

Appendix B | Limited Hazardous Materials Survey

LIMITED HAZARDOUS MATERIALS SURVEY REPORT

For

**Assignment #3 Rehabilitate the Wastewater Treatment Plants at the Port Byron and Clifton Springs Service
Areas
in the Syracuse Division, MP 310.2 eastbound and MP 337.1 eastbound**

**Clifton Springs Travel Plaza Wastewater Treatment Plant
Mile Post 337.1
New York State Thruway
Clifton Springs, New York**

Beardsley #17011

March 8, 2017

Prepared for:

New York State Thruway Authority
200 Southern Blvd.
Albany, New York 12209



Beardsley Project # 17011
5789 Widewaters Parkway
Dewitt, New York 13214
Telephone: (315) 472-6980
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1. Location Plan
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- A. Asbestos Analysis Reports
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EXECUTIVE SUMMARY

Beardsley Architects + Engineers (Beardsley) has conducted a Limited Hazardous Materials Survey at the Clifton Springs Travel Plaza Wastewater Treatment Plant located in Clifton Springs, New York.

Purpose:

A Limited Hazardous Material Survey was conducted to identify hazardous building materials prior to a planned Wastewater Treatment Plant rehabilitation project.

Findings:

- No asbestos-containing materials were identified during the limited survey.
- Lead-containing paints (<0.5% lead by weight) were identified at the Trickling Filter, Control Building, and Sludge Holding Tank. Painted surfaces observed in good condition were not sampled as part of this survey and must be assumed to have detectable lead levels at concentrations above OSHA and EPA standards due to the age of the Wastewater Treatment Plant. OSHA worker protection regulations (29 CFR 1926.62) will apply to disturbances of these paints.
- No suspect polychlorinated biphenyls-containing (PCBs) caulks were observed within the work area during our December 29, 2016 site visit.
- Refer to Report Section 6.0 for recommendations associated with these findings.

1.0 INTRODUCTION

1.1 Purpose

In accordance with Assignment Number 3 of Term Contract No. D214307, Beardsley conducted a Limited Hazardous Material Survey at the Clifton Springs Travel Plaza Wastewater Treatment Plant located at mile post 337.1 (eastbound) of the New York State Thruway in Clifton Springs, New York. The scope of the Limited Hazardous Material Survey was limited to areas and materials affected by the planned Wastewater Treatment Plant rehabilitation project. The services included limited asbestos and lead-based paint surveys, along with the analysis of caulk for polychlorinated biphenyls.

1.2 Limitations

The survey was further limited as follows:

1. Only materials expected to be disturbed during the planned wastewater treatment plant upgrade project were sampled and analyzed as part of the survey.
2. No destructive sampling through structure floors, walls, or ceilings was conducted to limit destruction of finished materials.
3. No survey was completed on operational mechanical/electrical equipment.
4. Beardsley did not have access within active Wastewater Treatment Plant tanks and equipment. As such suspect hazardous materials, may exist in these locations.

2.0 ASBESTOS SURVEY

2.1 Purpose

The purpose of the asbestos survey was to determine whether or not the building or structure, or portion(s) thereof to be demolished, renovated, remodeled, or have repair work, contain asbestos-containing material (ACM). Refer to Report Section 1.2 Limitations. The survey was conducted in accordance with New York State Department of Labor (NYSDOL) Industrial Code Rule 56.

2.2 Classification

Asbestos-containing material (ACM) is defined by the United States Environmental Protection Agency (EPA) as a material containing greater than 1% asbestos by weight. The Occupational Safety and Health Administration (OSHA) defines asbestos-containing material as a material containing any detectable concentration of asbestos.

2.3 Field Sampling

The survey, conducted on December 29, 2016, consisted of bulk sampling and analysis of exposed suspect asbestos-containing materials observed on structures and equipment in areas affected by the planned project. A total of seventeen bulk samples of suspect asbestos-containing materials were collected from the project area. In general, the types of materials sampled consisted of:

CLIFTON SPRINGS WWTP SAMPLED MATERIALS		
Homogeneous Material		General Material Locations
No. ^{1.}	Material	
1	Skim coat #1	Primary and Secondary Clarifier concrete structure
2	Skim coat #2	Trickling Filter concrete structure
3	Skim coat #3	Control Building concrete structure
4	Skim coat #4	Sludge Holding Tank concrete structure
5	Skim coat #5	Effluent concrete structure
Notes:		
^{1.} Homogeneous material number corresponds to the first set of numbers in Sample ID on Chain of Custody provided in Report Attachment A.		
^{2.} Refer to Figure 2 for sample locations.		

2.4 Conclusions

EMSL Analytical, Inc, a New York State Department of Health (NYSDOH) ELAP-accredited testing laboratory (NYSELAP #11606), conducted the laboratory analyses. Samples of friable materials were analyzed by the polarized light microscopy (PLM) method. Samples of non-friable organically-bound (NOB) materials were analyzed by both the PLM and transmission electron microscopy (TEM) methods. Following the laboratory analysis, materials containing greater than 1% asbestos by weight are classified as asbestos-containing material, and those materials containing less than 1% asbestos by weight are classified as trace-asbestos-containing materials.

No sampled materials contained detectable asbestos. A copy of the Laboratory Analytical Report is provided in Report Attachment A.

3.0 LEAD-BASED PAINT SURVEY

3.1 Purpose

The purpose of this Lead-Based Paint Survey was to identify the type and extent of all lead-based paint (LBP) in poor condition with separation from substrate materials within the project area prior to the Wastewater Treatment Plant rehabilitation project.

3.2 Classification

The U.S. Environmental Protection Agency (EPA) and the U.S. Department of Housing and Urban Development (HUD) define lead-based paint as paint containing equal to or greater than 1 mg lead/cm² or 0.5% lead by weight. The Occupational Safety and Health Administration (OSHA) defines lead-containing materials as paint and other materials which contain any detectable concentration of lead.

3.3 Field Sampling

On December 29, 2016, Beardsley collected twelve paint chip samples from structures and equipment for laboratory analysis of lead content. The sample locations consisted of a single paint layer unless noted otherwise. The sampled paints were observed in poor to fair condition.

