

ADDENDUM NO. 1

Town of North Stonington, CT

Request for Proposal

Abatement of Hazardous Building Materials and Selective Structure Demolition:

Greene Gables Building at 8 Hewitt Road

And the Cabin at 3 Hewitt Road

North Stonington, CT

This addendum is being issued to address lead contaminated soil located adjacent to and four feet from the building foundation at 8 Hewitt Road in North Stonington, CT.

The following documents are being provided to allow the bidders to provide cost associated with the excavation, transport and lawful disposal of the lead contaminated soil:

- Eagle Environmental, Inc. report on "Limited Environmental Site Investigation – Green Gables Building - 8 Hewitt Road North Stonington, Connecticut" dated May 7, 2018.
- 8 Hewitt Road North Stonington, CFT Lead Contaminated Soil Removal Specification

Bidders are instructed to review the aforementioned documents and provide a cost for the work as follows:

Addendum No. 1 FORM OF BID

Excavation, Transport and Lawful Disposal
65 tons of Lead Contaminated Soil (Non-Hazardous)
(Lump Sum) \$ _____

Excavation, Transport and Lawful Disposal
65 tons of Lead Contaminated Soil (Hazardous)
(Lump Sum) \$ _____

Additional Cost for Excavation, Transport
and Lawful Disposal of Lead Contaminated
Soil (Non-Hazardous) \$ _____ per Ton

Additional Cost for Excavation, Transport
and Lawful Disposal of Lead Contaminated
Soil (Non-Hazardous) \$ _____ per Ton



May 7, 2018

Ms. Nita Kincaid
Selectman
Town of North Stonington
40 Main Street
North Stonington, Connecticut 06359

**RE: Limited Environmental Site Investigation
Green Gables Building
8 Hewitt Road
North Stonington, Connecticut
Eagle Project No. 18-046.13T1**


Dear Ms. Kincaid,

Eagle Environmental, Inc. (Eagle) completed a limited environmental site investigation (ESI) for the Green Gables building located at 8 Hewitt Road North Stonington, Connecticut. The purpose of the limited ESI was to assess the total and leachable lead levels in the soil adjacent to and away from the Site building prior to abatement and demolition activities, and to provide background lead in soil information at the Greene Gables building as it relates to the location of the community garden located on the property. The limited ESI included the following activities and observations:

- Soil samples were taken at eight (8) locations around the Green Gables building, and one (1) sample away from the building (for background lead in soil concentrations) for a total of nine (9) samples.
- Two (2) of eight (8) soil samples collected were above applicable CTDEEP Remediation Standard Regulations (RSRs) cleanup criteria for total lead in soils adjacent to the drip line on the east and west sides of the building.
- Five (5) of eight soil samples collected were above applicable RSR cleanup criteria for leachable lead on the north, east, and south sides of the building.

Based on the findings of this investigation, Eagle concludes that remediation of impacted soils will be necessary. Please do not hesitate to contact our office if you have any questions or require more information related to the content of this report.

Sincerely,
Eagle Environmental, Inc.



Report prepared by:
Joshua L. Smith
Environmental Consultant I



Report reviewed by:
Jeffery J. Duigou, LEP
Vice President of Environmental Sciences

EXECUTIVE SUMMARY

Eagle Environmental, Inc. (Eagle) has performed a limited environmental site investigation (ESI) at the Green Gables Building at 8 Hewitt Road in North Stonington, Connecticut (the "Site"). On April 26, 2018, soil samples were collected to determine total and leachable lead levels in the soil surrounding the Site building.

Based on the results of this investigation, Eagle concludes that the soils surrounding the sides of the Site building will require remediation. Total lead exceeds the applicable CTDEEP Remediation Standard Regulations (RSR) residential direct exposure criterion (RES DEC) for total lead at the drip line on the east and west sides of the Site building to a depth of 6 inches. Total lead exceeds site background concentration (35.3 mg/kg) along the drip line north (371 mg/kg) and south 182 (mg/kg) of the Site building. However, these concentrations do not exceed applicable RES DEC.

Leachable lead was detected above the RSR GA soil pollutant mobility criteria (PMC) up to 6 inches in depth along the north, east, and south drip line and four feet from the building along the east and south sides of the building.

Total lead concentrations were not encountered above the RES DEC four feet beyond the drip line on all sides of the building. Based on the results of the limited Phase II ESI, there does not appear to be the potential for mass transport of total lead to the community garden area due to pedestrian tracking of lead impacted soil from the Site building area at this time.

Eagle recommends removing the soil to a depth of one (1) foot from the foundation to four feet away from the foundation of the Site building. The approximate mass of soil to be removed is approximately 65 tons. Eagle recommends the collection of confirmatory soil samples from the limits of the excavation after the soil is excavated to determine compliance with the RSRs.

1.0 INTRODUCTION

On April 26, 2018, Eagle performed a limited environmental site investigation (ESI) at the Green Gables Building at 8 Hewitt Road in North Stonington. The purpose of the investigation was to assess lead content of the soil surrounding the Green Gables building. The limited ESI was conducted in in general conformance with the CTDEEP Site Characterization Guidance Document (dated September 2007, revised December 2010) and the Connecticut Department of Energy and Environmental Protection (CTDEEP) Remediation Standard Regulations (RSRs) dated June 27, 2013.

1.1 Regulatory Framework

1.2 Remediation Standard Regulations

The CTDEEP has developed the RSRs, Sections 22a-133k-1 through 3 of the Regulations of the Connecticut State Agencies (RCSA), that specify the allowable levels of regulated compounds in soil for both GA (groundwater presumed drinkable without treatment) and GB (presumed unsuitable for drinking without treatment) groundwater classification areas. The RSRs are typically used for all sites undergoing environmental investigations as a baseline to evaluate a site's potential environmental liability. However, RSRs only legally apply to sites that are under order from the CTDEEP to perform remediation, are considered a Hazardous Waste Establishment as defined by the Connecticut Property Transfer law, or are undergoing voluntary remediation where verification by the CTDEEP or an LEP is needed. The RSRs are being used herein as guidance on this project.

1.2.1 Soil Criteria

The RSRs define two criteria that apply to soil: the Direct Exposure Criteria (DEC) and the Pollutant Mobility Criteria (PMC). The DEC defines the maximum level of regulated compounds allowed in soil to a depth of 15 feet below ground surface (bgs) without posing a threat due to direct human exposure, while the PMC sets the maximum level of regulated compounds allowed in soil above the water table without posing a threat to groundwater quality. Each criterion is further divided into two categories; the DEC is based upon Site usage (i.e. Residential or Industrial/Commercial use), while the PMC is based on the groundwater classification (i.e. GA/GAA or GB). The Site is located in a GA groundwater classification area and therefore would be required to meet the GA PMC.

The Residential DEC (RDEC) must be met if a Site is to be used for residential purposes. The CTDEEP and the RSRs define "residential activity" to include any activity related to a residence or dwelling, or to a school, hospital, day care center, playground, or outdoor recreation area.

The DEC does not apply if soil meets the definition of "inaccessible," and the PMC does not apply if soil meets the definition of "environmentally isolated." In either case, an environmental land use restriction (ELUR) is required.

Soil can be rendered "inaccessible" if the impacted soil is covered by four feet of clean fill (non-polluted material), or covered by two feet of clean fill and a minimum of three inches of asphalt, or covered by a building or other permanent structure. Soils that are isolated beneath a building or other impermeable structure may be considered "environmentally isolated", such that with the use of an ELUR, the PMC does not apply. Pavement is not considered impermeable and cannot be used to render soil environmentally isolated.

Additionally, the RSRs provide certain exceptions and variances with regard to polluted fill when specific criteria are met for the Site. Moreover, the RSRs also provide several self-implementing options for assessment and remediation of regulated compounds in soil.

