DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND, MID ATLANTIC
PUBLIC WORKS DEPARTMENT, NAVAL STATION NEWPORT
ONE SIMONPIETRI DRIVE
NEWPORT, RHODE ISLAND 02841-1711

Amendment 003

Date: 2016-08-01

Contract Number: N40085-13-D-3025 0005
NHCNE B23 HVAC REPAIRS
Design Project

From: Bethany Collard
Design Manager
Naval Station Newport

This document serves as amendment #03 to the initial Solicitation N40085-16-R-4637 RFP. You are requested to amend your proposal to reflect the following changes:

1. Refer to attached revised Bid Schedule dated 2016-07-26
2. Refer to response to RFI 001 dated 2016-07-26
3. Refer to attached reference files
4. Refer to attached Asbestos Containing Materials Assessment dated June 26, 2015
5. Refer to attached Asbestos Containing Materials Assessment dated July 20, 2015
6. Refer to attached NAVSTA Newport, RI Soil Management Plan
7. Refer to attached Environmental memos for HVAC work
8. Refer to A/E's "Engineering Change Notice" dated 2018-07-29

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Contractor Prebid RFI 001

Date: 2016-07-26

Contract Number: N40085-13-D-3025 0005
NHCNE B23 HVAC REPAIRS
Construction Project

From: Bethany Collard
Project Manager
Naval Station Newport

1. Question/ Clarification 1

SOW states that “Partial payment for work accomplished under this contract will not be made. Payment will only be made when the work is (100 percent) complete and accepted by the Government.” Our subcontractors and we ourselves are small businesses. The completion period is 360 days. Small Businesses cannot carry that kind of cost for one full year plus the time it takes to get payment through WAWF. We strongly suggest the government provide for monthly billing and payment provisions using DFOWs.

Response: Partial monthly payments are allowed as noted in specification section 01200.00 20 PRICE AND PAYMENT PROCEDURES.

2. Question/ Clarification 2

Spec Section 01 35 26 Government Safety Requirements, 3.1.3 Unforeseen Hazardous Material states that, “The design should have identified materials such as PCB, lead paint, and friable and non-friable asbestos and other OSHA regulated chemicals (i.e. 29 CFR Part 1910.1000).” and,
Spec Section 01 57 19.00 20 Temporary Environmental Controls, 3.11 CONTROL AND MANAGEMENT OF ASBESTOS CONTAINING MATERIAL (ACM) states that, “Items, components, or materials disturbed by or included in work under this contract do involve asbestos. Other materials in the general area around where work will be performed may contain asbestos. All thermal insulation, in all work areas, should be considered to be asbestos unless positively identified by conspicuous tags or previous laboratory analysis certifying them as asbestos free.”

Where is information on these materials containing asbestos, PCB and lead paint presented in the Contract Documents?

Response: Representative sampling was done at those portions of Building 23 which are specifically designated for repairs and renovations. With the exception of roof samples, no destructive sampling was done. Materials in the project areas that could be asbestos-containing materials (ACMs), lead- based paint (LBP), polychlorinated biphenyls (PCBs) and hazardous building materials (HBMs) were tested. The test results of the samples taken identified no ACMs, no LBP, and no PCBs. The radiator thermostats have the potential to be mercury-containing and should be removed, handled and disposed of accordingly.

The original design of Building 23 was completed in December, 1994; asbestos – containing materials were typically no longer used in construction at this time. However, Spec Section 01 35 26 Government Safety Requirements, 3.1.3 Unforeseen Hazardous Material states that, " If additional material, not indicated, that may be hazardous to human health upon disturbance during construction operations is encountered, stop that portion of work and notify the Contracting Officer immediately."

Please refer to the reports entitled "Asbestos and Hazardous Building Materials Assessment, Building 23 HVAC Repairs Naval Health Care New England," prepared by GZA GeoEnvironmental, Inc., dated July, 2015 and "Asbestos Containing Materials Assessment, Building 23 HVAC Repairs, Naval Health Care New England," prepared by GZA GeoEnvironmental, Inc., dated June 26, 2015, for additional details.

For purposes of this bid proposal, it assumed NO Hazardous Materials will be encountered, based on testing results of previously tested materials and age of the building. A unit price for testing Haz Mat of materials in areas that were inaccessible during the design phase and disposal of Haz Mat, should those tests result positive, is noted in the revised Bid Schedule as attached.

In addition, refer to the A/E's "Engineering Change Notice" and include two (2) thermostats, as located on attached plan, to be removed and properly recycled per NVATSA Newport, RI Environmental Dept. requirements.

3. Question/ Clarification 3

Spec Section 02 41 00 Demolition and Deconstruction, 3.1.9 Acoustic Ceiling Tile states, "Recycling is not required if the tiles contain or may have been exposed to asbestos material." Where is information on these Tiles containing asbestos presented in the Contract Documents?

Response: Representative sampling was done at 1st Floor ceiling tiles and 2nd Floor Decontamination Room ceiling tiles. The test results of the samples taken identified no ACMs. Please refer to the report entitled "Asbestos and Hazardous Building Materials Assessment, Building 23 HVAC Repairs Naval Health Care New England," prepared by GZA GeoEnvironmental, Inc., dated July, 2015, for additional details.

For purposes of this bid proposal, it assumed NO Hazardous Materials will be encountered, based on testing results of previously tested materials and age of the building. The ceiling tiles ARE recyclable and have not been exposed ACM.

4. Question/ Clarification 4
Is Duct and HVAC System Cleaning part of the SOW?

Response: Interior Cleaning of the existing ductwork systems is not part of the scope of work in this contract. Refer to Section 230000 paragraph 3.4 for Cleaning Requirements; for all items listed, it is intended for the Contractor to perform daily external cleaning of all items listed, but not limited to just these items. Due to the nature of building type, hospital, it is required that a dust and debris plan be submitted to the BUMED Hygienist and Facilities Manager at BUMED, and NAVFAC CM, for approval prior to start of the work. All work areas must be clean and free of any dirt, dust, and debris by 0600 daily.

5. Question/ Clarification 5
Spec Section 02 85 00.00 20 Mold Remediation, 3.5 DUCT AND HVAC SYSTEM CLEANING requires that:
"a. The HVAC cleaning contractor shall be a certified member of NADCA.
b. The HVAC cleaning contractor shall have at least one individual with Ventilation System Mold Remediator Qualifications certified by NADCA onsite during duct and HVAC system cleaning."

Is there any mold in HVAC systems included in this SOW?

Response: During the A/E's inspection and investigations during the design phase, no mold was visually observed at that time, however the internal portions of ductwork were inaccessible. Please refer to the Spec Section 00 22 13.00 20, Supplementary Instructions to Offerors, CLIN 0001AA and Spec Section 02 85 00.00 20 Mold Remediation and provide a Unit Price to remediate 500 SF of mold.

For purposes of this bid proposal, it assumed NO mold will be encountered, based on testing results of previously tested materials and visible inspections. A unit price for testing for mold in areas that were inaccessible during the design phase and disposal of mold, should those tests result positive, is noted in the revised Bid Schedule as attached.

6. Question/ Clarification 6-Work Hours
2. C. PROVISIONS of SOW, Work hours: states, "Weekdays from 7:00 AM. To 5:00 PM. required to commence work under the contract within [15] calendar days of award. Complete the entire project by 30 August 2017." Whereas Spec SECTION 01 11 00 Summary of Work, Paragraph 1.5 WORK RESCHEDULING states," Contractor shall allow for a maximum of 3 calendar days where construction activity is prohibitive. Further allowance for 3 calendar days of excavation and subsurface activity abeyance shall be imposed where other construction activities are permitted. Government will provide 24 hour notification each time the restrictions are invoked.
And it further states,

” Normal duty hours for work shall be from 6 p.m. to 6 a.m., Monday through Friday. Requests for additional work shall require written approval from the Contracting Officer 7 days in advance of the proposed work period.”
Additionally, Spec Section 01 14 00 Work Restrictions, 1.4.2 Working Hours states, “Regular working hours must consist of an 8 1/2 hour period established by the Contractor Officer, between 6 p.m. and 5 a.m., Monday through Friday, and after 6 p.m. on Saturday, excluding Government holidays.”
Please clarify (a) what are the working hours. Please note some subs are not interested in working in night hours at this project.(b) Please specify how many periods shall be included in the schedule for 3 calendar days where construction activity is prohibitive.

Response: Please refer to the following:

a) *Revisions to the Central Sterilization Room (CSR) and Decontamination Room (DR) HVAC: All construction must be performed overnight and Sundays only. Regular working hours must consist of an 8 1/2 hour period established by the Contractor Officer, between 6 p.m. and 5 a.m., Monday through Friday, and after 6 p.m. on Saturday, excluding Government holidays.*
b) *Replace existing AHU-4 and AHU-5, demolish CU-1 and provide new OU-1 and interior door access to AHU-4: All construction must be performed overnight and Sundays only. Regular working hours must consist of an 8 1/2 hour period established by the Contractor Officer, between 6 p.m. and 5 a.m., Monday through Friday, and after 6 p.m. on Saturday, excluding Government holidays.*
c) *Replace existing baseboard radiators: All construction must be performed overnight and Sundays only. Regular working hours must consist of an 8 1/2 hour period established by the Contractor Officer, between 6 p.m. and 5 a.m., Monday through Friday, and after 6 p.m. on Saturday, excluding Government holidays.*
d) *Bid Option #1 Replace isolation valves: All construction must be performed overnight and Sundays only. Regular working hours must consist of an 8 1/2 hour period established by the Contractor Officer, between 6 p.m. and 5 a.m., Monday through Friday, and after 6 p.m. on Saturday, excluding Government holidays.*
e) *Bid Option #2 Replace AHU-1, AHU-2 and AHU-3 fan motors: Limited construction work could be performed during day-time hours, weekdays from 7:00 AM to 5:00 PM. The fans could be shut down for one hour, but they must function during the day to provide the required air exchange rates.*
f) *Bid Option #3 Realign three (3) tilted/shifted precast concrete cooling tower fascia panels: Construction may occur during regular day time hours, weekdays from 7:00 AM to 5:00 PM, but must avoid the period when the cooling tower is in operation, approximately mid-May through mid-October.*

Allow for a maximum of three (3) twenty-four (24) hour periods during construction when construction activities will be prohibited.

7. Question/ Clarification 7
Could the GOVT provide us Reference Drawings listed in Spec Section 00 01 15 List of Drawings, PART 1 General, paragraph 1.3.1?

Response: Please refer to the attached pdf file entitled "B23 B23a – Existing Drawings.pdf".

8. Question/ Clarification 8

Could we please be provided with an existing valve tag schedule?

Response: A valve schedule was not created as part of the design work. Sufficient information exists on sheets MP111, P-111, P-112, P-121, and P-122 to replace the valves.

9. Refer to revised Bid Schedule dated 2016-07-26 for additional amount of Haz Mat testing, removal and disposal, and additional soil testing, removal and disposal.

10. Refer to attached NAVSTA Newport, RI Environmental Department Memorandums for refrigerant work. All refrigerant work must follow NSN procedures which includes the technician completing the CAA 40-82 F 1-3.
The Contractor shall provide an inventory of all new HVAC related equipment to ENV and NAVFAC Construction Manager.
All refrigerant work must be done by a certified technician and must provide copies of all certifications prior to the start of refrigerant work.

Revised 2016-07-26

DOCUMENT 00 22 13.00 20

SUPPLEMENTARY INSTRUCTIONS TO OFFERORS
02/14

PART 1 GENERAL

1.1 CONTRACT LINE ITEMS

The terms Offeror and Bidder and versions thereof (offer/bid) have the same definition as used within this contract.

Provide the Contract Line Item (CLIN) lump sum price for the following items:

CLIN 0001 - BASE PRICE. Price includes the following:

a. Revise Central Sterile Room and Decontamination Room HVAC in accordance with the drawings and specifications.

b. Baseboard Radiator Replacement in accordance with the drawings and specifications.

c. Replace AHU-4/CU-1 and AHU-5/CU-2 in accordance with the drawings and specifications.

d. Replace Laboratory ceiling mounted split Dx units in accordance with the drawings and specifications.