Visually similar paints and substrates observed from area to area were assumed to have the same paint and were not resampled.

3.4 Conclusions

EMSL Analytical, Inc. performed laboratory analysis for lead content by flame atomic absorption spectrometry (AAS) in accordance with EPA Method SW 846 3050B and 7420. Of the twelve paint chip samples delivered to EMSL, none contained detectable lead concentrations greater than the EPA action level of 0.5% lead by weight. Four sampled paints contained detectable concentrations of lead and are classified as lead-containing materials according to OSHA. Laboratory analytical results are summarized below:

SUMMARY OF LEAD-BASED PAINT ANALYTICAL RESULTS			
Sample #	Paint Color	Locations	Lead Concentration (by weight)
L-CS-1	Green/Light Green	Painted steel valve body by Flow Diversion Structure	<0.010%
L-CS-2	Cream-Beige	Painted concrete Trickling Filter structure	0.016%
L-CS-3	Brown/Gray	Painted wood door at Trickling Filter	<0.010%
L-CS-4	Light Brown/White	Painted concrete structure at Control Building	<0.010%
L-CS-5	Brown	Painted wood door at wet well of the Control Building	<0.010%
L-CS-6	White/Dark Gray/Blue/Light Green	Painted concrete structure at wet well of the Control Building	0.056%
L-CS-7	White/Black	Painted concrete structure at interior of Control Building	0.068%

SUMMARY OF LEAD-BASED PAINT ANALYTICAL RESULTS			
Sample #	Paint Color	Locations	Lead Concentration (by weight)
L-CS-8	Gray	Painted concrete floor at the Control Building	<0.010%
L-CS-9	Brown	Painted wood wet well access hatch at the interior of the Control Building	<0.010%
L-CS-10	Cream-White	Painted concrete structure at Sludge Holding Tank	0.013%
L-CS-11	Dark Brown/Green/Gray	Painted steel hatch at Sludge Holding Tank	<0.010%
L-CS-12	Cream-White	Painted concrete structure at Effluent Structure	<0.010%

A copy of the EMSL Laboratory Test Report is included in Report Attachment B.

Painted surfaces observed in good condition were not sampled as part of this survey and must be assumed to have detectable lead levels at concentrations above OSHA and EPA standards due to the age of the Wastewater Treatment Plant.

4.0 POLYCHLORINATED BIPHENYLS SURVEY

4.1 Purpose

The purpose of the polychlorinated biphenyls survey was to determine if polychlorinated biphenyl (PCBs) are present in exposed caulks used within the project area prior to the planned Wastewater Treatment Plant rehabilitation project. Refer to Section 1.2 Limitations.

4.2 Classification

According to the EPA, caulk containing PCBs at concentrations greater than or equal to 50 ppm is considered a hazardous material.

4.3 Field Sampling

No suspect polychlorinated biphenyls-containing caulks were observed within the work area during our December 29, 2016 site visit.

5.0 DISCLAIMER

Beardsley assumes no responsibility, liability, or risk for the use of this report for any purpose other than as a Limited Hazardous Material Survey. A Limited Hazardous Material Survey is not intended to be used as an

abatement design document. Furthermore, due to the potential for concealed hazardous materials, this Report should not be construed to represent all hazardous materials present at the site, and all quantities/locations of hazardous materials identified in this report are approximate and shall be verified on-site.

6.0 RECOMMENDATIONS

6.1 Concealed Materials

There is a possibility that other concealed hazardous materials may be present. If any suspect hazardous material is encountered during future renovation/demolition activities, the renovation/demolition work should immediately stop. Prior to resuming the building renovation/demolition work, the suspect hazardous material should be sampled by a certified professional and submitted to a certified laboratory for analysis. Alternatively, they may be assumed to be hazardous and removed by a licensed abatement contractor and disposed of in accordance with all applicable regulations.

6.2 Lead-Based Paint

During handling of lead-containing paints, measures should be taken to prevent lead exposure to the public and the environment. OSHA Lead in Construction Standard (29 CFR Part 1926.62) worker protection procedures will apply to disturbance of lead-based paint.

We trust that this Limited Hazardous Material Survey meets your requirements for the Wastewater Treatment Plant Rehabilitation project. If you should have any questions or require additional information, please feel free to contact our office at your convenience.

Very truly yours,

BEARDSLEY ARCHITECTS + ENGINEERS



Douglas E. Porter, P.E.