2.0 SITE INVESTIGATION

On April 26, 2018, Joshua Smith of Eagle used hand held equipment to conduct sampling of the soil surrounding the Green Gables building. Soil samples were collected at the drip line and four (4) feet out from the drip line adjacent to the north, east, west, and south sides of the Site building (refer to *Figure SP-1* for soil sampling locations). One (1) background sample was also collected upgradient and away from the Site building to determine background lead levels in soil at the Site. All nine (9) samples were taken at a depth of six (6) inches. The hand held equipment was washed with soap and water then rinsed with distilled water prior to sampling soil and between soil sample locations. Soil samples were placed into glass containers and preserved in accordance with standard methods.

3.0 SOIL ANALYTICAL RESULTS

The following soil samples were submitted for analysis to a Connecticut-certified laboratory for total lead by EPA Method 6000/7000 and for leachable lead by the Synthetic Precipitation Leaching Procedure (SPLP) EPA Method 1312. Laboratory analytical results are presented in *Appendix A* and summarized below.

<u>Sample Number / Location</u>	<u>Total Lead (PPM)</u>	<u>SPLP (mg/L)</u>
N1 – North drip line	371	0.020**
N2 – North 4 feet out from drip line	132	<0.010
S1 - South drip line	182	0.035**
S2 – South 4 feet out from drip line	228	0.018**
E1 - East drip line	591*	0.078**
E2 – East 4 feet out from drip line	245	0.030**
W1 - West drip line	569*	0.014
W2 – West 4 feet out from drip line	134	<0.010
B1 – Background Northwest(up-gradient) 200 feet from building	35.3	<0.010

*Samples above the CTDEEP RSR RES DEC/** Samples above the CTDEEP RSR Mobility Criteria for class GA groundwater

4.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of this investigation, Eagle concludes that the soils surrounding the sides of the Site building will require remediation. Total lead exceeds the applicable RSR criteria for RES DEC for total lead at the drip line on the east and west sides of the Site building to a depth of 6 inches. Total lead exceeds site background concentration (35.3 mg/kg) along the drip line north (371 mg/kg) and south 182 (mg/kg) of the Site building. However, these concentrations do not exceed applicable RES DEC.

Leachable lead was detected above the RSR GA PMC up to 6 inches in depth along the north, east, and south drip line and four feet from the building along the east and south sides of the building.

Total lead concentrations were not encountered above the RES DEC four feet beyond the drip line on all sides of the building. Based on the results of the limited Phase II ESI, there does not appear to be the potential for mass transport of total lead to the community garden area due to pedestrian tracking of lead impacted soil from the Site building area at this time.

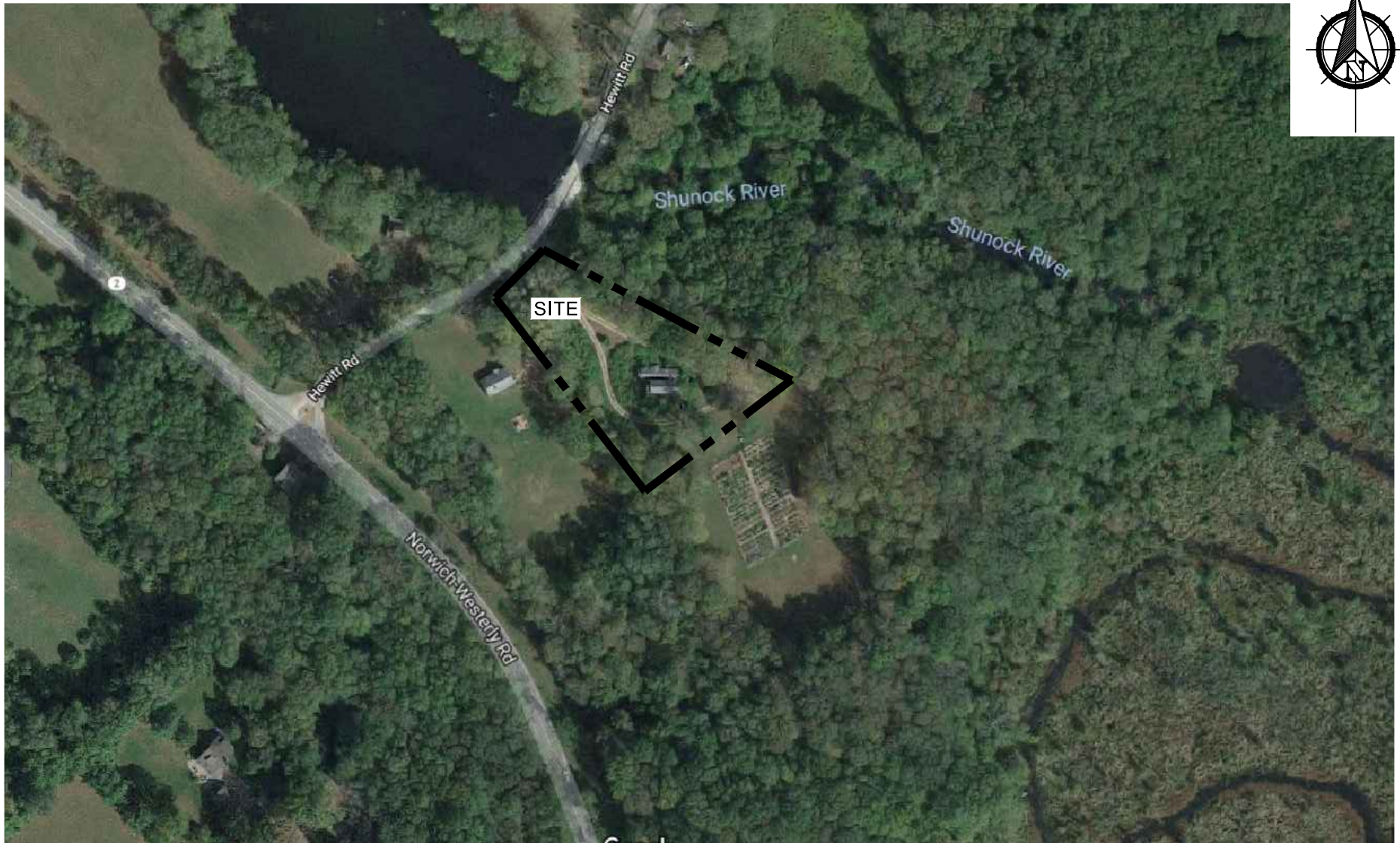
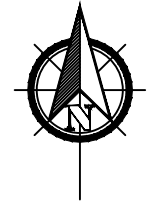
Eagle recommends removing the soil to a depth of one (1) foot from the foundation to four feet away from the foundation of the Site building as shown on *Figure SP-2*. The approximate mass of soil to be removed is approximately 65 tons. Eagle recommends the collection of confirmatory soil samples from the limits of the excavation after the soil is excavated to determine compliance with the RSRs.

5.0 LIMITATIONS

This limited Phase II environmental site investigation report was prepared by Eagle Environmental, Inc. and for their client, exclusively. The findings provided by Eagle Environmental, Inc. in this report are based solely on the information reported in this document.

Should additional information become available concerning this Site or neighboring properties which could directly impact the Site in the future, that information should be made available to Eagle Environmental, Inc. for review so that, if necessary, conclusions presented in this report may be modified. The conclusions of this report are based on Site conditions observed by Eagle Environmental, Inc. personnel at the time of the investigation and samples collected and analyzed on the date shown or stated in this report. This report has been prepared in accordance with generally accepted engineering and geological practices. No other warranty, express or implied, is made.

FIGURES



SITE LOCATION PLAN

SCALE: 1" = 200'



EAGLE
Environmental, Inc.

