Analysis of Brownfields Cleanup Alternatives and Cleanup Work Plan
New England Youth Theatre
48 Elm Street
Brattleboro, Vermont 05301

EPA Brownfields RFA 19093
Vermont DEC Site #2008-3834

March 25, 2021

Prepared For:
New England Youth Theatre, Inc.
100 Flat Street
Brattleboro, Vermont 05301
Contact: David Dunn, Esq., Treasurer
(802) 579-6420

LE·Environmental

21 North Main Street
Waterbury, Vermont 05676
Contact: Alan Liptak, EP, PG
(802) 917-2001
LEE #18-122

CONTENTS

Appendix

A. Maps
   - Site Location Map
   - Conceptual Redevelopment Plan
   - PCB Verification Sampling Locations Plan

B. Previous Reports and Data
   - 2019 Phase II ESA Report
   - 2008 Asbestos Inspection Report
   - 2009 Masonry Profiling Report
   - 2017 Analytical Data
   - 2021 Asbestos Assessment Letter

C. Cleanup Cost Estimates

1.0 INTRODUCTION AND BACKGROUND

LE Environmental LLC of Waterbury, Vermont (LEE) prepared this Analysis of Brownfields Cleanup Alternatives (ABCA) and Cleanup Work Plan (Work Plan) for the New England Youth Theatre, Inc. to address planned demolition of a cinder block building addition at 48 Elm Street in Brattleboro, Vermont (Site, Vermont Department of Environmental Conservation (DEC) Site #2008-3834).

The Site is located at the intersection of Elm and Flat Streets in downtown Brattleboro. It consists of an approximately 0.17 acre parcel (formerly known as 64 Elm Street; see Appendix A). The Site coordinates are 42° 50' 59" north latitude and 72° 33' 41" west longitude.

The Site contains a brick and wood frame former industrial structure with two stories and a basement. The brick building has a cinder block office addition on its north end, which was built circa 1965. The addition is slab-on-grade construction with no basement. The cinder block building addition is in an advanced state of decay, is structurally unsound and at risk of collapse. The interior building paint in both the brick building and the cinder block addition contains polychlorinated biphenyl compounds (PCBs) at levels triggering jurisdiction of the United States Environmental Protection Agency (USEPA) Toxic Substances Control Act (TSCA) Regulations (40 CFR Part 761).

NEYT is planning to remove the cinder block building addition, leaving the adjacent brick building and cement floor slab intact. NEYT has plans to build a small performance stage and gathering area for its students on the cement slab once the building is demolished and cleanup is completed. A conceptual redevelopment plan is included in Appendix A.

The cleanup work is being funded via EPA Brownfields Revolving Loan Funds awarded to and administered by the Windham Regional Commission (WRC) of Brattleboro, Vermont. Table 1 contains Site owner information.

Table 1: Site Information	
Site Owner Name:	New England Youth Theatre
Site Owner Address	100 Flat Street, Brattleboro, VT 05301
Site Owner Contact	David Dunn, Treasurer (802) 579-6420
Environmental Professional	LE Environmental LLC
Environmental Professional Address	21 North Main Street #1, Waterbury, VT 05670
Environmental Professional Contact	Alan Liptak, EP, PG (802) 917-2001
Funding Entity	Windham Regional Commission
Funding Entity Address	139 Main Street, Suite 505, Brattleboro, VT 05301
Funding Entity Contact	Susan Westa, Senior Planner (802) 257-4547

2.0 ANALYSIS OF BROWNFIELD CLEANUP ALTERNATIVES

2.1 PREVIOUS SITE USES AND CLEANUP/REMEDIATION

The Site was an industrial facility that has been converted to an arts campus. The brick structure was built in the late 1880's and has been a paper mill, machine shop, manufacturing plant, paint factory, and theater storage building.[1] NEYT programming is provided in a separate building on the property. The brick building and the cinder block building are not currently used. A Site cleanup consisting of installation of a clean soil cap around the building was completed in 2015.

2.2 SITE ASSESSMENT FINDINGS

The 48 Elm Street Site has been the subject of several Brownfields assessments and cleanup planning documents, including:

- Phase I Environmental Site Assessment (ESA)[2]
- Phase II ESA[3]
- Supplemental Phase II ESA[4]
- Analysis of Brownfields Cleanup Alternatives/Corrective Action Plan (ABCA/CAP)[5]
- Section 106 Historic Preservation Review[6]
- Risk-based Cleanup and Disposal Plan[7]
- CAP Amendment[8]
- As-built Completion Report[9]
- PCB testing of caulk and window glazing[10]
- Phase II ESA (Paint Testing)[11]

Previous work related to building material testing is summarized below.

2008-2009 Building Material Testing

Building material testing was performed during the 2008-2009 Phase II ESA. Three painted masonry samples were collected from the inside walls on the ground floor

[1] KAS, May 2009.
[2] GCM Environmental, July 2008.
[3] KAS, May 2009.
[4] KAS, October 2009.
[5] New England Envirostrategies, July 2010.
[6] Papazian, 2011.
[7] Weston & Sampson, February 2012.
[8] Lincoln Applied Geology, February 2015.
[9] Lincoln Applied Geology, September 2015.
[10] Eastern Analytical, April 2017.
[11] LEE, March 2019.

of the cinder block building, and five painted masonry samples were collected from the inside walls on the second floor. The 2008-2009 sampling locations and procedures are documented in LEE's 2019 Phase II ESA report in Appendix B.

The sampling and testing results indicate that most of the painted masonry samples had PCB concentrations less than 1 ppm; however, two samples from the first floor of the cinder block addition (1W-5 and 1W-6) had reported PCB concentrations of 180 ppm. Sample 1W-5 was collected from a single sampling location and sample 1W-6 was collected from two adjacent sampling locations.

The first floor walls inside the western side of the cinder block building are covered with light blue paint. The other first floor sample (1W-7) was also collected from a single area with light blue paint and this sample did not have an elevated PCB concentration (0.6 ppm). The 2nd floor interior walls did not have elevated PCB concentrations (2W-6, 7, 8 and 9 between 0.5-0.9 ppm).

Also, an asbestos inspection was performed in 2008 that included the cinder block building addition.[12] Within the cinder block addition, suspect asbestos containing materials (ACM) were sampled by a licensed Vermont asbestos inspector, and were tested for asbestos by a Vermont-certified analytical laboratory. Two samples within the cinder block building tested positive for asbestos: 9"x9" floor tile from the northeast room on the first floor (Sample #6), and floor tile mastic from the northeast room on the second floor (Sample #7). Other tested materials were found to not be ACM. The 2008 asbestos inspection report is in Appendix B.

2009 Paint Removal Pilot Testing

A pilot test was performed inside the brick building in 2009 to test the effectiveness of sandblasting in removing paint from brick walls with PCBs. The goal was to remove PCB-containing paint so that the underlying brick had PCB concentrations below the TSCA threshold of 1 ppm. One masonry profiling sample was collected from the first floor and one masonry profiling sample was collected from the second floor. A duplicate sample set was also collected from the first floor. The pre-removal PCB paint concentrations were 0.7-1.0 ppm on the first floor, and 4.6 ppm on the second floor.

The paint on the masonry walls was removed prior to obtaining the profiling samples using a sandblasting technique. Catamount Environmental of Wilmington, Vermont conducted the paint removal. Containment areas were installed around each of the sampling locations to capture lead and PCB dust. Masonry samples were obtained on September 10, 2009, after the paint was removed from the brick at the following intervals; from 0-1/8", 1/8"-1/4", and 1/4"- 1/2" below the surface of the

[12] KAS, 2008.

wall (samples P-1 through P-6). Sampling equipment was decontamination between each sample. The samples were containerized and delivered to Eastern Analytical, Inc. (EAI) for laboratory testing of PCBs via EPA Method 8082 with Soxhlet extraction. The sample locations, tabulated results and laboratory analytical report are included in Appendix B.

Concentrations of PCBs were detected in four out of the six masonry profiling samples. The highest concentration observed was 0.4 ppm, which is well below the TSCA standard of 1 ppm. The surface samples (0-1/8") had the highest concentrations of PCBs, and the concentrations decreased with depth. The surface sample on the first floor was reported to contain 0.4 ppm total PCBs, and the surface sample on the second floor contained 0.2 ppm total PCBs. Both of these concentrations were notably lower than previously reported concentrations where the paint was not removed prior to sampling. These data demonstrate that sandblasting is an effective technique to remove PCB-containing paint with concentrations from 0.7-4.6 ppm from the brick walls, resulting in the remaining masonry having PCB concentrations below the TSCA threshold of 1 ppm.

2017 Building Materials Testing

On April 20, 2017, Catamount Environmental Inc. collected building material samples from the cinder block building addition. The samples included roofing, insulation, window glaze, caulk, flooring and sheetrock. Samples of caulk and window glazing were tested for PCBs and were reported to have PCB concentrations of 8.8 ppm and 1.8 ppm, respectively.[13] Catamount also collected samples of suspect ACM in 2017. These were tested for asbestos and no asbestos was detected.[14] Copies of the 2017 laboratory analytical results are included in Appendix B.

2018 PCB and Lead Testing

LEE collected paint samples from the cinder block building for PCB testing. During this work, it was discovered that a portion of the cinder block building's ground floor interior walls are unpainted. A total of thirteen samples were collected. The sampling locations, procedures and results are documented in LEE's Phase II ESA report in Appendix B. The laboratory results are summarized in Table 2.

Table 2: Summary of PCB Testing Results

Sample	Location	Media/Color	Total PCBs	Congeners
PS-101	First floor-west	Light blue paint on wood	60 ppm	1254
PS-102	First floor-north	Light blue painted cement block	950 ppm	
PS-103			3.5 ppm	
PS-104			3.0 ppm	

[13] Eastern Analytical, 2017.
[14] ESML, 2017.

PS-108	Second floor-west	Green painted cement block	1.4 ppm	1248 and 1254
PS-109			2.4 ppm	
PS-110	Second floor-north		2.0 ppm	
PS-111		Grey painted cement block	3.3 ppm	
PS-112			2.0 ppm	
PS-113	Second floor-east	Green painted cement block	2.3 ppm	
PS-114		Tan over green painted cement block	3.1 ppm	
PS-115			3.0 ppm	
PS-116	Second floor-south		3.5 ppm	

TCLP lead testing was performed for a representative building materials sample from the cinder block structure. The sampling locations, procedures and results are documented in LEE's Phase II ESA report in Appendix B. The results indicate that the waste does not contain sufficient extractable lead to render the combined waste stream hazardous. The state and federal threshold for TCLP lead is 5 milligrams per liter (mg/l). The sample collected did not contain a lead concentration above the reporting limit of 0.5 mg/l.

2021 Asbestos Assessment

In March 2021, a Vermont-licensed asbestos inspector from K-D Associates, Inc. of South Burlington, Vermont conducted a follow up asbestos assessment on behalf of NEYT. The purpose was to check the cinder blocks for vermiculite filling, and to assess the current building condition in preparation for demolition. Several penetrations were made into the cinder block walls on the building's first floor, where vermiculite would be expected to be if present. No vermiculite was found inside the cinder blocks.

During the assessment, it was found that ACM flooring on the first floor and flooring mastic on the second floor are co-mingled with other building materials including fallen down ceilings, sheetrock, insulation, metal and debris. The overall condition of the building was deemed to be too dangerous to allow asbestos abatement to proceed safely before the building is demolished. K-D Associates recommended that an asbestos abatement firm be present when the building is demolished to sort through the demolition debris and pick out and bag ACM at that time. The debris will need to be wetted, and a Vermont Department of Health permit will need to be acquired before this approach can proceed. K-D's assessment letter is in Appendix B.

Discussion

The PCB paint data collected in 2018 confirmed the 2009 findings that the western portion of the interior ground floor walls are painted with light blue paint containing ≥ 50 ppm PCBs. The data supporting this finding include (from southwest to northeast):

- Sample 1W-5 (2008), blue painted masonry, 180 ppm PCBs.
- Sample PS-101 (2018), blue paint chips, 60 ppm PCBs.
- Sample PS-102 (2018), blue paint, 950 ppm PCBs.
- Sample 1W-6 (2008), blue painted masonry, 180 ppm PCBs.

Building products found to contain ≥ 50 ppm PCBs are classified as PCB bulk product waste under federal regulations if the PCBs were integral to the paint and not from some other source. Building materials with ≥ 50 ppm PCBs are also hazardous waste according to Section 7.211 of the Vermont Hazardous Waste Management Regulations, December 2016 (Waste Code VT-01).

Not all of the light blue paint in the building contains hazardous / bulk product PCB concentrations; however, there is no discernable visual difference between the hazardous/ bulk product light blue paint and the non-hazardous / non-bulk product light blue paint. Due to the lack of visual difference in the light blue paint, USEPA requested that all the light blue paint be considered bulk product waste and managed as such. This includes the entire west ground floor wall, the western part of the north ground floor wall and part of the brick wall. The impacted area contains approximately 450 cinder blocks and some painted wood, and its weight should be around 10-12 tons.

The rest of the interior ground floor walls are not painted, and all of the second floor interior block walls have other color paint that contains <50 ppm PCBs. None of the exterior walls are painted, except for recently painted murals that are not suspect for PCBs. The unpainted first floor walls can be disposed of at a certified solid waste disposal facility, subject to facility acceptance. The painted second floor walls with PCBs <50 ppm can be considered excluded PCB product waste per TSCA regulations and can be disposed of at a certified solid waste disposal facility, subject to facility acceptance. [15]

The north face of the north brick wall that will remain on Site has several colors of paint similar to the other inside walls. This wall, and a small portion of the east brick wall where the cinder block building wraps around, will become an outside wall once the demolition is completed. Since the paint has PCBs in it, it will need to be removed. Pilot testing done in 2009 inside the building suggests that sandblasting is effective at removing relatively low PCB concentration paint and leaving the remaining brick with PCBs less than 1 ppm.

2.3 PROJECT GOALS

NEYT plans to remove the cinder block building addition. There is no planned use of the structure and in its current condition, rehabilitating the building for any use

[15] LEE, 2019, pages 9-10.

would likely be far in excess of the cost to develop institutional space elsewhere in Brattleboro.

The project goal is to safely remove the building addition in accordance with all applicable Federal, State and Local regulations, and in a manner that is safe for the neighborhood residents and NEYT staff and families.

2.4 APPLICABLE REGULATIONS AND CLEANUP STANDARDS

Cleanup Oversight Responsibility

USEPA Region 1 TSCA office has primary jurisdiction over the management and disposal of PCB waste. Submittal and approval of a work plan will be required prior to demolition. Vermont Department of Health (DOH) has jurisdiction over the asbestos abatement. Authorization for the abatement will be applied for prior to the start of demolition, and a mandatory 10-day notification period for the DOH and EPA NESHAPS will be provided. The Vermont DEC Waste Management Division has indicated that the approved Corrective Action Plan will not need to be amended as long as the demolition project and redevelopment do not involve excavating any soil.

NEYT has retained LE Environmental as EP to oversee the environmental aspects of the work. LE Environmental will retain K-D Associates, a certified Vermont asbestos entity, to oversee and document the asbestos abatement. A contractor with OSHA HAZWOPER training will perform the demolition work. A licensed waste hauler will be sub-contracted to transport and dispose of waste materials. Disposal of non-hazardous waste will be done at a certified solid waste facility. Disposal of hazardous waste/bulk product waste will be done at a TSCA approved hazardous waste disposal facility.

Cleanup Standards

The relevant PCB cleanup standard is the TSCA threshold of 1 ppm total PCBs in building materials. Verification testing will be performed on all surfaces from which paint is removed (See Section 3.2). For asbestos, Vermont DOH defines ACM as containing 1% or more asbestos. Visual clearance will take place following the asbestos abatement.

Applicable Laws and Regulations

Laws and regulations that are applicable to this cleanup include 40 CFR Part 761 for PCBs, Vermont Regulations for Asbestos Control, the Federal Small Business Liability Relief and Brownfields Revitalization Act, the Federal Davis-Bacon Act, and Vermont environmental law. Federal laws regarding procurement of contractors to

conduct the cleanup will be followed. In addition, all appropriate permits (e.g., waste transport/disposal manifests and bills of lading) will be obtained during the work.

2.5 EVALUATION OF CLEANUP ALTERNATIVES

Cleanup Alternatives Considered

Two alternative cleanup scenarios were developed and evaluated, in addition to the required "no action" alternative. Alternative #1 is to demolish the building and dispose of the cinder blocks without removing paint from them. Alternative #2 is to remove the paint from the cinder blocks that currently have paint with PCB concentrations ≥ 50 ppm, and dispose all of the cinder blocks as solid waste. Alternative #3 is the no-action alternative.

- Alternative #1: Demolition including disposal of painted cinder block will require that the light blue painted blocks (PCB concentrations in paint ≥ 50 ppm) be segregated for disposal from the rest of the cinder blocks. These blocks are on the first floor west wall and the western part of the first floor north wall. To access these blocks, the rest of the building has to be removed first. Cinder blocks in the rest of the first floor, and the entire second floor, are unpainted, or contain paint with PCBs <50 ppm. Those can be disposed of at a certified solid waste facility. The blocks with PCBs ≥50 ppm must be transported to and disposed of at a TSCA approved hazardous waste disposal facility.
- Alternative #2: Demolition with paint removal on all of the light blue cinder blocks (PCBs ≥ 50 ppm) would require paint removal from approximately 1,300 square feet of interior block wall before those walls are demolished. For safety reasons the interior paint removal would take place after the rest of the building has been taken down. Then, all of the cinder blocks would be disposed of at a certified solid waste landfill. The only waste stream to be disposed of at a TSCA-approved facility would be drummed paint waste.
- Alternative #3: No action would be performed and the building would remain in its current condition.

Cleanup Alternatives Evaluation

Effectiveness – Including Resiliency Considerations

- Alternative #1: Demolition including disposal of painted cinder block would be effective in controlling and eliminating exposure to the identified contaminants (PCBs and asbestos). During demolition, the demolition debris will be wetted to minimize dust and asbestos fiber migration. Access to the Site will be controlled with fencing and a gate. Vehicles and pedestrians will be restricted from the nearby sidewalk and street during critical demolition periods. Non-hazardous waste (demolition debris and cinder blocks with

PCBs <50 ppm) will be transported to a certified solid waste disposal facility. Hazardous / bulk product waste (cinder blocks with PCBs ≥50 ppm) will be transported to a TSCA approved hazardous waste facility. Once the cinder block building is gone, paint would be removed from the exterior brick wall and drummed for disposal. Environmental resiliency considerations would include waste transportation to the disposal destination. Vehicle emissions will not be significant once the demolition is completed. Local contractors will be encouraged to bid and the selected contractor will abide by a no-idle policy.

- Alternative #2: Removal of light blue paint from cinder blocks on a portion of the lower floor followed by demolition would be effective in controlling and eliminating exposure to the identified contaminants (PCBs and asbestos). Access and safety considerations would be similar to Alternative #1. Once the paint is removed and the blocks are tested, all of the cinder block would be considered non-hazardous waste and would be transported to a certified solid waste disposal facility. Hazardous/bulk product waste including drummed paint and sandblasting waste will be transported to a TSCA approved hazardous waste facility. Once the cinder block building is gone, paint would be removed from the exterior brick wall. Less vehicle emissions would be created in Alternative #2 compared to Alternative #1 because all of the cinder blocks would be disposed of locally and the only waste to be shipped to the TSCA approved hazardous waste disposal facility would be several drums of paint and sandblast waste.
- Alternative #3-No action would not be effective in minimizing human contact to contaminants because the building is in very poor condition and is at risk of structural collapse and if that were to occur, uncontrolled contaminant dispersal would take place in the urban neighborhood where the building is located.

Implementability

- Alternative #1- Demolition including disposal of painted cinder blocks will require the blocks be segregated separately for non-hazardous block (unpainted and painted with PCBs <50 ppm) and hazardous / bulk product waste (PCBs ≥50 ppm). Local contractors with OSHA HAZWOPER training can perform the demolition and waste sorting. Specialized licensed subcontractors will be needed for asbestos abatement, paint removal from the brick, and waste transport and disposal. Transport and disposal of cinder blocks with PCBs ≥50 ppm must be performed by a licensed hazardous waste hauler and at a TSCA approved disposal facility.
- Alternative #2- Demolition including paint removal and disposal of cinder blocks will require the paint be removed from the light blue cinder blocks on the ground floor. Contractor responsibilities would be similar to Alternative #1. Transport / disposal of drummed hazardous/bulk product waste must

be performed by a licensed hazardous waste hauler and at a TSCA approved disposal facility.
- Alternative #3- No Action does not entail performing any implementation activities.

Cost

- Alternative #1-Estimated Brownfields Eligible Costs are $150,420.
- Alternative #2-Estimated Brownfields Eligible Costs are $173,186.
- Alternative #3-Estimated Brownfields Eligible Costs are $0.

Cost estimates are in Appendix C.

2.6 RECOMMENDED CLEANUP ALTERNATIVE

Alternative #1-Demolition including disposal of painted cinder blocks is recommended for implementation. The estimated cost to proceed in this manner is approximately $23,000 (13%) less than removing the PCB containing paint from the blocks before disposing of them. The environmental resiliency of Alternative #1 is slightly less than Alternative #2, due to having to transport and dispose of approximately 20 tons of cinder blocks with PCBs ≥50 ppm to a TSCA approved hazardous waste disposal facility. Alternative #3, "no action" is not recommended due to its safety and health considerations and the advanced state of decay of the building.

3.0 CLEANUP PLAN

This Plan has been developed based on applicable federal and state regulations. Work performed under this plan will be conducted in conjunction with the building demolition. The following describes the basis of the cleanup plan, identified PCB-containing materials that will be remediated, the remedial activities to be performed, management of remediation wastes, and verification sampling post-remediation.

3.1 BASIS OF THE CLEANUP PLAN

The basis of the cleanup plan is to safely remove the cinder block building addition in preparation for NEYT's redevelopment of the Site. This includes properly managing all demolition waste streams, including solid waste (demolition debris, unpainted block, and painted block with PCB concentrations <50 ppm), ACM, and hazardous waste / bulk product waste (light blue painted block with PCBs ≥50 ppm). Paint will be removed from the north brick wall and the brick will be tested post- removal to verify that total PCBs are <1 ppm. Once the building demolition and testing is complete, NEYT will redevelop the Site into a stage and gathering area for its students.

3.2 WORK PLAN

Management and Funding

NEYT is applying for USEPA Brownfields Cleanup Funding from the WRC Revolving Loan Fund (RLF) for the demolition and redevelopment work. NEYT has retained LEE as the project's EP. LEE will assist NEYT's civil engineer (Stevens and Associates) with logistical aspects of the work.

One provision for using WRC's Brownfields RLF grant funds is that the work must be competitively procured. Stevens and Associates and LEE are developing bid documents and demolition specifications for the work in preparation for competitive procurement. The project will be advertised on the NEYT and Vermont Bid System web sites. A contractor with OSHA HAZWOPER training will be selected to perform the work. The contractor must have specialized expertise to perform the asbestos abatement, waste segregation, waste transportation, and paint removal from the brick wall and verification testing of the cleaned brick. Due to the competitive procurement requirement, the identity of the contractor and its sub-contractors is not yet known.

Demolition and Abatement

During the demolition, site access will be restricted. A dedicated construction entrance will be designated and fencing will be installed to restrict non-authorized access.

Cinder block walls that are either unpainted, or with paint <50 ppm PCBs will be removed and either live-loaded into trucks or rolloff containers or temporarily stockpiled in preparation for loading. Demolition of the interior of the building (floors and stairway) will proceed once a sufficient portion of the building is opened to allow equipment to reach in. The interior demolition will be done in the presence of licensed asbestos abatement professionals, who will sort through the waste to segregate ACM including comingled waste. The wastes will be sprayed with water to minimize dust. ACM will be picked by hand and placed in plastic bags for disposal.

Demolition will progress as the cinder blocks and interior contents are removed and sorted. The demolition will proceed until the only remaining part of the cinder block building is the light blue painted walls that have PCBs ≥50 ppm. Then, those blocks will be removed and live-loaded into rolloff containers or trucks (not stockpiled) for transport to the TSCA-approved hazardous disposal facility. There is a relatively small amount of light blue painted wood inside the west end of the building and this will be loaded with the light blue painted cinder blocks.

Following removal of the remaining block walls, the cement floor slab will be swept clean and the sweepings will be drummed due to the possibility of PCB containing

paint. The contractor will then remove the paint from the brick wall. This will be performed from construction lifts and/or scaffolding with containment and appropriate PPE. Paint removal will be performed using sandblasting techniques with either sand or with dry ice. PCB concentrations in paint on the brick wall may or may not be ≥50 ppm. Pilot testing at the Site in 2009 demonstrated that sandblasting the brick to remove the paint was effective in reducing PCB concentrations in the brick to below 1 ppm in areas with PCB paint in the 0.7-4.6 ppm range.

Waste disposal will include solid waste (unpainted cinder block, and painted block and wood other than light blue painted), hazardous / bulk product waste (light blue painted block and wood and drummed paint waste), asbestos containing waste, and metal salvage (primarily heating system components). The contractor selected via competitive procurement will determine the disposal destinations. The solid waste is likely to go to a local certified solid waste landfill. The hazardous/bulk product waste has to go to a TSCA approved hazardous waste landfill. The asbestos waste has to go to a solid waste facility certified to take asbestos waste. The metals can be recycled locally. There may be waste characterization testing requirements for individual disposal destinations. The contractor will be responsible for determining the characterization testing needs and for performing the sampling and testing.

Verification sampling and testing will be performed on the brick wall once the paint is removed (Verification Sampling Locations Plan in Appendix A). A ten-foot grid will be laid out, and 7 brick samples and 1 duplicate brick sample will be collected and tested (>5% collection rate). A hammer drill and masonry bit will be used to obtain brick samples from 0-1/8" deep. The drill bit will be decontaminated with an Alconox-water mixture before the first use, between uses, and after the last use. The confirmation samples will be containerized (amber 4-ounce jars), labeled, and shipped to EAI using chain of custody procedures for testing of PCBs via EPA Method 8082, with Soxhlet extraction. Results will be requested on a one-week turnaround time. The verification brick sample PCB testing results will be tabularized and compared with the TSCA threshold of 1 ppm.

3.3 AIR MONITORING

Due to the requirement to wet down the demolition debris to avoid dust generation, air sampling for fugitive dust is not specified. Laboratory results would not arrive in time to inform the site cleanup.

3.4 REMEDIATION AND WASTE MANAGEMENT PLAN

The following items describe the remediation process, decontamination protocols, and waste management procedures.