NYSDOL Asbestos Inspector/Designer #08-20452

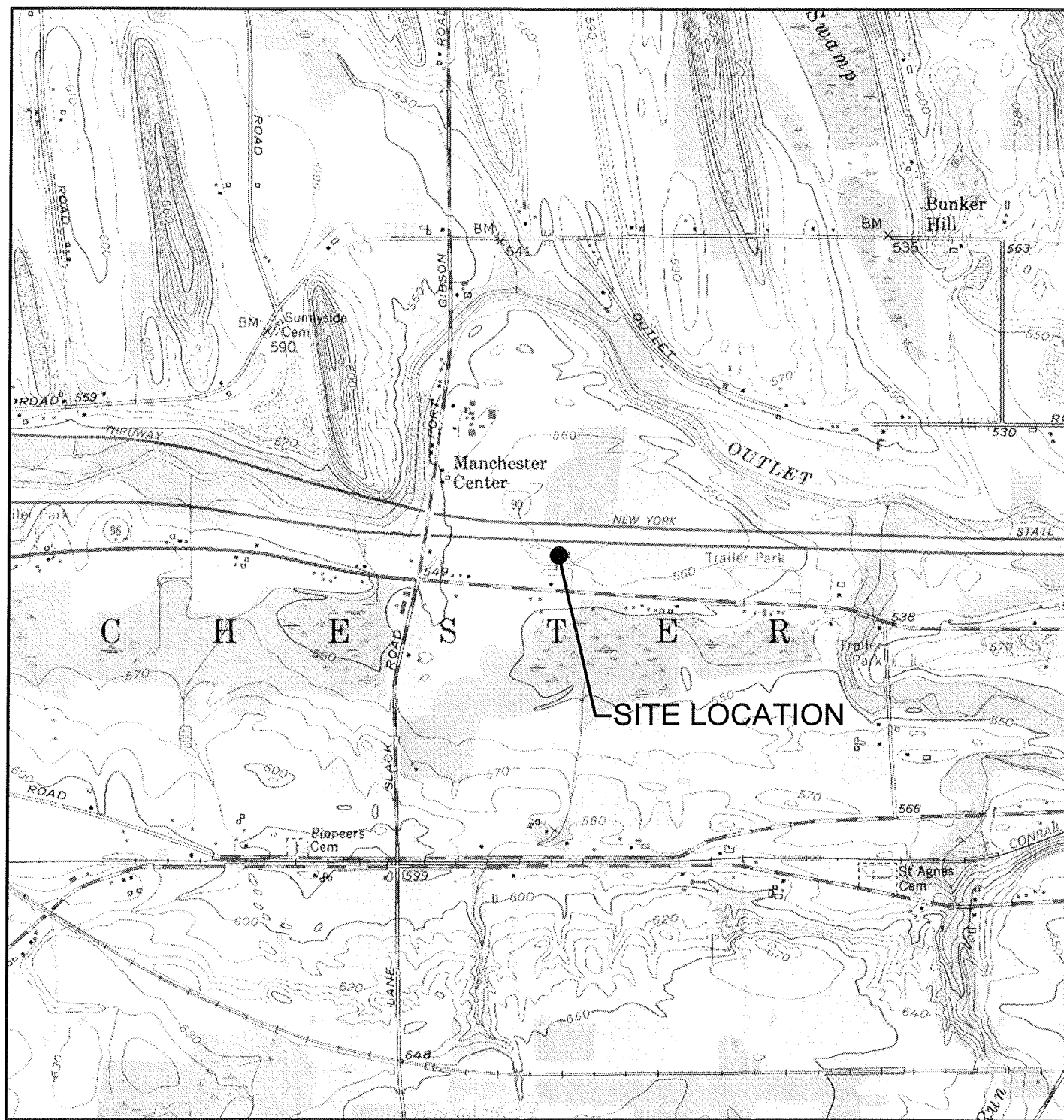
USEPA LBP Inspector #NY-I-128954-1



Carmen J. Lapine, P.E.

Principal

FIGURES



WARNING
Any alterations to this document not
conforming to section 7307, New York
State Education Law are strictly prohibited.

ENVIRONMENTAL LOCATION PLAN

FIG-1

Submission Name
March 2017

Project No: 17011

Drawn By: FJS

Designed By: DEP

Reviewed By: DEP/CJL

Assignment #3 Rehabilitate the Wastewater
Treatment Plants at Clifton Springs and Port
Byron Service Areas in the Syracuse Division MP
337.10 Eastbound and MP 310.20 Eastbound

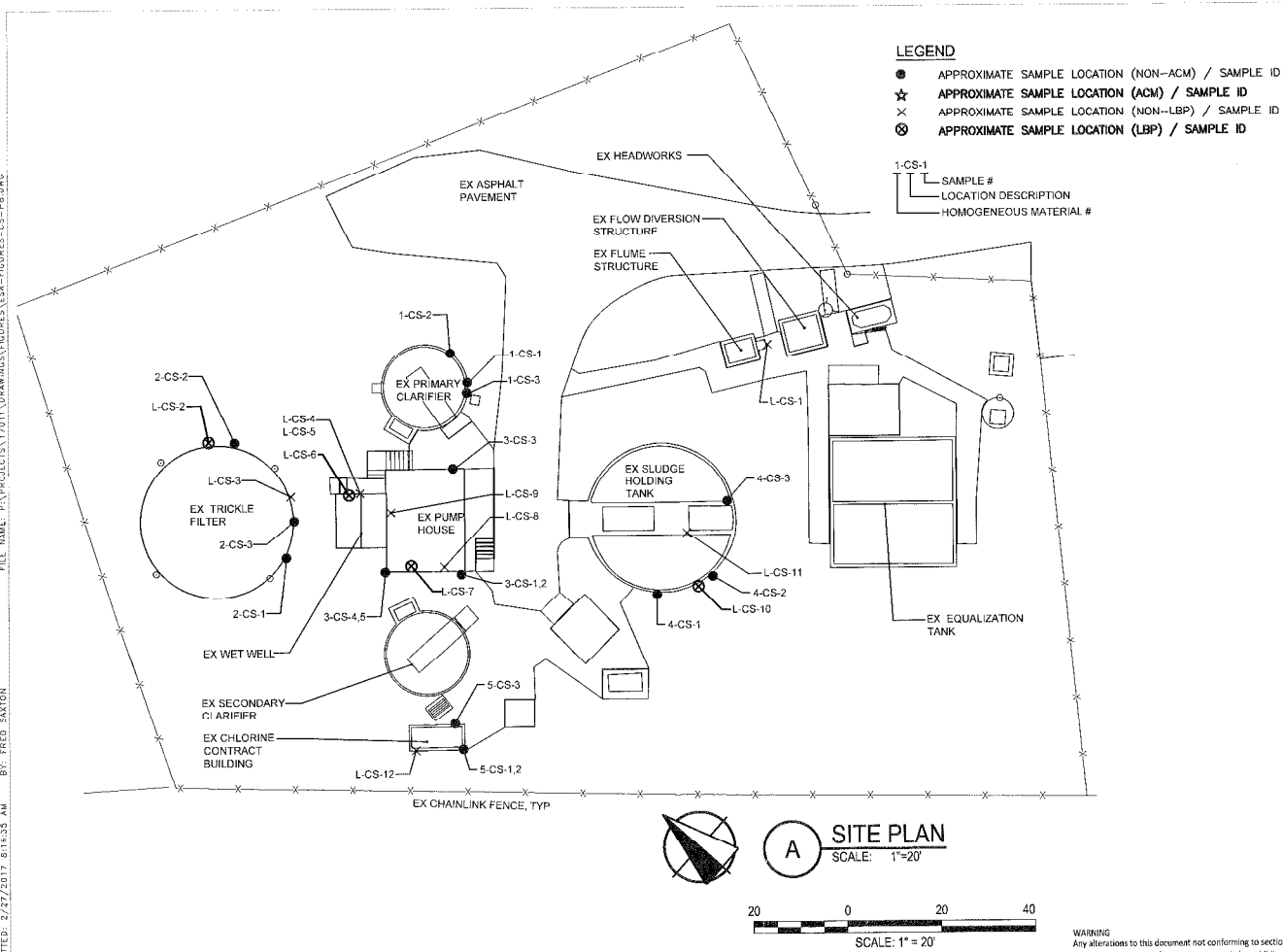
Clifton Springs Travel Plaza Wastewater
Treatment Plant