CLIN	DESCRIPTION	TOTAL PRICE FOR CLIN 0001
0001	BASE PRICE for items a. through d. as described above.	$_____

CLIN 0001AA. Price for 5 tests and remediation of 500 SF of suspect mold for Base Price Item (a.) listed above, complete in accordance with the drawings and specifications and in accordance with the following schedule:

CLIN	ITEM	UNIT	UNIT PRICE	NO. UNITS	TOTAL PRICE FOR CLIN 0001AA (UNIT PRICE X NO. UNITS)
0001AA	Test & Remediate Mold	Each	$_____	5 test & 500 SF	$_____

CLIN 0002 Option Item No. 1 - Price includes the following:

Price for providing all work in connection with Replace Isolation Valves, complete in accordance with the drawings and specifications.

CLIN	DESCRIPTION	TOTAL PRICE FOR CLIN 0002

0002	Replace Isolation Valves	$_____

CLIN 0002AA. Price for 2 PEM tests, and removal and disposal of 100 SF of suspect hazardous building materials for Option Item No. 1 listed above, complete in accordance with the drawings and specifications and in accordance with the following schedule:

CLIN	ITEM	UNIT	UNIT PRICE	NO. UNITS	TOTAL PRICE FOR CLIN 0002AA (UNIT PRICE X NO. UNITS)
0002AA	Hazardous Building Materials	Each	$_____	2 PEM tests & 100 SF	$_____

CLIN 0003 Option Item No. 2 - Price includes the following:

Price for providing all work in connection with Replace AHU-1, AHU-2 and AHU-3 Fan Motors, complete in accordance with the drawings and specifications.

CLIN	DESCRIPTION	TOTAL PRICE FOR CLIN 0003
0003	Replace AHU-1, AHU-2 and AHU-3 Fan Motors	$_____

CLIN 0003AA. Price for 2 PEM tests and removal and disposal of 100 SF of suspect hazardous building materials for Option Item No. 2 listed above, complete in accordance with the drawings and specifications and in accordance with the following schedule:

CLIN	ITEM	UNIT	UNIT PRICE	NO. UNITS	TOTAL PRICE FOR CLIN 0003AA (UNIT PRICE X NO. UNITS)
0003AA	Hazardous Building Materials	Each	$_____	2 PEM tests & 100 SF	$_____

CLIN 0004 Option Item No. 3 - Price includes the following:

Price for providing all work in connection with Realign Three (3) Precast Concrete Cooling Tower Fascia Panel, complete in accordance with drawings and specifications.

CLIN	DESCRIPTION	TOTAL PRICE FOR CLIN 0004

0004	Realign Three (3) Precast Concrete Cooling Tower Fascia Panels	$_____

CLIN 0004AA. Price for 3 soil tests and removal and disposal of 75 cubic yards of soil materials per NAVSTA Newport, RI Soil Management Plan as attached, for Option Item No. 3 listed above, complete in accordance with the drawings and specifications and in accordance with the following schedule:

CLIN	ITEM	UNIT	UNIT PRICE	NO. UNITS	TOTAL PRICE FOR CLIN 0004AA (UNIT PRICE X NO. UNITS)
0004AA	3 Soil tests and 50 cubic yards	Each	$_____	3 tests & 75 cubic yards	$_____

1.2 GENERAL BID NOTES

a. Award will be made on the total sum of Contract Line Item 0001 and the sum of the extensions under Contract Line Item 0001AA. For CLIN 0001AA, enter unit prices and extended totals in spaces provided. If there is a difference between a unit price and the extended total, the unit price will be held to be the intended bid and the total recomputed accordingly. If an Offeror provides a total but fails to enter a unit price, the total divided by the specified quantity will be held to be the intended unit price.

b. The Government reserves the unilateral right to award CLIN 0002 and CLIN 0002AA, CLIN 0003 and CLIN 0003AA, and CLIN 0004 and CLIN 0004AA to the Contractor at the proposed price within 90 calendar days after the contract award. A firm fixed proposed price is required for CLIN 0001, CLIN 0002, CLIN 0003 and CLIN 0004. No provision is made for economic price adjustment.

c. Evaluation of Options (JUL 1990). Except when it is determined in accordance with FAR 17.206 (b) not to be in the Government's best interest, the Government will evaluate offers for award purposes by adding the price for the Option(s) to the total price for CLIN 0001. In accordance with FAR 52.217-5, evaluation of options will not obligate the Government to exercise the Option(s).

d. The Government may reject an offer as nonresponsive if it is materially unbalanced as to prices for the basic requirement and the option quantities. An offer is unbalanced when it is based on prices significantly less than cost for some work and prices which are significantly overstated for other work.

e. If CLIN 0002, CLIN 0003 and /or CLIN 0004 are exercised, additional bonding and consent of surety is required. Consequently, the Performance Bond must reflect 100 percent of the aggregate amount of all items.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Document --

ASBESTOS AND HAZARDOUS BUILDING MATERIALS ASSESSMENT
BUILDING 23 HVAC REPAIRS NAVAL HEALTH CARE NEW ENGLAND
NAVAL HEALTH CARE NEW ENGLAND (NHCNE)

NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

Submitted to:

Burns & McDonnell
Chesapeake, Virginia

July, 2015
File No. 34043.03

Proactive By Design.
Our Company Commitment

GZA GeoEnvironmental, Inc.

530 Broadway | Providence, Rhode Island 02909
401-421-4140

27 Offices Nationwide
www.gza.com

Proactive by Design

GEOTECHNICAL
ENVIRONMENTAL
ECOLOGICAL
WATER
CONSTRUCTION MANAGEMENT

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Providence, RI 02909
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July 20, 2015
File No. 34043.03

Mr. Jerry Q. Jorge
Burns & McDonnell
1305 Executive Blvd., Suite 160
Chesapeake, Virginia 23320

Re: Asbestos and Hazardous Building Materials Assessment
Building 23 HVAC Repairs Naval Health Care New England
Naval Health Care New England (NHCNE)
Naval Station Newport
Newport, Rhode Island

Dear Mr. Jorge:

This report presents the results of a pre-renovation asbestos-containing materials (ACMs), lead-based paint (LBP), polychlorinated biphenyls (PCBs) and hazardous building materials (HBMs) assessment conducted by GZA GeoEnvironmental, Inc. (GZA) for Burns & McDonnell (the Client) of the Building 23 Naval Health Care New England facility located at the Naval Station Newport, Newport, Rhode Island (the Site).

Authorization to proceed with the assessment of the building was granted in accordance with our proposal dated February 6, 2015. This report of findings has been prepared in accordance with the limitations provided in Appendix A, and is subject to modification if subsequent information is developed or identified by GZA or any other party.

The NHCNE facility consists of numerous buildings. The proposed HVAC repairs and renovations associated with this project are located in Building 23; a two-three story brick façade building with a basement. It is our understanding that repairs or replacements will take place in select locations on all floors of the Building 23. Our assessment focused on those portions of Building 23 which were specifically designated for repairs/renovations referred to herein as the Project Areas. GZA's assessment work was conducted on May 18th and 20th, 2015. GZA's work consisted of the following:

- A walkthrough and visual inspection of accessible building areas by USEPA-accredited and Rhode Island-certified asbestos inspectors to locate, estimate, sample, and assess those materials suspected to contain asbestos;

- Representative bulk sampling of each homogeneous area of suspect asbestos materials in sufficient numbers to comply with USEPA guidelines. Analysis of the asbestos bulk samples at a Rhode Island-certified laboratory (See Appendix B for laboratory certificates of analysis) using polarized light microscopy with dispersion staining (PLM/DS), and visual estimation of

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resulting asbestos concentrations;

- Collection of samples for lead-based paint (LBP) analysis;
- Collection of caulking samples for PCB analysis;
- A visual evaluation of the Project Areas to identify other hazardous or potentially hazardous building materials, such as above-ground-storage tanks (ASTs), mercury-containing switches, fluorescent lamps, ballasts potentially containing polychlorinated biphenyls (PCBs) or diethyl-hexyl phthalate (DEHP), chlorofluorocarbons (CFCs), batteries, containerized wastes, and other universal waste items which may be impacted by the repairs;
- Collection of composite soil samples for pre-characterization for off-Site disposal;

This report presents GZA's results and opinions. Included is a summary of the work completed; laboratory analysis results; a description of ACMs, LBP, PCBs and HBMs identified; and locations and estimated quantities.

ASBESTOS SURVEY RESULTS

As part of the project, GZA identified and collected 37 samples (exclusive of samples of roofing material which are scheduled to be collected in the near future) of materials which potentially contained ACMs. The intent was to provide pre-renovation estimates of the types and quantities of ACMs, if present, which may be impacted by the proposed project.

As part of GZA's sampling we did not conduct any destructive/invasive explorations of the interiors of any electrical distribution equipment or mechanical equipment associated with the project. Mechanical systems associated with the repair project were visually evaluated for the presence of ACMs and none were detected other than vibration dampers associated with the air handler units (AHUs). Due to the active working nature of the AHUs, samples of the vibration dampers were not collected, but have the potential to contain ACMs and should be dealt with accordingly. No suspect ACMs were noted during the evaluation of the piping and isolation valves associated with the repair project.

A table listing suspect ACM samples is attached in Appendix C.

<u>ASBESTOS-CONTAINING MATERIALS</u>

GZA's assessment and the laboratory test results identified no ACMs within the building.

LEAD-BASED PAINT RESULTS

Samples were collected of representative painted surfaces in selected interior portions of the Project Area for Lead-based paint (LBP) analysis. The concentrations of lead on interior surfaces within the project area was below the method detection limit of 0.010% by weight; below the

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USEPA threshold of 0.5% by weight to be considered lead-based paint. A table listing all samples collected for LBP analysis and their concentrations is attached in Appendix D.

HAZARDOUS BUILDING MATERIALS

GZA conducted observations of the building to obtain information on the presence of hazardous building materials that require removal and disposal prior to the proposed repairs or renovations. Hazardous materials observed associated with the repairs include: fluorescent lamps, fluorescent lamp ballasts, thermostats and air conditioning units. Fluorescent lamps and lamp ballasts were identified within the vicinity of many proposed isolation valve replacements located mainly in hallway corridors. It is GZA's understanding that existing lighting is to remain, however, some fixtures may have to be removed to provide access to the valves. Thermostats associated with the radiator replacements have the potential to be mercury-containing and should be removed, handled and disposed of accordingly. Air conditioning units contain chlorofluorocarbons (CFCs) which must be removed by a properly licensed technician prior to disposal/recycling.

POLY-CHLORINATED BIPHENYLS

GZA collected four samples of caulking for PCB analysis. PCBs are commonly detected in building caulks and sealants. PCBs were not detected in any of the four suspect building materials sampled from areas associated with the repair project.

GZA also performed a visual assessment of suspect PCB-containing items. Fluorescent light ballasts were present within the project work area and are typically suspected to contain PCBs. It is GZA's understanding that the existing lights in the Project Areas are to remain; however, as noted above some light fixtures may need to be removed to gain access to valves that are scheduled to be replaced.

OTHER REGULATED MATERIALS

GZA performed a visual assessment of additional regulated materials in the Project Area. Locations of identified universal waste/hazardous materials are as follows:

Identified universal/hazardous materials are provided in the Hazardous Materials Inventory in Appendix E.

SOIL ANALYSIS

As part of the proposed repairs associated with the condensing water system cooling tower; excess soils are likely to be generated. Soils cannot be removed from the Navy Base Site and used as unrestricted clean fill, thus they require characterization for off-Site disposal. GZA collected one composite soil sample

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from the proposed excavated fill material areas for pre-characterization analysis for off-site disposal at a licensed in-State facility. One parameter, arsenic, was detected in excess of the Rhode Island Department of Environmental Management's (RIDEM's) Residential and Industrial/Commercial Direct Exposure Criteria of 7 mg/kg. In accordance with the Site specific Soils Management Plan (SMP) all excess soils from the project will need to be disposed of properly at a facility approved to accept impacted soils such as the Central Landfill or Coventry Landfill.

GZA is currently preparing a soil disposal application package to obtain disposal approval at an appropriately licensed receiving facility selected in concert with you and/or the NAVY.