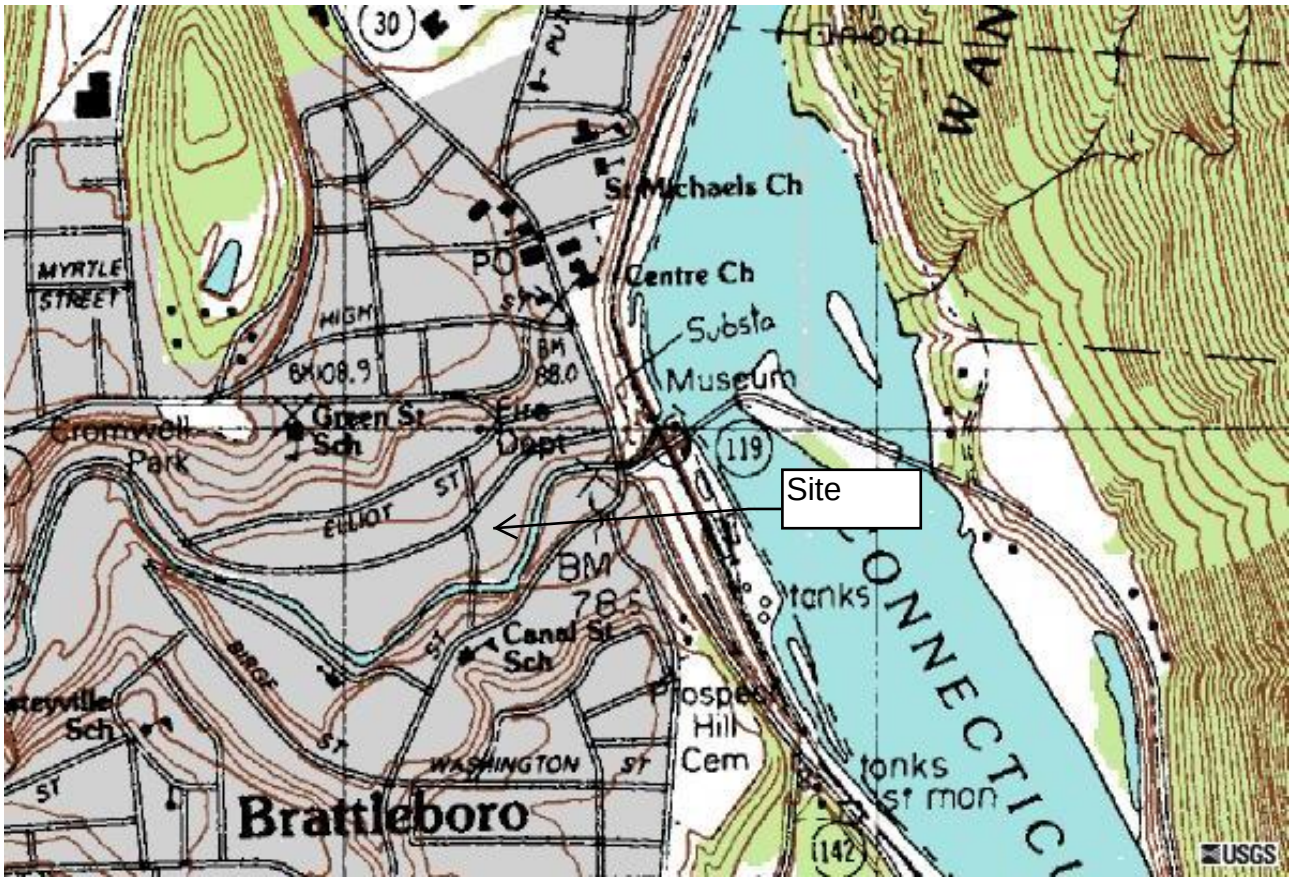
1. Regulatory approvals will be required prior to the commencement of the work, including approval of this work plan by EPA Region 1 TSCA, and approval of the proposed asbestos abatement plan by the Vermont DOH.
2. Competitive procurement for a cleanup contractor and disposal facility, including development of bid documents and final specifications.
3. Pre-construction Site meeting with stakeholders (NEYT, EPA, LEE, contractor) to review work plan, health and safety procedures, and Site conditions.
4. Mobilization of labor and equipment.
5. Contractor will hold daily tailgate meetings to discuss health and safety issues. OSHA 40 Hour HAZWOPER trained personnel will perform excavation, loading, and supervision. Standard personal protective equipment will include Modified Level D. At a minimum, workers in contact with building materials shall have suitable work clothing that covers all exposed skin, gloves, hardhats, hearing protection, and safety glasses. Used PPE and contaminated gear will be collected and disposed of off-Site as solid waste.
6. All equipment in contact with paint will be decontaminated with detergent and water, using a pressure washer. The decontamination water and residuals will be drummed for testing and off-Site disposal.
7. All paperwork generated during the remediation (waste manifests, bills of lading, etc.) will be collected and included in the Brownfields Construction Completion Report.
8. Waste management of all materials generated during the cleanup will be tracked and accounted for. All waste will be handled and shipped according to state and federal regulations.
9. The identity of the contractor and the disposal facility will be determined during EPA-required competitive procurement for the cleanup. This plan will be updated accordingly.
10. The current schedule to complete this work is:
    a. Contractor procurement/plan approvals April-June 2021
    b. Mobilization July 2021
    c. Demolition, disposal, verification and completion July-September 2021

4.0 REFERENCES

1. LEE, Brownfields Phase II ESA Report, 48 Elm Street, Brattleboro, Vermont, March 23, 2019.
2. KAS, Inc., Phase II Environmental Site Assessment Report, 64 Elm Street, Brattleboro, Vermont, May 2009, obtained from the VT ANR Natural Resources Atlas.
3. Lyssa Papazian, Historic Preservation Review, 64 Elm Street, Brattleboro, Vermont, April 2011, obtained from the VT ANR Natural Resources Atlas.
4. 1962 Aerial Photograph of Brattleboro, Vermont, obtained from the Vermont Law Library, Montpelier, Vermont.
5. GCM Environmental, Phase I Environmental Site Assessment Report, 64 Elm Street, Brattleboro, Vermont, July 2008.
6. KAS, Inc., Supplemental Phase II Environmental Site Assessment Report, 64 Elm Street, Brattleboro, Vermont, October 2009, VT ANR Natural Resources Atlas.
7. KAS, Asbestos Inspection Report, 64 Elm Street, Brattleboro, Vermont, December 17, 2008.
8. New England Envirostrategies, ABCA/CAP, 64 Elm Street, Brattleboro, Vermont, July 2010, obtained from the VT ANR Natural Resources Atlas.
9. Weston and Sampson, Risk Based Cleanup and Disposal Plan, 64 Elm Street, Brattleboro, Vermont, February 2012, obtained from the VT ANR Natural Resources Atlas.
10. Lincoln Applied Geology, Corrective Action Plan Amendment, 100 Flat Street and 48 Elm Street, Brattleboro, Vermont, February 20, 2015, obtained from the VT ANR Natural Resources Atlas.
11. Lincoln Applied Geology, As-Built Completion Report, 100 Flat Street and 48 Elm Street, Brattleboro, Vermont, September 30, 2015, obtained from the VT ANR Natural Resources Atlas.
12. Eastern Analytical, Inc., Laboratory Report #167872 for NE Youth Theater, April 28, 2017, obtained from NEYT.
13. New Jersey Institute of Technology, Working with Federal and State PCB Regulations on Brownfields Sites, Brochure #4, 2013.
14. Vermont Hazardous Waste Management Regulations, December 2016, obtained from the Agency of Natural Resources Web Site.
15. USEPA Region 1, electronic mail message from Joe Ferrari to Alan Liptak of LEE on September 25, 2018.
16. K-D Associates, Inc. Asbestos Assessment, 48 Elm Street, New England Youth Theater, March 17, 2021.

APPENDIX A

MAPS
Site Location Map
Conceptual Redevelopment Plan
PCB Verification Sampling Locations Plan



N

W E

S

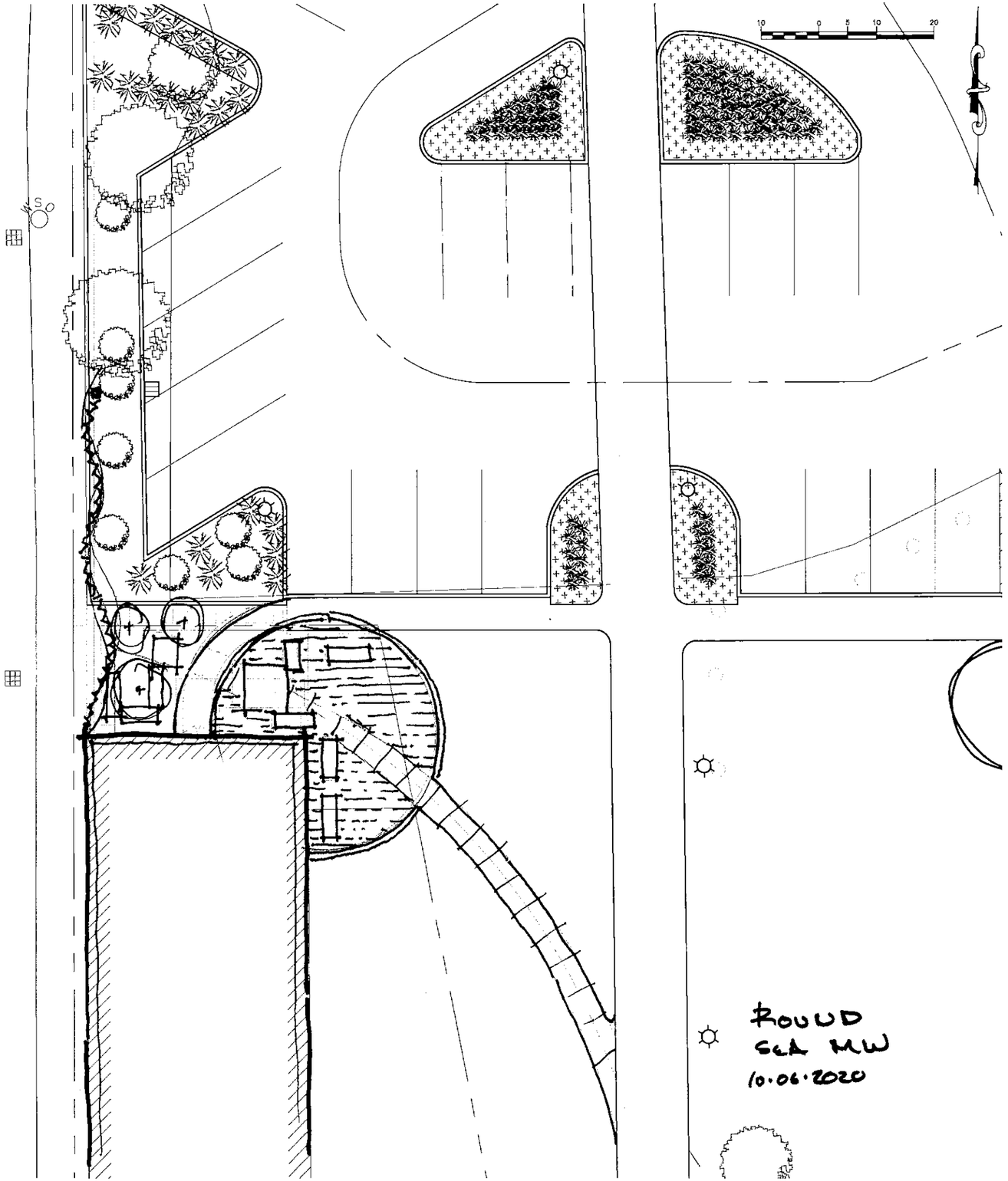
48 Elm Street

Brattleboro, Vermont

LE-Environmental

1984 USGS Map

LE #: 17-096
Date: October 10, 2017
Source: MSRmaps.com



LEGEND

	EXISTING	PROPOSED
CATCH BASIN	ECB	CB
DRAIN MANHOLE	EDMH	DMH
SEWER MANHOLE	ESMH	SMH
AREA DRAIN	EAD	AD
CURB STOP	⊗	●
GATE VALVE	⋈	⋈
SIGN POST	⊣	⊣
UTILITY POLE	⌀	⌀
LIGHT POLE	☼	☼
FIRE HYDRANT	⌀	⌀
FLUSHING HYDRANT	⇨	⇨
ENTRY	⇨	⇨
IRON PIN	●	○
MONUMENT	■	■
INLET PROTECTION		
STONE CHECK DAM		
HEADWALL		
STONEWALL		
RIP RAP		
SILT FENCE		
CONIFERS		
DECIDUOUS TREES		
SHRUB		
OIL TANK	OIL	OIL
PROPANE TANK	PROPANE P	PROPANE P
TELEPHONE PEDESTAL	T	T
HANDICAP PARKING		
SURFACE WATER FLOW		
STOCKADE FENCE		
CHAINLINK FENCE		
CENTERLINE		
BOUNDARY LINE		
WETLANDS		
STREAM		
CURB		
STORM DRAIN		
ELECTRIC CONDUIT		

ROUND
CLA MW
10.06.2020

STEVENS & ASSOCIATES, P.C.
SMART DESIGN FOR LIVABLE COMMUNITIES

SA

ARCHITECTS | ENGINEERS
LANDSCAPE ARCHITECTS | PLANNERS
95 MAIN ST. | P.O. BOX 1586
BRATTLEBORO, VT 05302
PH: 802-257-9329 | F: 802-258-3892
WWW.STEVENS-ASSOC.COM

NEW ENGLAND YOUTH THEATER

100 FLAT STREET
BRATTLEBORO, VERMONT

PREPARED FOR:
TRI-STATE AUTO
LIMITED DEMOLITION
PROJECT

SCHEMATIC DESIGN PLAN

DES. BY	MW
DWN. BY	TS
CHKD. BY	MW
SCALE	AS NOTED
DATE	07/15/2020
PROJECT NUM:	20-001

DWG. NO.
SD-1

CURVING SCREEN / FENCE

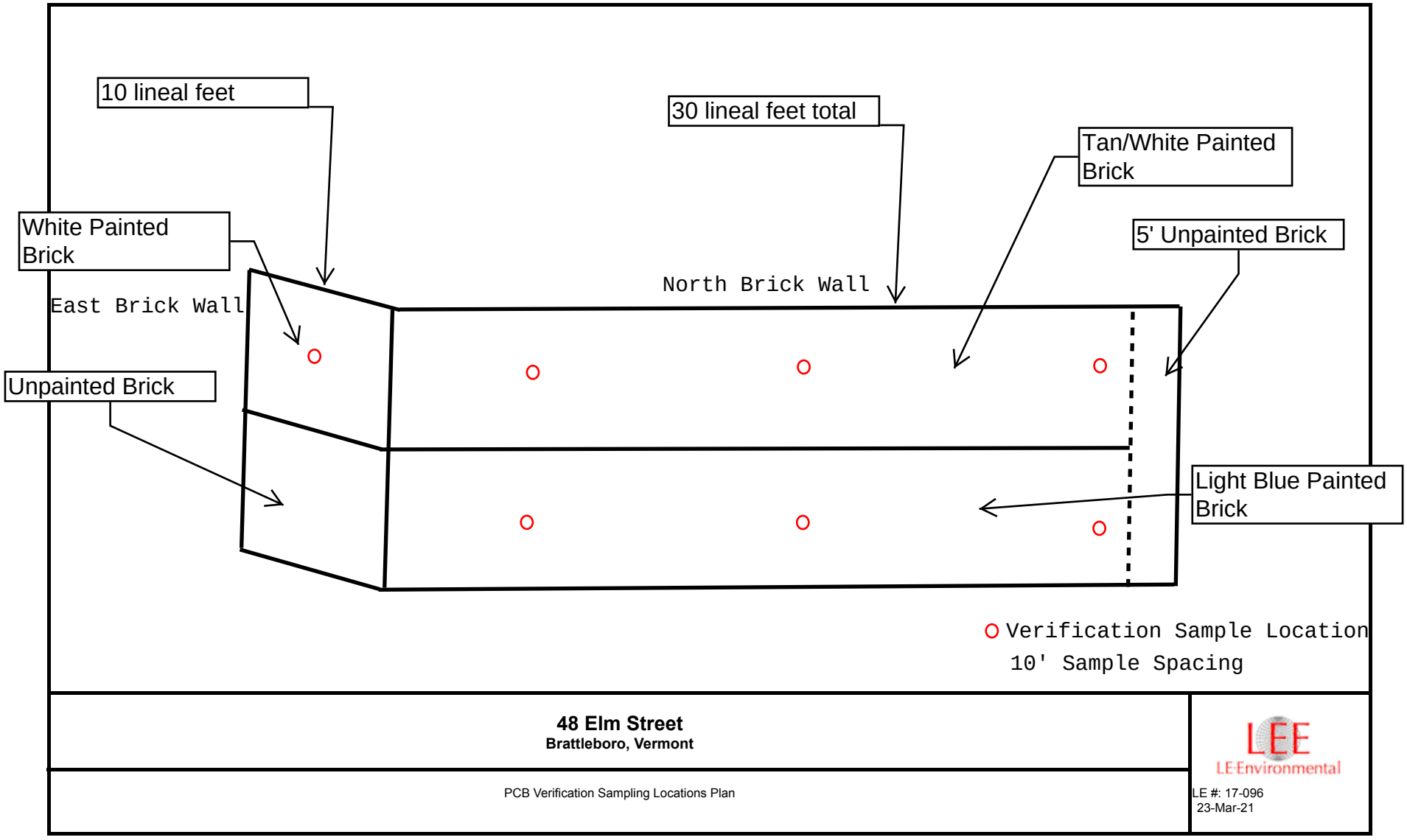
SMALL PLANTED AREA

BACKDROP TO STAGE/ PLAZA AREA

CONNECTING WALK TO BUILDING

PLAZA AREA - WOOD TIMBER BLOCKS FOR SEATING, PLAY OR "STAGE

ROUND
S&K NCW
10.06.2020 1/4 SCALE



48 Elm Street
Brattleboro, Vermont

PCB Verification Sampling Locations Plan

LE-Environmental

LE #: 17-096
23-Mar-21

APPENDIX B

Previous Reports and Data

Brownfields Phase II ESA Report
New England Youth Theatre
48 Elm Street
Brattleboro, Vermont 05301

DEC SMS Site # 2008-3834
EPA RFA#14113

August 31, 2018
Last Revised March 23, 2019

Prepared for:

Town of Brattleboro
230 Main Street, Suite 202
Brattleboro, Vermont 05301

LE·Environmental

21 North Main Street
Waterbury, Vermont 05676
(802) 917-2001
www.leenv.net

LEE Project 17-096

Contents

Appendices

EXECUTIVE SUMMARY

LE Environmental LLC (LEE) was retained by the Town of Brattleboro to perform a Brownfields Phase II Environmental Site Assessment (ESA) at a portion of 48 Elm Street, Brattleboro, Vermont (Site). The Phase II ESA was performed as specified in LEE's Site Specific Quality Assurance Project Plan Addendum (SSQAPP addendum) dated January 24, 2018.

The Site contains one brick and wood frame structure with two stories and a partial basement. This structure was built in the late 1880's and has been a paper mill, machine shop, manufacturing plant, paint factory, and theater storage building. The building has a cinder block addition on its north end, which was built circa 1965; it is a 2-story structure with slab on grade construction. This Phase II ESA work was restricted to the interior of this cinder block addition.

The cinder block addition is unstable and at risk of collapse, and it slated for demolition this fall. Samples of paint, and a representative building materials sample were collected on August 16, 2018. The paint samples were tested for PCBs, and the building materials sample was tested for TCLP lead. The PCB testing results confirm earlier (2009) testing results that indicate the light blue painted portion of the cinder block building's ground floor walls are Bulk Product Waste per USEPA definition, and hazardous waste per State of Vermont definition (VT-01). The estimated impacted area is 400 square feet of cinder block wall with some painted wood, and its estimated weight is 10-12 tons (20-22 tons if the walls are double block).

The second floor walls have PCB concentrations well below 50 ppm. The results of the TCLP lead testing indicate that the combined waste stream is not a hazardous waste by reason of lead toxicity.

LEE has developed the following recommendations during this Phase II ESA.

1. Due to the presence of Bulk Product Waste and hazardous waste, a contractor with current OSHA 40 Hazwoper training must perform the building demolition.
2. Light blue painted interior walls along the west ground floor block wall and the north ground floor block wall must be managed as Bulk Product Waste and Hazardous Waste to comply with State and Federal regulations.
3. The second floor walls can be managed as excluded PCB product waste and disposed of at a certified solid waste disposal facility. The unpainted first floor walls can be disposed of as construction and demolition debris at a certified solid waste disposal facility.
4. NEYT has indicated it will utilize EPA Brownfields funding for the building demolition. An open procurement process will be required for the Qualified Environmental Professional and the building demolition and disposal.
5. A PCB abatement report will need to be prepared that documents the management of the Bulk Product/Hazardous Waste portion of the building, for submittal to EPA and VT DEC.

1.0 INTRODUCTION

LE Environmental LLC of Waterbury, Vermont (LEE) was retained by the Town of Brattleboro to perform a Brownfields Phase II Environmental Site Assessment (ESA) at a portion of 48 Elm Street, Brattleboro, Vermont (Site). A Site location map is included in Appendix A. The 48 Elm Street Site is Vermont Department of Environmental Conservation (DEC) Site #2008-3834.

The Phase II ESA was performed as specified in LEE's Site Specific Quality Assurance Project Plan Addendum (SSQAPP addendum) dated January 24, 2018. Nora Conlon of the USEPA Quality Assurance Unit approved the SSQAPP addendum on May 1, 2018 and USEPA Project Officer Joe Ferrari approved the SSQAPP addendum on June 28, 2018 after consultations with Region 1 EPA's Toxic Substances Control Act (TSCA) office. DEC Site Manager Matt Becker indicated that his office does not have jurisdiction over this work.[1] This report was revised on October 31, 2018 and on March 23, 2019 in response to comments received from USEPA Region 1.[2]

2.0 SITE INFORMATION

The 48 Elm Street Site is located at the intersection of Elm and Flat Streets in downtown Brattleboro. It consists of an approximately 0.17 acre parcel (formerly known as 64 Elm Street; see Appendix A). The Site coordinates are 42° 50' 59" north latitude and 72° 33' 41" west longitude. The Site contains one brick and wood frame structure with two stories and a basement. This structure was built in the late 1880's and has been a paper mill, machine ship, manufacturing plant, paint factory, and theater storage building.[3]

The building has a cinder block addition on its north end, which was built circa 1965; this work was restricted to this cinder block addition. Construction was after 1950 based on Sanborn Insurance Mapping.[4] A 1962 aerial photo of the Site does not show the building addition (Appendix A).[5] This addition has no basement. The cinder block addition was used for offices and administrative functions. The addition is failing structurally, and its third floor was already been removed due to structural failure. Table 1 contains Site owner contact information.

Table 1: Site Information	
Site Owner Name:	New England Youth Theatre
Site Owner Address	100 Flat Street, Brattleboro, VT 05301
Site Owner Contact	shafer.naomi@gmail.com (802) 275 - 7596

[1] Electronic mail message Matt Becker 10/16/17.
[2] Electronic mail messages Joe Ferrari 9/25/18 and 3/19/19.
[3] KAS, May 2009.
[4] Papazian, 2011.
[5] Vermont Law Library Collection.

3.0 CURRENT USE OF THE SITE

The cinder block building addition is an abandoned office building formerly associated with several industrial uses of the adjoining brick building to the south.

4.0 BACKGROUND

The 48 Elm Street Site, including the cinder block building addition, has been the subject of several Brownfields assessments and cleanup planning documents, including:

- Phase I Environmental Site Assessment (ESA)[6];
- Phase II ESA[7];
- Supplemental Phase II ESA[8];
- Analysis of Brownfields Cleanup Alternatives/Corrective Action Plan (ABCA/CAP)[9];
- Section 106 Historic Preservation Review;[10]
- Risk-based Cleanup and Disposal Plan[11];
- CAP Amendment[12];
- As-built Completion Report.[13]
- PCB testing of caulk and window glazing.[14]

Soils, groundwater, and building materials testing took place during these assessments. The 2009 Phase II ESA included collection of eight interior paint samples and testing in the cinder block addition, and the 2017 PCB testing results addressed one caulk sample and one window glazing sample (both were less than 10 parts per million (ppm) PCBs). None of the other documents addressed building materials quality in the cinder block addition.

During the 2009 Phase II ESA, building materials testing was performed, which was oriented toward building re-use. Three painted masonry samples were collected from the inside walls on the ground floor of the cinder block building, and five painted masonry samples were collected from the inside walls on the second floor. Maps showing the 2009 sampling locations are included in Appendix A. The samples

[6] GCM Environmental, July 2008.
[7] KAS, May 2009.
[8] KAS, October 2009.
[9] New England Envirostrategies, July 2010.
[10] Papazian, 2011.
[11] Weston & Sampson, February 2012.
[12] Lincoln Applied Geology, February 2015.
[13] Lincoln Applied Geology, September 2015.
[14] Eastern Analytical, April 2017.

were collected per 40 CFR §761.283 and the EPA Region 1 Draft Standard Operating Procedure for Sampling Concrete in the Field. An impact hammer drill was used to obtain powdered masonry samples from 0-0.5" depth. Multiple sample holes were drilled at each sampling location to obtain enough powered painted masonry for the lab analysis. The samples were submitted to Eastern Analytical Inc. (EAI) for analysis of PCB congeners via EPA Method 8082 and for TPH via EPA Method 8100.

The 2009 sampling and testing results indicate that most of the painted masonry samples had PCB concentrations less than 1 ppm; however, two samples from the first floor (1W-5 and 1W-6) had reported PCB concentrations of 180 ppm. Sample 1W-5 was collected from a single sampling location and sample 1W-6 was collected from two adjacent sampling locations.

The results of testing for 1W-5 and 1W-6 suggest that the west ground floor wall and a portion of the north ground floor wall are Bulk Product Waste.[15] The inside of the cinder block walls in this part of the building are covered with light blue paint. The other first floor sample (1W-7) was also collected from a single area with light blue paint and this sample did not have an elevated PCB concentration (0.6 ppm). The 2nd floor interior walls did not have elevated PCB concentrations (2W-6, 7, 8 and 9 between 0.5-0.9 ppm).

TPH results in the addition were 130 ppm or less. Samples of caulk and window glazing collected from the building addition in April 2017 were reported to have PCB concentrations of 8.8 ppm and 1.8 ppm, respectively.[16]

5.0 PROJECT OBJECTIVES

The current project objective is to investigate the data gaps associated with the existing building waste in preparation for demolition and waste disposal. The Sampling Design set forth in Section E of the approved SSQAPP amendment was used to determine the PCB concentrations in the demolition waste stream, and to determine if the building waste stream contains concentrations of leachable lead in excess of hazardous waste standards. The following data gaps were identified:

- Representative paint sample PCB data.
- Representative sampling of the demolition waste stream for a Toxicity Characteristic Leaching Procedure (TCLP) lead test.

The next sections of this report address these data gaps.

[15] NJIT.
[16] Eastern Analytical, 2017.

6.0 PAINT ASSESSMENT

On August 16, 2018, LEE collected paint samples from the cinder block building for PCB testing. Ten-foot sample spacing was utilized as specified in the SSQAPP addendum. During field work on August 16, 2018, it was discovered that a portion of the cinder block building's ground floor interior walls are unpainted, resulting in three fewer samples collected than scheduled.[17]

A total of thirteen samples were collected. Four samples were collected from the ground floor and nine samples were collected from the second floor. A duplicate sample was collected for quality assurance. The samples were numbered PS-101 through PS-104 (ground floor), and PS-108 through PS-116 (second floor). The sampling locations are shown on the Paint Sampling Plans in Appendix A.

Nearly all of the paint inside the building was well adhered to the cinder block walls. The paint samples were collected using a Milwaukee battery operated hammer drill and a ¾" diameter carbide drill bit. The drill bit was used to make 1/8" to ¼" indentations in the cinder block wall surface, just enough to penetrate the indentations in the rough irregular wall surface. Approximately 10 indentions were required at each sampling location to provide sufficient sample for analysis. The paint samples were collected into laboratory supplied 4-ounce amber glass jars, labeled and placed in a cooler.

Flaking paint on a wooden alcove was noted on the interior west side of the ground floor. At that location (PS-101), light blue paint was collected into a laboratory supplied 4-ounce amber glass jar. The samples were submitted to EAI for analysis of PCBs via EPA Method 8082A with Soxhlet extraction. The laboratory results are summarized in the following Table 1 and in Appendix C.