beardsley
architects + engineers

FILE NAME: P:\PROJECTS\17011\DRAWINGS\FIGURES\ESA-FIGURES-CS-PB.DWG

BY: FRED SEXTON

PLOTTED: 2/27/2017 8:18:05 AM



Submission Name
March 2017
Project No: 17011
Drawn By: FJS
Designed By: DEP
Reviewed By: DEP/CIL

Rehabilitate the Wastewater Treatment Plants at
Clifton Springs and Port Byron Service Areas in the Syracuse Division
MP 337.10 Eastbound and MP 310.20 Eastbound
CLIFTON SPRINGS TRAVEL PLAZA WASTEWATER TREATMENT PLANT

no. revision description by date
ENVIRONMENTAL

SAMPLE LOCATION PLAN

FIG-2

ATTACHMENT A

ASBESTOS ANALYSIS REPORTS

**EMSL Analytical, Inc.**

490 Rowley Road, Depew, NY 14043

Phone/Fax: (716) 651-0030 / (716) 651-0394

<http://www.EMSL.com>buffalolab@emsl.com

EMSL Order: 141700012

CustomerID: C&HE50

CustomerPO:

ProjectID:

Attn: **Douglas Porter**
Beardsley Design Associates
5789 Widewaters Parkway
De Witt, NY 13214

Phone: (315) 472-6980
 Fax: (315) 472-3523
 Received: 12/30/16 10:21 AM
 Analysis Date: 1/5/2017
 Collected: 12/29/2016

Project: **NYSTA Clifton Springs/BDA17011****Test Report:Asbestos Analysis of Bulk Material**

Test	Analyzed Date	Color	Non Asbestos		Asbestos
			Fibrous	Non-Fibrous	
Sample ID 1-CS-1 141700012-0001		Description Homogeneity	Clifton Springs, primary clarifier - skim coat #1 Homogeneous		
PLM NYS 198.1 Friable	1/5/2017	Black		100.00% Non-fibrous (other)	None Detected
PLM NYS 198.6 VCM					Not Analyzed
PLM NYS 198.6 NOB					Not Analyzed
TEM NYS 198.4 NOB					Not Analyzed
Sample ID 1-CS-2 141700012-0002		Description Homogeneity	Clifton Springs, primary clarifier - skim coat #1 Homogeneous		
PLM NYS 198.1 Friable	1/5/2017	Black		100.00% Non-fibrous (other)	None Detected
PLM NYS 198.6 VCM					Not Analyzed
PLM NYS 198.6 NOB					Not Analyzed
TEM NYS 198.4 NOB					Not Analyzed
Sample ID 1-CS-3 141700012-0003		Description Homogeneity	Clifton Springs, primary clarifier - skim coat #1 Homogeneous		
PLM NYS 198.1 Friable	1/5/2017	Black		100.00% Non-fibrous (other)	None Detected
PLM NYS 198.6 VCM					Not Analyzed
PLM NYS 198.6 NOB					Not Analyzed
TEM NYS 198.4 NOB					Not Analyzed
Sample ID 2-CS-1 141700012-0004		Description Homogeneity	Clifton Springs, trickling filter - skim coat #2 Heterogeneous		
PLM NYS 198.1 Friable	1/5/2017	Gray/White		100.00% Non-fibrous (other)	None Detected
PLM NYS 198.6 VCM					Not Analyzed
PLM NYS 198.6 NOB					Not Analyzed
TEM NYS 198.4 NOB					Not Analyzed
Sample ID 2-CS-2 141700012-0005		Description Homogeneity	Clifton Springs, trickling filter - skim coat #2 Heterogeneous		
PLM NYS 198.1 Friable	1/5/2017	Gray/White		100.00% Non-fibrous (other)	None Detected
PLM NYS 198.6 VCM					Not Analyzed
PLM NYS 198.6 NOB					Not Analyzed
TEM NYS 198.4 NOB					Not Analyzed

**EMSL Analytical, Inc.**

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Phone/Fax: (716) 651-0030 / (716) 651-0394

<http://www.EMSL.com>buffalolab@emsl.com

EMSL Order: 141700012

CustomerID: C&HE50

CustomerPO:

ProjectID:

Test Report:Asbestos Analysis of Bulk Material

Non Asbestos				
Test	Color	Fibrous	Non-Fibrous	Asbestos
Sample ID 2-CS-3 141700012-0006	Description Homogeneity	Clifton Springs, trickling filter - skim coat #2 Heterogeneous		
PLM NYS 198.1 Friable	1/5/2017	Gray/White	100.00% Non-fibrous (other)	None Detected
PLM NYS 198.6 VCM				Not Analyzed
PLM NYS 198.6 NOB				Not Analyzed
TEM NYS 198.4 NOB				Not Analyzed
Sample ID 3-CS-1 141700012-0007	Description Homogeneity	Clifton Springs, control building - skim coat #3 Homogeneous		
PLM NYS 198.1 Friable	1/5/2017	White	100.00% Non-fibrous (other)	None Detected
PLM NYS 198.6 VCM				Not Analyzed
PLM NYS 198.6 NOB				Not Analyzed
TEM NYS 198.4 NOB				Not Analyzed
Sample ID 3-CS-2 141700012-0008	Description Homogeneity	Clifton Springs, control building - skim coat #3 Homogeneous		
PLM NYS 198.1 Friable	1/5/2017	White	100.00% Non-fibrous (other)	None Detected
PLM NYS 198.6 VCM				Not Analyzed
PLM NYS 198.6 NOB				Not Analyzed
TEM NYS 198.4 NOB				Not Analyzed
Sample ID 3-CS-3 141700012-0009	Description Homogeneity	Clifton Springs, control building - skim coat #3 Homogeneous		
PLM NYS 198.1 Friable	1/5/2017	White	100.00% Non-fibrous (other)	None Detected
PLM NYS 198.6 VCM				Not Analyzed
PLM NYS 198.6 NOB				Not Analyzed
TEM NYS 198.4 NOB				Not Analyzed
Sample ID 3-CS-4 141700012-0010	Description Homogeneity	Clifton Springs, control building - skim coat #3 Homogeneous		
PLM NYS 198.1 Friable	1/5/2017	White	100.00% Non-fibrous (other)	None Detected
PLM NYS 198.6 VCM				Not Analyzed
PLM NYS 198.6 NOB				Not Analyzed
TEM NYS 198.4 NOB				Not Analyzed
Sample ID 3-CS-5 141700012-0011	Description Homogeneity	Clifton Springs, control building - skim coat #3 Homogeneous		
PLM NYS 198.1 Friable	1/5/2017	White	100.00% Non-fibrous (other)	None Detected
PLM NYS 198.6 VCM				Not Analyzed
PLM NYS 198.6 NOB				Not Analyzed
TEM NYS 198.4 NOB				Not Analyzed

**EMSL Analytical, Inc.**

490 Rowley Road, Depew, NY 14043

Phone/Fax: (716) 651-0030 / (716) 651-0394

<http://www.EMSL.com>buffalolab@emsl.com

EMSL Order: 141700012

CustomerID: C&HE50

CustomerPO:

ProjectID:

Test Report:Asbestos Analysis of Bulk Material

Test		Color	Fibrous	Non-Fibrous	Asbestos
Sample ID	4-CS-1 141700012-0012	Description Homogeneity	Clifton Springs, sludge holding tank - skim coat #4 Homogeneous		
PLM NYS 198.1 Friable	1/5/2017	White	100.00% Non-fibrous (other)		None Detected
PLM NYS 198.6 VCM					Not Analyzed
PLM NYS 198.6 NOB					Not Analyzed
TEM NYS 198.4 NOB					Not Analyzed
Sample ID	4-CS-2 141700012-0013	Description Homogeneity	Clifton Springs, sludge holding tank - skim coat #4 Homogeneous		
PLM NYS 198.1 Friable	1/5/2017	White	100.00% Non-fibrous (other)		None Detected
PLM NYS 198.6 VCM					Not Analyzed
PLM NYS 198.6 NOB					Not Analyzed
TEM NYS 198.4 NOB					Not Analyzed
Sample ID	4-CS-3 141700012-0014	Description Homogeneity	Clifton Springs, sludge holding tank - skim coat #4 Homogeneous		
PLM NYS 198.1 Friable	1/5/2017	White	100.00% Non-fibrous (other)		None Detected
PLM NYS 198.6 VCM					Not Analyzed
PLM NYS 198.6 NOB					Not Analyzed
TEM NYS 198.4 NOB					Not Analyzed
Sample ID	5-CS-1 141700012-0015	Description Homogeneity	Clifton Springs, effluent structure - skim coat #5 Homogeneous		
PLM NYS 198.1 Friable	1/5/2017	White	100.00% Non-fibrous (other)		None Detected
PLM NYS 198.6 VCM					Not Analyzed
PLM NYS 198.6 NOB					Not Analyzed
TEM NYS 198.4 NOB					Not Analyzed
Sample ID	5-CS-2 141700012-0016	Description Homogeneity	Clifton Springs, effluent structure - skim coat #5 Homogeneous		
PLM NYS 198.1 Friable	1/5/2017	White	100.00% Non-fibrous (other)		None Detected
PLM NYS 198.6 VCM					Not Analyzed
PLM NYS 198.6 NOB					Not Analyzed
TEM NYS 198.4 NOB					Not Analyzed
Sample ID	5-CS-3 141700012-0017	Description Homogeneity	Clifton Springs, effluent structure - skim coat #5 Homogeneous		
PLM NYS 198.1 Friable	1/5/2017	White	100.00% Non-fibrous (other)		None Detected
PLM NYS 198.6 VCM					Not Analyzed
PLM NYS 198.6 NOB					Not Analyzed
TEM NYS 198.4 NOB					Not Analyzed

**EMSL Analytical, Inc.**

490 Rowley Road, Depew, NY 14043

Phone/Fax: (716) 651-0030 / (716) 651-0394

<http://www.EMSL.com>buffalolab@emsl.com

EMSL Order: 141700012

CustomerID: C&HE50

CustomerPO:

ProjectID:

Test Report:Asbestos Analysis of Bulk Material

Test	Color	Non Asbestos		Asbestos
		Fibrous	Non-Fibrous	

Analyst(s)

Michelle SkillmanRhonda McGee, Laboratory Manager
or other approved signatory

NOB = Non Friable Organically Bound N/A = Not Applicable VCM = Vermiculite Containing Material

-In New York State, TEM is currently the only method that can be used to determine if NOB materials can be considered or treated as non-asbestos containing.

All samples examined for the presence of vermiculite when analyzed via NYS 198.1.

-NYS Guidelines for Vermiculite containing samples are available at http://www.wadsworth.org/labcert/elapcert/forms/VermiculiteInterimGuidance_Rev070913.pdf

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples were received in good condition unless otherwise noted.

This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. This report may contain data that is not covered by the NVLAP accreditation.