Thank you for this opportunity to be of service to you. Please contact any of the undersigned with any questions you may have pertaining to the information in this report.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Erik Beloff
Assistant Project Manager

John R. Pilling
Consultant/Reviewer

Edward A. Summerly, P.G.
Principal

EB/EAS:jm

Attachments:

Appendix A:	Limitations
Appendix B:	EMSL Asbestos Analytical Laboratory Reports
Appendix C:	Suspect ACM Sample Inventory Table
Appendix D:	Lead and PCB Sample Inventory Table
Appendix E:	Hazardous Materials Inventory Table

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APPENDIX A

LIMITATIONS

1. GZA's pre-renovation/demolition asbestos/hazardous materials evaluation was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same geographical area, and GZA observed the degree of care and skill generally exercised by other consultants under similar circumstances and conditions. GZA's findings and conclusions must be considered not as scientific certainties, but rather as our professional opinion concerning the significance of the limited data gathered during the course of the pre-renovation/demolition asbestos/hazardous materials evaluation. No other warranty, express or implied, is made. Specifically, GZA does not and cannot represent that the Site contains no asbestos-containing materials, or other latent condition beyond that observed by GZA during its pre-renovation/demolition asbestos/hazardous materials evaluation.

2. This survey report, which presents our findings, is not to be used as a bid document/work plan, or in place of a work plan, for conducting asbestos abatement. When an asbestos abatement work plan is prepared, the State of Rhode Island requires that the plan be prepared by a Rhode Island-certified and USEPA-accredited Asbestos Project Designer. GZA recommends that a work plan and technical abatement specifications be prepared and a bid walkthrough be administered by GZA personnel familiar with the on-site asbestos conditions.

3. The observations described in this report were made under the conditions stated herein. The conclusions presented in the report were based solely upon the services described therein, and not on scientific tasks or procedures beyond the proposed Scope of Services.

4. The conclusions and recommendations contained in this report are based on environmental sampling and visual observations, and were arrived at in accordance with generally accepted standards of industrial hygiene practice. No other warranty, express or implied, is made.

5. Where sample analyses were conducted by an outside laboratory, GZA GeoEnvironmental, Inc. (GZA) has relied upon the data provided, and has not conducted an independent evaluation of the reliability of these data.

6. The purpose of this report was to assess the physical characteristics of the subject Site with respect to the presence of ACMs, Lead Paint, and HBMs at the Site building. No specific attempt was made to check on the compliance by any party with federal, state, or local laws and regulations.

7. Observations were made of the Site as indicated within the report. While it was GZA's intent to conduct a thorough survey, it is important to note that we cannot guarantee that all asbestos materials within the surveyed area have been identified. ACMs have frequently been used in areas where detection is difficult until renovation, demolition, and/or asbestos abatement work begins and allows access to these remote areas. Where access to portions of the site was unavailable or limited, GZA has provided an opinion as to the likely presence of asbestos materials consistent with the information available.

8. Since GZA has no control over labor and materials costs and design, the estimates of abatement costs have been made on the basis of prior experience and discussions with contractors. The actual costs for various items will depend on actual market conditions when the project is bid. GZA does not guarantee the accuracy of cost estimates to contractor’s bids for abatement costs.

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APPENDIX B

EMSL ASBESTOS ANALYTICAL LABORATORY REPORTS

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

EMSL Order:	041514719
CustomerID:	GZA61
CustomerPO:	
ProjectID:	

Attn: **Erik Beloff**
GZA GeoEnvironmental, Inc.
530 Broadway
Providence, RI 02909-1820

Phone:	(401) 421-4140
Fax:	(401) 751-8613
Received:	05/21/15 9:20 AM
Analysis Date:	5/27/2015
Collected:	5/18/2015

Project: **B23 HVAC - 15-280**

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by PLM via EPA 600/R-93/116 section 2.3

SAMPLE ID	DESCRIPTION	APPEARANCE	% MATRIX MATERIAL	% NON-ASBESTOS FIBERS	ASBESTOS TYPES
1 *041514719-0001*	1st Floor - 6" Cove Base, Green	Green Non-Fibrous Homogeneous	100	None	No Asbestos Detected
2 *041514719-0002*	1st Floor - Mastic behind 1, Tan	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
5 *041514719-0005*	1st Floor - 7" Cove Base, Tan	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
6 *041514719-0006*	1st Floor - Mastic behind 5, Tan	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
8 *041514719-0008*	1st Floor - Mastic behind 7, Tan	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
10 *041514719-0010*	1st Floor - 4" Cove Base, Tan	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
11 *041514719-0011*	1st Floor - Mastic behind 10, Tan	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
12 *041514719-0012*	1st Floor - 4" Cove Base, Green	Green Non-Fibrous Homogeneous	100	None	No Asbestos Detected
13 *041514719-0013*	1st Floor - Mastic behind 12, Tan	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected

Analyst(s)

Andrew Castellano (18)
Samantha Rundstorm (7)

Benjamin Ellis, Laboratory Manager
or other approved signatory

Initial report from 05/27/2015 23:01:09

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

EMSL Order:	041514719
CustomerID:	GZA61
CustomerPO:	
ProjectID:	

Attn: **Erik Beloff**
GZA GeoEnvironmental, Inc.
530 Broadway
Providence, RI 02909-1820

Phone:	(401) 421-4140
Fax:	(401) 751-8613
Received:	05/21/15 9:20 AM
Analysis Date:	5/27/2015
Collected:	5/18/2015

Project: **B23 HVAC - 15-280**

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by PLM via EPA 600/R-93/116 section 2.3

SAMPLE ID	DESCRIPTION	APPEARANCE	% MATRIX MATERIAL	% NON-ASBESTOS FIBERS	ASBESTOS TYPES
14 *041514719-0014*	2nd Floor - 6" Cove Base, Tan	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
15 *041514719-0015*	2nd Floor - Mastic behind 14, Tan	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
16 *041514719-0016*	2nd Floor - Wallpaper, Beige	Beige Fibrous Homogeneous	100	None	No Asbestos Detected
17 *041514719-0017*	2nd Floor - 4" Cove Base, Green	Green Non-Fibrous Homogeneous	100	None	No Asbestos Detected
18 *041514719-0018*	2nd Floor - Mastic behind 17, Tan	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
20 *041514719-0020*	2nd Floor - 4" Cove Base, Tan	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
21 *041514719-0021*	2nd Floor - Mastic behind 20, Tan	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
23 *041514719-0023*	2nd Floor - 2" Tile Mastic, behind 22, Tan	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
24 *041514719-0024*	1st Floor - 6" Cove Base, Green	Green Non-Fibrous Homogeneous	100	None	No Asbestos Detected

Analyst(s)

Andrew Castellano (18)
Samantha Rundstorm (7)

Benjamin Ellis, Laboratory Manager
or other approved signatory

Initial report from 05/27/2015 23:01:09

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

EMSL Order:	041514719
CustomerID:	GZA61
CustomerPO:	
ProjectID:	

Attn: **Erik Beloff**
GZA GeoEnvironmental, Inc.
530 Broadway
Providence, RI 02909-1820

Phone:	(401) 421-4140
Fax:	(401) 751-8613
Received:	05/21/15 9:20 AM
Analysis Date:	5/27/2015
Collected:	5/18/2015

Project: **B23 HVAC - 15-280**

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by PLM via EPA 600/R-93/116 section 2.3

SAMPLE ID	DESCRIPTION	APPEARANCE	% MATRIX MATERIAL	% NON-ASBESTOS FIBERS	ASBESTOS TYPES
25 *041514719-0025*	1st Floor - Mastic behind 24, Tan	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
30 *041514719-0030*	2nd Floor - Pipe Penetration Sealant, Pink	Pink Non-Fibrous Homogeneous	100	None	No Asbestos Detected
31 *041514719-0031*	2nd Floor - Pipe Penetration Sealant, Red	Red Non-Fibrous Homogeneous	100	None	No Asbestos Detected
34 *041514719-0034*	2nd Floor, Room 2244 - Bldg Caulk, Gray	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
35 *041514719-0035*	2nd Floor, Room 2244, AHU-5 - Caulk, Dark Gray	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
36 *041514719-0036*	Water Tower - Caulk, Newer, Gray, Flexible	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
37 *041514719-0037*	Water Tower - Caulk, Older, Dark Gray, Brittle	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected

Analyst(s)

Andrew Castellano (18)
Samantha Rundstorm (7)

Benjamin Ellis, Laboratory Manager
or other approved signatory

Initial report from 05/27/2015 23:01:09

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

EMSL Order:	041514719
CustomerID:	GZA61
CustomerPO:	
ProjectID:	

Attn: **Erik Beloff**
GZA GeoEnvironmental, Inc.
530 Broadway
Providence, RI 02909-1820

Phone:	(401) 421-4140
Fax:	(401) 751-8613
Received:	05/21/15 9:20 AM
Analysis Date:	5/27/2015
Collected:	5/18/2015

Project: **B23 HVAC - 15-280**

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

			Non-Asbestos				Asbestos
Sample	**Description**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**% Type**
3 *041514719-0003*	1st Floor - Wall, Plaster, Speckled Colored, Textured	Brown/Gray Fibrous Homogeneous	20%	Cellulose	80%	Non-fibrous (other)	**None Detected**
4 *041514719-0004*	1st Floor - Wall, Drywall, Gray	White Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
7 *041514719-0007*	1st Floor - 2" Tile Grout, Green	Green Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
9 *041514719-0009*	1st Floor - 4" Tile Grout, Green	Green Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
19 *041514719-0019*	2nd Floor - 4" Tile Grout, Green	Green Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
22 *041514719-0022*	2nd Floor - 2" Tile Grout, Green	Green Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
26 *041514719-0026*	1st Floor - Ceiling Tile, 2'x2', White, Smooth	Gray/White Non-Fibrous Homogeneous	40% 35%	Cellulose Min. Wool	25%	Non-fibrous (other)	**None Detected**
27 *041514719-0027*	1st Floor - Ceiling Tile, 2'x2', White, Small Indents	Gray/White Fibrous Homogeneous	30% 45%	Min. Wool Cellulose	25%	Non-fibrous (other)	**None Detected**

Analyst(s)

Chelsey Bilhear (2)
Samantha Rundstorm (9)

Benjamin Ellis, Laboratory Manager
or other approved signatory

Initial report from 05/27/2015 23:01:09

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

EMSL Order:	041514719
CustomerID:	GZA61
CustomerPO:	
ProjectID:	

Attn: **Erik Beloff**
GZA GeoEnvironmental, Inc.
530 Broadway
Providence, RI 02909-1820

Phone:	(401) 421-4140
Fax:	(401) 751-8613
Received:	05/21/15 9:20 AM
Analysis Date:	5/27/2015
Collected:	5/18/2015

Project: **B23 HVAC - 15-280**

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

			Non-Asbestos				Asbestos
Sample	**Description**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**% Type**
28 *041514719-0028*	2nd Floor, Decon Room - Ceiling Tile, White, Textured	Gray/White Fibrous Homogeneous	30% 45%	Min. Wool Cellulose	25%	Non-fibrous (other)	**None Detected**
29 *041514719-0029*	2nd Floor, Decon Room - Ceiling Tile, White, Textured	Gray/White Fibrous Homogeneous	35% 55%	Cellulose Min. Wool	10%	Non-fibrous (other)	**None Detected**
32 *041514719-0032*	2nd Floor - Wall, Plaster, White	Brown/Gray Fibrous Homogeneous	20%	Cellulose	80%	Non-fibrous (other)	**None Detected**
33 *041514719-0033*	2nd Floor - Drywall, Gray						**Insufficient Material**

Analyst(s)

Chelsey Bilhear (2)
Samantha Rundstorm (9)

Benjamin Ellis, Laboratory Manager
or other approved signatory

Initial report from 05/27/2015 23:01:09

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 786-5974
http://www.EMSL.com cinnaminsonleadlab@emsl.com

EMSL Order:	201506108
CustomerID:	GZA61
CustomerPO:	
ProjectID:	

Attn: **Erik Beloff**
GZA GeoEnvironmental, Inc.
530 Broadway
Providence, RI 02909-1820

Phone:	(401) 421-4140
Fax:	(401) 751-8613
Received:	05/21/15 9:37 AM
Collected:	5/18/2015

Project: **B-23 HVAC-15-280**

Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

Client Sample Description	*Lab ID*	*Collected*	*Analyzed*	*Lead Concentration*
LP-1	*201506108-0001*	5/18/2015	5/22/2015	<0.010 % wt
	Site: Room 2126,Decon Room			
LP-2	*201506108-0002*	5/18/2015	5/22/2015	<0.010 % wt
	Site: 1st Floor,NE Corner			
LP-3	*201506108-0003*	5/18/2015	5/22/2015	<0.010 % wt
	Site: 2nd Floor,Room 2244,Khaki			

Julie Smith - Laboratory Director
NJ-NELAP Accredited:03036
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 established by the AIHA-LAP, unless specifically indicated otherwise.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NELAP Certifications: NJ 03036, NY 10872, PA 68-00367, AIHA-LAP, LLC ELLAP 100194, A2LA 2845.01

Initial report from 05/26/2015 11:03:12

CERTIFICATE OF ANALYSIS

Doug LeDo
GZA GeoEnvironmental, Inc.
530 Broadway
Providence, RI 02909

RE: B23 HVAC Repair (03.0015280)
ESS Laboratory Work Order Number: 1505531

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 1:21 pm, May 29, 2015

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with NELAC Standards, A2LA and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair

ESS Laboratory Work Order: 1505531

SAMPLE RECEIPT

The following samples were received on May 21, 2015 for the analyses specified on the enclosed Chain of Custody Record.