8 SOUTH MAIN STREET, SUITE 3
TERRYVILLE, CONNECTICUT 06786
860-589-8257

LIMITED PHASE II
ENVIRONMENTAL SITE INVESTIGATION
TOWN OF NORTH STONINGTON
8 HEWITT ROAD
NORTH STONINGTON, CONNECTICUT

DATE: 5/3/2018

PROJECT NO.: 18-046.13T1

DRAWN BY: BB

REVIEWED BY: JD

SHEET NO.

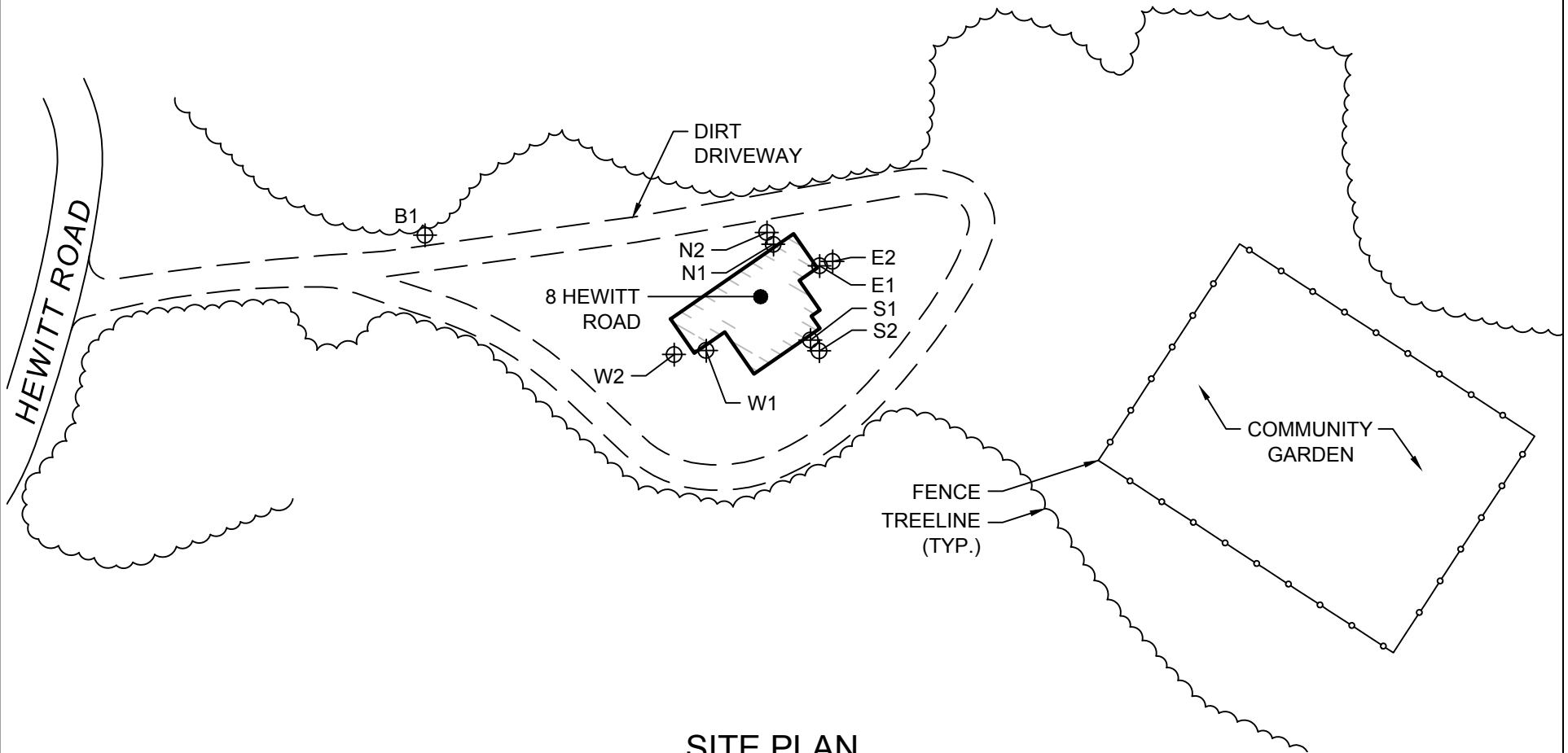
SL-1

SHEET 1 OF 3

KEY:



SURFICIAL SOIL SAMPLE LOCATION



SITE PLAN

SCALE: 1" = 60'



EAGLE
Environmental, Inc.

8 SOUTH MAIN STREET, SUITE 3
TERRYVILLE, CONNECTICUT 06786
860-589-8257

LIMITED PHASE II
ENVIRONMENTAL SITE INVESTIGATION
TOWN OF NORTH STONINGTON
8 HEWITT ROAD
NORTH STONINGTON, CONNECTICUT

DATE: 5/3/2018

PROJECT NO.: 18-046.13T1

DRAWN BY: BB

REVIEWED BY: JD

SHEET NO.

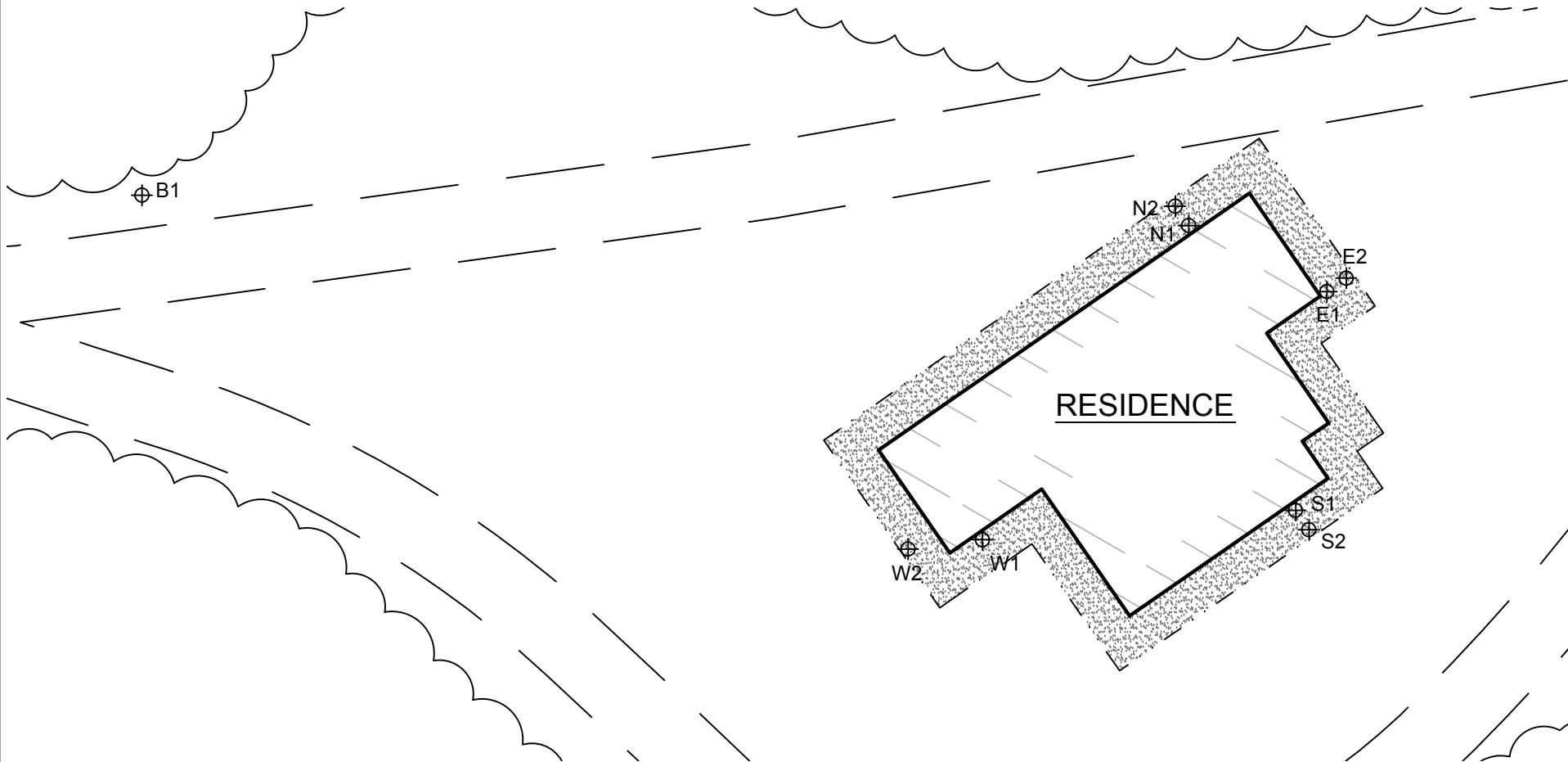
SP-1

SHEET 2 OF 3

KEY:



APPROXIMATE LIMIT OF SOIL
TO BE EXCAVATED



SOIL REMEDIATION PLAN

SCALE: 1" = 20'



8 SOUTH MAIN STREET, SUITE 3
TERRYVILLE, CONNECTICUT 06786
860-589-8257

LIMITED PHASE II
ENVIRONMENTAL SITE INVESTIGATION
TOWN OF NORTH STONINGTON
8 HEWITT ROAD
NORTH STONINGTON, CONNECTICUT

DATE: 5/3/2018
PROJECT NO.: 18-046.13T1
DRAWN BY: BB
REVIEWED BY: JD

SHEET NO.
SP-2
SHEET 3 OF 3

APPENDIX A
SOIL ANALYTICAL REPORTS

EAGLE ENVIRONMENTAL, INC.
8 SOUTH MAIN STREET, SUITE 3 • TERRYVILLE, CT 06786
PHONE (860) 589-8257 • FAX (860) 585-7034



Tuesday, May 01, 2018

Attn: Mr. Jeff Duigou
Eagle Environmental Inc.
8 South Main Street, Suite 3 ©
Terryville CT 06786

Project ID: TOWN OF NO STONINGTON
Sample ID#s: CA37363 - CA37371

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

Sincerely yours,

A handwritten signature in cursive script that reads "Phyllis Shiller".

Phyllis/Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301



Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

May 01, 2018

FOR: Attn: Mr. Jeff Duigou
Eagle Environmental Inc.
8 South Main Street, Suite 3 ©
Terryville CT 06786

Sample Information

Matrix: SOIL
Location Code: EAGLEENV
Rush Request: Standard
P.O.#: 18-046.13T1

Custody Information

Collected by:
Received by: CP
Analyzed by: see "By" below

Date Time

04/26/18
04/27/18 13:31

Laboratory Data

SDG ID: GCA37363
Phoenix ID: CA37363

Project ID: TOWN OF NO STONINGTON

Client ID: N1 NORTH DRIPLINE

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Lead	371	4.8	mg/Kg	10	04/30/18	MA	SW6010C
SPLP Lead	0.020	0.010	mg/L	1	04/30/18	MA	SW6010C
SPLP Metals Digestion	Completed				04/30/18	QW/W	SW3010A
Percent Solid	72		%		04/27/18	AP	SW846-%Solid
SPLP Extraction for Metals	Completed				04/27/18	I/Q	SW1312
Total Metals Digest	Completed				04/27/18	B/AG	SW3050B

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director

May 01, 2018

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report
May 01, 2018

FOR: Attn: Mr. Jeff Duigou
Eagle Environmental Inc.
8 South Main Street, Suite 3 ©
Terryville CT 06786

Sample Information

Matrix: SOIL
Location Code: EAGLEENV
Rush Request: Standard
P.O.#: 18-046.13T1

Custody Information

Collected by:
Received by: CP
Analyzed by: see "By" below

Date

04/26/18
04/27/18

Time

13:31

Laboratory Data

SDG ID: GCA37363
Phoenix ID: CA37364

Project ID: TOWN OF NO STONINGTON
Client ID: N2 NORTH 4FT OUT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Lead	132	3.2	mg/Kg	10	04/30/18	MA	SW6010C
SPLP Lead	< 0.010	0.010	mg/L	1	04/30/18	MA	SW6010C
SPLP Metals Digestion	Completed				04/30/18	QW/W	SW3010A
SPLP Extraction for Metals	Completed				04/27/18	I/Q	SW1312
Total Metals Digest	Completed				04/27/18	B/AG	SW3050B

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

Results are reported on an "as received" basis, and are not corrected for dry weight.

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Phyllis Shiller, Laboratory Director

May 01, 2018

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

May 01, 2018

FOR: Attn: Mr. Jeff Duigou
Eagle Environmental Inc.
8 South Main Street, Suite 3 ©
Terryville CT 06786

Sample Information

Matrix: SOIL
Location Code: EAGLEENV
Rush Request: Standard
P.O.#: 18-046.13T1

Custody Information

Collected by:
Received by: CP
Analyzed by: see "By" below

Date

04/26/18
04/27/18

Time

13:31

Laboratory Data

SDG ID: GCA37363
Phoenix ID: CA37365

Project ID: TOWN OF NO STONINGTON
Client ID: S1 SOUTH DRIPLINE

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Lead	182	4.0	mg/Kg	10	04/30/18	MA	SW6010C
SPLP Lead	0.035	0.010	mg/L	1	04/30/18	MA	SW6010C
SPLP Metals Digestion	Completed				04/30/18	QW/W	SW3010A
Percent Solid	86		%		04/27/18	AP	SW846-%Solid
SPLP Extraction for Metals	Completed				04/27/18	I/Q	SW1312
Total Metals Digest	Completed				04/27/18	B/AG	SW3050B

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

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Phyllis Shiller, Laboratory Director

May 01, 2018

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report
 May 01, 2018

FOR: Attn: Mr. Jeff Duigou
 Eagle Environmental Inc.
 8 South Main Street, Suite 3 ©
 Terryville CT 06786

Sample Information

Matrix: SOIL
 Location Code: EAGLEENV
 Rush Request: Standard
 P.O.#: 18-046.13T1

Custody Information

Collected by:
 Received by: CP
 Analyzed by: see "By" below

Date

04/26/18
 04/27/18

Time

13:31

Laboratory Data

SDG ID: GCA37363
 Phoenix ID: CA37366

Project ID: TOWN OF NO STONINGTON
 Client ID: S2 SOUTH 4FT OUT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Lead	228	3.4	mg/Kg	10	04/30/18	MA	SW6010C
SPLP Lead	0.018	0.010	mg/L	1	04/30/18	MA	SW6010C
SPLP Metals Digestion	Completed				04/30/18	QW/W	SW3010A
Percent Solid	86		%		04/27/18	AP	SW846-%Solid
SPLP Extraction for Metals	Completed				04/27/18	I/Q	SW1312
Total Metals Digest	Completed				04/27/18	B/AG	SW3050B

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

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Phyllis Shiller, Laboratory Director
 May 01, 2018

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

May 01, 2018

FOR: Attn: Mr. Jeff Duigou
Eagle Environmental Inc.
8 South Main Street, Suite 3 ©
Terryville CT 06786

Sample Information

Matrix: SOIL
Location Code: EAGLEENV
Rush Request: Standard
P.O.#: 18-046.13T1

Custody Information

Collected by:
Received by: CP
Analyzed by: see "By" below

Date

04/26/18
04/27/18

Time

13:31

Laboratory Data

SDG ID: GCA37363
Phoenix ID: CA37367

Project ID: TOWN OF NO STONINGTON
Client ID: W1 WEST DRIPLINE

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Lead	569	3.5	mg/Kg	10	04/30/18	MA	SW6010C
SPLP Lead	0.014	0.010	mg/L	1	04/30/18	MA	SW6010C
SPLP Metals Digestion	Completed				04/30/18	QW/W	SW3010A
SPLP Extraction for Metals	Completed				04/27/18	I/Q	SW1312
Total Metals Digest	Completed				04/27/18	B/AG	SW3050B

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

SPLP Non-Volatile Extraction:
Sample weight was < 100 grams (the minimum requirement of the method to insure homogeneity).