Samples analyzed by EMSL Analytical, Inc. Depew, NY NYS ELAP 11606

FAX: (716) 651-0394

Page 1 Of 2



141700012
ASBESTOS BULK SAMPLING

CHAIN OF CUSTODY FORM

Location: NYSTA-Clifton Springs
 Collected by: Douglas E Porter
 Delivered by: _____
 Received by: [Signature]

BDA# 17011
 Date: 12/29/16
 Date: _____
 Date: 12/30/16

Notes: _____

Requested Turnaround Time: 1-week

No.	Sample ID	Sample Location	Material Sampled	Homogenous Material #
1.	1-CS-1	Clifton Springs - Primary Clarifier	Skim coat #1	1
2.	1-CS-2	" "	" "	1
3.	1-CS-3	" "	" "	1
4.	2-CS-1	" Trickleling Filter	Skim coat #2	2
5.	2-CS-2	" " "	" "	2
6.	2-CS-3	" " "	" "	2
7.	3-CS-1	" Control Building	Skim coat #3	3
8.	3-CS-2	" " "	" "	3
9.	3-CS-3	" " "	" "	3
10.	3-CS-4	" " "	" "	3
11.	3-CS-5	" " "	" "	3
12.	4-CS-1	" Sludge Holding Tank	Skim coat #4	4
13.	4-CS-2	" " "	" "	4
14.	4-CS-3	" " "	" "	4
15.	5-CS-1	" Effluent structure	Skim coat #5	5
16.	5-CS-2	" " "	" "	5
17.	5-CS-3	" " "	" "	5
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

ATTACHMENT B

LEAD-BASED PAINT ANALYSIS REPORTS

**EMSL Analytical, Inc.**

528 Mineola Avenue, Carle Place, NY 11514

Phone/Fax: (516) 997-7251 / (516) 997-7528

<http://www.EMSL.com>carleplacelab@emsl.com

EMSL Order: 061700041

CustomerID: C&HE50

CustomerPO:

ProjectID:

Attn: **Douglas Porter**
Beardsley Design Associates
5789 Widewaters Parkway
De Witt, NY 13214

Phone: (315) 472-6980
Fax: (315) 472-3523
Received: 12/30/16 9:23 AM
Collected: 12/29/2016

Project: **NYSTA-Clifton Springs/BDA17011****Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)***

<i>Client Sample Description</i>	<i>Lab ID</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Lead Concentration</i>
L-CS-1 Site: Steel Valve Body Desc: Green/Lt. Green	061700041-0001	12/29/2016	1/5/2017	<0.010 % wt
L-CS-2 Site: Concrete at Tricking Filter Desc: Cream-Beige	061700041-0002	12/29/2016	1/5/2017	0.016 % wt
L-CS-3 Site: Wood Door at Tricking Filter Desc: Brown/Gray	061700041-0003	12/29/2016	1/5/2017	<0.010 % wt
L-CS-4 Site: Concrete at Control Building Desc: Lt. Brown/White	061700041-0004	12/29/2016	1/5/2017	<0.010 % wt
L-CS-5 Site: Wood Door at Wet Well Desc: Brown	061700041-0005	12/29/2016	1/5/2017	<0.010 % wt
L-CS-6 Site: Concrete at Wet Wall Desc: White/Dk gray/blue/Lt. gray	061700041-0006	12/29/2016	1/5/2017	0.056 % wt
L-CS-7 Site: Control Building Concrete Wall Desc: White/Black	061700041-0007	12/29/2016	1/5/2017	0.068 % wt
L-CS-8 Site: Control Building Concrete Floor Desc: Gray	061700041-0008	12/29/2016	1/5/2017	<0.010 % wt
L-CS-9 Site: Control Building Wood Access Hatch Desc: Brown	061700041-0009	12/29/2016	1/5/2017	<0.010 % wt
L-CS-10 Site: Concrete at Sludge Holding Tank Desc: Cream-White	061700041-0010	12/29/2016	1/5/2017	0.013 % wt
L-CS-11 Site: Steel Sludge Holding Tank Hatch Desc: Dark Brown/Green/Gray	061700041-0011	12/29/2016	1/5/2017	<0.010 % wt

Michelle McGowan, Laboratory Manager
or other approved signatory

*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.010 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements unless specifically indicated otherwise. Definitions of modifications are available upon request.

Samples analyzed by EMSL Analytical, Inc. Carle Place, NY Lab ID 102344 is accredited by the AIHA-LAP, LLC in the Environmental Lead accreditation program for Lead in Paint, CT PH-0249, NYS ELAP 11469

Initial report from 01/05/2017 20:48:06

**EMSL Analytical, Inc.**

528 Mineola Avenue, Carle Place, NY 11514

Phone/Fax: (516) 997-7251 / (516) 997-7528

<http://www.EMSL.com>carleplacelab@emsl.com

EMSL Order: 061700041

CustomerID: C&HE50

CustomerPO:

ProjectID:

Attn: **Douglas Porter**
Beardsley Design Associates
5789 Widewaters Parkway
De Witt, NY 13214

Phone: (315) 472-6980
Fax: (315) 472-3523
Received: 12/30/16 9:23 AM
Collected: 12/29/2016

Project: **NYSTA-Clifton Springs/BDA17011****Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)***

<i>Client Sample Description</i>	<i>Lab ID</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Lead Concentration</i>
L-CS-12	061700041-0012	12/29/2016	1/5/2017	<0.010 % wt
Site: Effluent Structure Concrete				
Desc: Cream-White				

Michelle McGowan, Laboratory Manager
or other approved signatory

*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.010 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements unless specifically indicated otherwise. Definitions of modifications are available upon request.