Table 2: Summary of PCB Testing Results

Sample	Location	Media/Color	Total PCBs	Congeners
PS-101	First floor-west	Light blue paint on wood	60 ppm	1254
PS-102	First floor-north	Light blue painted cement block	950 ppm	
PS-103			3.5 ppm	
PS-104			3.0 ppm	
PS-108	Second floor-west	Green painted cement block	1.4 ppm	1248 and 1254
PS-109			2.4 ppm	
PS-110	Second floor-north		2.0 ppm	
PS-111		Grey painted cement block	3.3 ppm	
PS-112			2.0 ppm	
PS-113	Second floor-east	Green painted cement block	2.3 ppm	
PS-114		Tan over green painted cement block	3.1 ppm	
PS-115			3.0 ppm	
PS-116	Second floor-south		3.5 ppm	

[17] SSQAPP Addendum, page 8, Section E1 predicted 16 samples collected.

7.0 BUILDING MATERIALS TCLP LEAD ASSESSMENT

TCLP lead testing was performed for a representative building materials sample from the cinder block structure. The purpose of the sampling was to ensure the resulting building debris was not sufficiently enriched in lead so as to render the building waste stream as hazardous.

Representative samples of building materials, including wood, sheetrock, flooring, insulation and cement block were collected on August 16, 2018. A reasonable attempt was made to create a building material sample that reflected the composition of the demolition waste stream, which is mostly cement block. The sample was containerized and labeled, then delivered to EAI under chain of custody procedure for TCLP lead analysis.

The results of the testing indicate that the waste characterization sample did not contain sufficient extractable lead to render the combined waste stream hazardous by reason of toxicity. The state and federal threshold for TCLP lead is 5 milligrams per liter (mg/l). The sample collected did not contain a lead concentration above the reporting limit of 0.5 mg/l. A copy of the laboratory report is in Appendix D.

8.0 DISCUSSION

The PCB data collected in August 2018 has confirmed that the western portion of the interior ground floor walls are painted with light blue paint containing greater than 50 ppm PCBs. Data from the 2009 Phase II ESA are consistent with this conclusion. The data supporting this finding include (from southwest to northeast):

- Sample 1W-5 (collected in 2009), blue painted masonry, 180 ppm PCBs.
- Sample PS-101, blue paint chips, 60 ppm PCBs.
- Sample PS-102, blue paint, 950 ppm PCBs.
- Sample 1W-6 (collected in 2009), blue painted masonry, 180 ppm PCBs.

Samples 1W-5, PS-101, and PS-102 were grab samples from single locations while Sample 1W-6 was a composite from two separate locations.

Building products found to contain ≥ 50 ppm PCBs are classified as PCB bulk product waste under federal regulations through the Toxics Substances Control Act (TSCA) found in Chapter 40 of the Code of Federal Regulations (CFR) (40 CFR 761).[18] Building materials found to contain ≥ 50 ppm PCBs are also considered to be hazardous waste according to Section 7.211 of the Vermont Hazardous Waste Management Regulations, effective December 2016 (Waste Code VT-01).

[18] NJIT, 2013.

Not all of the light blue paint in the building contains hazardous / bulk product PCB concentrations; however, there is no discernable visual difference between the hazardous/ bulk product light blue paint and the non-hazardous / non-bulk product light blue paint. Sample PS-103, also containing light blue paint, was collected 10' east of PS-102, and a few feet east of 1W-6. PS-103 was reported to contain 3.5 ppm PCBs. Due to the lack of visual difference in the light blue paint, USEPA requests that all the light blue paint be considered bulk product waste and managed as such.

The light blue painted ground floor walls will need to be disposed of as bulk product waste and Vermont-listed hazardous waste. This includes the entire west ground floor wall and the western part of the north ground floor wall. The light blue painted west wall is approximately 15' long and 8' high (120 square feet) and includes cinder blocks and a wooden alcove. The portion of the north wall subject to management as bulk product / hazardous waste is approximately 35' long and 8' high (280 square feet). Cinder blocks weigh 35 pounds each and are approximately 0.9 square feet face area, therefore, the impacted area contains approximately 450 cinder blocks and some painted wood, and its weight should be around 10-12 tons. There is some indication that the walls are double block thickness and should this be the case throughout the impacted area, the weight of the blocks in the impacted area would be around 20-22 tons. This would need to be disposed of as bulk product waste/ hazardous waste unless the outer blocks are completely unpainted and can be easily separated from the impacted blocks.

The rest of the interior ground floor walls are not painted, and all of the second floor interior block walls have paint that contains less than 50 ppm PCBs,. None of the exterior walls are painted, except for recently painted murals that are not suspect for PCBs. The unpainted first floor walls can be disposed of as normal construction and demolition debris at a certified solid waste disposal facility, subject to facility acceptance. The painted second floor walls with PCBs below 50 ppm can be considered excluded PCB product waste per TSCA regulations and can be disposed of at a certified solid waste disposal facility, subject to facility acceptance. Documentation of the excluded PCB product waste status for the second floor walls as cited at 40 CFR 761.3 is provided for as follows:

- (i) The products or source of the products containing <50 ppm concentration PCBs were legally manufactured, processed, distributed in commerce, or used before October 1, 1984.
    - LEE believes based on information in the Section 106 report[19] that the cinder block addition was added circa 1965, and use of the building as a paint factory ended around 1972. Therefore, it is likely that the paint product containing <50 ppm concentration PCBs was legally used before 1984.

[19] Papazian, 2011.

- (ii) The products or source of the products containing <50 ppm concentrations PCBs were legally manufactured, processed, distributed in commerce, or used, i.e., pursuant to authority granted by EPA regulation, by exemption petition, by settlement agreement, or pursuant to other Agency-approved programs;
    - See (i). No petition, settlement agreement, or other agency-approved program is known.
- (iii) The resulting PCB concentration (i.e. below 50 ppm) is not a result of dilution, or leaks and spills of PCBs in concentrations over 50 ppm.
    - No evidence of dilution, leaks or spills of PCBs in concentrations over 50 ppm is known to have affected the 2nd floor paint with PCB concentrations below 50 ppm.

The demolition plan will specify careful removal of the second floor walls, and the light blue painted ground floor walls and disposal as solid waste. The western portion of the ground floor walls must be managed so as not to co-mingle the solid waste portion of the building with the bulk product/hazardous portion of the building.

9.0 DATA VALIDATION

LEE's quality assurance officer for the Site performed data validation per requirements of LEE's Generic QAPP document, Sections Q, R, and S. The review included field and laboratory data. All data were determined to be acceptable without condition for the purposes of the Phase II ESA. The data validation report and calculations spreadsheet are included in Appendix E.

10.0 CONCLUSIONS AND RECOMMENDATIONS

LEE has developed the following conclusions following completion of this Phase II ESA.

1. LEE was retained by the Town of Brattleboro to perform a Brownfields Phase II ESA at the Site, including testing for PCBs and TCLP lead. The Phase II ESA was performed as specified in the approved SSQAPP Addendum dated January 24, 2018.
2. Paint samples and a representative building materials sample were collected on August 16, 2018. The paint samples were tested for PCBs, and the building materials sample was tested for TCLP lead.
3. The PCB testing results confirm earlier (2009) testing results that indicate the western portion of the cinder block building's ground floor walls are bulk product waste per USEPA definition, and hazardous waste (VT-01) per State of Vermont definition. This includes the entire ground floor west wall and the ground floor north wall west of sampling location PS-103. The estimated

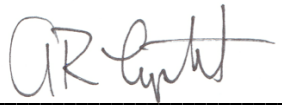
impacted area is 400 square feet of cinder block wall with some painted wood, and its estimated weight is 10-12 tons (20-22 tons if the walls are double block).
4. The rest of the first floor walls are not painted, and all of the second floor walls have PCB concentrations well below 50 ppm.
5. The results of the TCLP lead testing indicate that the combined waste stream is not a hazardous waste by reason of lead toxicity.

LEE has developed the following recommendations in connection with this Phase II ESA.

1. Due to the presence of Bulk Product Waste and hazardous waste, a contractor with current OSHA 40 Hazwoper training must perform the building demolition.
2. Light blue painted interior walls along the west ground floor block wall and the north ground floor block wall must be managed as Bulk Product Waste and Hazardous Waste to comply with State and Federal regulations.
3. The second floor walls can be managed as excluded PCB product waste and disposed of at a certified solid waste disposal facility.
4. The unpainted first floor walls can be disposed of as construction and demolition debris at a certified solid waste disposal facility.
5. NEYT has indicated it will utilize EPA Brownfields funding for the building demolition. An open procurement process will be required for the Qualified Environmental Professional and the building demolition and disposal.
6. A PCB abatement report will need to be prepared that documents the management of the Bulk Product/Hazardous Waste portion of the building, for submittal to EPA and VT DEC.

11.0 REPORT CERTIFICATION

This Brownfields Phase II ESA was prepared by Alan Liptak, Environmental Professional, and was reviewed by Angela Emerson, Environmental Professional, and represents to the best of our knowledge the existing environmental conditions at the Site. Resumes are in Appendix F.



Alan Liptak, Environmental Professional

Angela Emerson, Environmental Professional

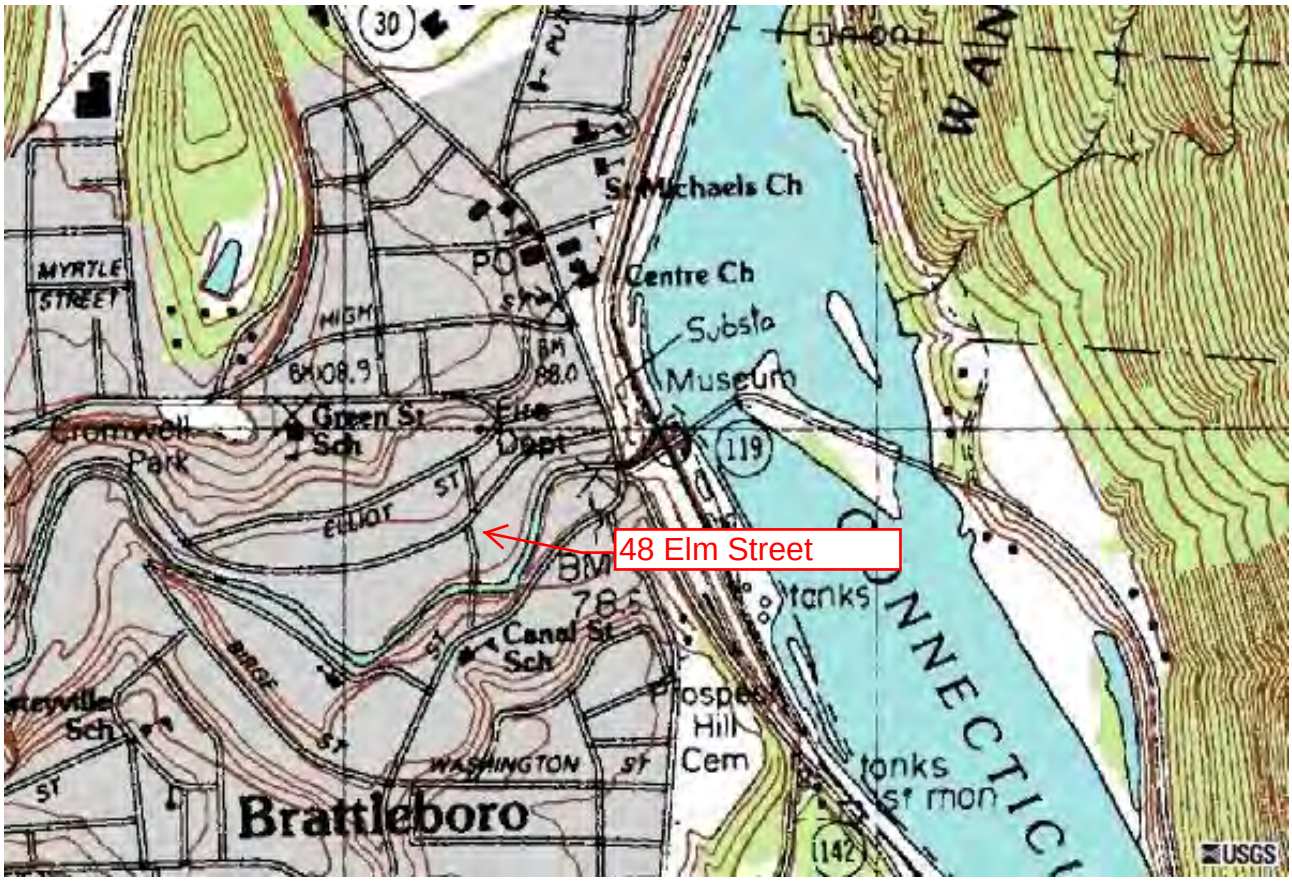
12.0 REFERENCES

1. LEE, Site-Specific Quality Assurance Project Plan addendum, 48 Elm Street, Brattleboro, Vermont, January 24, 2018.
2. KAS, Inc., Phase II Environmental Site Assessment Report, 64 Elm Street, Brattleboro, Vermont, May 2009, obtained from the VT ANR Natural Resources Atlas.
3. Lyssa Papazian, Historic Preservation Review, 64 Elm Street, Brattleboro, Vermont, April 2011, obtained from the VT ANR Natural Resources Atlas.
4. 1962 Aerial Photograph of Brattleboro, Vermont, obtained from the Vermont Law Library, Montpelier, Vermont.
5. GCM Environmental, Phase I Environmental Site Assessment Report, 64 Elm Street, Brattleboro, Vermont, July 2008.
6. KAS, Inc., Supplemental Phase II Environmental Site Assessment Report, 64 Elm Street, Brattleboro, Vermont, October 2009, VT ANR Natural Resources Atlas.
7. New England Envirostrategies, ABCA/CAP, 64 Elm Street, Brattleboro, Vermont, July 2010, obtained from the VT ANR Natural Resources Atlas.
8. Weston and Sampson, Risk Based Cleanup and Disposal Plan, 64 Elm Street, Brattleboro, Vermont, February 2012, obtained from the VT ANR Natural Resources Atlas.
9. Lincoln Applied Geology, Corrective Action Plan Amendment, 100 Flat Street and 48 Elm Street, Brattleboro, Vermont, February 20, 2015, obtained from the VT ANR Natural Resources Atlas.
10. Lincoln Applied Geology, As-Built Completion Report, 100 Flat Street and 48 Elm Street, Brattleboro, Vermont, September 30, 2015, obtained from the VT ANR Natural Resources Atlas.
11. Eastern Analytical, Inc., Laboratory Report #167872 for NE Youth Theater, April 28, 2017, obtained from NEYT.
12. New Jersey Institute of Technology, Working with Federal and State PCB Regulations on Brownfields Sites, Brochure #4, 2013.
13. Vermont Hazardous Waste Management Regulations, December 2016, obtained from the Agency of Natural Resources Web Site.
14. USEPA Region 1, electronic mail message from Joe Ferrari to Alan Liptak of LEE on September 25, 2018.

APPENDIX A

MAPS

Site Location Map
First Floor Paint Results
Second Floor Paint Results
Phase II ESA Site Maps (2009)
1962 Air Photo



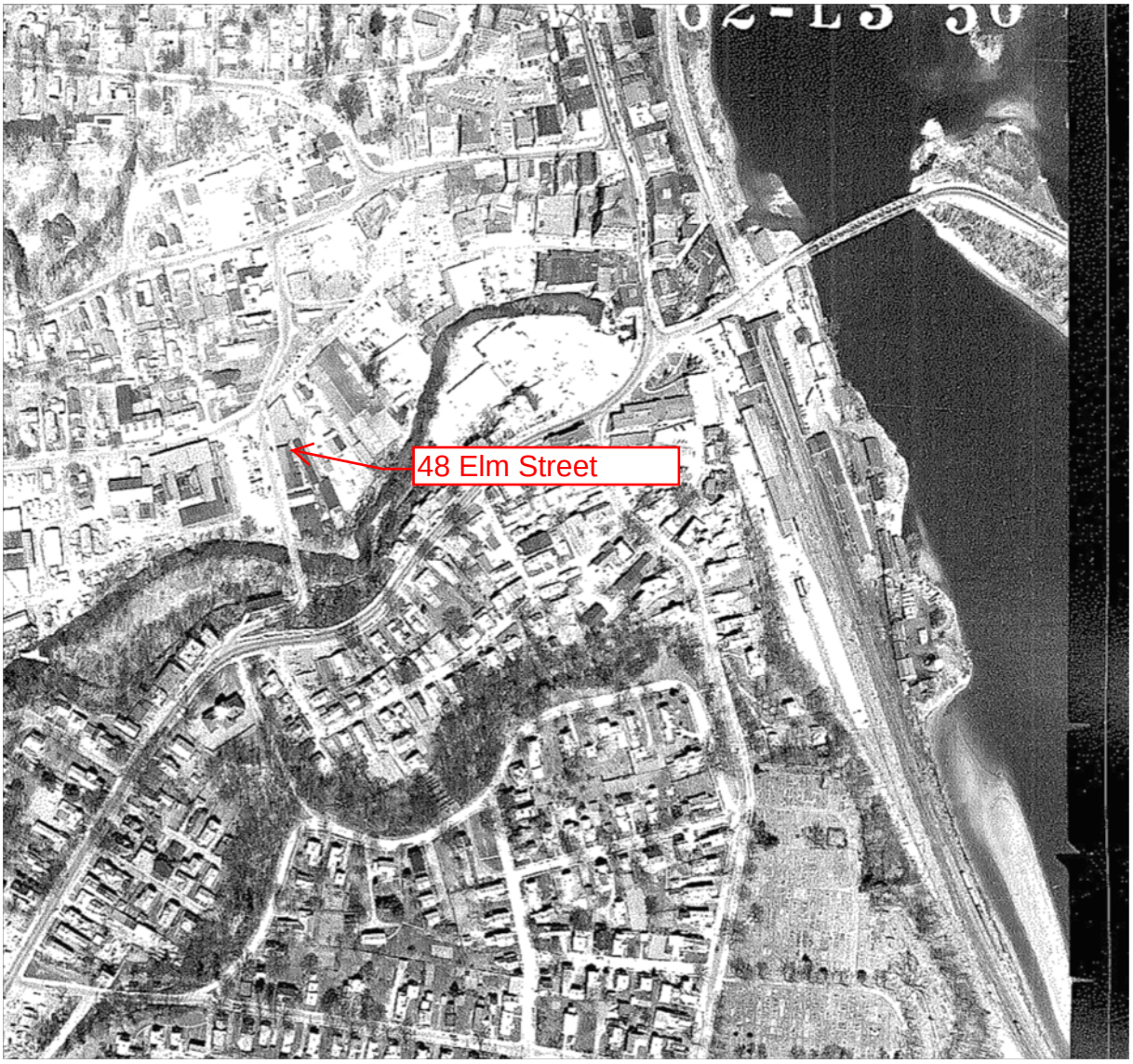
N
W E
S

48 Elm Street
Brattleboro, Vermont

LE-Environmental

1984 USGS Map

LE #: 17-096
Date: October 10, 2017
Source: MSRmaps.com



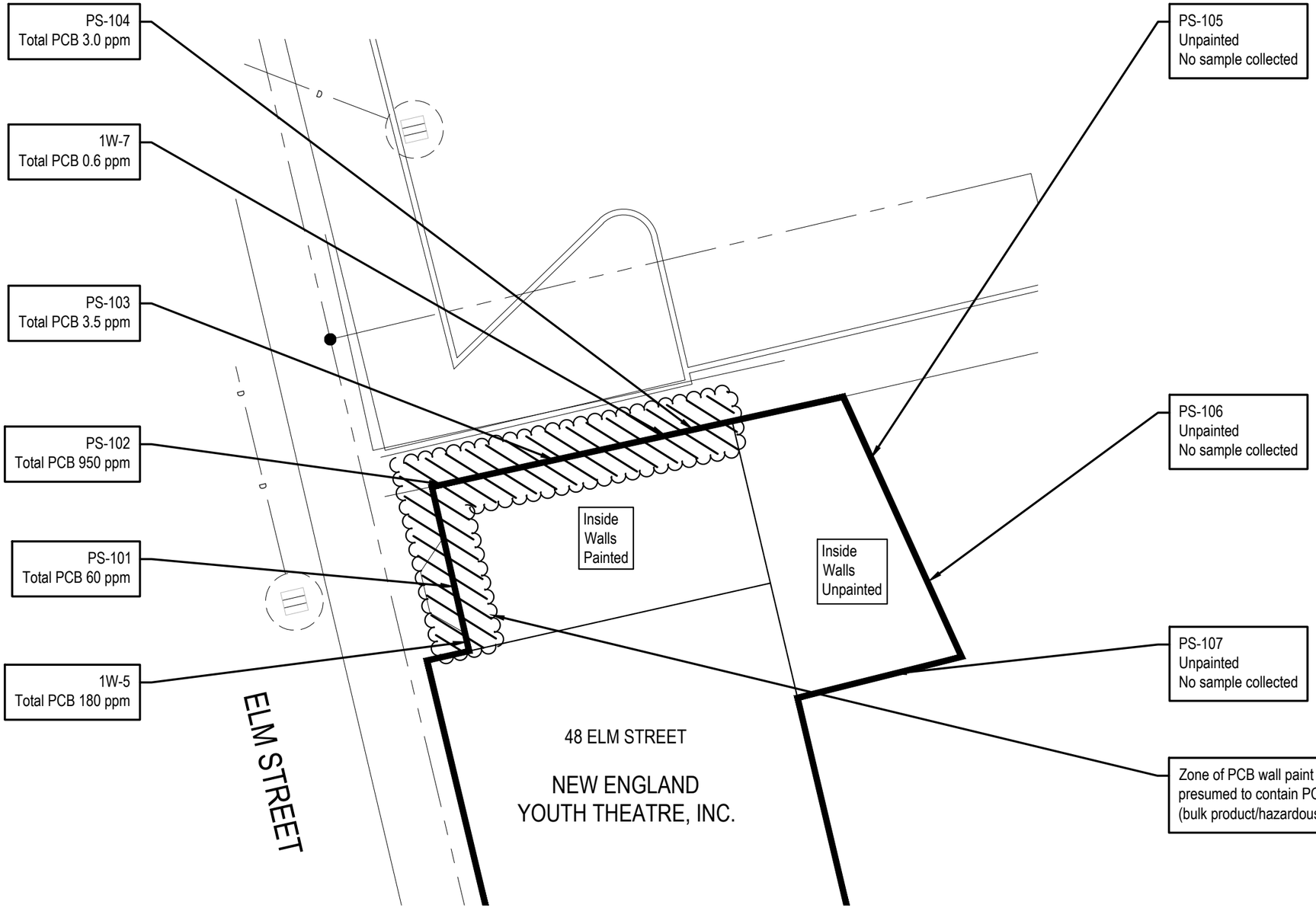
N
W E
S

48 Elm Street
Brattleboro, Vermont

LE·Environmental

1962 Aerial Photo

LE #: 17-096
Date: October 10, 2017
Source: Vermont Law Library



KEY:

Sample I.D.
PCB Result

CATCH BASIN

STORM DRAIN ——— D ———

PROPERTY LINE ——— — — ———

PCB PAINT DATA MAP

SCALE: 1"=10'

GRAPHIC SCALE

10 0 5 10 20 40

DEC SMS Site # 2008-3834

NOTE:
Total PCB expressed in parts per million as received.

1438 SOUTH BROWNELL ROAD
WILLISTON, VERMONT 05495
PHONE: (802)862-5590
FAX: (802)862-7598

GREEN MOUNTAIN ENGINEERING
CIVIL WATER WASTEWATER

LE LE-Environmental

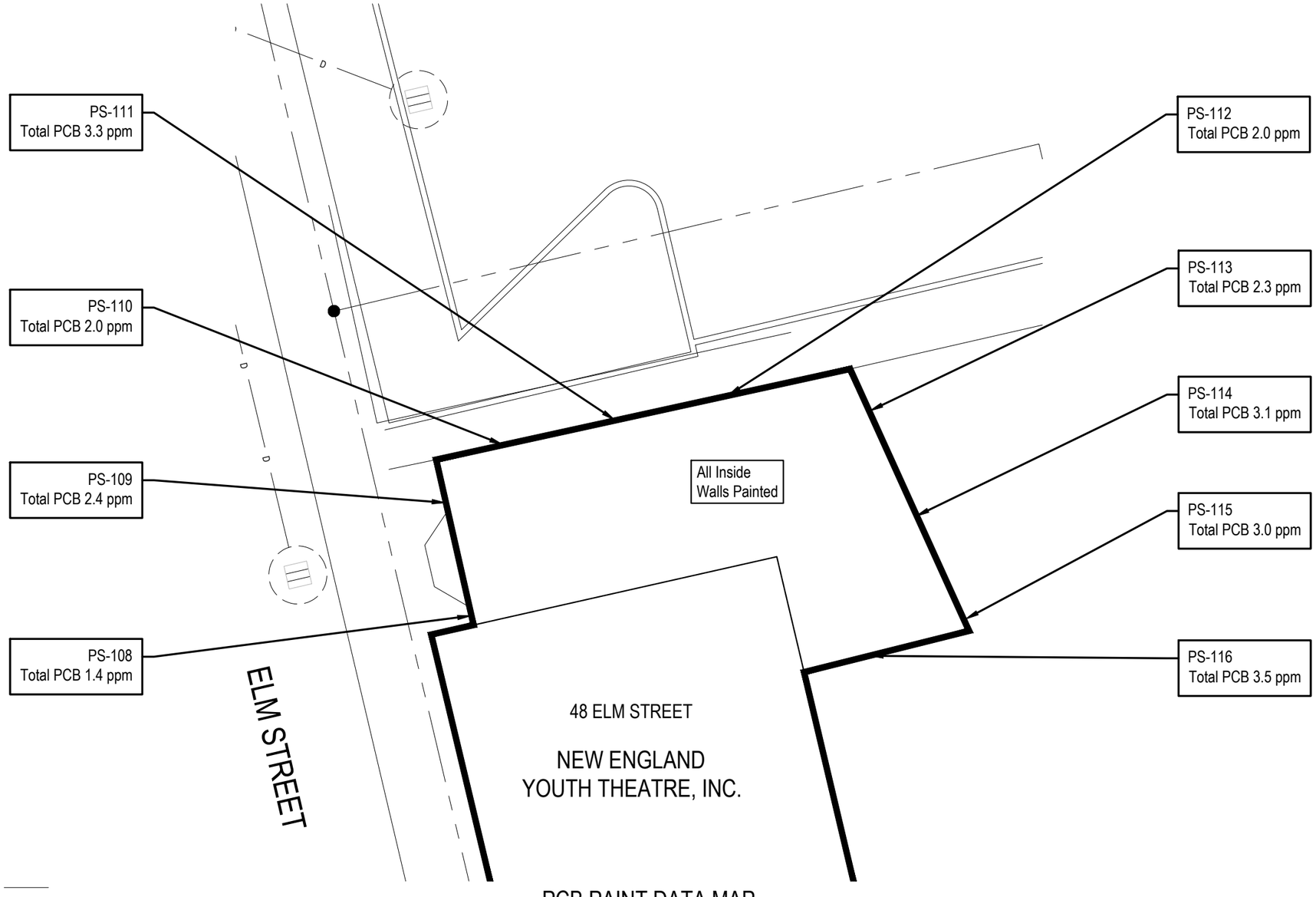
DRAWING TITLE: PCB PAINT DATA MAP
FIRST FLOOR SAMPLE LOCATIONS AND RESULTS

PROJECT: NEW ENGLAND YOUTH THEATRE, INC.