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.
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Phyllis Shiller, Laboratory Director

May 01, 2018

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



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Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

May 01, 2018

FOR: Attn: Mr. Jeff Duigou
Eagle Environmental Inc.
8 South Main Street, Suite 3 ©
Terryville CT 06786

Sample Information

Matrix: SOIL
Location Code: EAGLEENV
Rush Request: Standard
P.O.#: 18-046.13T1

Custody Information

Collected by:
Received by: CP
Analyzed by: see "By" below

Date Time

04/26/18
04/27/18 13:31

Laboratory Data

SDG ID: GCA37363
Phoenix ID: CA37368

Project ID: TOWN OF NO STONINGTON
Client ID: W2 WEST 4FT OUT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Lead	134	2.3	mg/Kg	1	04/28/18	MA	SW6010C
SPLP Lead	< 0.010	0.010	mg/L	1	04/30/18	MA	SW6010C
SPLP Metals Digestion	Completed				04/30/18	QW/W	SW3010A
SPLP Extraction for Metals	Completed				04/27/18	I/Q	SW1312
Total Metals Digest	Completed				04/27/18	B/AG	SW3050B

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

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Phyllis Shiller, Laboratory Director

May 01, 2018

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.

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Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

May 01, 2018

FOR: Attn: Mr. Jeff Duigou
Eagle Environmental Inc.
8 South Main Street, Suite 3 ©
Terryville CT 06786

Sample Information

Matrix: SOIL
Location Code: EAGLEENV
Rush Request: Standard
P.O.#: 18-046.13T1

Custody Information

Collected by:
Received by: CP
Analyzed by: see "By" below

Date

04/26/18
04/27/18

Time

13:31

Laboratory Data

SDG ID: GCA37363
Phoenix ID: CA37369

Project ID: TOWN OF NO STONINGTON
Client ID: E1 EAST DRIPLINE

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Lead	591	4.1	mg/Kg	10	04/30/18	MA	SW6010C
SPLP Lead	0.078	0.010	mg/L	1	04/30/18	MA	SW6010C
SPLP Metals Digestion	Completed				04/30/18	QWW	SW3010A
Percent Solid	80		%		04/27/18	AP	SW846-%Solid
SPLP Extraction for Metals	Completed				04/27/18	I/Q	SW1312
Total Metals Digest	Completed				04/27/18	B/AG	SW3050B

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.
If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director

May 01, 2018

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

May 01, 2018

FOR: Attn: Mr. Jeff Duigou
Eagle Environmental Inc.
8 South Main Street, Suite 3 ©
Terryville CT 06786

Sample Information

Matrix: SOIL
Location Code: EAGLEENV
Rush Request: Standard
P.O.#: 18-046.13T1

Custody Information

Collected by:
Received by: CP
Analyzed by: see "By" below

Date Time

04/26/18
04/27/18 13:31

Laboratory Data

SDG ID: GCA37363
Phoenix ID: CA37370

Project ID: TOWN OF NO STONINGTON

Client ID: E2 EAST 4FT OUT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Lead	245	0.96	mg/Kg	1	04/28/18	MA	SW6010C
SPLP Lead	0.030	0.010	mg/L	1	04/30/18	MA	SW6010C
SPLP Metals Digestion	Completed				04/30/18	QW/W	SW3010A
SPLP Extraction for Metals	Completed				04/27/18	I/Q	SW1312
Total Metals Digest	Completed				04/27/18	B/AG	SW3050B

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

SPLP Non-Volatile Extraction:

Sample weight was < 100 grams (the minimum requirement of the method to insure homogeneity).

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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Phyllis Shiller, Laboratory Director

May 01, 2018

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.

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Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

May 01, 2018

FOR: Attn: Mr. Jeff Duigou
Eagle Environmental Inc.
8 South Main Street, Suite 3 ©
Terryville CT 06786

Sample Information

Matrix: SOIL
Location Code: EAGLEENV
Rush Request: Standard
P.O.#: 18-046.13T1

Custody Information

Collected by:
Received by: CP
Analyzed by: see "By" below

Date Time

04/26/18
04/27/18 13:31

Laboratory Data

SDG ID: GCA37363
Phoenix ID: CA37371

Project ID: TOWN OF NO STONINGTON

Client ID: B1 BACKGROUND

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Lead	35.3	0.48	mg/Kg	1	04/28/18	MA	SW6010C
SPLP Lead	< 0.010	0.010	mg/L	1	04/30/18	MA	SW6010C
SPLP Metals Digestion	Completed				04/30/18	QW/W	SW3010A
SPLP Extraction for Metals	Completed				04/27/18	I/Q	SW1312
Total Metals Digest	Completed				04/27/18	B/AG	SW3050B

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

SPLP Non-Volatile Extraction:

Sample weight was < 100 grams (the minimum requirement of the method to insure homogeneity).

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director

May 01, 2018

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

May 01, 2018

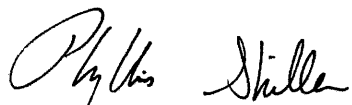
QA/QC Data

SDG I.D.: GCA37363

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 428396 (mg/kg), QC Sample No: CA37363 (CA37363, CA37364, CA37365, CA37366, CA37367, CA37368, CA37369, CA37370, CA37371)													
<u>ICP Metals - Soil</u>													
Lead	BRL	0.33	371	348	6.40	106			90.6			75 - 125	30
QA/QC Batch 428505 (mg/L), QC Sample No: CA37367 (CA37363, CA37364, CA37365, CA37366, CA37367, CA37368, CA37369, CA37370, CA37371)													
<u>ICP Metals - SPLP Extraction</u>													
Lead	BRL	0.010	0.014	0.014	NC	101			95.5			75 - 125	20

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

- RPD - Relative Percent Difference
- LCS - Laboratory Control Sample
- LCSD - Laboratory Control Sample Duplicate
- MS - Matrix Spike
- MS Dup - Matrix Spike Duplicate
- NC - No Criteria
- Intf - Interference


 Phyllis Shiller, Laboratory Director
 May 01, 2018

Tuesday, May 01, 2018

Criteria: None

State: CT

Sample Criteria Exceedances Report

GCA37363 - EAGLEENV

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL	Criteria	Analysis Units
--------	-------	-----------------	----------	--------	----	----------	----	----------	----------------

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



REASONABLE CONFIDENCE PROTOCOL LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Laboratory Name: Phoenix Environmental Labs, Inc.

Client: Eagle Environmental Inc.

Project Location: TOWN OF NO STONINGTON

Project Number:

Laboratory Sample ID(s): CA37363-CA37371

Sampling Date(s): 4/26/2018

List RCP Methods Used (e.g., 8260, 8270, et cetera) 1311/1312, 6010

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CT DEP method-specific Reasonable Confidence Protocol documents?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1A	Were the method specified preservation and holding time requirements met?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1B	<u>VPH and EPH methods only:</u> Was the VPH or EPH method conducted without significant modifications (see section 11.3 of respective RCP methods)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
2	Were all samples received by the laboratory in a condition consistent with that described on the associated Chain-of-Custody document(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3	Were samples received at an appropriate temperature (< 6 Degrees C)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
4	Were all QA/QC performance criteria specified in the CTDEP Reasonable Confidence Protocol documents achieved?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5	a) Were reporting limits specified or referenced on the chain-of-custody? b) Were these reporting limits met?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
7	Are project-specific matrix spikes and laboratory duplicates included in the data set?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or 1B is "No", the data package does not meet the requirements for "Reasonable Confidence". This form may not be altered and all questions must be answered.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete.