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Initial report from 01/05/2017 20:48:06

EMSL

Lead (Pb) Chain of Custody

EMSL Order (To Use Only):

Carle Place, NY 11514

PHONE: (516) 997-7251

FAX: (516) 997-7528

EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

061700041

Company: Beardsley Design Associates		EMSL-Bill to: <input type="checkbox"/> Different <input checked="" type="checkbox"/> Same If Bill to is Different note instructions in Comments**	
Street: 5789 Widewaters Parkway		Third Party Billing requires written authorization from third party	
City: De Witt	State/Province: NY	Zip/Postal Code: 13214	Country: United States
Report To (Name): Douglas Porter		Telephone #: 315-472-6980	
Email Address: dporter@beardsley.com		Fax #: 315-472-3523	Purchase Order:
Project Name/Number: NYSTA - Clifton Springs/BDA17011		Please Provide Results: <input type="checkbox"/> FAX <input checked="" type="checkbox"/> E-mail <input type="checkbox"/> Mail	
U.S. State Samples Taken: NY		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	
Turnaround Time (TAT) Options* - Please Check			
<input type="checkbox"/> 3 Hour	<input type="checkbox"/> 6 Hour	<input type="checkbox"/> 24 Hour	<input type="checkbox"/> 48 Hour
<input type="checkbox"/> 72 Hour	<input type="checkbox"/> 96 Hour	<input checked="" type="checkbox"/> 1 Week	<input type="checkbox"/> 2 Week
*Analysis completed in accordance with EMSL's Terms and Conditions located in the Price Guide			
Matrix	Method	Instrument	Reporting Limit
Chips <input checked="" type="checkbox"/> % by wt. <input type="checkbox"/> mg/cm ² <input type="checkbox"/> ppm	SW846-7000B	Flame Atomic Absorption	0.01%
Air <input checked="" type="checkbox"/>	NIOSH 7082	Flame Atomic Absorption	4 µg/filter
	NIOSH 7105	Graphite Furnace AA	0.03 µg/filter
	NIOSH 7300 modified	ICP-AES/ICP-MS	0.5 µg/filter
Wipe* <input type="checkbox"/> ASTM <input type="checkbox"/> non ASTM <input type="checkbox"/> *if no box is checked, non-ASTM Wipe is assumed	SW846-7000B	Flame Atomic Absorption	10 µg/wipe
	SW846-6010B or C	ICP-AES	1.0 µg/wipe
	SW846-7000B/7010	Graphite Furnace AA	0.075 µg/wipe
TCLP	SW846-1311/7000B/SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)
	SW846-1131/SW846-6010B or C	ICP-AES	0.1 mg/L (ppm)
Soil	SW846-7000B	Flame Atomic Absorption	40 mg/kg (ppm)
	SW846-7010	Graphite Furnace AA	0.3 mg/kg (ppm)
	SW846-6010B or C	ICP-AES	2 mg/kg (ppm)
Wastewater Unpreserved <input type="checkbox"/> Preserved with HNO ₃ pH < 2 <input type="checkbox"/>	SM3111B/SW846-7000B	Flame Atomic Absorption	0.4 mg/L (ppm)
	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)
	EPA 200.7	ICP-AES	0.020 mg/L (ppm)
Drinking Water Unpreserved <input type="checkbox"/> Preserved with HNO ₃ pH < 2 <input type="checkbox"/>	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)
	EPA 200.8	ICP-MS	0.001 mg/L (ppm)
TSP/SPM Filter	40 CFR Part 50	ICP-AES	12 µg/filter
	40 CFR Part 50	Graphite Furnace AA	3.6 µg/filter
Other:			
Name of Sampler: Doug Porter		Signature of Sampler: Douglas E Porter	
Sample #	Location	Volume/Area Color	Date/Time Sampled
L-CS-1	Steel Valve body	Green/Lt. green	12/29/16 - AM
L-CS-2	Concrete at Trickling Filter	Cream-beige	12/29/16 - AM
L-CS-3	Wood door at " "	Brown/gray	12/29/16 - AM
L-CS-4	Concrete at control Building	Lt. brown/white	12/29/16 - AM
L-CS-5	Wood door at wetwell	Brown	12/29/16 - AM
Client Sample #'s		Total # of Samples: 12	
Relinquished (Client):	Date: 12/29/16	Time: 4:31 PM	
Received (Lab):	Date: 12-30-16	Time: 9:23 AM	
Comments:			

Pb - J2 1/5/17

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

EMSL Analytical, Inc.
528 Mineola Avenue

LEAD (Pb) CHAIN OF CUSTODY

EMSL ORDER ID (Lab Use Only):

Carle Place, NY 11514

PHONE: (516) 997-7251

FAX (516) 997-7528

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

[illegible]

Comments/Special Instructions:

Pb- 2 1/5/17

ATTACHMENT C

RESUMES & CERTIFICATIONS OF KEY INDIVIDUALS

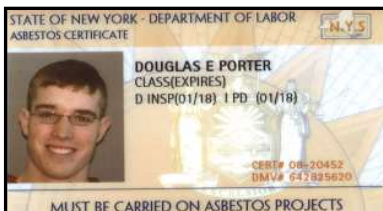
Education: BS Environmental Resources Engineering, SUNY Environmental Science and Forestry, 2008

Employment: 8+ years with Beardsley

Active Registrations: NYS Professional Engineer 2013, #092623
 NYSDOL Asbestos Building Inspector/Project Designer (#08-20452)
 EPA Lead-Based Paint Inspector #NY-I-128954-1/#R2T-I-128954-1
 OSHA Hazardous Waste Operations Training Certification (HAZWOPER)

Memberships: NYS Commercial Association of REALTORS (NYSCAR)

Experience: Mr. Porter is responsible for the technical aspects of the firm's environmental services, including assessments, subsurface investigations, groundwater monitoring, hazardous material surveys, and remediation design.

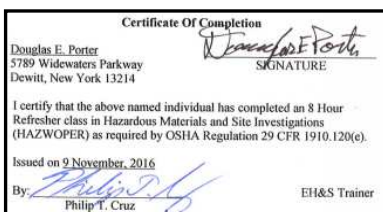
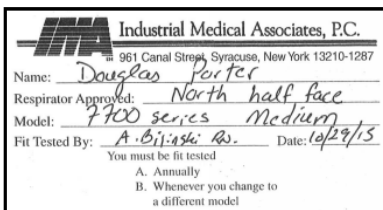


Hazardous Building Material Surveys Various

Mr. Porter has performed over 100 Hazardous Material Surveys that include asbestos, lead, PCBs, radon, and mold for projects located throughout New York State. Surveys were performed for vacant and occupied residential, commercial, multi-tenant housing, and State/Federally owned facilities.