The client did not deliver the samples in a cooler.

Lab Number	Sample Name	Matrix	Analysis
1505531-01	PCB-1	Solid	8082A
1505531-02	PCB-2	Solid	8082A
1505531-03	PCB-3	Solid	8082A
1505531-04	PCB-4	Solid	8082A

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair

ESS Laboratory Work Order: 1505531

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair

ESS Laboratory Work Order: 1505531

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015D - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH / VPH

Prep Methods

3005A - Aqueous ICP and Graphite Furnace Digestion
3020A - Aqueous ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035 - Solid Purge and Trap

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair
Client Sample ID: PCB-1
Date Sampled: 05/20/15 10:15
Percent Solids: N/A
Initial Volume: 0.2
Final Volume: 10
Extraction Method: 3546

ESS Laboratory Work Order: 1505531
ESS Laboratory Sample ID: 1505531-01
Sample Matrix: Solid
Units: mg/kg wet
Analyst: TAJ
Prepared: 5/22/15 17:45

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (5.00)		8082A		1	05/26/15 20:35		CE52114
Aroclor 1221	ND (5.00)		8082A		1	05/26/15 20:35		CE52114
Aroclor 1232	ND (5.00)		8082A		1	05/26/15 20:35		CE52114
Aroclor 1242	ND (5.00)		8082A		1	05/26/15 20:35		CE52114
Aroclor 1248	ND (5.00)		8082A		1	05/26/15 20:35		CE52114
Aroclor 1254	ND (5.00)		8082A		1	05/26/15 20:35		CE52114
Aroclor 1260	ND (5.00)		8082A		1	05/26/15 20:35		CE52114
Aroclor 1262	ND (5.00)		8082A		1	05/26/15 20:35		CE52114
Aroclor 1268	ND (5.00)		8082A		1	05/26/15 20:35		CE52114

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*94 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*78 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*101 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*106 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair
Client Sample ID: PCB-2
Date Sampled: 05/20/15 11:00
Percent Solids: N/A
Initial Volume: 1
Final Volume: 10
Extraction Method: 3546

ESS Laboratory Work Order: 1505531
ESS Laboratory Sample ID: 1505531-02
Sample Matrix: Solid
Units: mg/kg wet
Analyst: TAJ
Prepared: 5/22/15 17:45

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (1.00)		8082A		1	05/26/15 20:54		CE52114
Aroclor 1221	ND (1.00)		8082A		1	05/26/15 20:54		CE52114
Aroclor 1232	ND (1.00)		8082A		1	05/26/15 20:54		CE52114
Aroclor 1242	ND (1.00)		8082A		1	05/26/15 20:54		CE52114
Aroclor 1248	ND (1.00)		8082A		1	05/26/15 20:54		CE52114
Aroclor 1254	ND (1.00)		8082A		1	05/26/15 20:54		CE52114
Aroclor 1260	ND (1.00)		8082A		1	05/26/15 20:54		CE52114
Aroclor 1262	ND (1.00)		8082A		1	05/26/15 20:54		CE52114
Aroclor 1268	ND (1.00)		8082A		1	05/26/15 20:54		CE52114

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*88 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*77 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*97 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*104 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair
Client Sample ID: PCB-3
Date Sampled: 05/20/15 08:15
Percent Solids: N/A
Initial Volume: 1.4
Final Volume: 10
Extraction Method: 3546

ESS Laboratory Work Order: 1505531
ESS Laboratory Sample ID: 1505531-03
Sample Matrix: Solid
Units: mg/kg wet
Analyst: TAJ
Prepared: 5/22/15 17:45

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.714)		8082A		1	05/26/15 21:13		CE52114
Aroclor 1221	ND (0.714)		8082A		1	05/26/15 21:13		CE52114
Aroclor 1232	ND (0.714)		8082A		1	05/26/15 21:13		CE52114
Aroclor 1242	ND (0.714)		8082A		1	05/26/15 21:13		CE52114
Aroclor 1248	ND (0.714)		8082A		1	05/26/15 21:13		CE52114
Aroclor 1254	ND (0.714)		8082A		1	05/26/15 21:13		CE52114
Aroclor 1260	ND (0.714)		8082A		1	05/26/15 21:13		CE52114
Aroclor 1262	ND (0.714)		8082A		1	05/26/15 21:13		CE52114
Aroclor 1268	ND (0.714)		8082A		1	05/26/15 21:13		CE52114

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*77 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*65 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*88 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*99 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair
Client Sample ID: PCB-4
Date Sampled: 05/20/15 08:40
Percent Solids: N/A
Initial Volume: 1.4
Final Volume: 10
Extraction Method: 3546

ESS Laboratory Work Order: 1505531
ESS Laboratory Sample ID: 1505531-04
Sample Matrix: Solid
Units: mg/kg wet
Analyst: TAJ
Prepared: 5/22/15 17:45

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.714)		8082A		1	05/26/15 21:33		CE52114
Aroclor 1221	ND (0.714)		8082A		1	05/26/15 21:33		CE52114
Aroclor 1232	ND (0.714)		8082A		1	05/26/15 21:33		CE52114
Aroclor 1242	ND (0.714)		8082A		1	05/26/15 21:33		CE52114
Aroclor 1248	ND (0.714)		8082A		1	05/26/15 21:33		CE52114
Aroclor 1254	ND (0.714)		8082A		1	05/26/15 21:33		CE52114
Aroclor 1260	ND (0.714)		8082A		1	05/26/15 21:33		CE52114
Aroclor 1262	ND (0.714)		8082A		1	05/26/15 21:33		CE52114
Aroclor 1268	ND (0.714)		8082A		1	05/26/15 21:33		CE52114

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*83 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*73 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*85 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*81 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair

ESS Laboratory Work Order: 1505531

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082A Polychlorinated Biphenyls (PCB)										
Batch CE52114 - 3546										
Blank										
Aroclor 1016	ND	0.0500	mg/kg wet							
Aroclor 1221	ND	0.0500	mg/kg wet							
Aroclor 1232	ND	0.0500	mg/kg wet							
Aroclor 1242	ND	0.0500	mg/kg wet							
Aroclor 1248	ND	0.0500	mg/kg wet							
Aroclor 1254	ND	0.0500	mg/kg wet							
Aroclor 1260	ND	0.0500	mg/kg wet							
Aroclor 1262	ND	0.0500	mg/kg wet							
Aroclor 1268	ND	0.0500	mg/kg wet							
Surrogate: Decachlorobiphenyl	*0.0184*		mg/kg wet	*0.02500*		*73*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0131*		mg/kg wet	*0.02500*		*52*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0204*		mg/kg wet	*0.02500*		*82*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0201*		mg/kg wet	*0.02500*		*80*	*30-150*			
LCS										
Aroclor 1016	0.512	0.0500	mg/kg wet	0.5000		102	40-140			
Aroclor 1260	0.478	0.0500	mg/kg wet	0.5000		96	40-140			
Surrogate: Decachlorobiphenyl	*0.0219*		mg/kg wet	*0.02500*		*88*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0163*		mg/kg wet	*0.02500*		*65*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0238*		mg/kg wet	*0.02500*		*95*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0263*		mg/kg wet	*0.02500*		*105*	*30-150*			
LCS Dup										
Aroclor 1016	0.396	0.0500	mg/kg wet	0.5000		79	40-140	25	30	
Aroclor 1260	0.564	0.0500	mg/kg wet	0.5000		113	40-140	16	30	
Surrogate: Decachlorobiphenyl	*0.0256*		mg/kg wet	*0.02500*		*102*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0212*		mg/kg wet	*0.02500*		*85*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0130*		mg/kg wet	*0.02500*		*52*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0138*		mg/kg wet	*0.02500*		*55*	*30-150*			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair ESS Laboratory Work Order: 1505531

Notes and Definitions

U	Analyte included in the analysis, but not detected
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
[2C]	Result was taken from the second column. Dual column analysis.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair

ESS Laboratory Work Order: 1505531

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP)
A2LA Accredited: Testing Cert# 2864.01
http://www.a2la.org/scopepdf/2864-01.pdf

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI0002
http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/documents/AllLabs.xls

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
http://www.depweb.state.pa.us/portal/server.pt/community/labs/13780/laboratory_accreditation_program/590095

CHEMISTRY

A2LA Accredited: Testing Cert # 2864.01
Lead in Paint, Phthalates, Lead in Children's Metals Products (Including Jewelry)
http://www.A2LA.org/dirsearchnew/newsearch.cfm

CPSC ID# 1141
Lead Paint, Lead in Children's Metals Jewelry
http://www.cpsc.gov/cgi-bin/labapplist.aspx

Sample and Cooler Receipt Checklist

Client: GZA GeoEnvironmental, Inc.
Client Project ID: _____
Shipped/Delivered Via: Client

ESS Project ID: 15050531
Date Project Due: ~~5/28/15~~ 5/29/15 ~~5/21/15~~
Days For Project: 5 Day

Items to be checked upon receipt:

1. Air Bill Manifest Present?	* No	10. Are the samples properly preserved?	Yes
Air No.:		11. Proper sample containers used?	Yes
2. Were Custody Seals Present?	No	12. Any air bubbles in the VOA vials?	N/A
3. Were Custody Seals Intact?	N/A	13. Holding times exceeded?	No
4. Is Radiation count < 100 CPM?	Yes	14. Sufficient sample volumes?	Yes
5. Is a cooler present?	* No	15. Any Subcontracting needed?	No
Cooler Temp: **21.9**		16. Are ESS labels on correct containers?	**Yes|No**
Iced With: **None**		17. Were samples received intact?	**Yes|No**
6. Was COC included with samples?	Yes	ESS Sample IDs:	
7. Was COC signed and dated by client?	Yes	Sub Lab:	
8. Does the COC match the sample	Yes	Analysis:	
9. Is COC complete and correct?	Yes	TAT:	

18. Was there need to call project manager to discuss status? If yes, please explain.

_____

_____

_____

Who was called?:_____ By whom? _____

Sample Number	Properly Preserved	Container Type	# of Containers	Preservative
1	Yes	Plastic Bag	1	NP
2	Yes	Plastic Bag	1	NP
3	Yes	Plastic Bag	1	NP
4	Yes	Plastic Bag	1	NP

Completed By: _____ Date/Time: 5/21/15 1448
Reviewed By: Donna Rose Date/Time: 5/21/15 1745

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston, RI 02910-2211
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

Page 1 of 1

Turn Time: X Standard Other ____
If faster than 5 days, prior approval by laboratory is required # ____
State where samples were collected from: MA (RI) CT NH NJ NY ME Other ____
Is this project for any of the following: MA-MCP* (Navy) USACE Other ____

Reporting Limits

ESS LAB PROJECT ID: 150531

Electronic Deliverable: X Yes ___ No Format PDF

Co. Name	Project #	Project Name (20 Char. or less)
GZA	15-280	B-23 HVAC Repairs

Contact Person	Address
Doug Le Do	530 Broadway

City	State	Zip	PO#
Providence	RI	02909	

Telephone #	Fax #	Email Address
401-421-4140		

ESS LAB Sample#	Date	Collection Time	COMP	GRAB	MATRIX	Sample Identification (20 Char. or less)	Number of Containers	Type of Containers	8260 524.2	624	8021 MTBE/BTEX	VPH 8015 GRO	8100 TPH	8015 DRO	EPH No Targets	8081 Pesticides	8082 PCB	608 Pesticides	608 PCB	8270 PAH only	625	RCRA5	RCRA8	PP13	TAL23	TCLP8	MCP	MCPw/Hg	NBC7
1	5-20-15	1015		X	SD	PCB-1	1	P								X													
2	5-20-15	1100		X	SD	PCB-2	1	P								X													
3	5-20-15	0815		X	SD	PCB-3	1	P								X													
4	5-20-15	0840		X	SD	PCB-4	1	P								X													

Circle and/or Write Required Analysis

Container Type: P-Poly G-Glass S-Sterile V-VOA
Matrix: S-Soil SD-Solid D-Sludge WW-Waste Water GW-Ground Water SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filters

Cooler Present ___ Yes X No
Seals Intact ___ Yes ___ No NA: ____
Cooler Temp: 21.9° NO ICE

Internal Use Only
[ ] Pickup
[ ] Technicians ____

Comments: - EPA method SW 846-8082 for PCB's.