Authorized Signature: _____

Position: Assistant Lab Director

Printed Name: Greg Lawrence

Date: Tuesday, May 01, 2018

Name of Laboratory Phoenix Environmental Labs, Inc.

This certification form is to be used for RCP methods only.



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



RCP Certification Report

May 01, 2018

SDG I.D.: GCA37363

SDG Comments

Metals Analysis:

The client requested a shorter list of elements than the 6010 RCP list. Only Lead is reported as requested on the chain of custody.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

ARCOS 04/28/18 04:54

Mike Arsenault, Chemist 04/28/18

CA37368, CA37370, CA37371

Additional criteria for CCV and ICSAB:

Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB). The linear range is defined daily by the calibration range.

The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.

The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.

The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

ARCOS 04/30/18 06:28

Mike Arsenault, Chemist 04/30/18

CA37363, CA37364, CA37365, CA37366, CA37367, CA37369

Additional criteria for CCV and ICSAB:

Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB). The linear range is defined daily by the calibration range.

The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.

The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.

The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 04/30/18 06:27

Mike Arsenault, Chemist 04/30/18

CA37363, CA37364, CA37365, CA37366, CA37367, CA37368, CA37369, CA37370, CA37371

The initial calibration met criteria.

The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.

The continuing calibration blanks were less than the reporting level for the elements reported.

The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria. The linear range is defined daily by the calibration range.

The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.

The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.

The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Site Specific):

Batch 428396 (CA37363)

CA37363, CA37364, CA37365, CA37366, CA37367, CA37368, CA37369, CA37370, CA37371

All LCS recoveries were within 75 - 125 with the following exceptions: None.

All MS recoveries were within 75 - 125 with the following exceptions: None.

Batch 428505 (CA37367)

CA37363, CA37364, CA37365, CA37366, CA37367, CA37368, CA37369, CA37370, CA37371

All LCS recoveries were within 75 - 125 with the following exceptions: None.

All MS recoveries were within 75 - 125 with the following exceptions: None.



Environmental Laboratories, Inc.
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Certification Report

May 01, 2018

SDG I.D.: GCA37363

ICP Metals Narration

Temperature Narration

The samples in this delivery group were received at 5.8°C.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

**8 HEWITT ROAD
NORTH STONINGTON, CT LEAD CONTAMINATED SOIL REMOVAL - 02 09 00**

SECTION 02 09 00 – LEAD-CONTAMINATED SOIL REMOVAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. General Provisions of Contract, including General and Supplementary Conditions and Division 1 Specifications Sections of the Contract Documents apply to this Section.
- B. Eagle Environmental, Inc. report on “Limited Environmental Site Investigation – Green Gables Building North Stonington, Connecticut Eagle Project No. 18-046.13T1” dated May 7, 2018.

1.2 PROJECT DESCRIPTION

- A. The work specified herein covers the procedures relevant to the abatement of hazardous building materials located at 8 Hewitt Road in North Stonington, Connecticut (the “Site”). The Project shall involve the following:
 - 1. Removal and off-site lawful disposal of lead contaminated soil adjacent to and 5 feet out from the building foundation wall to a depth of one (1) foot.
 - 2. Placement of clean backfill in the excavation.
- B. This Plan specifies the minimum requirements for lead safe work practices for performing lead-contaminated soil removal within the specified area adjacent to and 5 feet out from the building foundation wall. It is incumbent upon the CONTRACTOR to ensure compliance with all applicable State and Federal regulations.
- C. Prior to the off-site disposal of the lead contaminated soil at an approved disposal facility, the CONTRACTOR shall provide the disposal facility analytical testing requirements and a contact phone number for the disposal facility to the CONSULTANT. The CONSULTANT shall conduct laboratory testing required by the disposal facility and forward testing data within two (2) business days of receiving final results from the analytical laboratory. The CONTRACTOR shall obtain approval for disposal of the lead contaminated soil at the chosen disposal facility prior to transporting soil to the disposal facility. A copy of the approval letter shall be reviewed and approved by the OWNER’S CONSULTANT.
- D. The CONTRACTOR performing the work specified in Section 02 09 00 Lead-Contaminated Soil Removal shall be trained in accordance with the Department of Labor’s Occupational Safety and Health Administration (OSHA) Lead in Construction Standard 29 CFR 1926. The CONTRACTOR shall be entirely responsible for maintaining compliance with the OSHA Lead in Construction Standard, EPA RRP final rule and applicable disposal regulations throughout the course of the work.
- E. The CONTRACTOR shall be responsible for all Occupational Safety and Health Administration (OSHA) Lead in Construction Standard 29 CFR 1926.62 requirements including but not limited to personnel air monitoring, respiratory protection, personal protective clothing and change areas. The work shall be performed using proper engineering controls to ensure the safety of employees, occupants and prevent cross contamination to other sections of the Site. No other trade’s workers shall be permitted into the work space or contained area while soil removal

8 HEWITT ROAD
NORTH STONINGTON, CT LEAD CONTAMINATED SOIL REMOVAL - 02 09 00

procedures are being performed. Visual clearance and post hazard reduction dust wipes shall be collected by a certified lead inspector/risk assessor.

- F. All work shall be conducted in compliance with all Federal, State and local regulations. Specifically, work shall conform to The United States Environmental Protection Agency (USEPA), The State of Connecticut Department of Energy and Environmental Protection (DEEP) Hazardous Waste Disposal regulations and the Department of Labor's Occupational Safety and Health Administration (OSHA) Lead in Construction Final Rule 29 CFR 1926.62.

1.3 SCOPE OF WORK

- A. Exterior Soil Area – CONTRACTOR shall excavate soil to a depth of one (1) foot along the adjacent to the exterior of the foundation wall out to five (5) feet from the foundation wall. Soil shall be placed into roll off steel containers lined with two (2) layers of 6-mil polyethylene on-site area designated by the OWNER/ OWNER'S CONSULTANT. CONTRACTOR shall secure the roll off containers to prevent access by the public.

1.4 CONSULTANT AND OWNER INFORMATION

- A. Name of Consultant: Jeffery J. Duigou, LEP
Firm: Eagle Environmental, Inc.
Address: 8 South Main Street
City: Terryville State: Connecticut Zip: 06786
Telephone: (860) 589-8257

1.5 OWNER INFORMATION

- A. Name: Town of North Stonington
Address: 40 Main Street
City: North Stonington State: Connecticut Zip: 06359
Telephone: (860) 535-2877

1.6 APPLICABLE CODES

- A. The CONTRACTOR shall be solely responsible for conducting this project and supervising all work in a manner which shall be in conformance with all federal, state and local regulations and guidelines. Specifically, the CONTRACTOR shall comply with the requirements of the following:
 - 1. Occupational Safety and Health Administration: OSHA
 - a. 29 CFR 1910 General Industry Standards
 - b. 29 CFR 1910.1025 Lead Standard for General Industry
 - c. 29 CFR 1910.134 Respiratory Protection
 - d. 29 CFR 1910.1200 Hazard Communication
 - e. 29 CFR 1910.245 Specifications for Accident Prevention (Sign and Tags)
 - f. 29 CFR 1926.21 Safety Training and Education
 - g. 29 CFR 1926.62 Lead in Construction Final Rule
 - 2. State of Connecticut Department of Energy and Environmental Protection: DEEP
 - a. Guidance for the management and disposal of lead contaminated materials

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NORTH STONINGTON, CT LEAD CONTAMINATED SOIL REMOVAL - 02 09 00

generated in the lead abatement and demolition industries

3. USEPA

- a. 40 CFR 745.80 - .119 Final Rule
- b. 40 CFR part 261
- c. 40 CFR 745 Subpart E
- d. 40 CFR 61 Subpart M
- e. 40 CFR 261 Identification and Listing of Hazardous Waste