CLIENT: 48 ELM STREET
BRATTLEBORO, VT

DESIGNED: AL	PROJECT NO. 25-005.12
DRAWN: BPC	
CHECKED BY: AH	
PLOT DATE: 10/19/18	DRAWING NO. 1
SCALE: 1" = 10'	
DATE: AUG. 2018	SHEET 1 OF 2

FILE: S:\GME PROJECT FILES\25-000\25-005 LE ENVIRONMENTAL\25-005.12 48 ELM STREET, BRATTLEBORO, VT\DRAWINGS\48 ELM STREET.DWG



KEY:

Sample I.D.
PCB Result

CATCH BASIN

STORM DRAIN —— D ——

PROPERTY LINE —— — — ——

PCB PAINT DATA MAP

SCALE: 1"=10'

GRAPHIC SCALE

10 0 5 10 20 40

DEC SMS Site # 2008-3834

NOTE:
Total PCB expressed in parts per million as received.

1438 SOUTH BROWNELL ROAD
WILLISTON, VERMONT 05495
PHONE: (802)862-5590
FAX: (802)862-7598

GREEN MOUNTAIN ENGINEERING
CIVIL
WATER
WASTEWATER

LE
LE·Environmental

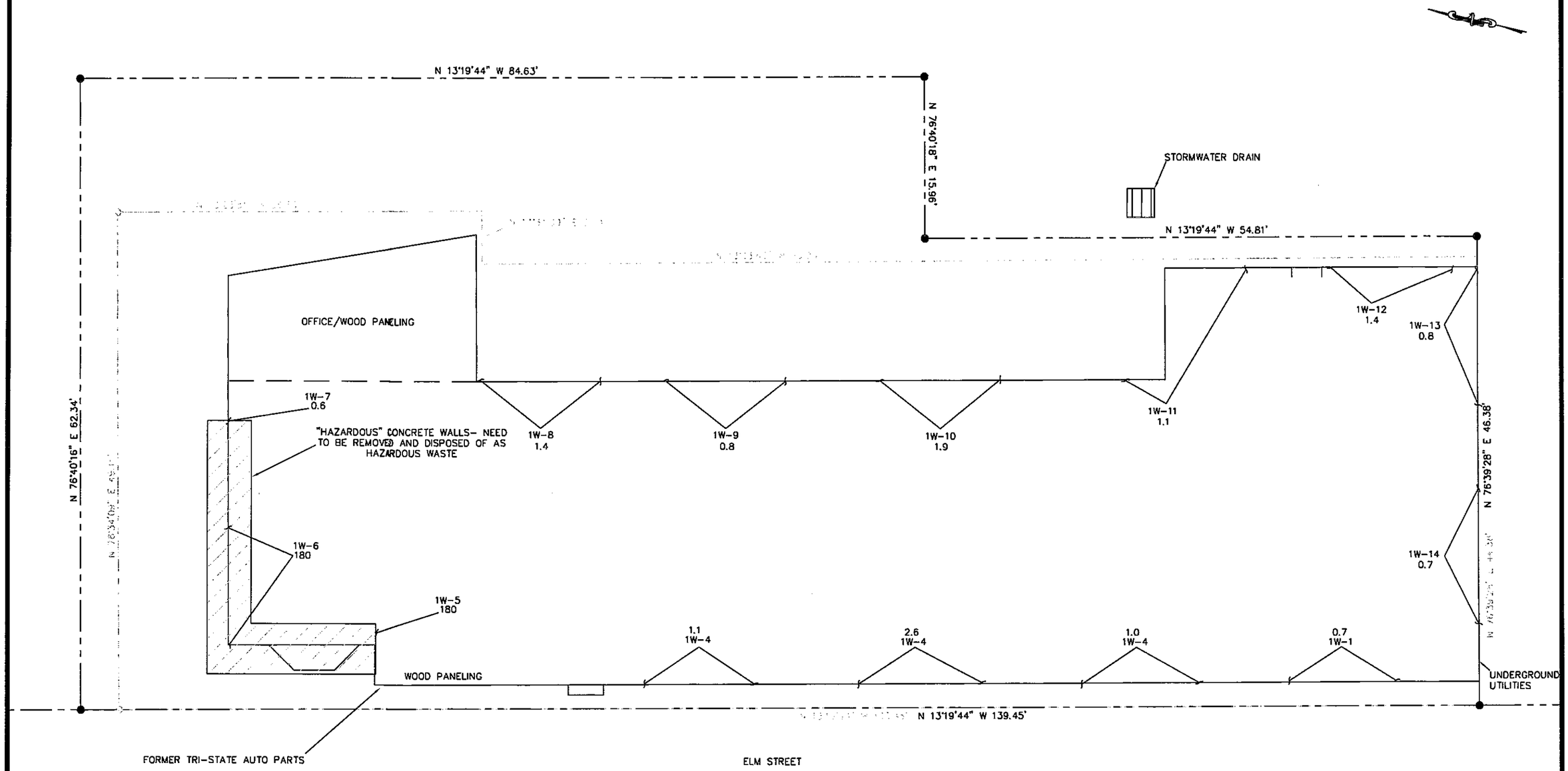
DRAWING TITLE: PCB PAINT DATA MAP
SECOND FLOOR SAMPLE LOCATIONS AND RESULTS

PROJECT: NEW ENGLAND YOUTH THEATRE, INC.

CLIENT: 48 ELM STREET
BRATTLEBORO, VT

DESIGNED: AL	PROJECT NO. 25-005.12
DRAWN: BPC	
CHECKED BY: AH	
PLOT DATE: 08/31/18	DRAWING NO. 2
SCALE: 1" = 10'	
DATE: AUG. 2018	SHEET 2 OF 2

FILE: S:\GME PROJECT FILES\25-000\25-005 LE ENVIRONMENTAL\25-005.12 48 ELM STREET, BRATTLEBORO, VT\DRAWINGS\48 ELM STREET.DWG



LEGEND

PROPERTY LINE

2.6
1W-3
COMPOSITE WALL SAMPLE WITH PCB CONTAMINANT CONCENTRATION (ppm)

ESPC #: 20084264
KAS #: 505080133

KAS

P.O. BOX 787, WILLISTON, VT, 05495
WWW.KAS-CONSULTING.COM

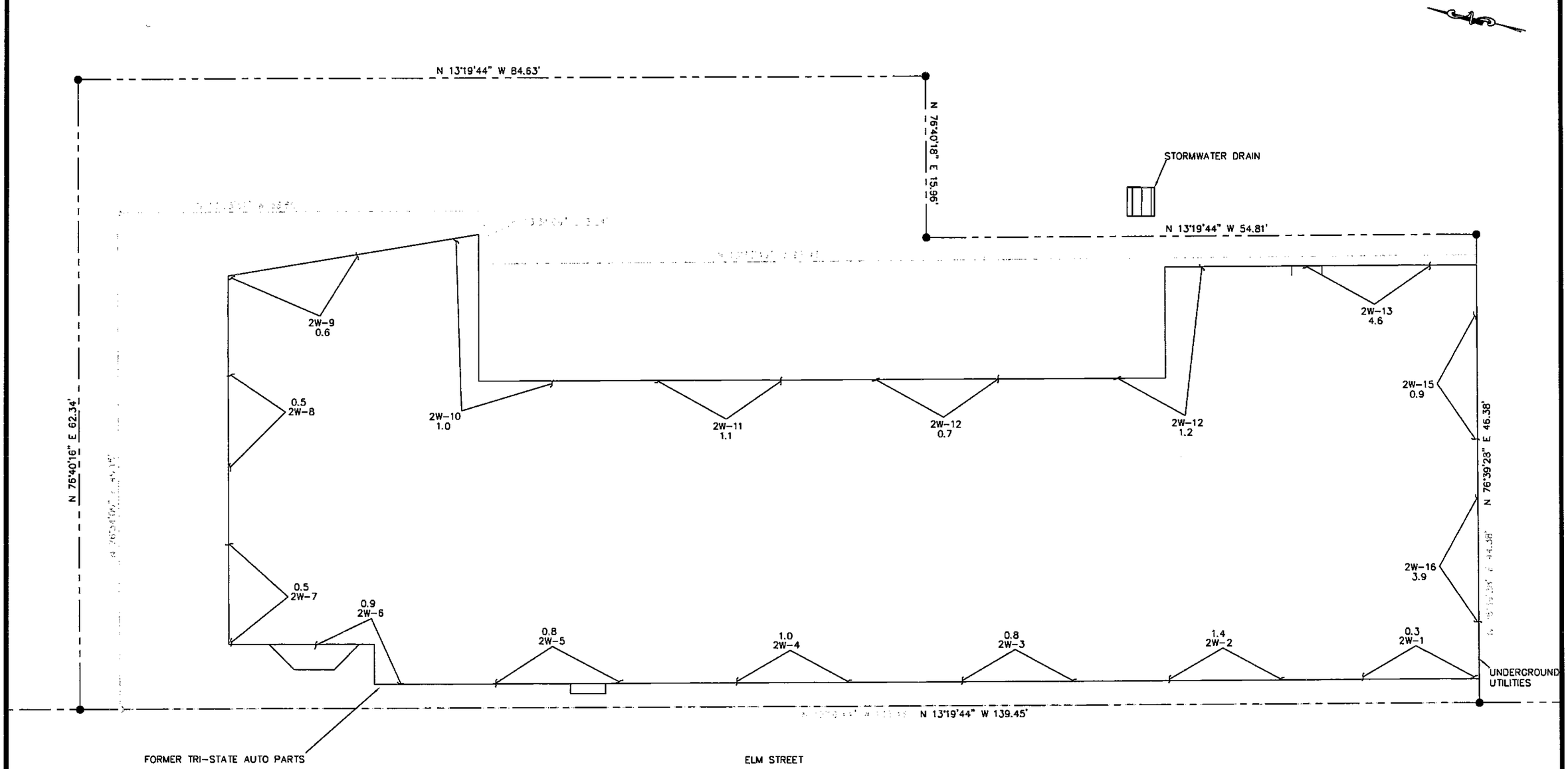
FORMER TRI-STATE AUTO PARTS

64 ELM STREET
BRATTLEBORO, VERMONT

FIRST FLOOR WALL PCB CONTAMINANT CONCENTRATION MAP

SAMPLED: 2/4/09

DATE: 5/21/09	DWG #: 3	SCALE: 1"=10'	DRN.: DM	APP.: AE



LEGEND

PROPERTY LINE

0.8 2W-3 COMPOSITE WALL SAMPLE WITH PCB CONTAMINANT CONCENTRATION (ppm) (M=8082)

ESPC #: 20084264
KAS #: 505080133

KAS

P.O. BOX 787, WILLISTON, VT, 05495
WWW.KAS-CONSULTING.COM

FORMER TRI-STATE AUTO PARTS

64 ELM STREET
BRATTLEBORO, VERMONT

SECOND FLOOR WALL PCB CONTAMINANT CONCENTRATION MAP

SAMPLED: 2/11/09

DATE: 5/21/09	DWG #: 4	SCALE: 1"=10'	DRN.: DM	APP.: AE

APPENDIX B

Photographs

Photographic Documentation
Paint Sampling Summary
New England Youth Theatre
48 Elm Street, Brattleboro, Vermont
LEE #17-096

LEE Environmental

Photograph ID: 001 Date: July 2017 Location: North and west sides of cinder block building addition. Direction: Looking south Comments: Showing the unpainted exterior surfaces of the cinder block building to be demolished.	
Photograph ID: 002 Date: May 2018 Location: South side of cinder block building addition (right). Direction: Looking north Comments: Showing the unpainted exterior surface of the cinder block building to be demolished.	

Photographic Documentation
Phase I Environmental Site Assessment
New England Youth Theatre
48 Elm Street, Brattleboro, Vermont
LEE #17-096

LEE Environmental

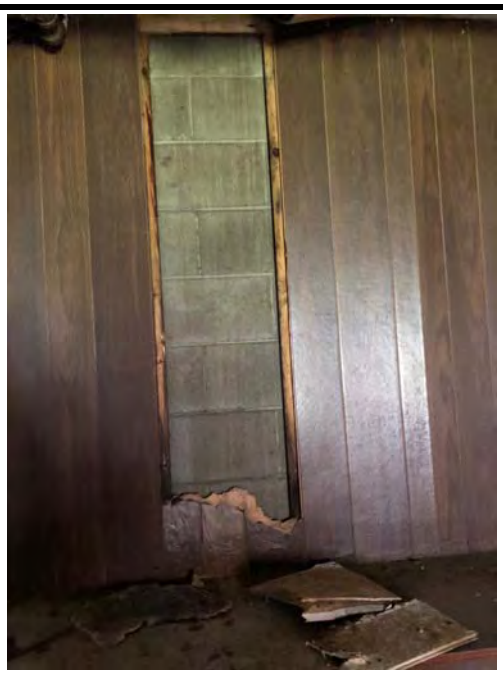
Photograph ID: 003 Date: August 2018 Location: East side of cinder block building addition Direction: Looking west Comments: Showing unpainted exterior surface of the cinder block building to be demolished.	
Photograph ID: 004 Date: August 2018 Location: 1W-5 Sampling Location First floor-west wall Direction: Looking west Comments: 1W-5 was a blue paint sample collected in 2009 from the blue painted cinder blocks (180 ppm PCBs).	

Photographic Documentation
Phase I Environmental Site Assessment
New England Youth Theatre
48 Elm Street, Brattleboro, Vermont
LEE #17-096

LEE Environmental

Photograph ID: 005 Date: August 2018 Location: PS-101 sampling location First floor - west wall Direction: Looking west Comments: PS-101 was a blue paint sample collected from the west interior wood wall (60 ppm PCBs).	
Photograph ID: 006 Date: August 2018 Location: PS-102 Sampling Location First floor-north wall Direction: Looking north Comments: PS-102 was a blue paint sample collected from the north interior wall (smaller diameter holes) (950 ppm PCBs). The larger diameter holes on either side were from sample 1W-6, collected in 2009 (180 ppm PCBs).	

Photographic Documentation
Phase I Environmental Site Assessment
New England Youth Theatre
48 Elm Street, Brattleboro, Vermont
LEE #17-096

Photograph ID: 007 Date: August 2018 Location: PS-103 Sampling Location First floor-north wall Direction: Looking north Comments: PS-103 was a blue paint sample collected from the north interior wall (smaller diameter holes) (3.5 ppm PCBs). The larger diameter holes on the right were from sample 1W-7, collected in 2009 (0.6 ppm PCBs).	
Photograph ID: 008 Date: August 2018 Location: Intended PS-104 Sample Location First floor-north wall Direction: Looking north Comments: Showing the intended sampling location for PS-104 on the north wall. Removing the paneling indicated the interior wall was not painted, therefore, PS-104 was relocated farther west in the blue painted zone.	

Photographic Documentation
Phase I Environmental Site Assessment
New England Youth Theatre
48 Elm Street, Brattleboro, Vermont
LEE #17-096

LE Environmental

Photograph ID: 009 Date: August 2018 Location: Intended PS-105 & 106 Sample Locations-first floor east wall Direction: Looking east Comments: Showing the intended sampling locations for PS-105 and PS-106 on the east wall. The interior wall was not painted, therefore these samples were not collected.	
Photograph ID: 010 Date: August 2018 Location: Intended PS-107 Sample Location First floor-south wall Direction: Looking south Comments: Showing the intended sampling location for PS-107. Pulling back the wallboard in this zone indicated that the cinder blocks were not painted; therefore the sample was not collected.	

Photographic Documentation
Phase I Environmental Site Assessment
New England Youth Theatre
48 Elm Street, Brattleboro, Vermont
LEE #17-096

LE Environmental

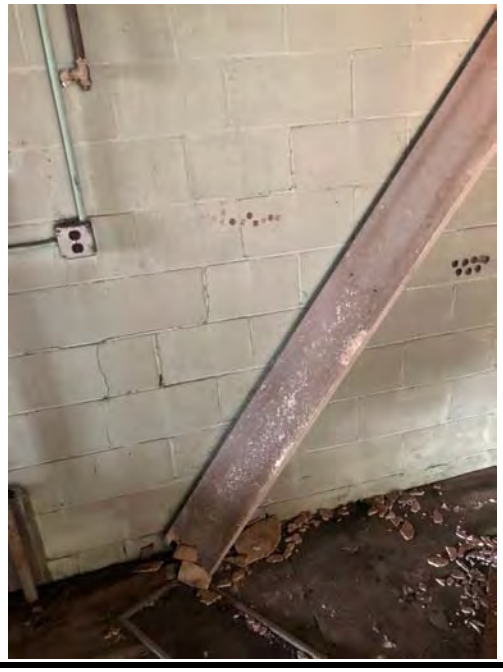
Photograph ID: 011 Date: August 2018 Location: Intended PS-107 Sample Location First floor-south wall Direction: Looking south Comments: Showing the intended sampling location for PS-107. Pulling back the wallboard in this zone indicated that the cinder blocks were not painted; therefore the sample was not collected.	
Photograph ID: 012 Date: August 2018 Location: PS-108 Sample Location Second floor- west wall Direction: Looking west Comments: PS-108 was a green paint sample collected from the west interior wall (1.4 ppm PCBs).	

Photographic Documentation
Phase I Environmental Site Assessment
New England Youth Theatre
48 Elm Street, Brattleboro, Vermont
LEE #17-096

LE Environmental

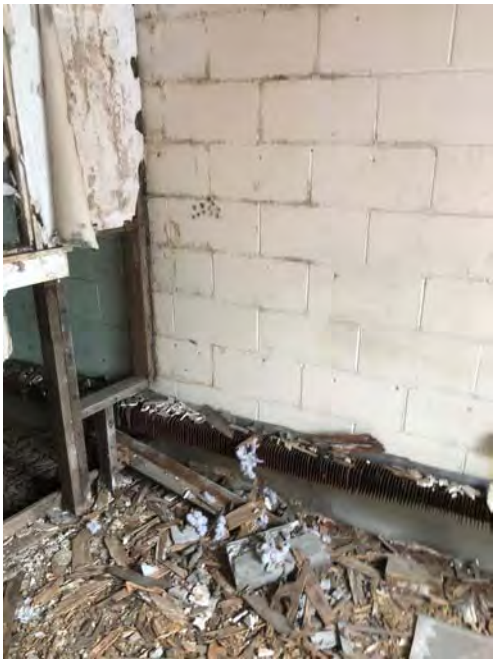
Photograph ID: 013 Date: August 2018 Location: PS-109 Sample Location Second floor-west wall Direction: Looking north Comments: PS-109 was a green paint sample collected from the west interior wall (2.4 ppm PCBs).	
Photograph ID: 014 Date: August 2018 Location: PS-110 Sample Location Second floor-north wall Direction: Looking north Comments: PS-110 was a green paint sample collected from the north interior wall (2.0 ppm PCBs). Sample holes from 2W-7 collected in 2009 are visible (0.5 ppm PCBs)	

Photographic Documentation
Phase I Environmental Site Assessment
New England Youth Theatre
48 Elm Street, Brattleboro, Vermont
LEE #17-096

Photograph ID: 015 Date: August 2018 Location: PS-111 Sample Location Second floor-north wall Direction: Looking east Comments: PS-111 was a grey paint sample collected from the north interior wall (3.3 ppm PCBs). The sample holes for 2W-8 collected in 2009 are visible (0.5 ppm PCBs).	
Photograph ID: 016 Date: August 2018 Location: PS-112 Sample Location Second floor-north wall. Direction: Looking north Comments: PS-112 was a grey paint sample collected from the north interior wall (2.0 ppm PCBs). Holes for 2W-9 collected in 2009 are visible to the right (0.6 ppm PCBs).	

Photographic Documentation
Phase I Environmental Site Assessment
New England Youth Theatre
48 Elm Street, Brattleboro, Vermont
LEE #17-096

LE Environmental

Photograph ID: 017 Date: August 2018 Location: PS-113 Sample Location Second floor east wall Direction: Looking east Comments: PS-113 was a green paint sample collected from the east interior wall (2.3 ppm PCBs).	
Photograph ID: 018 Date: August 2018 Location: PS-114 Sample Location Second floor-east wall Direction: Looking east Comments: PS-114 was a tan paint over green paint sample from the east interior wall (3.1 ppm PCBs).	

Photographic Documentation
Phase I Environmental Site Assessment
New England Youth Theatre
48 Elm Street, Brattleboro, Vermont
LEE #17-096

Photograph ID: 019 Date: August 2018 Location: PS-115 Sample Location Second floor-south wall Direction: Looking east Comments: PS-115 was a tan paint over green paint sample from the south east corner interior wall (3.0 ppm PCBs).	
Photograph ID: 020 Date: August 2018 Location: PS-116 Sample Location Second floor-south wall Direction: Looking south Comments: PS-116 was a tan paint over green paint sample from the south interior wall (3.5 ppm PCBs)	

APPENDIX C

Tabular Summary of Laboratory Results

Paint Sampling Data Summary
48 Elm Street
Brattleboro, Vermont

Sample ID	*PS-101*	*PS-102*	*PS-103*	*PS-104*	*PS-108*	*PS-109*	*PS-110*	TSCA / DEC
Sample Date	*8/16/18*							Waste Standard
PCBs, EPA Method 8082								
Aroclor - 1016	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	-
Aroclor - 1221	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	-
Aroclor - 1232	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	-
Aroclor - 1242	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	-
Aroclor - 1248	ND<0.2	ND<0.2	ND<0.2	ND<0.2	**0.51**	**0.93**	**0.62**	-
Aroclor - 1254	**60**	**950**	**3.5**	**3.0**	**0.85**	**1.5**	**1.4**	-
Aroclor - 1260	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	-
Aroclor - 1262	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	-
Aroclor - 1268	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	-
Total PCBs	**60**	**950**	**3.5**	**3.0**	**1.4**	**2.4**	**2.0**	**50**

Sample ID	*PS-111*	*PS-112*	*PS-113*	*PS-114*	*PS-115*	*PS-116*	*Duplicate PS-103*	TSCA / DEC
Sample Date	*8/16/18*							Waste Standard
PCBs, EPA Method 8082								
Aroclor - 1016	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	-
Aroclor - 1221	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	-
Aroclor - 1232	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	-
Aroclor - 1242	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	-
Aroclor - 1248	**1.3**	**0.76**	**0.71**	**1.3**	**1.5**	**1.7**	ND<0.2	-
Aroclor - 1254	**2.0**	**1.2**	**1.6**	**1.8**	**1.5**	**1.8**	**3.0**	-
Aroclor - 1260	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	-
Aroclor - 1262	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	-
Aroclor - 1268	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	ND<0.2	-
Total PCBs	**3.3**	**2.0**	**2.3**	**3.1**	**3.0**	**3.5**	**3.0**	**50**

NOTES:
All values reported in mg/kg, as received
ND<1.0 = Not Detected< Detection Limit
Results reported above detection limits are indicated in bold
Results above TSCA and DEC Hazardous Waste Standards are shaded

KAS

First Floor Wall Sampling Summary
64 Elm Street
Brattleboro, Vermont

Concrete Sample *Sample Depth (in.)* *Sample Date*	*1W-1* *0-0.5"* *2/4/09*	*1W-2* *0-0.5"* *2/4/09*	*1W-3* *0-0.5"* *2/4/09*	*1W-4* *0-0.5"* *2/4/09*	*1W-5* *0-0.5"* *2/4/09*	*1W-6* *0-0.5"* *2/4/09*	*1W-7* *0-0.5"* *2/4/09*	*1W-8* *0-0.5"* *2/4/09*	*1W-9* *0-0.5"* *2/4/09*	*1W-10* *0-0.5"* *2/4/09*	*1W-11* *0-0.5"* *2/4/09*	*1W-12* *0-0.5"* *2/4/09*	*1W-13* *0-0.5"* *2/4/09*	*1W-14* *0-0.5"* *2/4/09*	*Duplicate* *1W-2* *0-0.5"* *2/4/09*	TSCA Clean-up Level	Hazardous Waste Standard
TPH DRO																	
TPH 8100	**820**	**1100**	**1300**	**740**	**120**	**130**	**80**	**540**	**170**	**580**	**670**	**2600**	**420**	**760**	**920**	-	**50,000**
PCBs, EPA Method 8082																	
Aroclor - 1016	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <9	ND <9	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	-	-
Aroclor - 1221	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <9	ND <9	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	-	-
Aroclor - 1232	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <9	ND <9	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	-	-
Aroclor - 1242	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <9	ND <9	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	-	-
Aroclor - 1248	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <9	ND <9	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	-	-
Aroclor - 1254	**0.7**	**1.0**	**2.6**	**1.1**	**180**	**180**	**0.6**	**1.1**	**0.8**	**1.9**	**1.1**	**1.4**	**0.8**	**0.7**	**0.8**	-	-
Aroclor - 1260	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <9	ND <9	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	-	-
Total PCBs	**0.7**	**1.0**	**2.6**	**1.1**	**180**	**180**	**0.6**	**1.1**	**0.8**	**1.9**	**1.1**	**1.4**	**0.8**	**0.7**	**0.8**	**1**	-

NOTES:

All values reported in mg/kg, dry, unless otherwise indicated.

PRG = Preliminary Remediation Goal

ND<1.0 = Not Detected< Detection Limit

Results reported above detection limits are indicated in bold

Values above the TSCA Cleanup Level are shaded

KAS

Second Floor Wall Sampling Summary
64 Elm Street
Brattleboro, Vermont

Concrete Sample *Sample Depth (in.)* *Sample Date*	*2W-1* *0-0.5"* *2/11/09*	*2W-2* *0-0.5"* *2/11/09*	*2W-3* *0-0.5"* *2/11/09*	*2W-4* *0-0.5"* *2/11/09*	*2W-5* *0-0.5"* *2/11/09*	*2W-6* *0-0.5"* *2/11/09*	*2W-7* *0-0.5"* *2/11/09*	*2W-8* *0-0.5"* *2/11/09*	*2W-9* *0-0.5"* *2/11/09*	*2W-10* *0-0.5"* *2/11/09*	*2W-11* *0-0.5"* *2/11/09*	*2W-12* *0-0.5"* *2/11/09*	*2W-13* *0-0.5"* *2/11/09*	*2W-14* *0-0.5"* *2/11/09*	*2W-15* *0-0.5"* *2/11/09*	*2W-16* *0-0.5"* *2/11/09*	*Duplicate* *2W-16* *0-0.5"* *2/11/09*	TSCA Clean-up Level	Hazardous Waste Standard
TPH DRO																			
TPH 8100	**4,200**	**2,000**	**1,600**	**4,200**	**440**	**350**	ND<50	**70**	**50**	**380**	**560**	**630**	**660**	**720**	**380**	**4,500**	**4,000**	-	**50,000**
PCBs, EPA Method 8082																			
Aroclor - 1016	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.2	ND <0.1	ND <0.2	ND <0.2	-	-
Aroclor - 1221	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.2	ND <0.1	ND <0.2	ND <0.2	-	-
Aroclor - 1232	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.2	ND <0.1	ND <0.2	ND <0.2	-	-
Aroclor - 1242	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.2	ND <0.1	ND <0.2	ND <0.2	-	-
Aroclor - 1248	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.2	ND <0.1	ND <0.2	ND <0.2	-	-
Aroclor - 1254	**0.3**	**1.4**	**0.8**	**1.0**	**0.8**	**0.9**	**0.5**	**0.5**	**0.6**	**1.0**	**1.1**	**0.7**	**1.2**	**4.6**	**0.9**	**3.9**	**4.4**	-	-
Aroclor - 1260	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.2	ND <0.2	ND <0.2	ND <0.2	-	-
Total PCBs	**0.3**	**1.4**	**0.8**	**1.0**	**0.8**	**0.9**	**0.5**	**0.5**	**0.6**	**1.0**	**1.1**	**0.7**	**1.2**	**4.6**	**0.9**	**3.9**	**4.4**	**1**	-

NOTES:

All values reported in mg/kg, dry, unless otherwise indicated.