A partial list of Hazardous Material Surveys that Mr. Porter has completed includes:

- AFRL: Demolish Building 102; Rome, New York
- AFRL: Demolish Building 104; Rome, New York
- AFRL: Mail Room Renovations; Rome New York
- NYS OGS: Building 58 Fire Alarm System; Newark, New York
- NYS OGS: Boiler Replacement; Batavia, New York
- NYS OGS: Replace Cell Backs; Auburn, New York
- Private: Commercial Bank Renovations; Fayetteville, New York
- Private: Vacant Commercial Building Renovations; Auburn, New York
- Private: Vacant Residential Building Demolition; Auburn, New York
- VA: Building 17 Renovations; Bath, New York
- VA: Replace Condensate Line; Canandaigua, New York
- VA: Life Safety Circuits Upgrade; Syracuse, New York
- WFLBOCES: Flint Campus Capital Improvements; Stanley, New York
- WFLBOCES: Boiler Replacement; Newark, New York



**Pre-Demolition Hazardous Material Survey and Abatement Design
Rome, New York**

Prior to the scheduled demolition of a 35,000 square foot former air force research and development building, Mr. Porter completed a comprehensive review of the building's environmental history. During the review potential concerns were identified and included asbestos, lead, PCBs, ionizing radiation, and building component hazards (drywells, mercury switches, etc.). Subsequent to the review, Mr. Porter completed a comprehensive Hazardous Material Survey at the site to identify asbestos, lead, and PCB-containing materials that would require abatement prior to the building's demolition. Additionally, Mr. Porter assisted in overseeing a Radium-226 Characterization Survey which was conducted in accordance with MARS-SIM standards. The purpose of the survey was to identify locations of residual radium contamination associated with the facility's past luminous painting operations. At the conclusion of the investigations Mr. Porter assisted with the develop of abatement plans, specifications, and cost estimates. Special considerations of hazardous materials abatement were noted on abatement plans to meet the client's goal of recycling 50% of demolished building materials.

**Limited Hazardous Material Survey and Abatement Design
Stanley, New York**

As part of a planned capital improvements project, Mr. Porter conducted a hazardous material survey of limited portions of an educational building. The survey was completed to identify asbestos, lead, and PCB-containing materials that would be disturbed during renovation activities and subsequently require abatement. To reduce the cost of the survey, Mr. Porter worked directly with project architects/engineers to define the extents of the project area. During the survey an incidental disturbance of a suspect asbestos-containing material was observed. Mr. Porter assisted with the development of an immediate plan to characterize the affected area and restrict access. A site specific variance was developed and approved by the NYSDOL to allow the continued monitoring of the disturbance and delay abatement/cleanup of the asbestos-containing material until planned renovations. Mr. Porter prepared abatement specifications, estimates, and detailed drawings for the project.

**Boiler Room Hazardous Material Survey and Abatement Design
Batavia, New York**

Prior to scheduled boiler system replacement of a 17,000 square foot vehicle maintenance building, Mr. Porter conducted a hazardous material survey. The survey was completed to identify asbestos, lead, and PCB-containing materials that would be disturbed during renovation activities and subsequently require abatement. Based on the results of the survey, Mr. Porter prepared abatement specifications, estimates, and detailed drawings for the project.

**Roof Asbestos Survey and Abatement Design
Trumansburg, New York**

Mr. Porter served as the Asbestos Building Inspector and Project Designer for this project. Prior to the scheduled roof replacement of two educational facilities, Mr. Porter conducted an asbestos survey to identify the types, locations, conditions, and approximate quantities of asbestos-containing materials before the commencement of renovation activities. Based on the results of the survey, Mr. Porter prepared asbestos abatement specifications, estimate, and drawings. The drawings included scaled roof plans and notes in order to specify the asbestos abatement work required.

**Limited Asbestos and Lead-Based Paint Surveys
Syracuse, New York**

Mr. Porter conducted a pre-survey inspection of the building to determine the scope of the project and served as lead Asbestos Building Inspector. Prior to substantial building renovations of the 24,000 square foot commercial office building, Mr. Porter collected nearly 250 bulk samples of suspect materials in accordance with NYS Code Rule 56 sampling requirements. Sampling activities included both interior and exterior portions of the building. The limited lead-based paint survey identified paints in poor condition containing lead concentrations above OSHA and EPA standards.

**Pre-Demolition Asbestos Surveys
Auburn, New York**

Mr. Porter has performed asbestos surveys of eight vacant residential buildings in the City of Auburn that were scheduled to be demolished. The purpose of the asbestos surveys was to identify the types, locations, conditions, and approximate quantities of asbestos-containing materials before the commencement of demolition activities. The asbestos surveys included intrusive sampling methods which involved penetrating walls, ceilings, and floors in preparation for the demolition operations at the property.

**Incidental Disturbance Assessment
Auburn, New York**

Mr. Porter worked with the building's current Owner, a not-for-profit organization committed to the redevelopment of a Theater listed on the National Register of Historic Places, to determine the extent of asbestos containing debris within the building. The severe degradation of interior finishes and thermal system insulation contributed to the spread of asbestos fibers within the building. Through the use of bulk, swipe, and air sampling, Mr. Porter documented the extent of the incidental disturbance. Comprehensive abatement cost estimates were developed to plan for clean-up of the building and assist the Owner in obtaining funding for the clean-up through grant submissions. A phased cleanup methodology was developed to allow for the building to be renovated in stages based on the amount of funding available.

New York State – Department of Labor

Division of Safety and Health
License and Certificate Unit
State Campus, Building 12
Albany, NY 12240

ASBESTOS HANDLING LICENSE

Beardsley Design Associates, Architecture, Engineering
and Landscape Architecture, D. P.C.

64 South Street
Auburn, NY 13021

FILE NUMBER: 01-0566
LICENSE NUMBER: 29269
LICENSE CLASS: RESTRICTED
DATE OF ISSUE: 03/16/2016
EXPIRATION DATE: 03/31/2017

Duly Authorized Representative – Richard C Elliott:

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.



Eileen M. Franko, Director
For the Commissioner of Labor