B. The CONTRACTOR is required to keep all documents for a minimum of three (3) years.

1.7 DEFINITIONS

- A. "Biological monitoring" means the analysis of a person's blood and/or urine, to determine the level of lead contamination in the body.
- B. "Lead" means metallic lead, all inorganic lead compounds, and organic lead soaps. Excluded from this definition are all other organic lead compounds.
- C. "RCRA" (Resource Conservation Recovery Act): The USEPA enforced act, which establishes regulatory levels for hazardous chemicals. There are eight (8) heavy metals of concern for disposal: Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium and Silver.
- D. "CONTRACTOR" means the primary CONTRACTOR and all sub-CONTRACTORS performing the work.
- E. "Toxicity Characteristic Leachate Procedure (TCLP)" is the EPA required sample preparation and analysis for determining the hazard characteristic of a waste generated at a lead abatement site.
- F. "Exposure Monitoring" instrument monitoring of the air within the breathing zone for the presence of lead.
- G. "Permissible Exposure Limit (PEL)" The employer shall ensure that no employee is exposed to an airborne concentration of lead, or its compounds, in excess of the PEL of 0.05 mg/m³ for an 8 hour time weighted average (TWA).
- H. "Competent Person" means one who is capable of identifying existing and predictable lead hazards in the surroundings or working conditions and who has authorization to take prompt corrective measures to eliminate them.
- I. "Exposure Assessment" means an employer's initial determination if an employee shall be exposed to lead at or above the action level.
- J. "Wet Cleaning" means the process of eliminating lead contamination from building surfaces and objects by using clothes, mops or other cleaning tools which have been dampened with TSP and water, and by afterwards disposing of these cleaning items as clean contaminated waste.

1.8 FEES, PERMITS AND LICENSES

A. The CONTRACTOR shall comply with the provisions of all permits or applications required by

8 HEWITT ROAD
NORTH STONINGTON, CT LEAD CONTAMINATED SOIL REMOVAL - 02 09 00

the work specified, as well as make all submittals required under those permits or applications.

- B. The CONTRACTOR shall make notifications to the local Police Department and Fire Department regarding the project.

1.9 SITE EXAMINATION

- A. The CONTRACTOR shall visit the site and examine all structures located thereon. The specifications shall be compared with the existing field conditions. The CONTRACTOR shall examine all parts of the existing structures to which new work shall be connected, attached or applied, and notify OWNER'S CONSULTANT of any conditions detrimental to the proper and timely completion of the work.
- B. The CONTRACTOR shall notify Architect/Engineer of any discrepancies, errors or omissions that might have been discovered in the Decontamination Plan for the purpose of making such corrections or adjustments as may be necessary. Unless specifically noted otherwise in the plan, any additional work by other trades or by the CONTRACTOR that is required in order for the CONTRACTOR to finish the job shall be assumed to be included. If it should appear that any work called for in the Plan is not in accordance with State, local or federal laws or ordinances, the CONTRACTOR shall immediately notify OWNER'S CONSULTANT.

1.10 SEQUENCING AND SCHEDULING

- A. The CONTRACTOR shall extend full cooperation to OWNER in all matters involving the use of OWNER's facilities. At no time shall the CONTRACTOR cause or allow to be caused conditions that may cause risk or hazards to the general public or conditions that might impair safe use of the facility.
- B. The CONTRACTOR shall submit a time-line schedule, not date specific, to OWNER, Architect/Engineer and CONSULTANT for integration into the overall project schedule. Coordinate the work of this section with the needs of the OWNER/CONSULTANT. Phasing and scheduling of this project shall be at the discretion of the OWNER/CONSULTANT and shall not proceed in any area without the express consent of the OWNER/CONSULTANT. The CONTRACTOR shall be available within 24 hours' notice for additional work or rework, if after acceptance of the work, it is found that intent of the safety plan was not achieved from the initial work effort as determined by the OWNER/CONSULTANT. Liquidated damages shall be in the amount of one hundred and fifty (\$150) dollars per day.
- C. A final written schedule shall be prepared for approval by the OWNER and Architect.
- D. The CONTRACTOR shall coordinate his/her work with the progress of the work of other trades so that the work shall be completed as soon as conditions permit.
- E. The CONTRACTOR shall strictly coordinate their work with the work of the CONSULTANT and other trades.

1.11 SUBMITTALS

- A. This Section specifies administrative and procedural requirements for submittals required for performance of the Work.

8 HEWITT ROAD
NORTH STONINGTON, CT LEAD CONTAMINATED SOIL REMOVAL - 02 09 00

- B. The CONTRACTOR shall provide the following pre-project submittals prior to initiating work at the site:
1. Copies of all notifications, permits, applications, licenses and like documents required by federal, state and local regulations obtained or submitted in proper fashion.
 2. Copies of medical records for each employee to be used on the project.
 3. Record of successful respirator fit testing performed by a qualified individual within the previous year, for each employee to be used on this project with the employee's name and social security number with each record.
 4. Proposed respiratory protection program for employees throughout all phases of the job, including make, model and NIOSH approval numbers of respirators to be used.
 5. Written description, for the OWNER's review and acceptance, of all proposed procedures, methods or equipment to be utilized that differ from the Contract Specifications, including manufacturers' specifications on any equipment not specified for use by this Section; in all instances, the CONTRACTOR must comply with all applicable federal, state and local regulations.
 6. Chain-of-Command of responsibility at work site including supervisors, foremen, and competent person, their names, resumes and certificates of training.
 7. List of all supervisors and workers intended to be assigned to the project.
 8. The name and address of CONTRACTOR's blood lead testing lab, OSHA-CDC listing, and Certification in the state where work site is located.
 9. The name and address of CONTRACTOR's personal air monitoring and waste disposal lead testing laboratory (ies) including certification(s) of AIHA accreditation for heavy metal analysis, listing of relevant experience in air and debris lead analysis.
 10. Safety Data Sheets (SDS) on all materials and chemicals to be used on the project.
 11. Name, address, and ID number of the hazardous waste hauler, waste transfer route, and proposed treatment facility/disposal site.
 12. Name, address, and ID number of the proposed construction debris site.
 13. Temporary Hazardous Waste I.D. No.
 14. Copy of each workers lead awareness training certificate.
 15. Copy of each workers initial blood lead level and zinc protoporphorin level.
 16. Soil removal compliance plan.
 17. Copy of the landfill acceptance letter for the non-hazardous or hazardous soil
- C. The CONTRACTOR shall provide the following post-project submittals at the completion of the work on site to the OWNERs representative:

8 HEWITT ROAD
NORTH STONINGTON, CT LEAD CONTAMINATED SOIL REMOVAL - 02 09 00

1. Copies of completed waste manifests with signatures from the landfill acknowledging receipt of the waste.
2. Copies of all analytical data.
3. Copies of post project blood lead levels and zinc protoporphorin levels for each worker and supervisor who worked on the site.
4. Copies of all OSHA Compliance air sampling results.

1.12 SITE OCCUPANCY

- A. The work of this project must be performed during standard work hours unless given written permission by the OWNER. The work schedule shall be approved by the OWNER and Architect prior to the start of the project.
- B. The Site shall remain in operation during the work of this project. The CONTRACTOR shall maintain safe means of ingress and egress during the work. At no time during this work shall unauthorized personnel be allowed into the work area.