PRG = Preliminary Remediation Goal

ND<1.0 = Not Detected< Detection Limit

Results reported above detection limits are indicated in bold

Values above the TSCA Cleanup Level are shaded

APPENDIX D

Laboratory Analytical Reports

Eastern Analytical, Inc.
professional laboratory and drilling services

Alan Liptak
LE Environmental LLC
21 North Main Street #1
Waterbury, VT 05676

Subject: Laboratory Report
Eastern Analytical, Inc. ID: 185597
Client Identification: 48 Elm St. | 17-096
Date Received: 8/17/2018

Report revision/reissue: Revision, replaces report dated 8/24/2018

Revision information: Report revised to include PCB extraction method, at customers request.

Dear Mr. Liptak:

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.eailabs.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:
Solid samples are reported on a dry weight basis, unless otherwise noted
< : "less than" followed by the reporting limit
> : "greater than" followed by the reporting limit
%R : % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269) and Vermont (VT1012).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw, Lab Director | 10.3.18 Date | 8 # of pages (excluding cover letter)

SAMPLE CONDITIONS PAGE

EAI ID#: **185597**

Client: **South Essex Sewer District**

Client Designation: **48 Elm St. | 17-096**

Temperature upon receipt (°C): 1.7 **Received on ice or cold packs (Yes/No): Y**

Acceptable temperature range (°C): 0-6

Lab ID	Sample ID	Date Received	Date Sampled	Sample Matrix	% Dry Weight	Exceptions/Comments (other than thermal preservation)
185597.01	PS-101	8/17/18	8/16/18	solid		Adheres to Sample Acceptance Policy
185597.02	PS-102	8/17/18	8/16/18	solid		Adheres to Sample Acceptance Policy
185597.03	PS-103	8/17/18	8/16/18	solid		Adheres to Sample Acceptance Policy
185597.04	PS-104	8/17/18	8/16/18	solid		Adheres to Sample Acceptance Policy
185597.05	PS-108	8/17/18	8/16/18	solid		Adheres to Sample Acceptance Policy
185597.06	PS-109	8/17/18	8/16/18	solid		Adheres to Sample Acceptance Policy
185597.07	PS-110	8/17/18	8/16/18	solid		Adheres to Sample Acceptance Policy
185597.08	PS-111	8/17/18	8/16/18	solid		Adheres to Sample Acceptance Policy
185597.09	PS-112	8/17/18	8/16/18	solid		Adheres to Sample Acceptance Policy
185597.1	PS-113	8/17/18	8/16/18	solid		Adheres to Sample Acceptance Policy
185597.11	PS-114	8/17/18	8/16/18	solid		Adheres to Sample Acceptance Policy
185597.12	PS-115	8/17/18	8/16/18	solid		Adheres to Sample Acceptance Policy
185597.13	PS-116	8/17/18	8/16/18	solid		Adheres to Sample Acceptance Policy
185597.14	Duplicate	8/17/18	8/16/18	solid		Adheres to Sample Acceptance Policy
185597.15	TCLP-1	8/17/18	8/16/18	solid		Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitability, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis.
Immediate analyses, pH, Total Residual Chlorine, Dissolved Oxygen and Sulfite, performed at the laboratory were run outside of the recommended 15 minute hold time.
All results contained in this report relate only to the above listed samples.
References include:
1) EPA 600/4-79-020, 1983
2) Standard Methods for Examination of Water and Wastewater, 20th, 21st, 22nd & 23rd Edition or noted Revision year.
3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
4) Hach Water Analysis Handbook, 4th edition, 1992

LABORATORY REPORT

EAI ID#: **185597**

Client: **LE Environmental LLC**

Client Designation: **48 Elm St. | 17-096**

Sample ID:	PS-101	PS-102	PS-103	PS-104	PS-108	PS-109	PS-110
Lab Sample ID:	185597.01	185597.02	185597.03	185597.04	185597.05	185597.06	185597.07
Matrix:	solid	solid	solid	solid	solid	solid	solid
Date Sampled:	8/16/18	8/16/18	8/16/18	8/16/18	8/16/18	8/16/18	8/16/18
Date Received:	8/17/18	8/17/18	8/17/18	8/17/18	8/17/18	8/17/18	8/17/18
% Solid:	100	100	100	100	100	100	100
Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Date of Extraction/Prep:	8/20/18	8/20/18	8/20/18	8/20/18	8/20/18	8/20/18	8/20/18
Date of Analysis:	8/21/18	8/21/18	8/21/18	8/21/18	8/21/18	8/21/18	8/21/18
Analyst:	AR	AR	AR	AR	AR	AR	AR
Extraction Method:	3540C	3540C	3540C	3540C	3540C	3540C	3540C
Analysis Method:	8082A	8082A	8082A	8082A	8082A	8082A	8082A
Dilution Factor:	14	14	13	15	13	14	15
PCB-1016	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
PCB-1221	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
PCB-1232	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
PCB-1242	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
PCB-1248	< 0.2	< 0.2	< 0.2	< 0.2	**0.51**	**0.93**	**0.62**
PCB-1254	**60**	**950**	**3.5**	**3.0**	**0.85**	**1.5**	**1.4**
PCB-1260	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
PCB-1262	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
PCB-1268	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
TMX (surr)	**64 %R**	**75 %R**	**76 %R**	**80 %R**	**87 %R**	**76 %R**	**80 %R**
DCB (surr)	**55 %R**	**71 %R**	**70 %R**	**71 %R**	**82 %R**	**73 %R**	**76 %R**

Acid clean-up was performed on the samples and associated batch QC.

Detection limits elevated in response to the lower initial mass used for analysis. A lower initial mass was used due to the nature of the sample matrix. Results are reported on a solids as received basis.

Deviations from the Report:

PS-101	Parameter: PCB-1254	Date of Analysis: 8/22/2018	Dilution Factor: 281
PS-102	Parameter: PCB-1254	Date of Analysis: 8/22/2018	Dilution Factor: 5720

LABORATORY REPORT

EAI ID#: **185597**

Client: **LE Environmental LLC**

Client Designation: **48 Elm St. | 17-096**

Sample ID:	PS-111	PS-112	PS-113	PS-114	PS-115	PS-116	Duplicate
Lab Sample ID:	185597.08	185597.09	185597.1	185597.11	185597.12	185597.13	185597.14
Matrix:	solid	solid	solid	solid	solid	solid	solid
Date Sampled:	8/16/18	8/16/18	8/16/18	8/16/18	8/16/18	8/16/18	8/16/18
Date Received:	8/17/18	8/17/18	8/17/18	8/17/18	8/17/18	8/17/18	8/17/18
% Solid:	100	100	100	100	100	100	100
Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Date of Extraction/Prep:	8/20/18	8/20/18	8/20/18	8/20/18	8/20/18	8/20/18	8/20/18
Date of Analysis:	8/21/18	8/21/18	8/21/18	8/21/18	8/22/18	8/22/18	8/22/18
Analyst:	AR	AR	AR	AR	AR	AR	AR
Extraction Method:	3540C	3540C	3540C	3540C	3540C	3540C	3540C
Analysis Method:	8082A	8082A	8082A	8082A	8082A	8082A	8082A
Dilution Factor:	14	14	14	14	14	14	14
PCB-1016	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
PCB-1221	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
PCB-1232	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
PCB-1242	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
PCB-1248	**1.3**	**0.76**	**0.71**	**1.3**	**1.5**	**1.7**	< 0.2
PCB-1254	**2.0**	**1.2**	**1.6**	**1.8**	**1.5**	**1.8**	**4.9**
PCB-1260	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
PCB-1262	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
PCB-1268	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
TMX (surr)	**76 %R**	**82 %R**	**81 %R**	**73 %R**	**76 %R**	**82 %R**	**81 %R**
DCB (surr)	**70 %R**	**76 %R**	**75 %R**	**69 %R**	**72 %R**	**79 %R**	**82 %R**

Acid clean-up was performed on the samples and associated batch QC.

Detection limits elevated in response to the lower initial mass used for analysis. A lower initial mass was used due to the nature of the sample matrix. Results are reported on a solids as received basis.

Deviations from the Report:
Duplicate Parameter: PCB-1254 Date of Analysis: 8/22/2018 Dilution Factor: 29

QC REPORT

EAI ID#: **185597**

Client: **LE Environmental LLC**

Batch ID: 63670350387/S082018PCB1

Client Designation: **48 Elm St. | 17-096**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
PCB-1016	< 0.02	0.12 (86 %R)	0.13 (97 %R) (11 RPD)	8/22/2018	mg/kg	40 - 140	30	8082A
PCB-1221	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	8/22/2018	mg/kg			8082A
PCB-1232	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	8/22/2018	mg/kg			8082A
PCB-1242	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	8/22/2018	mg/kg			8082A
PCB-1248	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	8/22/2018	mg/kg			8082A
PCB-1254	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	8/22/2018	mg/kg			8082A
PCB-1260	< 0.02	0.13 (99 %R)	0.14 (105 %R) (6 RPD)	8/22/2018	mg/kg	40 - 140	30	8082A
PCB-1262	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	8/22/2018	mg/kg			8082A
PCB-1268	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	8/22/2018	mg/kg			8082A
TMX (surr)	89 %R	88 %R	94 %R	8/22/2018	% Rec	30 - 150	30	8082A
DCB (surr)	90 %R	90 %R	94 %R	8/22/2018	% Rec	30 - 150	30	8082A

Samples were extracted and analyzed within holding time limits.
Instrumentation was calibrated in accordance with the method requirements.
The method blanks were free of contamination at the reporting limits.
Sample surrogate recoveries met the above stated criteria.
The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.
There were no exceptions in the analyses, unless noted.
*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.

LABORATORY REPORT

EAI ID#: **185597**

Client: **LE Environmental LLC**

Client Designation: **48 Elm St. | 17-096**

Sample ID: TCLP-1

Lab Sample ID: 185597.15
Matrix: solid
Date Sampled: 8/16/18
Date Received: 8/17/18

		Analytical Matrix	Units	Date of Analysis	Method	Analyst
Lead	< 0.5	TCLPsolid	mg/L	8/21/18	6020	DS

QC REPORT

EAI ID#: **185597**

Client: **LE Environmental LLC**

Client Designation: **48 Elm St. | 17-096**

Parameter Name	Blank	LCS	LCSD	Units	Date of Analysis	Limits	RPD	Method
Lead	< 0.5	1.0 (104 %R)	NA	mg/L	8/21/18	80 - 120		6020

Samples were analyzed within holding times unless noted on the sample results page.
Instrumentation was calibrated in accordance with the method requirements.
The method blanks were free of contamination at the reporting limits.
The associated matrix spikes and/or Laboratory Control Samples met the above stated criteria.
Exceptions to the above statements are flagged or noted above or on the QC Narrative page.
*/! Flagged analyte recoveries deviated from the QA/QC limits.

Page 1 of 2

CHAIN-OF-CUSTODY RECORD

185597

BOLD FIELDS REQUIRED. PLEASE CIRCLE REQUESTED ANALYSIS.

SAMPLE I.D.	SAMPLING DATE /TIME *IF COMPOSITE, INDICATE BOTH START & FINISH DATE /TIME	MATRIX (SEE BELOW)	GRAB/*COMPOSITE	VOC: 524.2 524.2 BTEX 524.2 MTBE ONLY	VOC: 8260 624 VTICs 1, 4 DIOXANE	VOC: 8021 BTEX HALOS	VOC: 8015 GRO MAVPH	SVOC: 8270 625 SVTICs EDB DBCP ABN A BN PAH	SVOC: TPH8100 LI L2	SVOC: 8015 DRO MAEPH	SVOC: PEST 608 PEST 8081 PCB 608 (PCB 8082)	SVOC: OIL & GREASE 1664 TPH 1664	TCLP: TCLP 1311 VOC PEST ABN METALS HERB	METALS: DISSOLVED METALS (LIST BELOW)	METALS: TOTAL METALS (LIST BELOW)	INORGANICS: TS TSS TDS SPEC. CON.	INORGANICS: BR CL F SO_4 NO_2 NO_3 NO_2NO_3	INORGANICS: BOD CBOD T. ALK.	INORGANICS: TKN NH_3 T. PHOS. O. PHOS.	INORGANICS: PH T. RES. CHLORINE	INORGANICS: COD PHENOLS TOC DOC	INORGANICS: TOTAL CYANIDE TOTAL SULFIDE	INORGANICS: REACTIVE CYANIDE REACTIVE SULFIDE FLASHPOINT IGNITABILITY	MICRO: TOTAL COLIFORM E. COLI FECAL COLIFORM	MICRO: ENTEROCOCCI HETEROTROPHIC PLATE COUNT	OTHER	OTHER	OTHER	# OF CONTAINERS	NOTES MEOH VIAL #
PS-101	8/16/18; 1113	P	G								X																			1	
PS-102	1117	P	G								X																			1	
PS-103	1123	P	G								X																			1	
PS-104	1132	P	G								X																			1	
PS-108	0938	P	G								X																			1	
PS-109	0942	P	G								X																			1	
PS-110	0946	P	G								X																			1	
PS-111	0951	P	G								X																			1	
PS-112	0956	P	G								X																			1	

MATRIX: A-AIR; S-SOIL; GW-GROUND WATER; SW-SURFACE WATER; DW-DRINKING WATER; WW-WASTE WATER P = PAINT

PRESERVATIVE: H-HCL; N-HNO_3; S-H_2SO_4; Na-NaOH; M-MEOH

PROJECT MANAGER: Alan Liptak
COMPANY: LE Environmental LLC
ADDRESS: 21 North Main St. #1
CITY: Waterbury **STATE:** VT **ZIP:** 05676
PHONE: (802) 917-2001 **EXT.:**
FAX: none
E-MAIL: alan@leenv.net
SITE NAME: 48 Elm St.
PROJECT #: 17-096
STATE: NH MA ME (VT) **OTHER:**
REGULATORY PROGRAM: NPDES: RGP POTW STORMWATER OR GWP, OIL FUND, (BROWNFIELD) OR OTHER: TSCA Project
QUOTE #: **PO #:**

DATE NEEDED: Normal TAT 5 dy if possible

QA/QC REPORTING LEVEL A B C OR PRESUMPTIVE CERTAINTY

REPORTING OPTIONS PRELIMS: (YES) OR NO

ELECTRONIC OPTIONS E-MAIL (PDF) EQUIS EXCEL

TEMP. 1.7 °C ICE? (YES) NO

SAMPLER(S): Alan Liptak			
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:
Alan Liptak	8/17/18	10:18	T. Thompson
T. Thompson	8-17-18	12:45	
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:

METALS: 8 RCRA 13 PP FE, MN PB, CU

OTHER METALS:

SAMPLES FIELD FILTERED? ☐ YES ☐ NO

NOTES: (IE: SPECIAL DETECTION LIMITS, BILLING INFO, IF DIFFERENT)

Previous tests showed up to 180 ppm PCB-1254 in portions of the bldg. paint

SITE HISTORY: Paint Factory
SUSPECTED CONTAMINATION: PCBs
FIELD READINGS: N/A

Eastern Analytical, Inc.
professional laboratory and drilling services
25 CHENELL DRIVE | CONCORD, NH 03301 | TEL: 603.228.0525 | 1.800.287.0525 | E-MAIL: CUSTOMERSERVICE@EASTERNANALYTICAL.COM | WWW.EASTERNANALYTICAL.COM

(WHITE: ORIGINAL GREEN: PROJECT MANAGER)

Page 2 of 2

CHAIN-OF-CUSTODY RECORD

BOLD FIELDS REQUIRED. PLEASE CIRCLE REQUESTED ANALYSIS.

FOR 185597 8

SAMPLE I.D.	SAMPLING DATE / TIME *IF COMPOSITE, INDICATE BOTH START & FINISH DATE / TIME	MATRIX (SEE BELOW)	GRAB/*COMPOSITE	VOC: 524.2 BTEX; 524.2 MTBE ONLY; 524.2 VTICS; 8260 624; 1, 4 DIOXANE; 8021 BTEX HALOS; 8015 GRO MAVPH	SVOC: 8270 625 ABN A BN SVTICS EDB DBCP PAH; TPH8100 LI L2; 8015 DRO MAEPH; PEST 608 PEST 8081 PCB 608 PCB 8082; OIL & GREASE 1664 TPH 1664	TCLP: TCLP 8011 VOC ABN PEST HERB METALS	METALS: DISSOLVED METALS (LIST BELOW); TOTAL METALS (LIST BELOW)	INORGANICS: TS TSS TDS SPEC. CON.; BR CL F SO4 NO2 NO3 NO2NO3; BOD CBOD T. ALK.; TKN NH3 T. PHOS. O. PHOS.; PH T. RES. CHLORINE; COD PHENOLS TOC DOC; TOTAL CYANIDE TOTAL SULFIDE; REACTIVE CYANIDE REACTIVE SULFIDE FLASHPOINT IGNITABILITY	MICRO: TOTAL COLIFORM E. COLI FECAL COLIFORM; ENTEROCOCCI HETEROTROPHIC PLATE COUNT	OTHER	# OF CONTAINERS	NOTES MEOH VIAL #
PS-113	8/16/18; 1002	P	G		X					1	
PS-114	1010	P	G		X					1	
PS-115	1016	P	G		X					1	
PS-116	1022	P	G		X					1	
Duplicate	1123	P	G		X					1	
TCLP-1	0938-1132	B	C			X	X	X		1	

MATRIX: A-AIR; S-SOIL; GW-GROUND WATER; SW-SURFACE WATER; DW-DRINKING WATER; WW-WASTE WATER P = Paint

PRESERVATIVE: H-HCL; N-HNO_3; S-H_2SO_4; Na-NaOH; M-MEOH B = Bldg Mat

PROJECT MANAGER: Alan Liptak
COMPANY: LE Environmental LLC
ADDRESS: 21 N Main St. #1
CITY: Waterbury STATE: VT ZIP: 05676
PHONE: (802) 917-2001 EXT.:
FAX:
E-MAIL: none glae@leenv.net
SITE NAME: 48 Elm St.
PROJECT #: 17-096
STATE: NH MA ME (VT) OTHER:
REGULATORY PROGRAM: NPDES; RCP, POTW STORMWATER OR GWP, OIL FUND, (BROWNFIELD) OR OTHER: TSCA Project
QUOTE #: PO #:

DATE NEEDED: Normal TAT 5 dy if possible

QA/QC
REPORTING LEVEL
A B C
OR
PRESUMPTIVE CERTAINTY

REPORTING OPTIONS
PRELIMS: (YES) OR NO

ELECTRONIC OPTIONS
E-MAIL (PDF) EQUIS EXCEL

TEMP. 7 °C
ICE? (YES) NO

SAMPLER(S): Alan Liptak

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:
Alan Liptak	8/17/18	10:18	T. Thompson
T. Thompson	8-17-18	13:45	
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:

METALS: 8 RCRA 13 PP FE, MN PB, CU
OTHER METALS: Pb
SAMPLES FIELD FILTERED? ☐ YES ☐ NO
NOTES: (IE: SPECIAL DETECTION LIMITS, BILLING INFO, IF DIFFERENT)
Previous tests showed up to 180 ppm PCB-1254 in portions of the building paint
SITE HISTORY: Paint factory
SUSPECTED CONTAMINATION: PCB, possible Pb
FIELD READINGS: N/A

Eastern Analytical, Inc.
professional laboratory and drilling services
25 CHENELL DRIVE | CONCORD, NH 03301 | TEL: 603.228.0525 | 1.800.287.0525 | E-MAIL: CUSTOMERSERVICE@EASTERNANALYTICAL.COM | WWW.EASTERNANALYTICAL.COM

(WHITE: ORIGINAL GREEN: PROJECT MANAGER)

APPENDIX E

Data Validation Report

LE·Environmental

21 North Main Street • Waterbury, Vermont 05676
Phone: (802) 917-2001 • www.leenv.net

Data Validation Report – Paint and Building Materials Sampling
48 Elm Street
Brattleboro, Vermont
August 31, 2018

Project Description

This data validation report applies to paint and building materials samples collected in preparation for demolition of the cinder block building addition at 48 Elm Street in Brattleboro, Vermont. Samples were collected using the scope of work according to the approved Site Specific Quality Assurance Project Plan (SSQAPP) Addendum (EPA RFA#14113) for a Brownfields Phase II ESA dated January 24, 2018.

Sampling Summary

The project scope included collection of 16 paint samples and 1 building materials sample. Sampling took place on August 16, 2018. Field quality control samples included a duplicate paint sample. Eastern Analytical, Inc. (EAI) of Concord, NH performed laboratory analysis of the samples.

- Thirteen paint samples were collected and tested for Polychlorinated Biphenyls (PCBs) via EPA Method 8082A. Three scheduled paint samples were not collected because it was discovered during sampling that the interior walls where those samples were to be collected were unpainted. This possibility was allowed for in the approved SSQAPP addendum.
- One building materials sample was collected and tested for extractable lead using the Toxicity Characteristic Leaching Procedure (TCLP) via SW846 and EPA Method 6020.

Sampling Procedures and Protocols

Sampling was performed in accordance with the procedures specified in the SSQAPP addendum. Field data sheets were reviewed to ensure proper documentation of the sampling conditions. All entries were made with permanent ink. Entries included the identity of the sampler, sampling location, time, and date. All entries and equipment used were recorded on the daily work report.

The chain of custody forms were reviewed to ensure the sample identification, number, type and size of sample containers, preservatives used; and signatures were properly recorded and were in accordance with the SSQAPP addendum.

The laboratory cover sheets, sample acceptance forms and case narratives were reviewed. All samples adhered to the laboratories' acceptance policies. All samples were analyzed in accordance with the laboratory's SOPs. No deviations from laboratory protocols were noted on the laboratory cover sheets. Samples arrived at EAI at 1.7°C on August 17, 2018, which is

within the acceptable range. All samples were analyzed within EPA holding times.

Blanks

Method blanks were prepared by the laboratory for all analyses performed and reported no detection of compounds, indicating that there was no contamination of samples while at the laboratories.

MS/MSD and LCS/LCSD

Matrix spike/matrix spike duplicate (MS/MSD) and laboratory control samples/laboratory control sample duplicate (LCS/LCSD) analysis was performed by the laboratory. All MS and LCS analysis laboratory acceptance criteria.

RPD

Relative percent difference (RPD) values were calculated for the duplicate sample obtained in the field and for the MS/MSD and LCS/LCSD data obtained at the laboratory. The RPD was within the 50% allowable range.

Surrogate Recovery

Surrogate recovery analyses performed by the laboratories are within acceptable ranges.

Reporting Limits

Laboratory reporting limits were compared with applicable regulatory criteria for each tested compound. All laboratory reporting limits were below the appropriate regulatory threshold criteria.

Deviations

There were no deviations from the site-specific QAPP addendum work scope.

Conclusion

Based on the findings presented above, all data should be accepted without condition.

Respectfully Submitted,

Angela Emerson, EP
Project Quality Assurance Officer

Data Validation Summary Table
48 Elm Street
Brattleboro, Vermont
LEE #17-096

Sample Name	PS-101	PS-102	PS-103	PS-104	PS-108	PS-109	PS-110
Lab sample number	185597.01	185597.02	185597.03	185597.04	185597.05	185597.06	185597.07
Date Sampled	8/16/18						
Date of Analysis	8/20/18 (extraction); 8/21/18 (analysis)						
Sample Type	Paint						
Was analysis completed within EPA Method specified holding time?	Y	Y	Y	Y	Y	Y	Y
Were the samples properly handled under COC guidelines?	Y	Y	Y	Y	Y	Y	Y
Were the samples properly chilled? (0-6 degrees C)	Y	Y	Y	Y	Y	Y	Y
Were any compounds detected in blanks?	N	N	N	N	N	N	N
Were the samples properly labeled?	Y	Y	Y	Y	Y	Y	Y
Relative Percent Difference (RPD) acceptable? (<=50% RPD)	N/A	N/A	Y	N/A	N/A	N/A	N/A
Were laboratory surrogate recovery concentrations acceptable?	Y	Y	Y	Y	Y	Y	Y
Were laboratory control samples and duplicates acceptable?	Y	Y	Y	Y	Y	Y	Y
Reporting limits meet Form K values	Y	Y	Y	Y	Y	Y	Y
Reporting limits do not meet Form K values	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Are reporting limits below applicable standards?	Y	Y	Y	Y	Y	Y	Y

Sample Name	PS-111	PS-112	PS-113	PS-114	PS-115	PS-116	Duplicate
Lab sample number	185597.08	185597.09	185597.10	185597.11	185597.12	185597.13	185597.14
Date Sampled	8/16/18						
Date of Analysis	8/20/18 (extraction); 8/21/18 (analysis)				8/20/18 (extraction); 8/22/18 (analysis)		
Sample Type	Paint						
Was analysis completed within EPA Method specified holding time?	Y	Y	Y	Y	Y	Y	Y
Were the samples properly handled under COC guidelines?	Y	Y	Y	Y	Y	Y	Y
Were the samples properly chilled? (0-6 degrees C)	Y	Y	Y	Y	Y	Y	Y
Were any compounds detected in blanks?	N	N	N	N	N	N	N
Were the samples properly labeled?	Y	Y	Y	Y	Y	Y	Y
Relative Percent Difference (RPD) acceptable? (<=50% RPD)	N/A	N/A	N/A	N/A	N/A	N/A	Y
Were laboratory surrogate recovery concentrations acceptable?	Y	Y	Y	Y	Y	Y	Y
Were laboratory control samples and duplicates acceptable?	Y	Y	Y	Y	Y	Y	Y
Reporting limits meet Form K values	Y	Y	Y	Y	Y	Y	Y
Reporting limits do not meet Form K values	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Are reporting limits below applicable standards?	Y	Y	Y	Y	Y	Y	Y

Sample Name	TCLP-1
Lab sample number	185597.15
Date Sampled	8/16/18
Date of Analysis	8/21/18
Sample Type	Bldg Materials
Was analysis completed within EPA Method specified holding time?	Y
Were the samples properly handled under COC guidelines?	Y
Were the samples properly chilled? (0-6 degrees C)	Y
Were any compounds detected in blanks?	N
Were the samples properly labeled?	Y
Relative Percent Difference (RPD) acceptable? (<=50% RPD)	N/A
Were laboratory surrogate recovery concentrations acceptable?	Y
Were laboratory control samples and duplicates acceptable?	Y
Reporting limits meet Form K values	Y
Reporting limits do not meet Form K values	N/A
Are reporting limits below applicable standards?	Y

Notes:
Y=Yes, N=No, N/A=Not applicable to sample

Relative Percent Difference Calculations
48 Elm Street
Brattleboro, Vermont

Sample Name	*PS-103*	*Duplicate*	Relative
Lab Sample Number	*185597.03*	*185597.14*	Percent
Date Extracted	*8/20/18*	*8/20/18*	Difference
Date Analyzed	*8/21/18*	*8/22/18*	(%)
PCBs, EPA Method 8082a (mg/kg, dry)			
PCB-1016	ND<0.2	ND<0.2	-
PCB-1221	ND<0.2	ND<0.2	-
PCB-1232	ND<0.2	ND<0.2	-
PCB-1242	ND<0.2	ND<0.2	-
PCB-1248	ND<0.2	ND<0.2	-
PCB-1254	**3.5**	**4.9**	16.7
PCB-1260	ND<0.2	ND<0.2	-
PCB-1262	ND<0.2	ND<0.2	-
PCB-1268	ND<0.2	ND<0.2	-

Surrogate Recovery Summary Table
48 Elm Street
Brattleboro, Vermont
17-096

Sample Name	Surrogate Recovery Limits	PS-101	PS-102	PS-103	PS-104	PS-108	PS-109	PS-110
Lab sample number		185597.01	185597.02	185597.03	185597.04	185597.05	185597.06	185597.07
Date Sampled		8/16/18						
Date of Analysis		8/20/18 (extraction); 8/21/18 (analysis)						
Sample Type		Paint						
TMX	30-150%	64	75	76	80	87	76	80
DCB	30-150%	55	71	70	71	82	73	76

Sample Name	Surrogate Recovery Limits	PS-111	PS-112	PS-113	PS-114	PS-115	PS-116	Duplicate
Lab sample number		185597.08	185597.09	185597.10	185597.11	185597.12	185597.13	185597.14
Date Sampled		8/16/18						
Date of Analysis		8/20/18 (extraction); 8/21/18 (analysis)				8/20/18 (extraction); 8/22/18 (analysis)		
Sample Type		Paint						
TMX	30-150%	76	82	81	73	76	82	81
DCB	30-150%	70	76	75	69	72	79	82

Notes:
Surrogate recoveries in (%) recovered
Shaded cells = surrogate recovery not within specified range.

