J from West

BLDG J Shed

BLDG K Boiler Building

East End BLDG B

View from North - BLDG B on left, BLDG A on right

View from South

BLDG A Basement

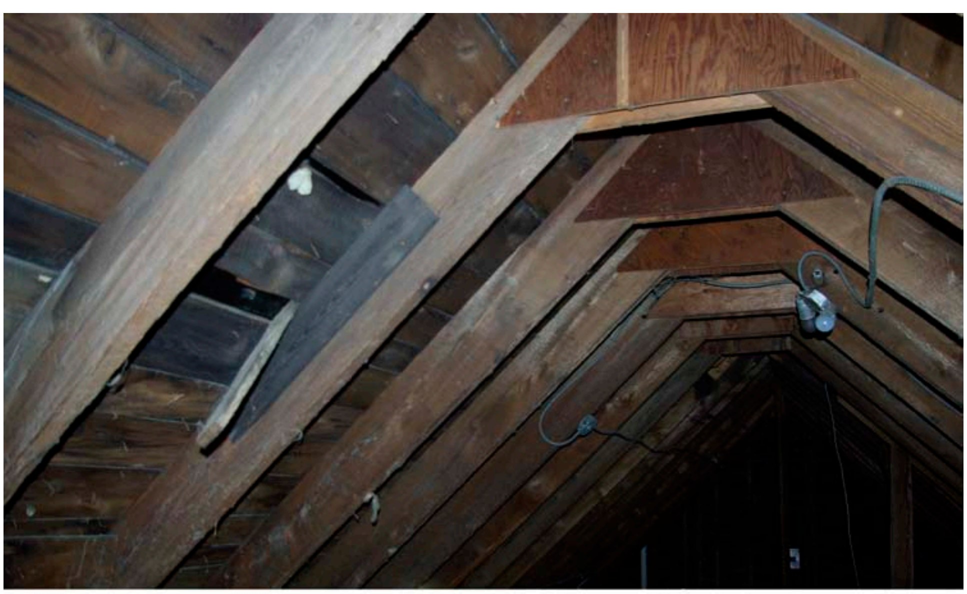
BLDG A - First floor framing from basement

BLDG A Floor Structure from Basement

BLDG A Roof

BLDG A West wall in basement looking into BLDG E

BLDG A - Second Level North Section



BLDG B Ridge of South Roof

BLDG B South East Corner Roof

BLDG B South side roof water damage - rotted framing

BLDG B South Side Upper Floor

BLDG B South East End Roof

BLDG B - South East upper floor - Wood infill at Removed Concrete

BLDG D from North

BLDG E Collapse

BLDG F - Connector between A and B Collapsing Roof

BLDG G Interior