1.13 NOTIFICATIONS

- A. The CONTRACTOR shall make notifications to the local Police Department and Fire Department regarding the project if required by local code.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Deliver all materials in the original packages, containers, or bundles bearing the name of the manufacturer and the brand name and product technical description.
- B. Damaged or deteriorating materials shall not be used and shall be removed from the premises.
- C. Fire retardant polyethylene sheet in a roll size to minimize the frequency of joints shall be delivered to job site with factory label indicating 10 mil.
- D. Tape or adhesive spray shall be capable of sealing joints in adjacent polyethylene sheets and for attachment of polyethylene sheet to finished or unfinished surfaces of dissimilar materials and capable of adhering under both dry and wet conditions, including use of amended water.
- E. Impermeable containers are to be used to received and retain any lead containing or contaminated materials until disposal at an acceptable disposal site. (The containers shall be labeled in accordance with EPA and DOT standards.)
- F. Other materials such temporary fencing necessary to excavate lead contaminated soil and the barriers that isolate the work area shall be provided as appropriate for the work.

PART 3 - EXECUTION

8 HEWITT ROAD
NORTH STONINGTON, CT LEAD CONTAMINATED SOIL REMOVAL - 02 09 00

3.1 INITIAL EXPOSURE ASSESSMENT

- A. In order to comply with the requirements of the OSHA Lead in Construction Standard 29 CFR 1926.62 an initial exposure assessment must be performed for each activity that disturbs lead paint covered building materials. The CONTRACTOR shall comply with the applicable sections of the regulation based on the results of the initial exposure assessment.
- B. If the results of the initial exposure assessment are greater than the Action Level for lead dust exposure, all requirements of the Standard apply.
 - 1. The Scope of this Section applies to all construction work where an employee may be occupationally exposed to lead. All construction work excluded from the general industry standard for lead 29 CFR 1910.1025(a) (2) is covered by this section. This includes but is not limited to the following.
 - a. Demolition or salvage of structures where lead or materials contaminated/containing lead is present.
 - b. Removal of materials contaminated with hazardous lead-dust;
 - c. New construction, alteration, repair, or renovation of structures, substrates, or portions thereof that contain lead, or materials containing lead.
 - d. Lead contamination cleanup
 - e. Transportation, disposal, storage, or containment of lead or materials containing lead on the site or location at which construction activities are performed.
- C. The CONTRACTOR shall assume that the employee is being exposed above the Permissible Exposure Level (PEL) until an initial exposure assessment has been completed for each lead related task being performed.
- D. For the purpose of the initial exposure assessment, employee exposure is that exposure which would occur if the employee were not using a respirator.
- E. The employer shall collect personal air samples representative of a full shift including at least one sample for each job classification in each work area for each shift or for the shift with the highest exposure level.
- F. Until the employer performs an initial exposure assessment as required by the Standard, the employer shall provide appropriate respiratory protection, appropriate personal protective equipment, clean change areas, hand washing facilities, biological monitoring, training under 29 CFR 1926.59, Hazard Communication; 29 CFR 1926.62 – Lead, 29 CFR 1926.21, Safety Training and Education.

8 HEWITT ROAD
NORTH STONINGTON, CT LEAD CONTAMINATED SOIL REMOVAL - 02 09 00

3.2 WASTE GENERATING ACTIVITIES

- A. The CONTRACTOR shall dispose of the following waste streams as lead waste:
 - 1. All soil that shall be removed under the base bid shall be disposed of as lead waste.
- B. The CONTRACTOR is responsible for disposal of all PPE and cleaning materials.

3.3 EXTERIOR WORK AREA PREPARATION

- A. The CONTRACTOR shall create a regulated work area around all active areas of work. The regulated work area shall consist of temporary fencing.
- B. The CONTRACTOR shall post lead hazard warning signs in accordance with OSHA 29 CFR 1926.62. It shall be the sole responsibility of the CONTRACTOR to ensure that only authorized personnel are permitted to enter the work area.
- C. The CONTRACTOR shall work with the OWNER and establish an approved location for placement of the waste canister prior to delivery.
- D. An orange construction fence with lead hazard warning signs in accordance with OSHA 29 CFR 1926.62 shall be erect and surrounding the waste canister. The signs should be posted on all visible sides of the waste canister.
- E. Two (2) layers of six (6) mil polyethylene sheeting shall be adhered to the base of the waste canister extending 3' out covering the surrounding grounds.

3.4 PERSONAL PROTECTION

- A. Prior to commencing work, instruct all workers in all aspects of personnel protection, work procedures, emergency procedures use of equipment including procedures unique to this project.
- B. Respiratory protection shall meet the requirements of OSHA as required in 29 CFR 1910.134, 29 CFR 1926.11, 29 CFR 1926.62. A formal respiratory protection program must be implemented in accordance with 29 CFR 1926.62 and 29 CFR 1910.134. The CONTRACTOR shall conduct exposure assessment air sampling, analysis and reporting to ensure the workers are using appropriate respiratory protection.
- C. The CONTRACTOR shall provide appropriate respiratory protection for each worker and ensure usage during potential lead-based paint exposure.
- D. The CONTRACTOR shall provide respirators from among those approved as being acceptable for protection by the National Institute for Occupational Safety and Health (NIOSH) under the provisions of 30 CFR Part II.
- E. The CONTRACTOR shall provide an adequate supply of filter for respirators in use.
- F. Minimum respiratory protection shall be as follows:

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- G. The CONTRACTOR shall provide and require all workers to wear protective clothing in Work Areas where airborne lead concentrations exceed permissible limits established by the OSHA or where contamination exists. Protective clothing shall include impervious coveralls with elastic wrists and ankles, head covering, gloves and foot coverings.
- H. The CONTRACTOR shall ensure that all authorized persons entering contaminated areas are equipped with proper respirators and protective clothing.

3.5 WORKER HYGIENE PRACTICES

- A. Workers shall don protective gear prior to entering work area including respirators, disposable coveralls and footwear. Eye protection, head protection and ear protection shall be provided to each worker.
- B. While leaving respirators on, workers shall remove all gross contamination, debris, and dust from disposable coveralls and remove coveralls and footwear and place in hazardous waste disposal bag prior to leaving work area.
- C. The CONTRACTOR shall establish a wash station in close proximity to the work area where workers shall decontaminate their person. The wash station shall be supplied with warm water and soap and an ample supply of drying towels. Wash water shall be tested for proper disposal.
- D. All equipment used by workers inside the work area shall be wet wiped or bagged for later decontamination before removal from work area.

3.6 SOIL REMOVAL PROCEDURES

- A. Complete all required work area preparation in each area prior to commencing with soil removal.
- B. A pathway to the waste containers shall be established and approved by OWNERS representative before removal procedures can commence.
- C. The CONTRACTOR must continuously mist the air and soil with a soap and water solution during the removal process. The CONTRACTOR is restricted from utilizing a garden hose as the water source as this method shall push the lead further into the soil.
- D. Lead-contaminated soil shall be placed into a bucket loader for transporting to the waste containers. The transport pathway from the excavation work area to the containers shall be covered with two (2) layers of six (6) mil polyethylene sheeting overlain by one (1) inch plywood sheathing. The polyethylene and plywood sheathing shall be placed to prevent spillage onto the Site and tracking lead contaminated soil outside the work area.
- E. Misting with water shall be performed to reduce the dust emissions during the unloading of the soil into the waste canister.

3.7 PROHIBITED ACTIVITIES

- A. The CONTRACTOR shall be prohibited from the following:

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1. Utilizing a garden hose as water source.
2. Creating visible dust during soil removal without proper PPE and engineering controls.

3.8 DISPOSAL OF WASTE MATERIALS

- A. The CONTRACTOR shall properly characterize all waste generated in order to determine if the waste is hazardous or not. Once waste has been characterized all records, analysis or other determinations made in accordance with the above requirements must be maintained for at least three (3) years from the date of shipment. All waste shall be sent off-site to permitted disposal facility. The CONTRACTOR shall use transporters permitted by the CT DEEP and DOT for any hazardous waste sent off-site in accordance with the identified requirements. The CONTRACTOR shall furnish over to the OWNER all copies of notifications, certifications and waste manifest once obtained from the disposal facility.

END SECTION 02 09 00

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