APPENDIX F

Resumes

Alan Liptak

LE Environmental LLC
21 North Main Street, Waterbury, Vermont 05676
c (802) 917-4228, p (802) 917-2001
alan@leenv.net

Expertise

Commercial property environmental due diligence; Brownfields investigation and cleanup; Phase I and II Environmental Site Assessments; Transaction screen; Vapor encroachment and intrusion; Indoor air quality; Environmental cleanup and redevelopment; PCB, dioxin, urban soils, metals contamination; Grant applications; Solid waste facility assessment; Expert witness.

Recent Environmental Assessment and Cleanup Experience

Brownfields and other redevelopment properties; Manufacturing facilities; Multi-unit housing; Electrical utility service centers; Dry cleaning facilities; Flood/disaster relief properties; Automotive / other vehicle dealerships and service garages; Agricultural properties; Abandoned/vacant properties; Solid waste transfer and disposal facilities; Petroleum storage / retail facilities.

Professional Experience

Senior Geologist/Co-Owner, LE Environmental LLC, Waterbury, Vermont July 2014-present

Principal Geologist/Partner, KAS Inc. 2004-June 2014

Environmental Programs Manager/Senior Geologist, Griffin International Inc. 1999-2004

Senior Scientist, The Johnson Company 1990-1999

Professional Licenses, Certifications and Qualifications

Licensed Professional Geologist, State of New Hampshire No. 00142

Licensed Professional Geologist, State of New York No. 00517

Certified Professional Geologist, American Institute of Professional Geologists No. 10166

ASTM Training: Phase I Environmental Site Assessment Practices For Commercial Real Estate: Transaction Screen & Phase I Site Assessment ASTM E1527-13 June 2014

EPA Environmental Professional.

OSHA 40 Hour Hazardous Sites Certified

Academic Background

MBA, Norwich University, Cum Laude

Master of Science, Geology, Chemistry Minor, University of Montana

Bachelor of Arts, Geology, State University of New York

Angela Emerson

LE Environmental LLC
21 North Main Street, Waterbury, Vermont 05676
c (802) 922-0043, p (802) 917-2001
angela@leenv.net

Expertise

Environmental project management; Brownfields investigation and cleanup; Commercial property environmental due diligence; Phase I and II Environmental Site Assessments; Vapor encroachment and intrusion investigations; Indoor air quality studies; Environmental cleanup and redevelopment; Grant applications; Solid waste facility assessment; Solid Waste Implementation Plans; General environmental consulting; PCB investigations and Self-Implementing Cleanup Plans.

Recent Environmental Assessment and Cleanup Experience

Brownfields assessments and redevelopment of contaminated properties; Manufacturing facilities; Multi-unit housing; Dry cleaning facilities; Flood/disaster relief properties; Automotive dealerships and service garages; Agricultural properties; Abandoned/vacant properties; Solid waste transfer and disposal facilities; Petroleum storage and retail facilities.

Professional Experience

Senior Geologist/Co-Owner, LE Environmental LLC, Waterbury, Vermont July 2014 - present

Senior Geologist, KAS Inc., Williston, Vermont 2005 – June 2014

Staff Geologist / Second Avenue Subway Project - Manhattan, Yu & Associates, Elmwood Park, New Jersey, 2002 - 2003

Internship, Vermont Geological Survey, Waterbury, Vermont, 2001

Professional Licenses, Certifications and Qualifications

Licensed Professional Geologist, State of New York No. 000969

ASTM Training: Phase I Environmental Site Assessment Practices For Commercial Real Estate: Transaction Screen & Phase I Site Assessment ASTM E1527-13 & Phase II Site Assessment ASTM E1903-11

EPA Environmental Professional

OSHA 40 Hour Hazardous Sites Certified

Academic Background

Bachelor of Science, Geology, University of Vermont

ASBESTOS INSPECTION REPORT
64 ELM STREET
BRATTLEBORO, VT 05301

DECEMBER 17, 2008

PROJECT #510080140

PREPARED FOR:

FULCRUM ARTS
74 COTTON MILL HILL
A338
BRATTLEBORO, VT 05301

KAS INC
P.O. BOX 787
WILLISTON, VT 05495
(802) 383-0486

TABLE OF CONTENTS

1. INSPECTION SUMMARY

One two/ three story masonry/ wood frame building located at 64 Elm Street, Brattleboro, VT has been inspected for the presence of asbestos containing materials (ACM). The building is currently unoccupied except for limited storage of theatrical props in a section of the first floor. The inspection/sampling included obtaining 42 bulk samples from suspect materials from all areas of the building except that the roof that was not inspected. The inspection is believed to have reasonably determined the extent of asbestos containing materials in the building and exterior to the building except the roof. The roof was to be sampled if an interior hatch to access the roof was available. A search did not locate an interior access. Should such access be available, and it just wasn't located by KAS, KAS will return and collect samples from the roof.

The inspection determined that there are three ACMs present. Caulk around windows and doors in the brick portion of the building, a limited amount of 9"x9" floor tiles and mastic associated with the ACM floor tiles. In addition the roof has to be assumed asbestos containing until it is tested and found to be asbestos free. An EPA NESHAPS notification may need to be submitted to EPA Region 1 and the State of Vermont 10 working days prior to any renovation efforts depending upon the amount of ACM materials to be disturbed during the renovation.

Table 1 summarizes the inspection results.

2. INSPECTION METHODS

This asbestos site inspection was conducted by an EPA accredited, State of Vermont certified, Asbestos Inspector/ Management Planner generally in accordance with AHERA inspection guidelines and generally accepted procedures. Bulk sample analysis was conducted by a State of Vermont licensed laboratory KD Associates, Inc. of South Burlington, VT. The inspectors possessed adequate experience, training and education to recognize potential ACM and to collect bulk samples of suspect materials for laboratory analysis.

The asbestos inspection consisted of a visual and physical inspection. The entire building was inspected for ACM, including the exterior, except for the roof.

In accordance with the workscope for this project, bulk samples were collected and analyzed from each suspect material found. Bulk samples of suspect ACM were analyzed for asbestos content using PLM methods (EPA 600/R-93/116 Method) and dispersion staining techniques

3. VERMONT REGULATIONS FOR ASBESTOS CONTROL (VRAC)

The Vermont Regulations for Asbestos Control, as authorized by 18 VSA Chapter 26, detail the procedures, regulations, certifications and licenses required when disturbance of asbestos containing materials occurs in the State of Vermont. In essence, any

company, individual or organization that disturbs asbestos containing materials or provides asbestos consulting or laboratory services must be certified by the State of Vermont. Personnel who conducted the inspection, bulk sample collections and laboratory analysis were properly certified by the State of Vermont and also possess current EPA approved training in asbestos site inspections and asbestos laboratory analysis.

4. CERTIFICATION/ACCREDITATION

Inspection Location: 64 Elm Street, Brattleboro, VT05301

Inspection Dates: November 11, 2008

Buildings Inspected:

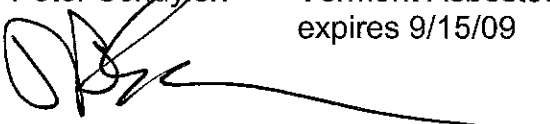
1. One two story former machine shop which housed other manufacturing endeavors through the years with offices of about 15,000 square feet (including the basement)

Inspector Certification/Accreditation:

The personnel who conducted the inspection/bulk sampling of the facilities hold the following Certification/Accreditation program requirements:

Inspector/ Management Planner:

Peter Schuyler: Vermont Asbestos Inspector/ Management Planner – MP014292, expires 9/15/09



Corporate and inspector licenses and certifications are contained in Appendix 1.

Asbestos bulk samples have been analyzed by KD Associates, Inc., South Burlington, Vermont Certification #AL018431, Analyst Bryan Schultz VT FA014774.

5. INSPECTION RESULTS

Building material/sample locations and specific results of the sampling and analysis and visual inspection are contained in Table1.

Twelve materials were determined to be suspect for asbestos content, one material was assumed to be asbestos containing. Three materials were found to be ACM, all were nonfriable. The assumed asbestos containing material is the roofing material. An interior access to the roof could not be located at the time of the inspection. The work

scope for this inspection called for roof inspection only if an interior access was available.

6. OBSERVATIONS

The former machine shop building is an old (probably pre 1900) two story masonry/ wood frame structure with a full basement with a more recent three story section on the north end. It is estimated to be about 15,000 square feet including the basement. No recent renovations were obvious and at the time of the inspection the building did not have a heating system and was disconnected from water and electricity. The building was in poor repair but appeared to be in good structural condition. It was not in use except for limited areas of the first floor where theatrical props were stored. A small heated closet in the basement housed what appeared to be the header for a dry sprinkler system. Electricity was brought to the room for heat by extension cord from an adjacent building. No vestiges of previous heating systems were obvious except for a large brick chimney in one corner of the basement. Due to the size and age of the building it was likely heated by coal and steam heat in the past.

Significant mold was observed in the basement.

Considerable debris and trash is evident throughout the building, particularly on the first floor.

7. RECOMMENDATIONS

If renovations are to take place in the building that will disturb the identified asbestos containing materials Vermont certified asbestos consultants and licensed asbestos abatement firms should be retained to remove the ACM.

Notification must be sent to Region 1 EPA in accordance with 40 CFR Part 61 subpart M and the State of Vermont in accordance with 18 VSA Chapter 26 at least 10 working days prior to start of any demolition (defined as disturbance of a load bearing structure). For renovations notification to the State of Vermont and Region 1 EPA may be necessary depending upon the amount of ACM to be disturbed.

The identified ACM may be left as is as long as it is not disturbed. The ACM materials do not pose a significant threat to human health or the environment if they are left undisturbed.

TABLE 1 – INSPECTION RESULTS
64 ELM STREET, BRATTLEBORO, VT

SAMPLE # LOCATION	MATERIAL	ANALYTICAL RESULTS	QUANTITY/ CONDITION
1A, 1B, 1C NW 1st flr office	sheet flooring/ mastic	not asbestos containing	
2A, 2B, 2C, 2D 1st flr brick portion 2nd flr brick portion	window glaze, multipane windows loose	not asbestos containing	
3A, 3B, 3C, 3D, 3E 1st, 2nd, 3rd flrs north addition	window glaze, 3 story section	not asbestos containing	
4A, 4B, 4C, 4D 1st, 2nd, 3rd flrs North addition	sheetrock	not asbestos containing	
5A, 5B, 5C NE room 1st flr	1'x2' ceiling tile stapled to lath	not asbestos containing	
6A, 6B, 6C NE room 1st flr	rug mastic/9"x9" floor tile/ mastic	tile 4.5% chrysotile mastic not asbestos containing	264 sqft/ none
7A, 7B, 7C NE room 2nd flr	9"x9" floor tile/ mastic	tile not asbestos containing mastic 3.3% chrysotile	121 sqft/ minor
8A, 8B, 8C N room 2nd flr	floor covering looks like rolled roofing	not asbestos containing	
9A, 9B, 9C 2nd flr ctr large room	wall covering paper like	not asbestos containing	
10A, 10B, 10C, 10D, 10E exterior windows & doors, brick portion	window caulk,	1.8% chrysotile asbestos	~200 lnft/ damaged
11A, 11B, 11C exterior windows north addition	caulk	not asbestos containing	
12A, 12B, 12C basement chimney room	ceiling plaster	not asbestos containing	
building roof	roofing materials	assumed asbestos containing	~7000 sqft

sqft – square feet
chrysotile – an asbestos form
asbestos containing material is defined as having over 1% asbestos content

APPENDIX 1

CERTIFICATIONS

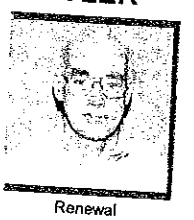
VERMONT DEPARTMENT OF HEALTH

Asbestos & Lead Regulatory Program

Asbestos Project Designer

PETER SCHUYLER

Eff. Date 01/15/08
Exp. Date 03/21/09



Renewal

CONES
PD018118
VT

VERMONT DEPARTMENT OF HEALTH

Asbestos & Lead Regulatory Program

Asbestos Inspector/Management Planner

PETER SCHUYLER

Eff. Date 08/27/08
Exp. Date 09/15/09

Renewal

CONES
MP014292
VT

RECEIVED DEC 4 2008

ASBESTOS CONSULTING ENTITY

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

KAS, INC.
P.O. BOX 787
WILLISTON VT 05495

LICENSE: CE869095

EXPIRES: Tuesday, December 01, 2009

CERIFICATE OF LICENSE
VERMONT ASBESTOS 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.

THIS CERTIFICATE IS FOR OFFICE USE ONLY.

Lindsey Wells

APPENDIX 2

LABORATORY ANALYSIS REPORTS

KD ASSOCIATES, INC.
Environmental Consulting & Contracting

Laboratory Results

Date Received: November 21, 2008

Mr. Peter Schuyler
KAS, Inc.
PO Box 787
Williston, VT 05495

Report Date: December 3 , 2008
KDAI Project No.: 0520-001
Location: 64 Elm Street, Brattleboro, VT
Lab Reference No.: 11089
Number of Samples Analyzed: 49

Analysis for asbestos type and quantity (visual area estimate and/or point count) was performed by EPA test method 600/R-93/116, utilizing Polarized Light Microscopy (PLM) and dispersion staining techniques.

KDAI Lab. No.	Sample Identification	Result
KD08-1850	1A Sheet Flooring	No Asbestos Detected
KD08-1898	1A Mastic	No Asbestos Detected
KD08-1851	1B Sheet Flooring	No Asbestos Detected
KD08-1899	1B Mastic	No Asbestos Detected
KD08-1852	1C Sheet Flooring	No Asbestos Detected
KD08-1900	1C Mastic	No Asbestos Detected
KD08-1853	2A Window Glaze	No Asbestos Detected
KD08-1854	2B Window Glaze	No Asbestos Detected
KD08-1855	2C Window Glaze	No Asbestos Detected
KD08-1856	2D Window Glaze	No Asbestos Detected
KD08-1857	3A Window Glaze	No Asbestos Detected
KD08-1858	3B Window Glaze	No Asbestos Detected
KD08-1859	3C Window Glaze	No Asbestos Detected
KD08-1860	3D Window Glaze	No Asbestos Detected
KD08-1861	3E Window Glaze	No Asbestos Detected
KD08-1862	4A Sheetrock	No Asbestos Detected
KD08-1863	4B Sheetrock	No Asbestos Detected
KD08-1864	4C Sheetrock	No Asbestos Detected
KD08-1865	4D Sheetrock	No Asbestos Detected
KD08-1866	5A 1' x 2' Ceiling Tile	No Asbestos Detected
KD08-1867	5B 1' x 2' Ceiling Tile	No Asbestos Detected

KD08-1868	5C 1' x 2' Ceiling Tile	No Asbestos Detected
KD08-1869	6A 9" x 9" Floor Tile	Positive for Asbestos 4.5% Chrysotile
KD08-1870	6A Mastic from above sample	No Asbestos Detected
KD08-1901	6A Rug Glue from above sample	No Asbestos Detected
KD08-1871	6B 9" x 9" Floor Tile	Not Analyzed
KD08-1872	6B Mastic from above sample	No Asbestos Detected
KD08-1902	6B Rug Glue from above sample	No Asbestos Detected
KD08-1873	6C 9" x 9" Floor Tile	Not Analyzed
KD08-1874	6C Mastic from above sample	No Asbestos Detected
KD08-1903	6C Rug Glue from above sample	No Asbestos Detected
KD08-1875	7A 9" x 9" Floor Tile	No Asbestos Detected
KD08-1876	7A Mastic from above sample	Positive for Asbestos 3.3% Chrysotile
KD08-1877	7B 9" x 9" Floor Tile	No Asbestos Detected
KD08-1878	7B Mastic from above sample	Not Analyzed
KD08-1879	7C 9" x 9" Floor Tile	No Asbestos Detected
KD08-1880	7C Mastic from above sample	Not Analyzed
KD08-1881	8A Floor Covering	No Asbestos Detected
KD08-1882	8B Floor Covering	No Asbestos Detected
KD08-1883	8C Floor Covering	No Asbestos Detected
KD08-1884	9A Wall Covering	No Asbestos Detected
KD08-1885	9B Wall Covering	No Asbestos Detected
KD08-1886	9C Wall Covering	No Asbestos Detected
KD08-1887	10A Caulk	No Asbestos Detected
KD08-1888	10B Caulk	No Asbestos Detected
KD08-1889	10C Caulk	No Asbestos Detected
KD08-1890	10D Caulk	Positive for Asbestos 1.8% Chrysotile
KD08-1891	10E Caulk	Not Analyzed
KD08-1892	11A Caulk	No Asbestos Detected
KD08-1893	11B Caulk	No Asbestos Detected
KD08-1894	11C Caulk	No Asbestos Detected

KD08-1895	12A Ceiling Plaster	No Asbestos Detected
KD08-1896	12B Ceiling Plaster	No Asbestos Detected
KD08-1897	12C Ceiling Plaster	No Asbestos Detected

Bryan Schultz
Laboratory Manager

The results listed above relate only to the items/samples tested. Samples received in good condition unless otherwise noted. K-D Associates, Inc. assumes no responsibility or liability for the manner in which these results are used or interpreted. The accuracy of PLM may be limited in the analysis of certain sample materials. For PLM results that are "negative" or positive at less than one percent, re-analysis by another analytical method may be appropriate.

Laboratory Certifications: Vermont #AL018431 and New York #11215
Analyst: Bryan Schultz, Analyst Certifications: FA014774, PA013668

cc: 0520-001

0244 - 1

KAS, INC., 368 AVENUE D, SUITE 15, WILLISTON, VT 05495
VT ASBESTOS CONSULTING ENTITY CE615423

PROJECT NO.: 510080140 SAMPLER: PETER SCHUYLER VT CERT MP014292 SIGNATURE:

CLIENT: Fulcrum Arts
74 Cotton Mill Hill
A338
Brattleboro, VT 05301

LOCATION: 64 Elm Street
Brattleboro, VT

SAMPLE TYPE: BULK TURNAROUND TIME: 6-10 days

SAMPLE #	DATE	ANALYSIS	SAMPLE LOCATION	BUILDING SURFACE	AMOUNT	DAMAGE
1A	11/20/08	PLM	NW office	Sheet flooring/mastic	~105sq ft	minor
1B	↓	↓				
1C	↓	↓				
2A	11/20/08	PLM	1ST FLR multi Pane window	window glaze	~2000 lnft	Significant damage
2B	↓	↓	↓			
2C	↓	↓				
2D	↓	↓	3rd FLR multi pane window			
3A	11/20/08	PLM	N office 1ST FLR	window glaze	~400 lnft	Significant damage
3B	↓	↓	NW Room 1ST FLR			
3C	↓	↓	NE Room 1ST FLR			
3D	↓	↓	NE Room 2ND FLR			
3E	↓	↓	NW Room 3rd FLR			

RELINQUISHED BY: DATE: 11/21/08 RECEIVED BY: BSch Date: 11-21-08

RELINQUISHED BY: DATE: RECEIVED BY: Date:

COMMENTS: 1) VERMONT SAMPLES, VERMONT ANALYST REQUIRED
2) STOP AT FIRST POSITIVE FOR ALL SAMPLE GROUPS

KAS, INC., 368 AVENUE D, SUITE 15, WILLISTON, VT 05495

VT ASBESTOS CONSULTING ENTITY CE615423

PROJECT NO.: 510080140 SAMPLER: PETER SCHUYLER VT CERT MP014292 SIGNATURE:

CLIENT: Fulcrum Arts
74 Cotton Mill Hill
A338
Brattleboro, VT 05301

LOCATION: 64 Elm Street
Brattleboro, VT

SAMPLE TYPE: BULK TURNAROUND TIME: 6-10 days

SAMPLE #	DATE	ANALYSIS	SAMPLE LOCATION	BUILDING SURFACE	AMOUNT	DAMAGE
4A	11/20/08	PLM	SW corner by sink 1ST FLR	Sheet rock	~2500 sq ft	Significant damage
4B	↓	↓	NE Room 2ND FLR			
4C			NE Room 2ND FLR			
4D			2ND to 3RD FLR Stairwell			
5A	11/20/08	PLM	NE Room 1ST FLR	1'x2' Ceiling tile	264 sq ft	Minor
5B	↓	↓	↓			
5C						
6A	11/20/08	PLM	NE Room 1ST FLR	9"x9" Floor Tile/mastic/rug glue	264 sq ft	none
6B	↓	↓				
6C						

RELINQUISHED BY: DATE: 11/20/08 RECEIVED BY: B. Sch Date: 11-21-08

RELINQUISHED BY: DATE: RECEIVED BY: Date:

COMMENTS: 1) VERMONT SAMPLES, VERMONT ANALYST REQUIRED
2) STOP AT FIRST POSITIVE FOR ALL SAMPLE GROUPS

KAS, INC., 368 AVENUE D, SUITE 15, WILLISTON, VT 05495

VT ASBESTOS CONSULTING ENTITY CE615423

PROJECT NO.: 510080140 SAMPLER: PETER SCHUYLER VT CERT MP014292 SIGNATURE:

CLIENT: Fulcrum Arts
74 Cotton Mill Hill
A338
Brattleboro, VT 05301

LOCATION: 64 Elm Street
Brattleboro, VT

SAMPLE TYPE: BULK TURNAROUND TIME: 6-10 days

SAMPLE #	DATE	ANALYSIS	SAMPLE LOCATION	BUILDING SURFACE	AMOUNT	DAMAGE
7A	11/20/08	PLM	NE Room 2nd Floor	9"x9" Floor tile/mastic	121 sq ft	none
7B	↓	↓				
7C	↓	↓				
8A	11/20/08	PLM	N Room 2nd Floor	Floor covering	~450 sq ft	minor
8B	↓	↓				
8C	↓	↓				
9A	11/20/08	PLM	2nd Floor Ctr large Room	Wall covering	~200 sq ft	significant damage
9B	↓					
9C	↓					

RELINQUISHED BY: DATE: 11/21/08 RECEIVED BY: BSch Date: 11-21-08

RELINQUISHED BY: DATE: RECEIVED BY: Date:

COMMENTS: 1) VERMONT SAMPLES, VERMONT ANALYST REQUIRED
2) STOP AT FIRST POSITIVE FOR ALL SAMPLE GROUPS

KAS, INC., 368 AVENUE D, SUITE 15, WILLISTON, VT 05495
VT ASBESTOS CONSULTING ENTITY CE615423

PROJECT NO.: 510080140 SAMPLER: PETER SCHUYLER VT CERT MP014292 SIGNATURE:

CLIENT: Fulcrum Arts
74 Cotton Mill Hill
A338
Brattleboro, VT 05301

LOCATION: 64 Elm Street
Brattleboro, VT

SAMPLE TYPE: BULK TURNAROUND TIME: 6-10 days

SAMPLE #	DATE	ANALYSIS	SAMPLE LOCATION	BUILDING SURFACE	AMOUNT	DAMAGE
10 A	11/20/08	PLM	Exterior windows floors brick patio	Caulk	~200 ln ft	Significant
10 B	↓					
10 C	↓					
10 D	↓					
10 E	↓					
11 A	11/20/08	PLM	Exterior Windows N. addition	Caulk	~100 ln ft	Significant
11 B	↓					
11 C	↓					
12 A	11/20/08	PLM	NE Basement room	Ceiling plaster	~400 sq ft	Significant
12 B	↓					
12 C	↓					

RELINQUISHED BY: DATE: 11/21/08 RECEIVED BY: Date: 11-21-08

RELINQUISHED BY: DATE: RECEIVED BY: Date:

COMMENTS: 1) VERMONT SAMPLES, VERMONT ANALYST REQUIRED
2) STOP AT FIRST POSITIVE FOR ALL SAMPLE GROUPS

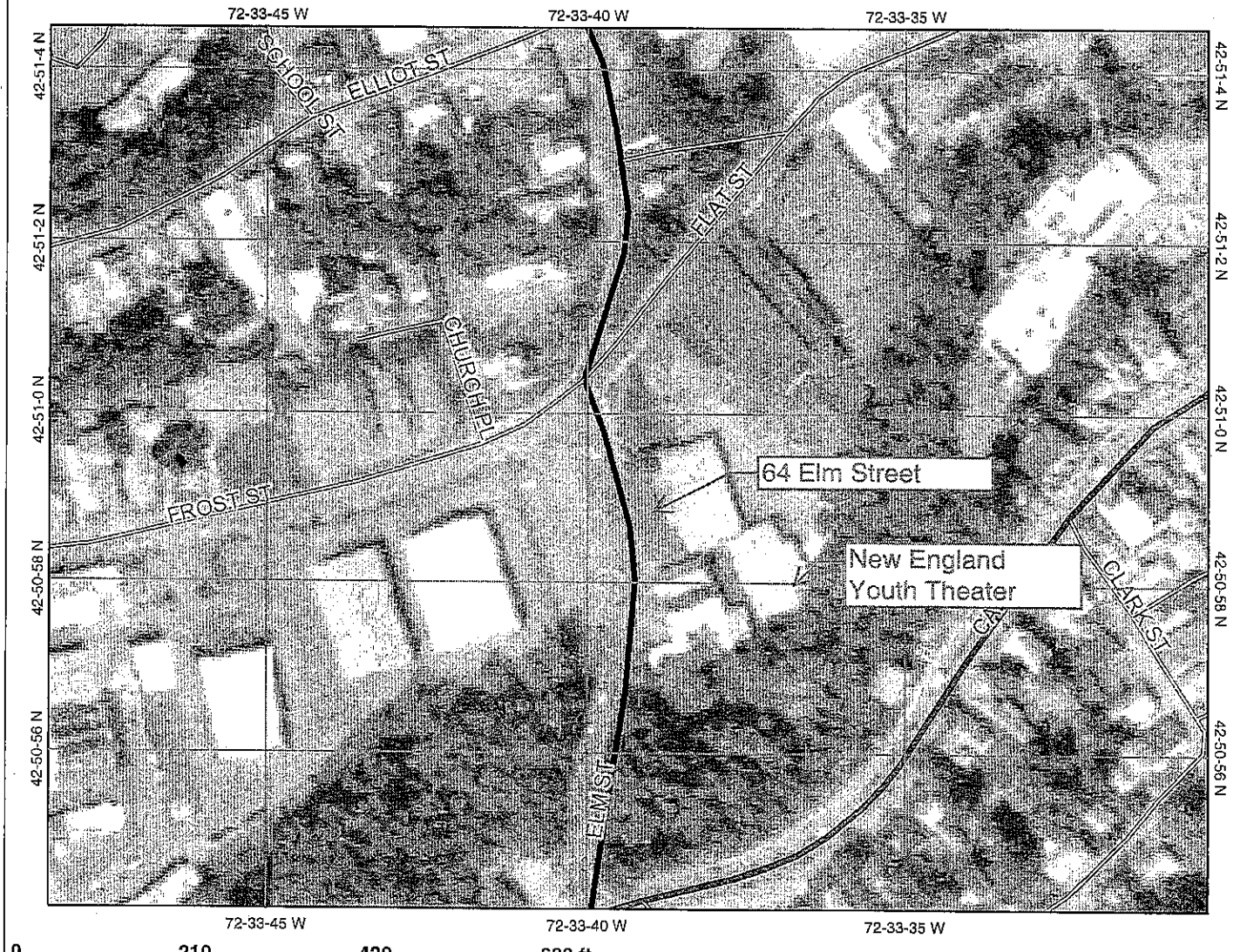
APPENDIX 3

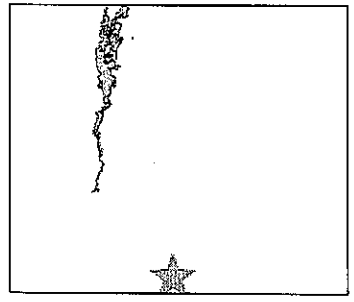
SAMPLE LOCATION DRAWING

ANR Environmental Interest Locator

Vermont Agency of Natural Resources (ANR)

Hazwaste Map





Legend

- Hazardous Waste Site
- Roads
  - US Highway
  - Vermont State Highway
  - Class One
  - Class Two
  - Legal Trail
  - Emergency U-Turn Area
  - Proposed Class Two
  - Proposed Class Three
  - Proposed Vermont State Highway
  - Proposed US Highway
  - Proposed Interstate
  - Discontinued Interstate
  - Class Three
  - Class Four
  - State/National Forest Highway
  - Military Road (No Public Access)
  - Private Road
- VT County Boundary
- VT Town Boundaries (No Fill)
- NAIP Color Orthophotos
- VT State Boundary (Fill)

VT State Plane Meters (NAD83)

Scale: 1:2,223

Map center: 495020, 38860

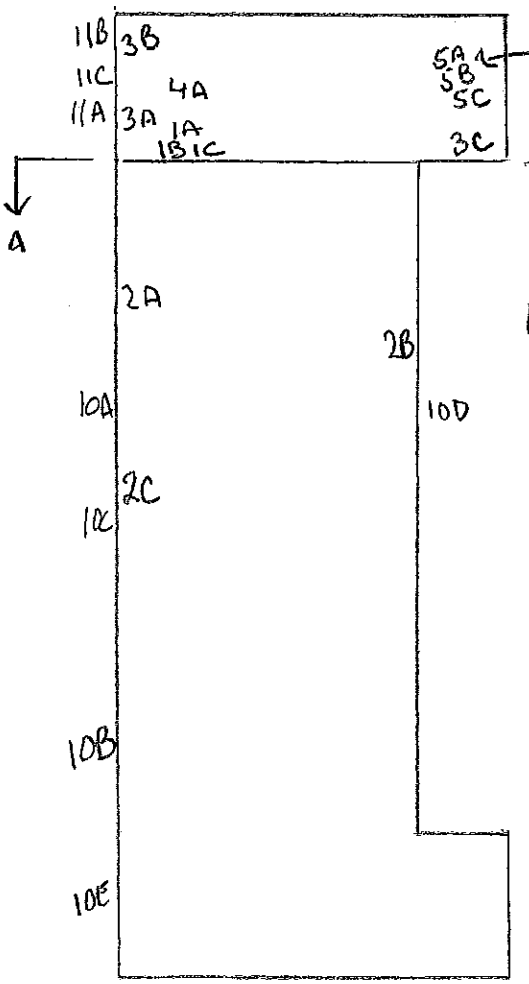
URL: http://maps.vermont.gov/imf/sites/ANR_NATRESViewer/jsp/launch.jsp

7/3/08

KAS INC
368 Avenue D Suite 15
WILLISTON, VERMONT 05495
(802) 383-0486 Fax (802) 383-0490

JOB 64 ELM ST 5100B0140
SHEET NO. 2 OF 3
CALCULATED BY PS DATE 12/16/08
CHECKED BY DATE
SCALE NTS

ASBESTOS INSPECTION SKETCH



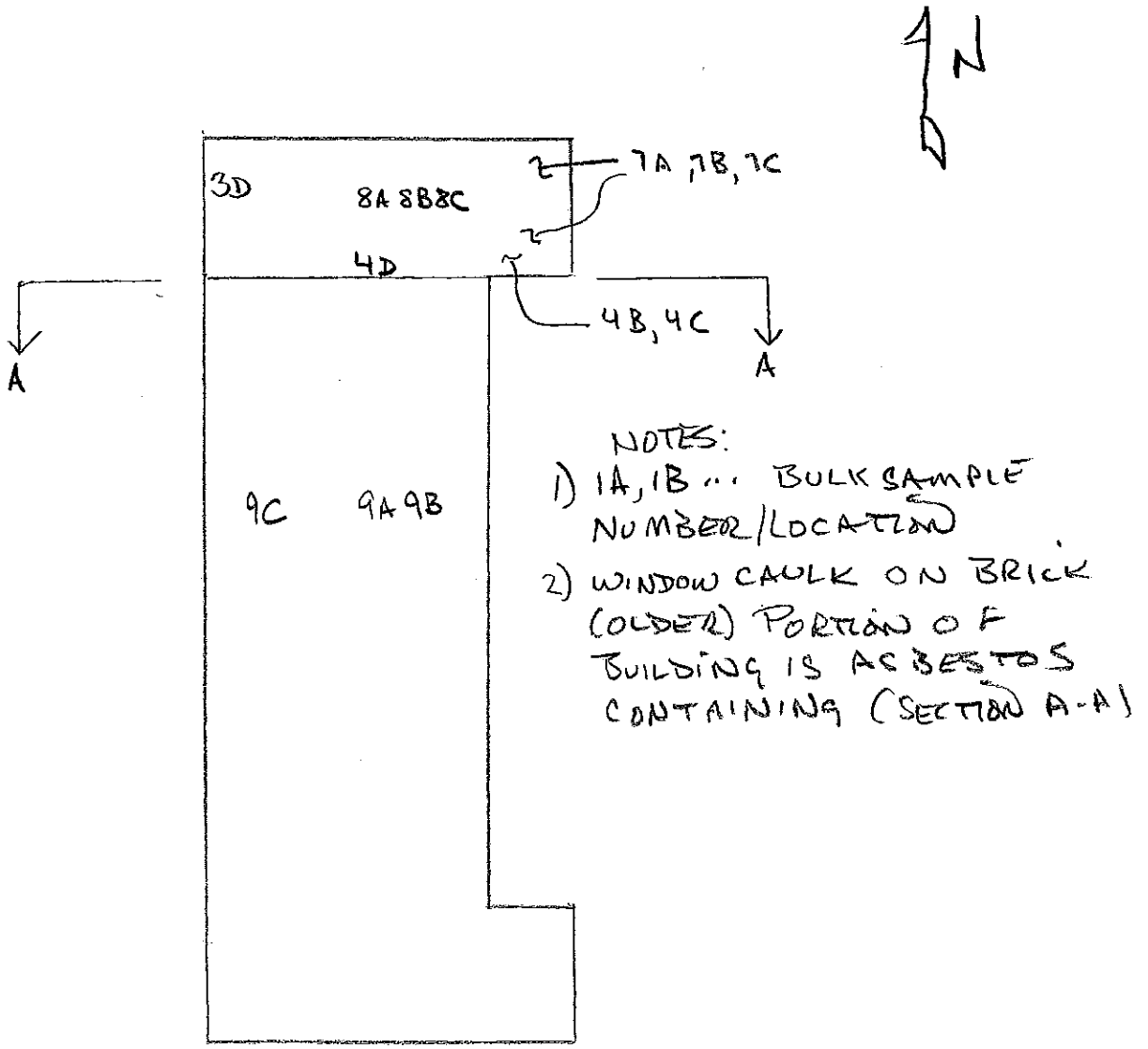
NOTES:
1) 1A, 1B... BULK SAMPLE NUMBER/LOCATION
2) ~264 sqft + Asbestos CONTAINING FLOOR TILES & MASTIC IN NE ROOM
3) CAULK AROUND WINDOWS AND DOORS ON BRICK (OLDER) PORTION OF BUILDING 4 IS ASBESTOS CONTAINING (SECTION A-A)

FIRST FLOOR

KAS INC
368 Avenue D Suite 15
WILLISTON, VERMONT 05495
(802) 383-0486 Fax (802) 383-0490

JOB 64 ELM ST 5100B0140
SHEET NO. 3 OF 3
CALCULATED BY PS DATE 12/16/08
CHECKED BY DATE
SCALE NTS

ASBESTOS INSPECTION SKETCH



NOTES:
1) 1A, 1B ... BULK SAMPLE NUMBER/LOCATION
2) WINDOW CAULK ON BRICK (OLDER) PORTION OF BUILDING IS ASBESTOS CONTAINING (SECTION A-A)

SECOND FLOOR

KAS INC
368 Avenue D Suite 15
WILLISTON, VERMONT 05495
(802) 383-0486 Fax (802) 383-0490

JOB 64 ELM ST 5100801140

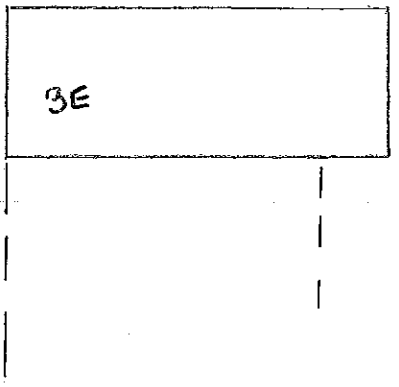
SHEET NO. 3 OF 3

CALCULATED BY PS DATE 12/16/08

CHECKED BY _____ DATE _____

SCALE NTS

ASBESTOS INSPECTION SKETCH



NOTE:

1) 3E - BULK SAMPLE NUMBER/LOCATION

2) NO ASBESTOS CONTAINING MATERIALS ON THIRD FLOOR

THIRD FLOOR

KAS INC
368 Avenue D Suite 15
WILLISTON, VERMONT 05495
(802) 383-0486 Fax (802) 383-0490

JOB 64 ELM ST 5100B0140

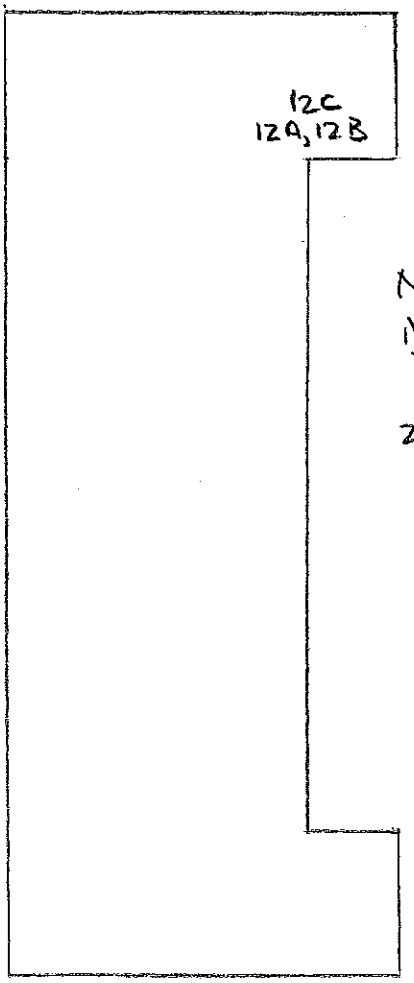
SHEET NO. 1 OF 3

CALCULATED BY PS DATE 12/16/08

CHECKED BY _____ DATE _____

SCALE NTS

ASBESTOS INSPECTION SKETCH



NOTES:

1) 12A, 12B ... BULK SAMPLE NUMBER/LOCATION
2) NO ASBESTOS CONTAINING MATERIALS IN BASEMENT

BASEMENT

1.0 INTRODUCTION

KAS, Inc. (KAS) has completed a Supplemental Phase II Environmental Site Assessment (ESA) at the Former Tri-State Auto Parts Site (Site), located at 64 Elm Street property in Brattleboro, Vermont. A Site Map and Site Location Map are included in Appendix A. Completed investigative work was conducted for the Windham Regional Commission (WRC) by KAS, according to KAS' Generic Quality Assurance Project Plan, (RFA07264), and KAS' Addendum #3-4 dated August 17, 2009. A comprehensive background on the history of the Site was included in KAS' Phase II Environmental Site Assessment Report, dated May 2009[1].

This Site is currently owned by the New England Youth Theatre (NEYT), and investigative work was funded by the WRC. The investigative work was proposed to address the findings of KAS' Phase II Environmental Site Assessment, which identified the presence of PCBs in soil, groundwater, and masonry walls on the subject property. The objective of KAS' Site Assessment is to further define the nature and extent of contamination at the Site. Elements of this ESA included the following: 1) preparation of a Quality Assurance Project Plan (QAPP) Site Specific Addendum, Health and Safety Plan (HASP), and necessary coordination, 2) masonry wall profiling and sandblasting study, 3) soil boring advancement, 4) shallow and deep soil sampling, 5) groundwater sampling, 6) sensitive receptor survey, 7) laboratory data validation as specified in the QAPP, and 8) preparation of this comprehensive Supplemental Phase II ESA Report. Conclusions presented in this assessment are based on the premise that the Site will be redeveloped as an artist studio with live/work space, requiring residential property consideration.

2.0 QUALITY ASSURANCE PROJECT PLAN

KAS prepared a Quality Assurance Project Plan (QAPP) Addendum to KAS' approved generic QAPP for Brownfields work in Vermont prior to the initiation of fieldwork. The Quality Assurance Project Plan Addendum #3-4 dated August 17, 2009 was prepared in accordance with the EPA document, *Quality Assurance Guidance for Conducting Brownfields Site Assessment, (EPA, 9/98, 540-R-98-038)*. The purpose of the QAPP and QAPP Addendum was to develop data quality objectives, a sampling design, analytical precision requirements, and quality assurance guidelines.

3.0 MASONRY WALL PROFILING SAMPLING AND SANDBLASTING

Previous masonry sampling on the walls in the first and second floors of the on-site building revealed PCB contamination. The walls are constructed of painted brick. The paint was believed to be a possible source of PCBs, and it is known to contain lead. The paint throughout the "older building" appears to be uniform in color and age. KAS theorized that removing the paint and collecting profiling samples of the brick would help determine if cleanup of the brick walls was feasible.

[1] KAS, Inc, Phase II Environmental Site Assessment, 64 Elm Street, May 2009.

One masonry profiling sample was collected from the first floor and one masonry profiling sample was collected from the second floor. A duplicate sample set was also collected from the first floor. The samples were collected in the vicinity of the highest observed PCB concentrations, in the "older building", which is scheduled to be renovated during development. The sample location on the second floor had to be moved slightly off the proposed location to accommodate the lead paint containment area.

The paint on the masonry walls was removed prior to obtaining the profiling samples using a sandblasting technique. The paint removal was conducted by Catamount Environmental of Wilmington, Vermont. Containment areas were installed around each of the sampling locations to capture lead and PCB dust. Masonry samples were obtained on September 10, 2009, after the paint was removed from the brick at the following intervals; from 0-1/8", 1/8"-1/4", and 1/4"-1/2" below the surface of the wall. Sampling equipment was decontamination between each sample. The samples were containerized and delivered to Eastern Analytical, Inc for laboratory testing of PCBs via EPA Method 8082. The sample locations are shown on the attached Site map. Tabulated results are included in the Masonry Walls Profiling Samples Data Summary included in Appendix B. Laboratory analytical reports are included in Appendix H.

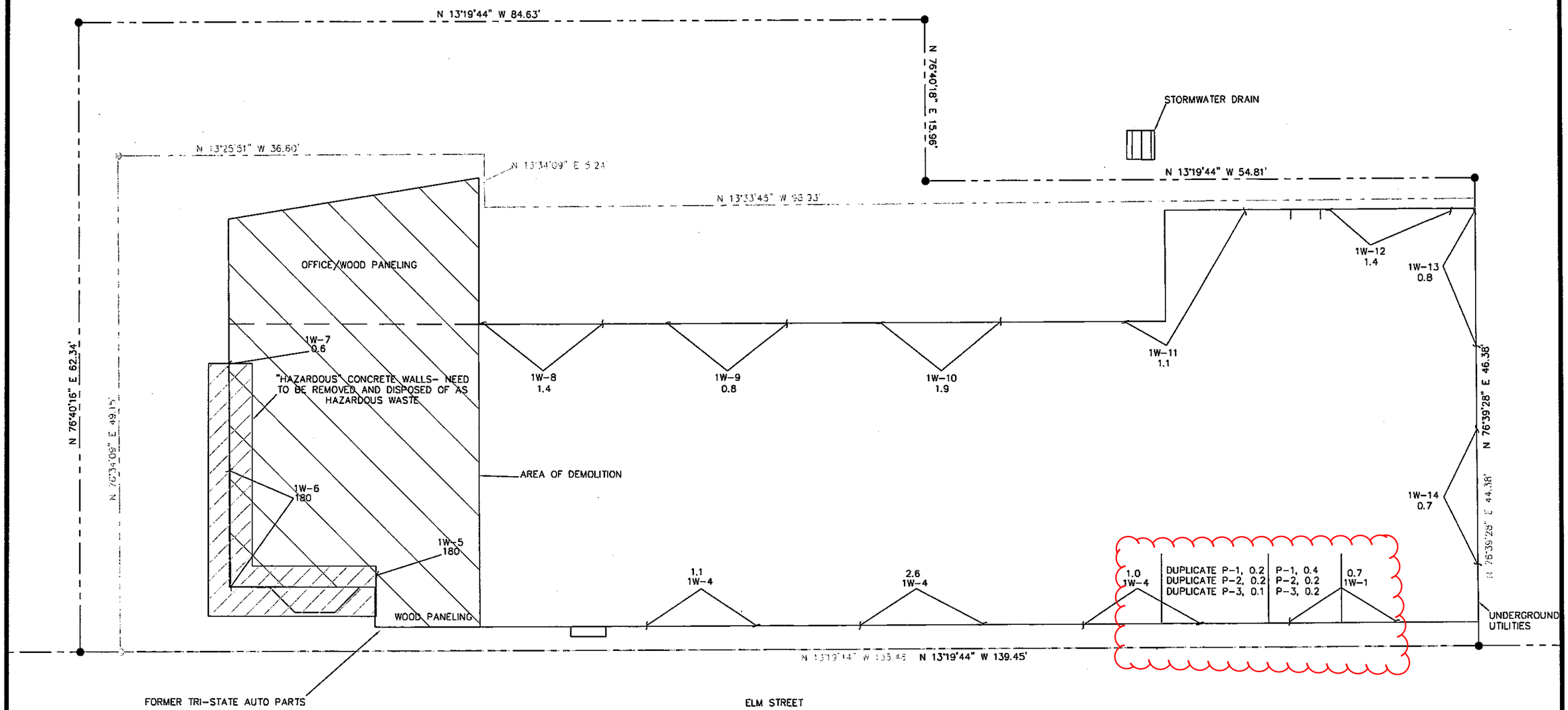
3.1 Masonry Wall Profiling Laboratory Analysis and Contaminant Distribution

Concentrations of PCBs were detected in four out of the six masonry profiling samples. The highest concentration observed was 0.4 parts per million (ppm), which is well below the TSCA standard of 1 ppm. The surface samples (0-1/8") had the highest concentrations of PCBs, and the concentrations decreased with depth. The surface sample on the first floor contained 0.4 ppm total PCBs, and the surface sample on the second floor contained 0.2 ppm total PCBs. Both of these concentrations were notably lower than previously reported concentrations where the paint was not removed prior to sampling.

4.0 MASONRY WALL SAMPLING IN BASEMENT

The on-site basement is slated to be used for storage in the redevelopment of the on-site building. The basement walls are constructed of a field stone foundation to approximately 5 feet above the floor surface, with a brick wall approximately 2 feet high above the field stone foundation. Masonry samples are collected in the brick layer that overlays the field stone walls. Previous masonry samples have contained concentrations of PCBs, and one area of the wall contained concentrations in excess of 10 ppm. Additional masonry wall samples were obtained every five feet in this area to delineate the PCB contamination along the wall.

Five masonry profiling samples were collected in the vicinity of the "hot spot" on the basement wall on September 10, 2009. One duplicate sample was also collected. Samples were collected in accordance with the USEPA Region 1 Sampling Concrete in the Field, Revision 0.0, December 1997. Sampling equipment was decontamination between each sample. The samples were containerized and delivered to Eastern Analytical, Inc for laboratory testing of PCBs via EPA Method 8082. The sample locations are shown on the attached Site map. Tabulated results



LEGEND

PROPERTY LINE

2.6 / 1W-3 — COMPOSITE WALL SAMPLE WITH PCB CONTAMINANT CONCENTRATION (ppm)

P-1 / 0.4 — PROFILE WALL SAMPLE WITH PCB CONTAMINANT CONCENTRATION (ppm)

ESPC #: 20084264
KAS #: 505080133

KAS

P.O. BOX 787, WILLISTON, VT, 05495
WWW.KAS-CONSULTING.COM

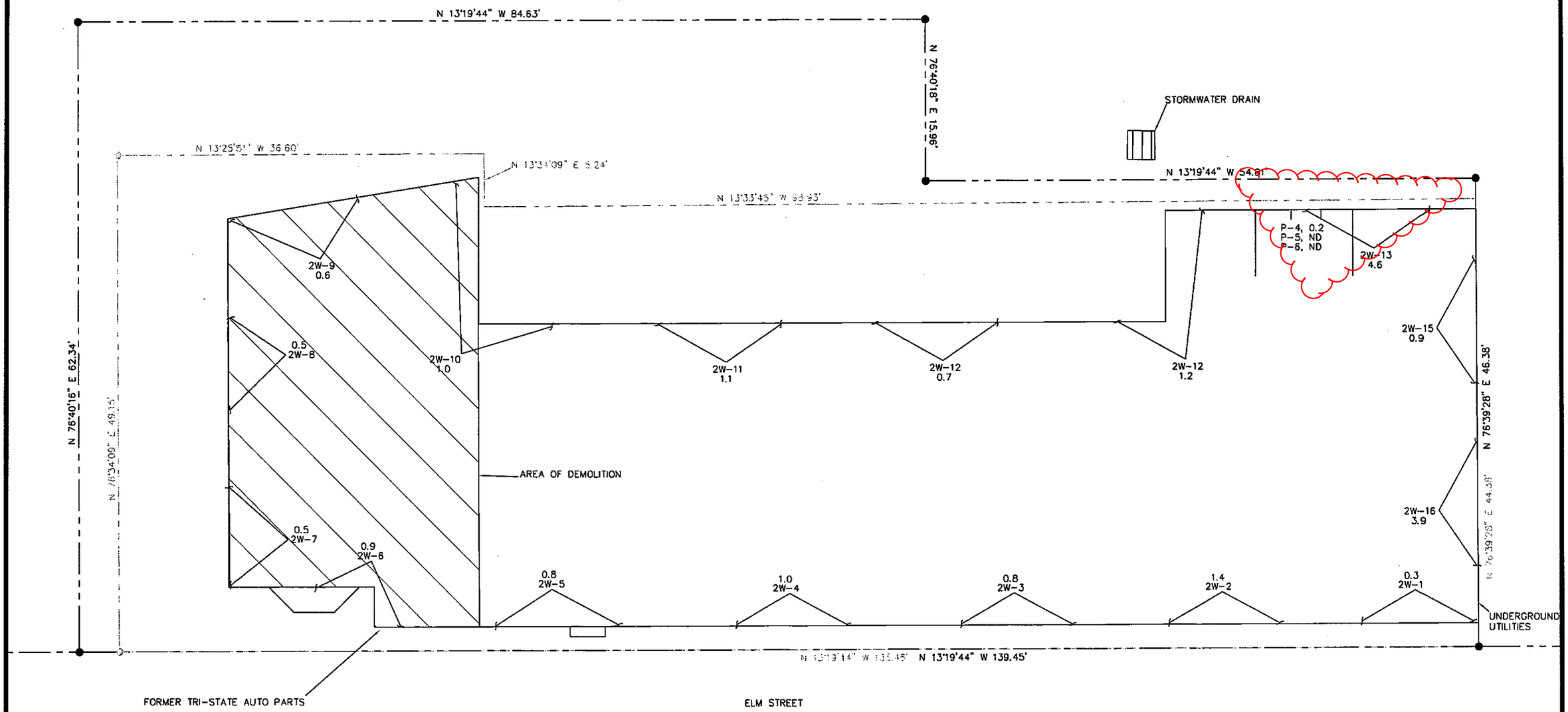
FORMER TRI-STATE AUTO PARTS

64 ELM STREET
BRATTLEBORO, VERMONT

FIRST FLOOR WALL PCB CONTAMINANT CONCENTRATION MAP

SAMPLED: 2/4/09 AND 9/10/09

DATE: 10/7/09	DWG #: 3	SCALE: 1"=10'	DRN.: DM	APP.: AE



LEGEND

PROPERTY LINE

0.8 / 2W-3 — COMPOSITE WALL SAMPLE WITH PCB CONTAMINANT CONCENTRATION (ppm) (M=8082)

P-4 / 0.2 — PROFILE WALL SAMPLE WITH PCB CONTAMINANT CONCENTRATION (ppm)

ESPC #: 20084264
KAS #: 505080133

KAS

P.O. BOX 787, WILLISTON, VT, 05495
WWW.KAS-CONSULTING.COM

FORMER TRI-STATE AUTO PARTS

64 ELM STREET
BRATTLEBORO, VERMONT

SECOND FLOOR WALL PCB CONTAMINANT CONCENTRATION MAP

SAMPLED: 2/11/09 AND 9/10/09

DATE: 10/7/09	DWG #: 4	SCALE: 1"=10'	DRN.: DM	APP.: AE

64 Elm Street
Brattleboro, Vermont

Masonry Profiling Data Summary
Former Tri-State Auto Parts
Brattleboro, Vermont

Masonry Sample *Sample Depth (in.)* *Sample Date*	*P-1* *0-1/8"* *9/10/09*	*P-2* *1/8"-1/4"* *9/10/09*	*P-3* *1/4"-1/2"* *9/10/09*	*P-4* *0-1/8"* *9/10/09*	*P-5* *1/8"-1/4"* *9/10/09*	*P-6* *1/4"-1/2"* *9/10/09*	*Duplicate P-1* *0-1/8"* *9/10/09*	*Duplicate P-2* *1/8"-1/4"* *9/10/09*	*Duplicate P-3* *1/4"-1/2"* *9/10/09*	TSCA Standard
PCBs, EPA Method 8082										
Aroclor - 1016	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	-
Aroclor - 1221	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	-
Aroclor - 1232	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	-
Aroclor - 1242	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	-
Aroclor - 1248	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	-
Aroclor - 1254	**0.4**	**0.2**	**0.2**	**0.2**	ND <0.1	ND <0.1	**0.2**	**0.2**	**0.1**	-
Aroclor - 1260	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	ND <0.1	-
Total PCBs	**0.4**	**0.2**	**0.2**	**0.2**	ND	ND	**0.2**	**0.2**	**0.1**	1.0

NOTES:

All values reported in mg/kg, dry, unless otherwise indicated.

ND<1.0 = Not Detected< Detection Limit

Results reported above detection limits are indicated in bold

Values above the TSCA Standard of 1 ppm are shaded

Angela Emerson
KAS, Inc.
PO Box 787
Williston , VT 05495

Subject: Laboratory Report

Eastern Analytical, Inc. ID: 82619
Client Identification: 64 Elm Street | 505080133
Date Received: 9/10/2009

Dear Ms. Emerson :

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.eailabs.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:
Solid samples are reported on a dry weight basis, unless otherwise noted
< : "less than" followed by the reporting limit
> : "greater than" followed by the reporting limit
%R : % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269) and Vermont (VT1012).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw, Lab Director

9.17.09
Date

7
# of pages (excluding cover letter)

SAMPLE CONDITIONS PAGE

Eastern Analytical, Inc. ID#: 82619

Client: **KAS, Inc.** Client Designation: **64 Elm Street | 505080133**

Temperature upon receipt (°C): 6 **Received on ice or cold packs (Yes/No): Y**

Lab ID	Sample ID	Date Received	Date Sampled	Sample Matrix	% Dry Weight	Exceptions/Comments (other than thermal preservation)
82619.01	P-1	9/10/09	9/10/09	soil	100.0	Adheres to Sample Acceptance Policy
82619.02	P-2	9/10/09	9/10/09	soil	99.5	Adheres to Sample Acceptance Policy
82619.03	P-3	9/10/09	9/10/09	soil	99.3	Adheres to Sample Acceptance Policy
82619.04	P-4	9/10/09	9/10/09	soil	99.4	Adheres to Sample Acceptance Policy
82619.05	P-5	9/10/09	9/10/09	soil	99.7	Adheres to Sample Acceptance Policy
82619.06	P-6	9/10/09	9/10/09	soil	99.8	Adheres to Sample Acceptance Policy
82619.07	Duplicate-1	9/10/09	9/10/09	soil	99.8	Adheres to Sample Acceptance Policy
82619.08	Duplicate-2	9/10/09	9/10/09	soil	99.7	Adheres to Sample Acceptance Policy
82619.09	Duplicate-3	9/10/09	9/10/09	soil	100.0	Adheres to Sample Acceptance Policy
82619.1	BW-14	9/10/09	9/10/09	soil	87.0	Adheres to Sample Acceptance Policy
82619.11	BW-15	9/10/09	9/10/09	soil	94.5	Adheres to Sample Acceptance Policy
82619.12	BW-16	9/10/09	9/10/09	soil	91.0	Adheres to Sample Acceptance Policy
82619.13	BW-17	9/10/09	9/10/09	soil	97.3	Adheres to Sample Acceptance Policy
82619.14	BW-18	9/10/09	9/10/09	soil	87.4	Adheres to Sample Acceptance Policy
82619.15	Duplicate-18	9/10/09	9/10/09	soil	85.5	Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitibility, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis.

All results contained in this report relate only to the above listed samples.

References include:

1) EPA 600/4-79-020, 1983
2) Standard Methods for Examination of Water and Wastewater : Inorganics, 19th Edition, 1995; Microbiology, 20th Edition, 1998
3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
4) Hach Water Analysis Handbook, 2nd edition, 1992

LABORATORY REPORT

Eastern Analytical, Inc. ID#: 82619

Client: **KAS, Inc.** Client Designation: **64 Elm Street | 505080133**

Sample ID:	P-1	P-2	P-3	P-4	P-5	P-6
Lab Sample ID:	82619.01	82619.02	82619.03	82619.04	82619.05	82619.06
Matrix:	soil	soil	soil	soil	soil	soil
Date Sampled:	9/10/09	9/10/09	9/10/09	9/10/09	9/10/09	9/10/09
Date Received:	9/10/09	9/10/09	9/10/09	9/10/09	9/10/09	9/10/09
% Solid:	100	99.5	99.3	99.4	99.7	99.8
Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Date of Extraction/Prep:	9/10/09	9/10/09	9/10/09	9/10/09	9/10/09	9/10/09
Date of Analysis:	9/11/09	9/11/09	9/11/09	9/11/09	9/11/09	9/11/09
Analyst:	JW	JW	JW	JW	JW	JW
Extraction Method:	3540C	3540C	3540C	3540C	3540C	3540C
Analysis Method:	8082	8082	8082	8082	8082	8082
Dilution Factor:	1	1	1	1	1	1
PCB-1016	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB-1221	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB-1232	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB-1242	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB-1248	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PCB-1254	**0.4**	**0.2**	**0.2**	**0.2**	< 0.1	< 0.1
PCB-1260	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TMX (surr)	**97 %R**	**100 %R**	**99 %R**	**101 %R**	**103 %R**	**98 %R**
DCB (surr)	**67 %R**	**73 %R**	**68 %R**	**103 %R**	**108 %R**	**99 %R**

Acid cleanup was performed on the samples and associated Batch QC.

LABORATORY REPORT

Eastern Analytical, Inc. ID#: 82619

Client: **KAS, Inc.** Client Designation: **64 Elm Street | 505080133**

Sample ID:	Duplicate-1	Duplicate-2	Duplicate-3	BW-14	BW-15	BW-16
Lab Sample ID:	82619.07	82619.08	82619.09	82619.1	82619.11	82619.12
Matrix:	soil	soil	soil	soil	soil	soil
Date Sampled:	9/10/09	9/10/09	9/10/09	9/10/09	9/10/09	9/10/09
Date Received:	9/10/09	9/10/09	9/10/09	9/10/09	9/10/09	9/10/09
% Solid:	99.8	99.7	100	87	94.5	91
Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Date of Extraction/Prep:	9/10/09	9/10/09	9/10/09	9/10/09	9/10/09	9/10/09
Date of Analysis:	9/11/09	9/11/09	9/11/09	9/14/09	9/14/09	9/14/09
Analyst:	JW	JW	JW	JW	JW	JW
Extraction Method:	3540C	3540C	3540C	3540C	3540C	3540C
Analysis Method:	8082	8082	8082	8082	8082	8082
Dilution Factor:	1	1	1	23	5	21
PCB-1016	< 0.1	< 0.1	< 0.1	< 2	< 0.5	< 2
PCB-1221	< 0.1	< 0.1	< 0.1	< 2	< 0.5	< 2
PCB-1232	< 0.1	< 0.1	< 0.1	< 2	< 0.5	< 2
PCB-1242	< 0.1	< 0.1	< 0.1	< 2	< 0.5	< 2
PCB-1248	< 0.1	< 0.1	< 0.1	< 2	< 0.5	< 2
PCB-1254	**0.2**	**0.2**	**0.1**	**14**	**4.8**	**17**
PCB-1260	< 0.1	< 0.1	< 0.1	< 2	< 0.5	< 2
TMX (surr)	**101 %R**	**100 %R**	**100 %R**	**DOR**	**115 %R**	**DOR**
DCB (surr)	**100 %R**	**74 %R**	**80 %R**	**DOR**	**130 %R**	**DOR**

Acid cleanup was performed on the samples and associated Batch QC.

DOR: Diluted out of range.

Eastern Analytical, Inc.
professional laboratory and drilling services

Don Yanke
Catamount Environmental, Inc.
15 Catamount Lane PO Box 160
Wilmington , VT 05363

Subject: Laboratory Report

Eastern Analytical, Inc. ID:	167872
Client Identification:	NE Youth Theater | 170442
Date Received:	4/21/2017

Dear Mr. Yanke :

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.eailabs.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:

Solid samples are reported on a dry weight basis, unless otherwise noted
< : "less than" followed by the reporting limit
> : "greater than" followed by the reporting limit
%R : % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269) and Vermont (VT1012).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw, Lab Director

4.28.17
Date

3
# of pages (excluding cover letter)

SAMPLE CONDITIONS PAGE

EAI ID#: **167872**

Client: **Catamount Environmental, Inc.**

Client Designation: **NE Youth Theater | 170442**

Temperature upon receipt (°C): 19.9 **Received on ice or cold packs (Yes/No): N**

Acceptable temperature range (°C): 0-6

Lab ID	Sample ID	Date Received	Date Sampled	Sample Matrix	% Dry Weight	Exceptions/Comments (other than thermal preservation)
167872.01	170442.11	4/21/17	4/20/17	solid	100.0	Adheres to Sample Acceptance Policy
167872.02	170442.12	4/21/17	4/20/17	solid	100.0	Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitability, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis.
Immediate analyses, pH, Total Residual Chlorine, Dissolved Oxygen and Sulfite, performed at the laboratory were run outside of the recommended 15 minute hold time.
All results contained in this report relate only to the above listed samples.
References include:
1) EPA 600/4-79-020, 1983
2) Standard Methods for Examination of Water and Wastewater,20th Edition, 1998 and 22nd Edition, 2012
3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
4) Hach Water Analysis Handbook, 2nd edition, 1992

LABORATORY REPORT

EAI ID#: **167872**

Client: **Catamount Environmental, Inc.**

Client Designation: **NE Youth Theater | 170442**

Sample ID:	170442.11	170442.12
Lab Sample ID:	167872.01	167872.02
Matrix:	solid	solid
Date Sampled:	4/20/17	4/20/17
Date Received:	4/21/17	4/21/17
% Solid:	100	100
Units:	mg/kg	mg/kg
Date of Extraction/Prep:	4/24/17	4/24/17
Date of Analysis:	4/26/17	4/26/17
Analyst:	SS	SS
Extraction Method:	3540C	3540C
Analysis Method:	8082A	8082A
Dilution Factor:	8	10
PCB-1016	< 0.1	< 0.2
PCB-1221	< 0.1	< 0.2
PCB-1232	< 0.1	< 0.2
PCB-1242	< 0.1	< 0.2
PCB-1248	< 0.1	< 0.2
PCB-1254	**8.8**	**1.8**
PCB-1260	< 0.1	< 0.2
PCB-1262	< 0.1	< 0.2
PCB-1268	< 0.1	< 0.2
TMX (surr)	**70 %R**	**94 %R**
DCB (surr)	**70 %R**	**78 %R**

Acid clean-up was performed on the samples and associated batch QC.
170442.11: PCB-1254 result obtained from a 5X dilution analyzed on 4/28/2017.
Results are reported on a solids as received basis. Detection limits elevated due to limited initial sample mass.

Page 1 of 1

CHAIN-OF-CUSTODY RECORD

167872

BOLD FIELDS REQUIRED. PLEASE CIRCLE REQUESTED ANALYSIS.

SAMPLE I.D.	SAMPLING DATE/TIME *IF COMPOSITE, INDICATE BOTH START & FINISH DATE/TIME	MATRIX (SEE BELOW)	GRAB/*COMPOSITE	VOC: 524.2 BTEX 524.2 MTBE ONLY	VOC: 8260B 624 VTICs 1, 4 DIOXANE	VOC: 8021B BTEX HALOS	VOC: 8015B GRO MAVPH	SVOC: 8270D 625 SVTICs EDB DBCP ABN A BN PAH	SVOC: TPH8100 LI L2	SVOC: 8015B DRO MAEPH	SVOC: PEST 608 PCB 608 PEST 8081A PCB 8082	SVOC: OIL & GREASE 1664 TPH 1664	TCLP: TCLP 1311 ABN METALS VOC PEST HERB	METALS: DISSOLVED METALS (LIST BELOW)	METALS: TOTAL METALS (LIST BELOW)	INORGANICS: TS TSS TDS SPEC. CON.	INORGANICS: BR CL F SO_4 NO_2 NO_3 NO_2NO_3	INORGANICS: BOD CBOD T. ALK.	INORGANICS: TKN NH_3 T. PHOS. O. PHOS.	INORGANICS: PH T. RES. CHLORINE	INORGANICS: COD PHENOLS TOC DOC	INORGANICS: TOTAL CYANIDE TOTAL SULFIDE	INORGANICS: REACTIVE CYANIDE REACTIVE SULFIDE FLASHPOINT IGNITABILITY	MICRO: TOTAL COLIFORM E. COLI FECAL COLIFORM	MICRO: ENTEROCOCCI HETEROTROPHIC PLATE COUNT	OTHER: P	OTHER: C	OTHER: B	# OF CONTAINERS	NOTES MEOH VIAL #
170442.11	4/20 1300 hrs																										X				Caulk
170442.12	4/20 1300 hrs																										X				Glazing

MATRIX: A-AIR; S-SOIL; GW-GROUND WATER; SW-SURFACE WATER; DW-DRINKING WATER; WW-WASTE WATER

PRESERVATIVE: H-HCL; N-HNO_3; S-H_2SO_4; Na-NaOH; M-MEOH

PROJECT MANAGER:

COMPANY: Catamount Environmental, Inc.

ADDRESS: PO Box 160, 15 Catamount Lane

CITY: Wilmington **STATE:** Vermont **ZIP:** 05363

PHONE: 802-464-2754 **EXT.:**

FAX: 802-464-5942

E-MAIL: info@catenv.net

SITE NAME: NE Youth Theater

PROJECT #: 170442

STATE: NH MA ME (VT) **OTHER:**

REGULATORY PROGRAM: NPDES: RGP POTW STORMWATER OR GWP, OIL FUND, BROWNFIELD OR OTHER:

QUOTE #: 1014459 **PO #:**

DATE NEEDED: 4/28/17

QA/QC REPORTING LEVEL

A B C

OR

PRESUMPTIVE CERTAINTY

REPORTING OPTIONS

PRELIMS: YES OR NO

IF YES: FAX OR PDF

ELECTRONIC OPTIONS

NO FAX E-MAIL PDF EQUIS

TEMP. 19.9 °C

ICE? YES (NO)

METALS: 8 RCRA 13 PP FE, MN PB, CU

OTHER METALS:

SAMPLES FIELD FILTERED? ☐ YES ☐ NO

NOTES: (IE: SPECIAL DETECTION LIMITS, BILLING INFO, IF DIFFERENT)

SAMPLER(S): Donald Yanke			
4/20/17 1400hrs			UPS
RELINQUISHED BY:	**DATE:**	**TIME:**	**RECEIVED BY:**
UPS	4/21/17	1100	
RELINQUISHED BY:	**DATE:**	**TIME:**	**RECEIVED BY:**
RELINQUISHED BY:	**DATE:**	**TIME:**	**RECEIVED BY:**

SITE HISTORY:

SUSPECTED CONTAMINATION:

FIELD READINGS:

Eastern Analytical, Inc.
Professional laboratory & drilling services

25 CHENELL DRIVE | CONCORD, NH 03301 | TEL: 603.228.0525 | 1.800.287.0525 | FAX: 603.228.4591 | E-MAIL: CUSTOMERSERVICE@EAILABS.COM | WWW.EAILABS.COM

(WHITE: ORIGINAL GREEN: PROJECT MANAGER)

EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	041711002
Customer ID:	CATA50
Customer PO:	
Project ID:	

Attention:	Donald Yanke	**Phone:**	(802) 464-2754
	Catamount Environmental, Inc.	**Fax:**	(802) 464-2754
	PO Box 160	**Received Date:**	04/21/2017 9:10 AM
	Wilmington, VT 05363	**Analysis Date:**	04/21/2017
		Collected Date:	04/20/2017

Project: N.E. Youth Theater / 64 Elm Street, Brattleboro / #170442

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
170442.01 *041711002-0001*	Roof - Flat Roof	Black Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
170442.02 *041711002-0002*	Roof - Flat Roof	Black Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
170442.03 *041711002-0003*	Roof - Roof Insulation	Brown Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
170442.04 *041711002-0004*	Roof - Roof Insulation	Brown Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
170442.05 *041711002-0005*	Windows - Window Glazing	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
170442.06 *041711002-0006*	Windows - Window Glazing	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
170442.07 *041711002-0007*	2nd Floor - Flooring	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
170442.08 *041711002-0008*	2nd Floor - Flooring	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
170442.09 *041711002-0009*	Walls - Sheetrock	White Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
170442.10 *041711002-0010*	Walls - Sheetrock	White Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected

Report Comment: **Cert# PB527462(SQ) Cert# PB077294(AC)**

Analyst(s)
Andrew Castellano (5)
Steven Quinn (5)

Benjamin Ellis, Laboratory Manager
or Other Approved Signatory

Initial report from: 04/21/2017 15:12:28

K D
ASSOCIATES, INC.
ENVIRONMENTAL CONSULTING
AND CONTRACTING

17 March 2021

Mr. Alan Liptak
LE Environmental LLC
21 North Main Street
Waterbury, Vermont 05676

Re: Asbestos Assessment, Block Building, 48 Elm Street, New England Youth Theater
Brattleboro, Vermont
K-D Project No. 14186-022

Dear Alan,

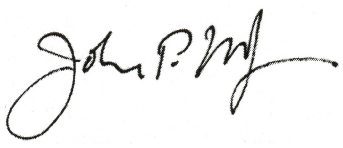
At your request, K-D Associates, Inc. visited the block building planned for demolition at the New England Youth Theater property in Brattleboro, Vermont. This building was previously surveyed for asbestos in 2008 by KAS, Inc. and follow-up testing was done in 2017 by Catamount Environmental, Inc. Two asbestos containing materials were identified in the original survey of the block building including 9" by 9" vinyl floor tile (mastic negative) located on the first floor and mastic associated with 9" by 9" vinyl floor tile (tile negative for asbestos) located on the second floor. All other materials were found to be negative for asbestos.

The building is currently in very poor condition with structural wood materials on the interior that appear unsound with missing flooring and compromised floor joists. The top floor and roof have been previously removed due to structural damage. At the time of our visit, it was not possible to safely access the second floor and the location and presence of the previously identified asbestos containing materials could not be determined. The interior of the block walls was inspected during our visit and no suspect insulation materials were found within the block.

Based upon observations made, it does not appear practical or safe to conduct asbestos abatement of the previously identified asbestos flooring materials prior to demolition. It is our recommendation that the contractor hired to conduct the demolition, work with an asbestos abatement company to coordinate the segregation of any suspect flooring materials encountered during demolition. This would likely involve the presence of a licensed asbestos abatement supervisor on site during demolition to properly handle these materials as they become accessible. This alternative approach would require approval from the Vermont Department of Health, Asbestos and Lead Control program prior to demolition. This demolition will also require notification to the Environmental Protection Agency 10 working days prior to the start date.

Please do not hesitate to call if you have any questions or need additional information.

Sincerely



John Madigan

41 IDX Drive • Suite 209 • South Burlington • Vermont • 05403-7757
(802) 862-7490 • (800) 639-2035
e-mail: kdai@kdassociatesinc.com • website: www.kdassociatesinc.com

APPENDIX C

Cleanup Cost Estimates

Cost Estimate
LE Environmental LLC
Alternative #1 Building Demolition with painted block disposal, paint removal from brick building
Mar-21

10%

General building demolition and asbestos abatement

	Rate	Units	Quantity	Subtotal	Markup	Total	Task Total
Temporary Site Access	$ 2,000.00	ea	1	$ 2,000.00		$ 2,000.00	
General Site Safety and Fencing	$ 2,000.00	ea	1	$ 2,000.00		$ 2,000.00	
Traffic Control	$ 2,000.00	day	1	$ 2,000.00		$ 2,000.00	
Pre-demolition cleanup	$ 2,000.00	ton	1	$ 2,000.00		$ 2,000.00	
Roofing removal	$ 2,000.00	ea	1	$ 2,000.00		$ 2,000.00	
Asbestos Abatement/Clearance	$ 6,500.00	ea	1	$ 6,500.00		$ 6,500.00	
							$ 16,500

Demo- 50 LF PCB Contaminated >50 ppm, 130 LF solid waste

	Rate	Units	Quantity	Subtotal	Markup	Total	Task Total
Contractor Mobilization	$ 2,500.00	ea	1	$ 2,500.00		$ 2,500.00	
Site prep	$ 1,000.00	ea	1	$ 1,000.00		$ 1,000.00	
Demo/excavator time	$ 1,500.00	day	3	$ 4,500.00		$ 4,500.00	
Site cleanup	$ 1,000.00	ea	1	$ 1,000.00		$ 1,000.00	
Contingency-30%						$ 2,700.00	
							$ 11,700

Paint removal North Wall Brick Building >50 ppm (~900 sf)

	Rate	Units	Quantity	Subtotal	Markup	Total	Task Total
Sandblasting Contractor	$ 5,000.00	day	3	$ 15,000.00		$ 15,000.00	
Mobilization	$ 1,000.00	ea	1	$ 1,000.00		$ 1,000.00	
T/D PCB contam	$ 500.00	drum	8	$ 4,000.00		$ 4,000.00	
T/D uncontaminated	$ 150.00	drum	2	$ 300.00		$ 300.00	
Site cleanup	$ 1,000.00	ea	1	$ 1,000.00		$ 1,000.00	
Brick confirmation testing (2)	$ 70.00	hour	8	$ 560.00		$ 560.00	
Travel (2)	$ 70.00	hour	10	$ 700.00		$ 700.00	
Mileage	$ 0.58	ea	250	$ 143.75		$ 143.75	
Hammer Drill Rental	$ 100.00	day	1	$ 100.00		$ 100.00	
EAI-PCB Analysis	$ 78.00	ea	8	$ 624.00		$ 624.00	
PPE	$ 100.00	allowance	1	$ 100.00		$ 100.00	
Contingency-30%						$ 7,058.33	
							$ 30,586

Cinder Block Disposal

	Rate	Units	Quantity	Subtotal	Markup	Total	Task Total
Contractor Labor Loading	$ 1,000.00	ea	1	$ 1,000.00		$ 1,000.00	
T/D PCB contam	$ 450.00	ton	21	$ 9,450.00		$ 9,450.00	
T/D <50(block + interior)	$ 80.00	ton	65	$ 5,200.00		$ 5,200.00	
							$ 15,650

Site Reconstruction

	Rate	Units	Quantity	Subtotal	Markup	Total	Task Total
Access Controls	$ 20,000.00	ea	1	$ 20,000.00		$ 20,000.00	
Facilities	$ 20,000.00	ea	1	$ 20,000.00		$ 20,000.00	
							$ 40,000

Contractor bid process

	Rate	Units	Quantity	Subtotal	Markup	Total	Task Total
Labor-Bid docs	$ 5,000.00	ea	1	$ 5,000.00		$ 5,000.00	
Labor-Specifications	$ 7,500.00	ea	1	$ 7,500.00		$ 7,500.00	
Labor-Contracting	$ 7,500.00	ea	1	$ 7,500.00		$ 7,500.00	
							$ 20,000

Admin/Coordination/Inspection / Abatement Report Preparation

	Rate	Units	Quantity	Subtotal	Markup	Total	Task Total
Labor-Reporting	$ 100.00	hr	24	$ 2,400.00		$ 2,400.00	
Labor-Review	$ 100.00	hr	6	$ 600.00		$ 600.00	
Labor-Validation	$ 100.00	hr	2	$ 200.00		$ 200.00	
Inspection SV	$ 70.00	hr	2	$ 140.00		$ 140.00	
Travel	$ 70.00	ea	5	$ 350.00		$ 350.00	
Mileage	$ 0.58	mi	250	$ 143.75		$ 143.75	
Asbestos oversight/clearance	$ 2,000.00	lot	1	$ 2,000.00		$ 2,000.00	
Drafting	$ 75.00	hr	2	$ 150.00		$ 150.00	
Coordination-demo contractor	$ 10,000.00	ea	1	$ 10,000.00		$ 10,000.00	**$ 15,984**

Total Estimate **$ 150,420**

Cost Estimate
LE Environmental LLC
Alternative #2 Building Demolition with paint removal from cinder blocks and brick building and local block disposal
Mar-21

10%

General building demolition and asbestos abatement

	Rate	Units	Quantity	Subtotal	Markup	Total	Task Total
Temporary Site Access	$ 2,000.00	ea	1	$ 2,000.00		$ 2,000.00	
General Site Safety and Fencing	$ 2,000.00	ea	1	$ 2,000.00		$ 2,000.00	
Traffic Control	$ 2,000.00	day	1	$ 2,000.00		$ 2,000.00	
Pre-demolition cleanup	$ 2,000.00	ton	1	$ 2,000.00		$ 2,000.00	
Roofing removal	$ 2,000.00	ea	1	$ 2,000.00		$ 2,000.00	
Asbestos Abatement/Clearance	$ 6,000.00	ea	1	$ 6,000.00		$ 6,000.00	
							$ 16,000

Paint Removal, Cinder Block Building (~1,300 sf)

	Rate	Units	Quantity	Subtotal	Markup	Total	Task Total
Sandblasting Contractor	$ 5,000.00	day	5	$ 25,000.00		$ 25,000.00	
Mobilization	$ 1,000.00	ea	1	$ 1,000.00		$ 1,000.00	
T/D PCB contam	$ 500.00	drum	8	$ 4,000.00		$ 4,000.00	
T/D uncontaminated	$ 150.00	drum	4	$ 600.00		$ 600.00	
Site cleanup	$ 1,000.00	ea	1	$ 1,000.00		$ 1,000.00	
Cinder block confirmation testing (2)	$ 70.00	hour	8	$ 560.00		$ 560.00	
Travel (2)	$ 70.00	hour	10	$ 700.00		$ 700.00	
Mileage	$ 0.58	ea	250	$ 143.75		$ 143.75	
Hammer Drill Rental	$ 100.00	day	2	$ 200.00		$ 200.00	
EAI-PCB Analysis	$ 78.00	ea	15	$ 1,170.00		$ 1,170.00	
PPE	$ 100.00	allowance	1	$ 100.00		$ 100.00	
Contingency-30%						$ 10,342.13	
							$ 44,816

Paint removal North Wall Brick Building >50 ppm (~900 sf)

	Rate	Units	Quantity	Subtotal	Markup	Total	Task Total
Sandblasting Contractor	$ 5,000.00	day	3	$ 15,000.00		$ 15,000.00	
Mobilization	$ 1,000.00	ea	1	$ 1,000.00		$ 1,000.00	
T/D PCB contam	$ 500.00	drum	8	$ 4,000.00		$ 4,000.00	
T/D uncontaminated	$ 150.00	drum	2	$ 300.00		$ 300.00	
Site cleanup	$ 1,000.00	ea	1	$ 1,000.00		$ 1,000.00	
Brick confirmation testing (2)	$ 70.00	hour	8	$ 560.00		$ 560.00	
Travel (2)	$ 70.00	hour	10	$ 700.00		$ 700.00	
Mileage	$ 0.58	ea	250	$ 143.75		$ 143.75	
Hammer Drill Rental	$ 100.00	day	1	$ 100.00		$ 100.00	
EAI-PCB Analysis	$ 78.00	ea	8	$ 624.00		$ 624.00	
PPE	$ 100.00	allowance	1	$ 100.00		$ 100.00	
Contingency-30%						$ 7,058.33	
							$ 30,586

Cinder Block Disposal

	Rate	Units	Quantity	Subtotal	Markup	Total	Task Total
Contractor Labor Loading	$ 1,000.00	ea	1	$ 1,000.00		$ 1,000.00	
Facility C/D	$ 80.00	ton	85	$ 6,800.00		$ 6,800.00	
							$ 7,800

Site Reconstruction

	Rate	Units	Quantity	Subtotal	Markup	Total	Task Total
Access Controls	$ 20,000.00	ea	1	$ 20,000.00		$ 20,000.00	
Facilities	$ 20,000.00	ea	1	$ 20,000.00		$ 20,000.00	
							$ 40,000

Contractor bid process

	Rate	Units	Quantity	Subtotal	Markup	Total	Task Total
Labor-Bid docs	$ 5,000.00	ea	1	$ 5,000.00		$ 5,000.00	
Labor-Specifications	$ 7,500.00	ea	1	$ 7,500.00		$ 7,500.00	
Labor-Contracting	$ 7,500.00	ea	1	$ 7,500.00		$ 7,500.00	
							$ 20,000

Admin/Coordination/Inspection / Abatement Report Preparation

	Rate	Units	Quantity	Subtotal	Markup	Total	Task Total
Labor-Reporting	$ 100.00	hr	24	$ 2,400.00		$ 2,400.00	
Labor-Review	$ 100.00	hr	6	$ 600.00		$ 600.00	
Labor-Validation	$ 100.00	hr	2	$ 200.00		$ 200.00	
Inspection SV	$ 70.00	hr	2	$ 140.00		$ 140.00	
Travel	$ 70.00	ea	5	$ 350.00		$ 350.00	
Mileage	$ 0.58	mi	250	$ 143.75		$ 143.75	
Drafting	$ 75.00	hr	2	$ 150.00		$ 150.00	
Coordination-demo contractor	$ 10,000.00	ea	1	$ 10,000.00		$ 10,000.00	**$ 13,984**

Total Estimate **$ 173,186**