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
	5-21-15 1401		5/21/15 1401				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

*MADEP requires that all additional calibrated analytes found during analysis be disclosed.

Please fax all changes to Chain of Custody in writing.

1 (White) Lab Copy 2 (Yellow) Client Receipt

CERTIFICATE OF ANALYSIS

Doug LeDo
GZA GeoEnvironmental, Inc.
530 Broadway
Providence, RI 02909

RE: B23 HVAC Repair (15-280)
ESS Laboratory Work Order Number: 1505481

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 2:42 pm, May 28, 2015

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with NELAC Standards, A2LA and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair

ESS Laboratory Work Order: 1505481

SAMPLE RECEIPT

The following samples were received on May 20, 2015 for the analyses specified on the enclosed Chain of Custody Record.

Low Level VOA vials were frozen by ESS Laboratory on May 20, 2015 at 12:05.

Lab Number	Sample Name	Matrix	Analysis
1505481-01	S-1	Soil	1010, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8082A, 8100M, 8260B Low, 9045, 9095A

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair

ESS Laboratory Work Order: 1505481

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair

ESS Laboratory Work Order: 1505481

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015D - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH / VPH

Prep Methods

3005A - Aqueous ICP and Graphite Furnace Digestion
3020A - Aqueous ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035 - Solid Purge and Trap

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair
Client Sample ID: S-1
Date Sampled: 05/20/15 08:30
Percent Solids: 93

ESS Laboratory Work Order: 1505481
ESS Laboratory Sample ID: 1505481-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**7.29** (2.53)		6010C		1	KJK	05/21/15 13:41	2.13	100	CE52045
Barium	**21.0** (2.53)		6010C		1	KJK	05/21/15 13:41	2.13	100	CE52045
Cadmium	ND (0.51)		6010C		1	KJK	05/21/15 13:41	2.13	100	CE52045
Chromium	**7.88** (1.01)		6010C		1	KJK	05/21/15 13:41	2.13	100	CE52045
Lead	**37.7** (5.05)		6010C		1	KJK	05/21/15 13:41	2.13	100	CE52045
Mercury	ND (0.033)		7471B		1	KJK	05/22/15 19:09	0.65	40	CE52044
Selenium	ND (15.2)		6010C		3	KJK	05/22/15 2:07	2.13	100	CE52045
Silver	ND (0.51)		6010C		1	KJK	05/21/15 13:41	2.13	100	CE52045

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair
Client Sample ID: S-1
Date Sampled: 05/20/15 08:30
Percent Solids: 93
Initial Volume: 7.7
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1505481
ESS Laboratory Sample ID: 1505481-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
1,1,1-Trichloroethane	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
1,1,2,2-Tetrachloroethane	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
1,1,2-Trichloroethane	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
1,1-Dichloroethane	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
1,1-Dichloroethene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
1,1-Dichloropropene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
1,2,3-Trichlorobenzene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
1,2,3-Trichloropropane	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
1,2,4-Trichlorobenzene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
1,2,4-Trimethylbenzene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
1,2-Dibromo-3-Chloropropane	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
1,2-Dibromoethane	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
1,2-Dichlorobenzene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
1,2-Dichloroethane	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
1,2-Dichloropropane	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
1,3,5-Trimethylbenzene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
1,3-Dichlorobenzene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
1,3-Dichloropropane	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
1,4-Dichlorobenzene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
1,4-Dioxane	ND (0.0699)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
1-Chlorohexane	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
2,2-Dichloropropane	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
2-Butanone	ND (0.0350)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
2-Chlorotoluene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
2-Hexanone	ND (0.0350)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
4-Chlorotoluene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
4-Isopropyltoluene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
4-Methyl-2-Pentanone	ND (0.0350)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Acetone	ND (0.0350)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Benzene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Bromobenzene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair
Client Sample ID: S-1
Date Sampled: 05/20/15 08:30
Percent Solids: 93
Initial Volume: 7.7
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1505481
ESS Laboratory Sample ID: 1505481-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Bromodichloromethane	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Bromoform	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Bromomethane	ND (0.0070)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Carbon Disulfide	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Carbon Tetrachloride	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Chlorobenzene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Chloroethane	ND (0.0070)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Chloroform	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Chloromethane	ND (0.0070)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
cis-1,2-Dichloroethene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
cis-1,3-Dichloropropene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Dibromochloromethane	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Dibromomethane	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Dichlorodifluoromethane	ND (0.0070)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Diethyl Ether	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Di-isopropyl ether	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Ethyl tertiary-butyl ether	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Ethylbenzene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Hexachlorobutadiene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Isopropylbenzene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Methyl tert-Butyl Ether	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Methylene Chloride	ND (0.0175)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Naphthalene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
n-Butylbenzene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
n-Propylbenzene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
sec-Butylbenzene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Styrene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
tert-Butylbenzene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Tertiary-amyl methyl ether	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Tetrachloroethene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Tetrahydrofuran	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair
Client Sample ID: S-1
Date Sampled: 05/20/15 08:30
Percent Solids: 93
Initial Volume: 7.7
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1505481
ESS Laboratory Sample ID: 1505481-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
trans-1,2-Dichloroethene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
trans-1,3-Dichloropropene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Trichloroethene	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Trichlorofluoromethane	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Vinyl Acetate	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Vinyl Chloride	ND (0.0070)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Xylene O	ND (0.0035)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Xylene P,M	ND (0.0070)		8260B Low		1	05/21/15 16:12	CYE0282	CE52137
Xylenes (Total)	ND (0.0070)		8260B Low		1	05/21/15 16:12		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*105 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*97 %*		*70-130*
Surrogate: Dibromofluoromethane	*94 %*		*70-130*
Surrogate: Toluene-d8	*100 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair
Client Sample ID: S-1
Date Sampled: 05/20/15 08:30
Percent Solids: 93
Initial Volume: 19
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 1505481
ESS Laboratory Sample ID: 1505481-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TAJ
Prepared: 5/21/15 17:30

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.0567)		8082A		1	05/22/15 17:54		CE52008
Aroclor 1221	ND (0.0567)		8082A		1	05/22/15 17:54		CE52008
Aroclor 1232	ND (0.0567)		8082A		1	05/22/15 17:54		CE52008
Aroclor 1242	ND (0.0567)		8082A		1	05/22/15 17:54		CE52008
Aroclor 1248	ND (0.0567)		8082A		1	05/22/15 17:54		CE52008
Aroclor 1254	ND (0.0567)		8082A		1	05/22/15 17:54		CE52008
Aroclor 1260	ND (0.0567)		8082A		1	05/22/15 17:54		CE52008
Aroclor 1262	ND (0.0567)		8082A		1	05/22/15 17:54		CE52008
Aroclor 1268	ND (0.0567)		8082A		1	05/22/15 17:54		CE52008

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*93 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*102 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*98 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*95 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair
Client Sample ID: S-1
Date Sampled: 05/20/15 08:30
Percent Solids: 93
Initial Volume: 19.6
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 1505481
ESS Laboratory Sample ID: 1505481-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DPS
Prepared: 5/20/15 17:47

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**61.4** (41.2)		8100M		1	05/20/15 23:47	CYE0280	CE52011

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*89 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair
Client Sample ID: S-1
Date Sampled: 05/20/15 08:30
Percent Solids: 93

ESS Laboratory Work Order: 1505481
ESS Laboratory Sample ID: 1505481-01
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Corrosivity (pH)	**7.27** (N/A)		9045		1	JLK	05/20/15 15:38	S.U.	CE52031
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 21.5 °C.**								
Flashpoint	**> 200** (N/A)		1010		1	EEM	05/21/15 12:00	°F	CE52127
Free Liquid	ND (0.3)		9095A		1	MJV	05/26/15 13:13	ml/5 min	CE52624
Reactive Cyanide	ND (2.0)		7.3.3.2		1	MJV	05/22/15 11:11	mg/kg	CE52226
Reactive Sulfide	ND (2.0)		7.3.4.1		1	MJV	05/22/15 11:11	mg/kg	CE52226

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair

ESS Laboratory Work Order: 1505481

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals										
Batch CE52044 - 7471A										
Blank										
Mercury	ND	0.033	mg/kg wet							
LCS										
Mercury	25.3	3.47	mg/kg wet	24.90		102	80-120			
LCS Dup										
Mercury	25.6	3.67	mg/kg wet	24.90		103	80-120	1	20	
Batch CE52045 - 3050B										
Blank										
Arsenic	ND	2.50	mg/kg wet							
Barium	ND	2.50	mg/kg wet							
Cadmium	ND	0.50	mg/kg wet							
Chromium	ND	1.00	mg/kg wet							
Lead	ND	5.00	mg/kg wet							
Selenium	ND	5.00	mg/kg wet							
Silver	ND	0.50	mg/kg wet							
LCS										
Arsenic	128	9.62	mg/kg wet	133.0		96	80-120			
Barium	218	9.62	mg/kg wet	229.0		95	80-120			
Cadmium	109	1.92	mg/kg wet	123.0		89	80-120			
Chromium	55.6	3.85	mg/kg wet	63.20		88	80-120			
Lead	102	19.2	mg/kg wet	108.0		95	80-120			
Selenium	71.7	19.2	mg/kg wet	81.40		88	80-120			
Silver	72.1	1.92	mg/kg wet	74.80		96	80-120			
LCS Dup										
Arsenic	115	8.93	mg/kg wet	133.0		87	80-120	10	20	
Barium	205	8.93	mg/kg wet	229.0		89	80-120	6	20	
Cadmium	100	1.79	mg/kg wet	123.0		82	80-120	9	20	
Chromium	51.7	3.57	mg/kg wet	63.20		82	80-120	7	20	
Lead	94.3	17.9	mg/kg wet	108.0		87	80-120	8	20	
Selenium	66.7	17.9	mg/kg wet	81.40		82	80-120	7	20	
Silver	66.7	1.79	mg/kg wet	74.80		89	80-120	8	20	
5035/8260B Volatile Organic Compounds / Low Level										
Batch CE52137 - 5035										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,2-Trichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethene	ND	0.0050	mg/kg wet							
1,1-Dichloropropene	ND	0.0050	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.0050	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair

ESS Laboratory Work Order: 1505481

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CE52137 - 5035										
1,2,3-Trichloropropane	ND	0.0050	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,4-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/kg wet							
1,2-Dibromoethane	ND	0.0050	mg/kg wet							
1,2-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,2-Dichloroethane	ND	0.0050	mg/kg wet							
1,2-Dichloropropane	ND	0.0050	mg/kg wet							
1,3,5-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,3-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,3-Dichloropropane	ND	0.0050	mg/kg wet							
1,4-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,4-Dioxane	ND	0.100	mg/kg wet							
1-Chlorohexane	ND	0.0050	mg/kg wet							
2,2-Dichloropropane	ND	0.0050	mg/kg wet							
2-Butanone	ND	0.0500	mg/kg wet							
2-Chlorotoluene	ND	0.0050	mg/kg wet							
2-Hexanone	ND	0.0500	mg/kg wet							
4-Chlorotoluene	ND	0.0050	mg/kg wet							
4-Isopropyltoluene	ND	0.0050	mg/kg wet							
4-Methyl-2-Pentanone	ND	0.0500	mg/kg wet							
Acetone	ND	0.0500	mg/kg wet							
Benzene	ND	0.0050	mg/kg wet							
Bromobenzene	ND	0.0050	mg/kg wet							
Bromochloromethane	ND	0.0050	mg/kg wet							
Bromodichloromethane	ND	0.0050	mg/kg wet							
Bromoform	ND	0.0050	mg/kg wet							
Bromomethane	ND	0.0100	mg/kg wet							
Carbon Disulfide	ND	0.0050	mg/kg wet							
Carbon Tetrachloride	ND	0.0050	mg/kg wet							
Chlorobenzene	ND	0.0050	mg/kg wet							
Chloroethane	ND	0.0100	mg/kg wet							
Chloroform	ND	0.0050	mg/kg wet							
Chloromethane	ND	0.0100	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
cis-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Dibromochloromethane	ND	0.0050	mg/kg wet							
Dibromomethane	ND	0.0050	mg/kg wet							
Dichlorodifluoromethane	ND	0.0100	mg/kg wet							
Diethyl Ether	ND	0.0050	mg/kg wet							
Di-isopropyl ether	ND	0.0050	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.0050	mg/kg wet							
Ethylbenzene	ND	0.0050	mg/kg wet							
Hexachlorobutadiene	ND	0.0050	mg/kg wet							
Isopropylbenzene	ND	0.0050	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair

ESS Laboratory Work Order: 1505481

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CE52137 - 5035										
Methyl tert-Butyl Ether	ND	0.0050	mg/kg wet							
Methylene Chloride	ND	0.0250	mg/kg wet							
Naphthalene	ND	0.0050	mg/kg wet							
n-Butylbenzene	ND	0.0050	mg/kg wet							
n-Propylbenzene	ND	0.0050	mg/kg wet							
sec-Butylbenzene	ND	0.0050	mg/kg wet							
Styrene	ND	0.0050	mg/kg wet							
tert-Butylbenzene	ND	0.0050	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.0050	mg/kg wet							
Tetrachloroethene	ND	0.0050	mg/kg wet							
Tetrahydrofuran	ND	0.0050	mg/kg wet							
Toluene	ND	0.0050	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Trichloroethene	ND	0.0050	mg/kg wet							
Trichlorofluoromethane	ND	0.0050	mg/kg wet							
Vinyl Acetate	ND	0.0050	mg/kg wet							
Vinyl Chloride	ND	0.0100	mg/kg wet							
Xylene O	ND	0.0050	mg/kg wet							
Xylene P,M	ND	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0499*		mg/kg wet	*0.05000*		*100*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0479*		mg/kg wet	*0.05000*		*96*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0453*		mg/kg wet	*0.05000*		*91*	*70-130*			
Surrogate: Toluene-d8	*0.0500*		mg/kg wet	*0.05000*		*100*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	0.0604	0.0050	mg/kg wet	0.05000		121	70-130			
1,1,1-Trichloroethane	0.0552	0.0050	mg/kg wet	0.05000		110	70-130			
1,1,2,2-Tetrachloroethane	0.0538	0.0050	mg/kg wet	0.05000		108	70-130			
1,1,2-Trichloroethane	0.0533	0.0050	mg/kg wet	0.05000		107	70-130			
1,1-Dichloroethane	0.0502	0.0050	mg/kg wet	0.05000		100	70-130			
1,1-Dichloroethene	0.0497	0.0050	mg/kg wet	0.05000		99	70-130			
1,1-Dichloropropene	0.0507	0.0050	mg/kg wet	0.05000		101	70-130			
1,2,3-Trichlorobenzene	0.0614	0.0050	mg/kg wet	0.05000		123	70-130			
1,2,3-Trichloropropane	0.0588	0.0050	mg/kg wet	0.05000		118	70-130			
1,2,4-Trichlorobenzene	0.0622	0.0050	mg/kg wet	0.05000		124	70-130			
1,2,4-Trimethylbenzene	0.0569	0.0050	mg/kg wet	0.05000		114	70-130			
1,2-Dibromo-3-Chloropropane	0.0566	0.0050	mg/kg wet	0.05000		113	70-130			
1,2-Dibromoethane	0.0575	0.0050	mg/kg wet	0.05000		115	70-130			
1,2-Dichlorobenzene	0.0581	0.0050	mg/kg wet	0.05000		116	70-130			
1,2-Dichloroethane	0.0501	0.0050	mg/kg wet	0.05000		100	70-130			
1,2-Dichloropropane	0.0520	0.0050	mg/kg wet	0.05000		104	70-130			
1,3,5-Trimethylbenzene	0.0590	0.0050	mg/kg wet	0.05000		118	70-130			
1,3-Dichlorobenzene	0.0579	0.0050	mg/kg wet	0.05000		116	70-130			
1,3-Dichloropropane	0.0591	0.0050	mg/kg wet	0.05000		118	70-130			
1,4-Dichlorobenzene	0.0586	0.0050	mg/kg wet	0.05000		117	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair

ESS Laboratory Work Order: 1505481

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CE52137 - 5035										
1,4-Dioxane	1.06	0.100	mg/kg wet	1.000		106	70-130			
1-Chlorohexane	0.0561	0.0050	mg/kg wet	0.05000		112	70-130			
2,2-Dichloropropane	0.0578	0.0050	mg/kg wet	0.05000		116	70-130			
2-Butanone	0.254	0.0500	mg/kg wet	0.2500		102	70-130			
2-Chlorotoluene	0.0569	0.0050	mg/kg wet	0.05000		114	70-130			
2-Hexanone	0.292	0.0500	mg/kg wet	0.2500		117	70-130			
4-Chlorotoluene	0.0574	0.0050	mg/kg wet	0.05000		115	70-130			
4-Isopropyltoluene	0.0576	0.0050	mg/kg wet	0.05000		115	70-130			
4-Methyl-2-Pentanone	0.283	0.0500	mg/kg wet	0.2500		113	70-130			
Acetone	0.273	0.0500	mg/kg wet	0.2500		109	70-130			
Benzene	0.0524	0.0050	mg/kg wet	0.05000		105	70-130			
Bromobenzene	0.0578	0.0050	mg/kg wet	0.05000		116	70-130			
Bromochloromethane	0.0534	0.0050	mg/kg wet	0.05000		107	70-130			
Bromodichloromethane	0.0549	0.0050	mg/kg wet	0.05000		110	70-130			
Bromoform	0.0582	0.0050	mg/kg wet	0.05000		116	70-130			
Bromomethane	0.0563	0.0100	mg/kg wet	0.05000		113	70-130			
Carbon Disulfide	0.0548	0.0050	mg/kg wet	0.05000		110	70-130			
Carbon Tetrachloride	0.0577	0.0050	mg/kg wet	0.05000		115	70-130			
Chlorobenzene	0.0563	0.0050	mg/kg wet	0.05000		113	70-130			
Chloroethane	0.0352	0.0100	mg/kg wet	0.05000		70	70-130			
Chloroform	0.0526	0.0050	mg/kg wet	0.05000		105	70-130			
Chloromethane	0.0449	0.0100	mg/kg wet	0.05000		90	70-130			
cis-1,2-Dichloroethene	0.0546	0.0050	mg/kg wet	0.05000		109	70-130			
cis-1,3-Dichloropropene	0.0611	0.0050	mg/kg wet	0.05000		122	70-130			
Dibromochloromethane	0.0611	0.0050	mg/kg wet	0.05000		122	70-130			
Dibromomethane	0.0508	0.0050	mg/kg wet	0.05000		102	70-130			
Dichlorodifluoromethane	0.0487	0.0100	mg/kg wet	0.05000		97	70-130			
Diethyl Ether	0.0538	0.0050	mg/kg wet	0.05000		108	70-130			
Di-isopropyl ether	0.0492	0.0050	mg/kg wet	0.05000		98	70-130			
Ethyl tertiary-butyl ether	0.0514	0.0050	mg/kg wet	0.05000		103	70-130			
Ethylbenzene	0.0565	0.0050	mg/kg wet	0.05000		113	70-130			
Hexachlorobutadiene	0.0642	0.0050	mg/kg wet	0.05000		128	70-130			
Isopropylbenzene	0.0568	0.0050	mg/kg wet	0.05000		114	70-130			
Methyl tert-Butyl Ether	0.0526	0.0050	mg/kg wet	0.05000		105	70-130			
Methylene Chloride	0.0510	0.0250	mg/kg wet	0.05000		102	70-130			
Naphthalene	0.0561	0.0050	mg/kg wet	0.05000		112	70-130			
n-Butylbenzene	0.0585	0.0050	mg/kg wet	0.05000		117	70-130			
n-Propylbenzene	0.0554	0.0050	mg/kg wet	0.05000		111	70-130			
sec-Butylbenzene	0.0575	0.0050	mg/kg wet	0.05000		115	70-130			
Styrene	0.0598	0.0050	mg/kg wet	0.05000		120	70-130			
tert-Butylbenzene	0.0580	0.0050	mg/kg wet	0.05000		116	70-130			
Tertiary-amyl methyl ether	0.0533	0.0050	mg/kg wet	0.05000		107	70-130			
Tetrachloroethene	0.0578	0.0050	mg/kg wet	0.05000		116	70-130			
Tetrahydrofuran	0.0475	0.0050	mg/kg wet	0.05000		95	70-130			
Toluene	0.0536	0.0050	mg/kg wet	0.05000		107	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair

ESS Laboratory Work Order: 1505481

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CE52137 - 5035										
trans-1,2-Dichloroethene	0.0505	0.0050	mg/kg wet	0.05000		101	70-130			
trans-1,3-Dichloropropene	0.0590	0.0050	mg/kg wet	0.05000		118	70-130			
Trichloroethene	0.0530	0.0050	mg/kg wet	0.05000		106	70-130			
Trichlorofluoromethane	0.0499	0.0050	mg/kg wet	0.05000		100	70-130			
Vinyl Acetate	0.0583	0.0050	mg/kg wet	0.05000		117	70-130			
Vinyl Chloride	0.0453	0.0100	mg/kg wet	0.05000		91	70-130			
Xylene O	0.0559	0.0050	mg/kg wet	0.05000		112	70-130			
Xylene P,M	0.115	0.0100	mg/kg wet	0.1000		115	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0459*		mg/kg wet	*0.05000*		*92*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0499*		mg/kg wet	*0.05000*		*100*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0470*		mg/kg wet	*0.05000*		*94*	*70-130*			
Surrogate: Toluene-d8	*0.0507*		mg/kg wet	*0.05000*		*101*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	0.0555	0.0050	mg/kg wet	0.05000		111	70-130	8	25	
1,1,1-Trichloroethane	0.0555	0.0050	mg/kg wet	0.05000		111	70-130	0.5	25	
1,1,2,2-Tetrachloroethane	0.0517	0.0050	mg/kg wet	0.05000		103	70-130	4	25	
1,1,2-Trichloroethane	0.0524	0.0050	mg/kg wet	0.05000		105	70-130	2	25	
1,1-Dichloroethane	0.0517	0.0050	mg/kg wet	0.05000		103	70-130	3	25	
1,1-Dichloroethene	0.0508	0.0050	mg/kg wet	0.05000		102	70-130	2	25	
1,1-Dichloropropene	0.0508	0.0050	mg/kg wet	0.05000		102	70-130	0.3	25	
1,2,3-Trichlorobenzene	0.0547	0.0050	mg/kg wet	0.05000		109	70-130	12	25	
1,2,3-Trichloropropane	0.0573	0.0050	mg/kg wet	0.05000		115	70-130	3	25	
1,2,4-Trichlorobenzene	0.0547	0.0050	mg/kg wet	0.05000		109	70-130	13	25	
1,2,4-Trimethylbenzene	0.0530	0.0050	mg/kg wet	0.05000		106	70-130	7	25	
1,2-Dibromo-3-Chloropropane	0.0606	0.0050	mg/kg wet	0.05000		121	70-130	7	25	
1,2-Dibromoethane	0.0539	0.0050	mg/kg wet	0.05000		108	70-130	6	25	
1,2-Dichlorobenzene	0.0524	0.0050	mg/kg wet	0.05000		105	70-130	10	25	
1,2-Dichloroethane	0.0511	0.0050	mg/kg wet	0.05000		102	70-130	2	25	
1,2-Dichloropropane	0.0539	0.0050	mg/kg wet	0.05000		108	70-130	4	25	
1,3,5-Trimethylbenzene	0.0550	0.0050	mg/kg wet	0.05000		110	70-130	7	25	
1,3-Dichlorobenzene	0.0521	0.0050	mg/kg wet	0.05000		104	70-130	10	25	
1,3-Dichloropropane	0.0562	0.0050	mg/kg wet	0.05000		112	70-130	5	25	
1,4-Dichlorobenzene	0.0520	0.0050	mg/kg wet	0.05000		104	70-130	12	25	
1,4-Dioxane	1.14	0.100	mg/kg wet	1.000		114	70-130	7	20	
1-Chlorohexane	0.0536	0.0050	mg/kg wet	0.05000		107	70-130	5	25	
2,2-Dichloropropane	0.0587	0.0050	mg/kg wet	0.05000		117	70-130	1	25	
2-Butanone	0.264	0.0500	mg/kg wet	0.2500		106	70-130	4	25	
2-Chlorotoluene	0.0533	0.0050	mg/kg wet	0.05000		107	70-130	6	25	
2-Hexanone	0.295	0.0500	mg/kg wet	0.2500		118	70-130	1	25	
4-Chlorotoluene	0.0541	0.0050	mg/kg wet	0.05000		108	70-130	6	25	
4-Isopropyltoluene	0.0533	0.0050	mg/kg wet	0.05000		107	70-130	8	25	
4-Methyl-2-Pentanone	0.284	0.0500	mg/kg wet	0.2500		114	70-130	0.2	25	
Acetone	0.303	0.0500	mg/kg wet	0.2500		121	70-130	10	25	
Benzene	0.0528	0.0050	mg/kg wet	0.05000		106	70-130	0.8	25	
Bromobenzene	0.0523	0.0050	mg/kg wet	0.05000		105	70-130	10	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair

ESS Laboratory Work Order: 1505481

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CE52137 - 5035										
Bromochloromethane	0.0524	0.0050	mg/kg wet	0.05000		105	70-130	2	25	
Bromodichloromethane	0.0551	0.0050	mg/kg wet	0.05000		110	70-130	0.3	25	
Bromoform	0.0522	0.0050	mg/kg wet	0.05000		104	70-130	11	25	
Bromomethane	0.0571	0.0100	mg/kg wet	0.05000		114	70-130	1	25	
Carbon Disulfide	0.0559	0.0050	mg/kg wet	0.05000		112	70-130	2	25	
Carbon Tetrachloride	0.0561	0.0050	mg/kg wet	0.05000		112	70-130	3	25	
Chlorobenzene	0.0526	0.0050	mg/kg wet	0.05000		105	70-130	7	25	
Chloroethane	0.0435	0.0100	mg/kg wet	0.05000		87	70-130	21	25	
Chloroform	0.0535	0.0050	mg/kg wet	0.05000		107	70-130	2	25	
Chloromethane	0.0459	0.0100	mg/kg wet	0.05000		92	70-130	2	25	
cis-1,2-Dichloroethene	0.0545	0.0050	mg/kg wet	0.05000		109	70-130	0.2	25	
cis-1,3-Dichloropropene	0.0609	0.0050	mg/kg wet	0.05000		122	70-130	0.4	25	
Dibromochloromethane	0.0570	0.0050	mg/kg wet	0.05000		114	70-130	7	25	
Dibromomethane	0.0515	0.0050	mg/kg wet	0.05000		103	70-130	1	25	
Dichlorodifluoromethane	0.0493	0.0100	mg/kg wet	0.05000		99	70-130	1	25	
Diethyl Ether	0.0548	0.0050	mg/kg wet	0.05000		110	70-130	2	25	
Di-isopropyl ether	0.0512	0.0050	mg/kg wet	0.05000		102	70-130	4	25	
Ethyl tertiary-butyl ether	0.0530	0.0050	mg/kg wet	0.05000		106	70-130	3	25	
Ethylbenzene	0.0534	0.0050	mg/kg wet	0.05000		107	70-130	6	25	
Hexachlorobutadiene	0.0562	0.0050	mg/kg wet	0.05000		112	70-130	13	25	
Isopropylbenzene	0.0533	0.0050	mg/kg wet	0.05000		107	70-130	6	25	
Methyl tert-Butyl Ether	0.0535	0.0050	mg/kg wet	0.05000		107	70-130	2	25	
Methylene Chloride	0.0518	0.0250	mg/kg wet	0.05000		104	70-130	2	25	
Naphthalene	0.0527	0.0050	mg/kg wet	0.05000		105	70-130	6	25	
n-Butylbenzene	0.0548	0.0050	mg/kg wet	0.05000		110	70-130	7	25	
n-Propylbenzene	0.0532	0.0050	mg/kg wet	0.05000		106	70-130	4	25	
sec-Butylbenzene	0.0537	0.0050	mg/kg wet	0.05000		107	70-130	7	25	
Styrene	0.0553	0.0050	mg/kg wet	0.05000		111	70-130	8	25	
tert-Butylbenzene	0.0536	0.0050	mg/kg wet	0.05000		107	70-130	8	25	
Tertiary-amyl methyl ether	0.0539	0.0050	mg/kg wet	0.05000		108	70-130	1	25	
Tetrachloroethene	0.0526	0.0050	mg/kg wet	0.05000		105	70-130	9	25	
Tetrahydrofuran	0.0504	0.0050	mg/kg wet	0.05000		101	70-130	6	25	
Toluene	0.0539	0.0050	mg/kg wet	0.05000		108	70-130	0.5	25	
trans-1,2-Dichloroethene	0.0509	0.0050	mg/kg wet	0.05000		102	70-130	0.8	25	
trans-1,3-Dichloropropene	0.0595	0.0050	mg/kg wet	0.05000		119	70-130	0.8	25	
Trichloroethene	0.0534	0.0050	mg/kg wet	0.05000		107	70-130	0.8	25	
Trichlorofluoromethane	0.0497	0.0050	mg/kg wet	0.05000		99	70-130	0.3	25	
Vinyl Acetate	0.0620	0.0050	mg/kg wet	0.05000		124	70-130	6	25	
Vinyl Chloride	0.0464	0.0100	mg/kg wet	0.05000		93	70-130	2	25	
Xylene O	0.0519	0.0050	mg/kg wet	0.05000		104	70-130	7	25	
Xylene P,M	0.107	0.0100	mg/kg wet	0.1000		107	70-130	7	25	
Surrogate: 1,2-Dichloroethane-d4	*0.0501*		mg/kg wet	*0.05000*		*100*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0518*		mg/kg wet	*0.05000*		*104*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0503*		mg/kg wet	*0.05000*		*101*	*70-130*			
Surrogate: Toluene-d8	*0.0521*		mg/kg wet	*0.05000*		*104*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair

ESS Laboratory Work Order: 1505481

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082A Polychlorinated Biphenyls (PCB)										
Batch CE52008 - 3540C										
Blank										
Aroclor 1016	ND	0.0500	mg/kg wet							
Aroclor 1221	ND	0.0500	mg/kg wet							
Aroclor 1232	ND	0.0500	mg/kg wet							
Aroclor 1242	ND	0.0500	mg/kg wet							
Aroclor 1248	ND	0.0500	mg/kg wet							
Aroclor 1254	ND	0.0500	mg/kg wet							
Aroclor 1260	ND	0.0500	mg/kg wet							
Aroclor 1262	ND	0.0500	mg/kg wet							
Aroclor 1268	ND	0.0500	mg/kg wet							
Surrogate: Decachlorobiphenyl	*0.0239*		mg/kg wet	*0.02500*		*96*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0213*		mg/kg wet	*0.02500*		*85*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0222*		mg/kg wet	*0.02500*		*89*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0255*		mg/kg wet	*0.02500*		*102*	*30-150*			
LCS										
Aroclor 1016	0.576	0.0500	mg/kg wet	0.5000		115	40-140			
Aroclor 1260	0.604	0.0500	mg/kg wet	0.5000		121	40-140			
Surrogate: Decachlorobiphenyl	*0.0265*		mg/kg wet	*0.02500*		*106*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0248*		mg/kg wet	*0.02500*		*99*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0243*		mg/kg wet	*0.02500*		*97*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0274*		mg/kg wet	*0.02500*		*110*	*30-150*			
LCS Dup										
Aroclor 1016	0.534	0.0500	mg/kg wet	0.5000		107	40-140	8	30	
Aroclor 1260	0.567	0.0500	mg/kg wet	0.5000		113	40-140	6	30	
Surrogate: Decachlorobiphenyl	*0.0256*		mg/kg wet	*0.02500*		*103*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0238*		mg/kg wet	*0.02500*		*95*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0237*		mg/kg wet	*0.02500*		*95*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0264*		mg/kg wet	*0.02500*		*106*	*30-150*			
8100M Total Petroleum Hydrocarbons										
Batch CE52011 - 3546										
Blank										
Decane (C10)	ND	0.2	mg/kg wet							
Docosane (C22)	ND	0.2	mg/kg wet							
Dodecane (C12)	ND	0.2	mg/kg wet							
Eicosane (C20)	ND	0.2	mg/kg wet							
Hexacosane (C26)	ND	0.2	mg/kg wet							
Hexadecane (C16)	ND	0.2	mg/kg wet							
Nonadecane (C19)	ND	0.2	mg/kg wet							
Nonane (C9)	ND	0.2	mg/kg wet							
Octacosane (C28)	ND	0.2	mg/kg wet							
Octadecane (C18)	ND	0.2	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair

ESS Laboratory Work Order: 1505481

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8100M Total Petroleum Hydrocarbons										
Batch CE52011 - 3546										
Tetracosane (C24)	ND	0.2	mg/kg wet							
Tetradecane (C14)	ND	0.2	mg/kg wet							
Total Petroleum Hydrocarbons	ND	37.5	mg/kg wet							
Triacontane (C30)	ND	0.2	mg/kg wet							
Surrogate: O-Terphenyl	*4.29*		mg/kg wet	*5.000*		*86*	*40-140*			
LCS										
Decane (C10)	2.0	0.2	mg/kg wet	2.500		80	40-140			
Docosane (C22)	2.2	0.2	mg/kg wet	2.500		88	40-140			
Dodecane (C12)	2.1	0.2	mg/kg wet	2.500		83	40-140			
Eicosane (C20)	2.2	0.2	mg/kg wet	2.500		88	40-140			
Hexacosane (C26)	2.2	0.2	mg/kg wet	2.500		90	40-140			
Hexadecane (C16)	2.2	0.2	mg/kg wet	2.500		88	40-140			
Nonadecane (C19)	2.2	0.2	mg/kg wet	2.500		87	40-140			
Nonane (C9)	1.9	0.2	mg/kg wet	2.500		75	30-140			
Octacosane (C28)	2.2	0.2	mg/kg wet	2.500		88	40-140			
Octadecane (C18)	2.2	0.2	mg/kg wet	2.500		88	40-140			
Tetracosane (C24)	2.1	0.2	mg/kg wet	2.500		84	40-140			
Tetradecane (C14)	2.2	0.2	mg/kg wet	2.500		86	40-140			
Total Petroleum Hydrocarbons	30.6	37.5	mg/kg wet	35.00		87	40-140			
Triacontane (C30)	2.2	0.2	mg/kg wet	2.500		87	40-140			
Surrogate: O-Terphenyl	*4.74*		mg/kg wet	*5.000*		*95*	*40-140*			
LCS Dup										
Decane (C10)	2.0	0.2	mg/kg wet	2.500		81	40-140	2	25	
Docosane (C22)	2.2	0.2	mg/kg wet	2.500		88	40-140	0.3	25	
Dodecane (C12)	2.1	0.2	mg/kg wet	2.500		84	40-140	0.7	25	
Eicosane (C20)	2.2	0.2	mg/kg wet	2.500		88	40-140	0.5	25	
Hexacosane (C26)	2.3	0.2	mg/kg wet	2.500		90	40-140	0.5	25	
Hexadecane (C16)	2.2	0.2	mg/kg wet	2.500		87	40-140	0.04	25	
Nonadecane (C19)	2.2	0.2	mg/kg wet	2.500		88	40-140	0.4	25	
Nonane (C9)	1.9	0.2	mg/kg wet	2.500		75	30-140	0.3	25	
Octacosane (C28)	2.2	0.2	mg/kg wet	2.500		88	40-140	0.6	25	
Octadecane (C18)	2.2	0.2	mg/kg wet	2.500		88	40-140	0.3	25	
Tetracosane (C24)	2.1	0.2	mg/kg wet	2.500		84	40-140	0.4	25	
Tetradecane (C14)	2.1	0.2	mg/kg wet	2.500		86	40-140	0.2	25	
Total Petroleum Hydrocarbons	30.1	37.5	mg/kg wet	35.00		86	40-140	2	25	
Triacontane (C30)	2.2	0.2	mg/kg wet	2.500		88	40-140	1	25	
Surrogate: O-Terphenyl	*4.68*		mg/kg wet	*5.000*		*94*	*40-140*			
Classical Chemistry										
Batch CE52127 - General Preparation										
Reference										
Flashpoint	82		°F	81.00		102	97.9-102.1			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair

ESS Laboratory Work Order: 1505481

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Classical Chemistry										
Batch CE52226 - General Preparation										
Blank										
Reactive Cyanide	ND	2.0	mg/kg							
Reactive Sulfide	ND	2.0	mg/kg							
LCS										
Reactive Cyanide	3.9	2.0	mg/kg	100.3		4	0.68-5.41			
Reactive Sulfide	0.2	2.0	mg/kg	10.00		2	0-44			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair

ESS Laboratory Work Order: 1505481

Notes and Definitions

Z-10	Soil pH measured in water at 21.5 ºC.
U	Analyte included in the analysis, but not detected
D	Diluted.
>	Greater than.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
[2C]	Result was taken from the second column. Dual column analysis.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: B23 HVAC Repair

ESS Laboratory Work Order: 1505481

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP)
A2LA Accredited: Testing Cert# 2864.01
http://www.a2la.org/scopepdf/2864-01.pdf

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI0002
http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/documents/AllLabs.xls

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
http://www.depweb.state.pa.us/portal/server.pt/community/labs/13780/laboratory_accreditation_program/590095

CHEMISTRY

A2LA Accredited: Testing Cert # 2864.01
Lead in Paint, Phthalates, Lead in Children's Metals Products (Including Jewelry)
http://www.A2LA.org/dirsearchnew/newsearch.cfm

CPSC ID# 1141
Lead Paint, Lead in Children's Metals Jewelry
http://www.cpsc.gov/cgi-bin/labapplist.aspx

Sample and Cooler Receipt Checklist

Client: GZA GeoEnvironmental, Inc.
Client Project ID: _____
Shipped/Delivered Via: Client

ESS Project ID: 15050481
Date Project Due: ~~5/27/15~~ 5/28/15 w 5/20/15
Days For Project: 5 Day

Items to be checked upon receipt:

1. Air Bill Manifest Present?	* No	10. Are the samples properly preserved?	Yes
Air No.:		11. Proper sample containers used?	Yes
2. Were Custody Seals Present?	No	12. Any air bubbles in the VOA vials?	N/A
3. Were Custody Seals Intact?	N/A	13. Holding times exceeded?	No
4. Is Radiation count < 100 CPM?	Yes	14. Sufficient sample volumes?	Yes
5. Is a cooler present?	Yes	15. Any Subcontracting needed?	No
Cooler Temp: **5.8**		16. Are ESS labels on correct containers?	**Yes|No**
Iced With: **Ice**		17. Were samples received intact?	**Yes|No**
6. Was COC included with samples?	Yes	ESS Sample IDs: _____	
7. Was COC signed and dated by client?	Yes	Sub Lab: _____	
8. Does the COC match the sample	Yes	Analysis: _____	
9. Is COC complete and correct?	Yes	TAT: _____	

18. Was there need to call project manager to discuss status? If yes, please explain.
Vial's Frozen. 5/20/15 @ 1205 WAL

Who was called?:_____ By whom? _____

Sample Number	Properly Preserved	Container Type	# of Containers	Preservative
1	Yes	4 oz Soil Jar	1	NP
1	Yes	40 ml - VOA	1	MeOH
1	Yes	40 ml - VOA	2	other
1	Yes	8 oz Soil Jar	3	NP

Completed By: _____ Date/Time: 5/20/15 1159
Reviewed By: Nancy Rose Date/Time: 5/20/15 1205

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston, RI 02910-2211
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

Page 1 of 1

Turn Time: X Standard Other ____
If faster than 5 days, prior approval by laboratory is required # ____

State where samples were collected from:
MA (RI) CT NH NJ NY ME Other ____

Is this project for any of the following:
MA-MCP (Navy) USACE Other ____

Reporting Limits

ESS LAB PROJECT ID: 1505481

Electronic Deliverable: Yes X No ____
Format: Excel X Access ____ PDF X Other ____

Co. Name	Project #	Project Name (20 Char. or less)
GZA	15-280	B23 HVAC Repair

Contact Person	Address
Doug Le Do	530 Broadway

City	State	Zip	PO#
Providence	RI	02909	

Telephone #	Fax #	Email Address
401-421-4140		erik.beloff@gza.com

ESS LAB Sample #	Date	Collection Time	COMP	GRAB	MATRIX	Sample Identification (20 Char. or less)	Pres Code	Number of Containers	Type of Containers	8260 VOA (524.2, 624)	VPH w/targets (8021 MTBE/BTEX, 8015 GRO)	8015 DRO (8100 TPH)	EPH w/PAHs (EPH w/o PAHs)	608 PCB (8082 PCB, 8081 Pesticides)	PAH 8270 (625, 8270 SVOA)	PP13 TAL23 (RCRA8, RCRA5)	NBC7 (TCLP-RCRA8)	MCP-METALS (13) w/Hg (MCP-METALS (13))	PH	RCS/N	Paint Filter free Liquids	% Solids	Flashpoint
										High + LL													
1	5-20-15	0830	X		S	S-1		7	V,G	X		X		X	X	X			X	X	X	X	X

Circle and/or Write Required Analysis

Container Type: P-Poly G-Glass S-Sterile V-VOA

Matrix: S-Soil SD-Solid D-Sludge WW-Waste Water GW-Ground Water SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filters

Cooler Present: X Yes ___ No
Seals Intact: ___ Yes ___ No NA: X
Cooler Temp: 5.8° ICE W 5/20/15

Internal Use Only
[ ] Pickup
[ ] Technicians ____

Preservation Code 1- NP, 2- HCl, 3- H_2SO_4, 4- HNO_3, 5- NaOH, 6- MeOH, 7- Asorbic Acid, 8- ZnAct, 9- ____

Sampled by: Erik Beloff

Comments: Water Tower Panels Composite Soil Sample.

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	5-20-15 1148	[signature]	5/20/15 1148				

*By circling MA-MCP, client acknowledges samples were collected in accordance with MADEP CAM VII A

Please fax all changes to Chain of Custody in writing.

1 (White) Lab Copy 2 (Yellow) Client Receipt

10/26/04 A

Proactive by Design

APPENDIX C

SUSPECT ACM SAMPLE INVENTORY TABLE

APPENDIX C
SUSPECT ACM SAMPLE INVENTORY
HVAC Repairs Naval Health Care New England (NHCNE)
Building 23
Naval Station Newport
Newport, Rhode Island

SAMPLE NUMBER	MATERIAL DESCRIPTION	MATERIAL LOCATION	ANALYTICAL RESULTS
1	6" cove base, green	1st Floor, north, near 1149	NAD
2	Mastic, tan	1st Floor, north, near 1149	NAD
3	Textured plaster, speckled	1st Floor, north, near 1149	NAD
4	Wallboard, gray	1st Floor, north, near 1149	NAD
5	7" cove base, tan	1st Floor, north, near 1142	NAD
6	Mastic, tan	1st Floor, north, near 1142	NAD
7	2" tile grout, green	1st Floor, north, room 1105	NAD
8	Mastic, tan, behind 2" tile	1st Floor, north, room 1105	NAD
9	4" tile grout, green	1st Floor, north, room 1068	NAD
10	4" cove base, tan	1st Floor, north, near 1019	NAD
11	Mastic, tan	1st Floor, north, near 1019	NAD
12	4" cove base, green	1st Floor, south, room 1242	NAD
13	Mastic, tan	1st Floor, south, room 1242	NAD
14	6" cove base, tan	2nd Floor, north, near 2004	NAD
15	Mastic, tan	2nd Floor, north, near 2004	NAD
16	Wallcovering, beige	2nd Floor, north, near 2004	NAD
17	4" cove base, green	2nd Floor, north, near 2092	NAD
18	Mastic, tan	2nd Floor, north, near 2092	NAD
19	4" tile grout, green	2nd Floor, north, room 2059	NAD
20	4" cove base, tan	2nd Floor, north, 2028	NAD
21	Mastic, tan	2nd Floor, north, 2028	NAD
22	2" tile grout, green	2nd Floor, south, room 2156	NAD
23	Mastic, tan, behind 2" tile	2nd Floor, south, room 2156	NAD
24	6" cove base, green	1st Floor, north, near 1145	NAD
25	Mastic, tan	1st Floor, north, near 1145	NAD
26	2'x2' ceiling tile, white, smooth	1st Floor, near 1154	NAD
27	2'x2' ceiling tile, white, small indents	1st Floor, near 1144	NAD
28	2'x2' ceiling tile, white, textured	2nd Floor, north, room 2127	NAD
29	2'x2' ceiling tile, white, textured	2nd Floor, north, room 2127	NAD
30	Pipe penetration sealant, pink	2nd Floor, north, room 2244	NAD
31	Pipe penetration sealant, red	2nd Floor, north, room 2244	NAD
32	Plaster, white	2nd Floor, near 2135	NAD
33	Wallboard, gray	2nd Floor, near 2135	NT
34	Building joint caulk, gray	2nd Floor, north, room 2244	NAD
35	caulk/sealant, dark gray	2nd Floor, north, room 2244, on AHU-5	NAD
36	Caulk, light gray, flexible	Exterior, water tower base panel	NAD
37	Caulk, dark gray, brittle	Exterior, water tower base panel	NAD

NOTES:
NAD - No Asbestos Detected
NA/PS - Sample Not Analyzed Due To Positive Stop
NT - Insufficient Material For Analysis

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APPENDIX D

LEAD AND PCB SAMPLE INVENTORY TABLE

APPENDIX D
LEAD AND PCB SAMPLE SUMMARY
HVAC Repairs Naval Health Care New England (NHCNE)
Building 23
Naval Station Newport
Newport, Rhode Island

SAMPLE NUMBER	MATERIAL DESCRIPTION	MATERIAL LOCATION	RESULT	
LEAD			**(% by weight)**	
LP-01	Paint, light tan	2nd Floor, room 2126	<0.010	
LP-02	Paint, tan	1st Floor, NE corner hallway	<0.010	
LP-03	Paint, khaki	2nd Floor, room 2244	<0.010	
	USEPA level of lead content in material defined as lead-based paint		>0.5	
PCBs			**(mg/kg)**	
PCB-1	Caulk, light gray	2nd Floor, room 2244	<5.00	
PCB-2	Caulk, gray	2nd Floor, room 2244, AHU-5	<1.00	
PCB-3	Caulk, gray, flexible	Exterior, water tower panels	<0.714	
PCB-4	Caulk, gray, brittle	Exterior, water tower panels	<0.714	

NOTES:

1. LF = Linear Feet, SF = Square Feet
2. Analysis conducted for lead via NIOSH Method SW846-74202 by EMSL Analytical, Inc. of Cinnaminson, NJ.
3. Analysis conducted for PCBs via EPA Method SW846-8082A by ESS Laboratory of Crasnton, RI.

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APPENDIX E

HAZARDOUS MATERIALS INVENTORY TABLE

APPENDIX E
HAZARDOUS MATERIALS INVENTORY
HVAC Repairs Naval Health Care New England (NHCNE)
Building 23
Naval Station Newport
Newport, Rhode Island

MATERIAL DESCRIPTION	POTENTIAL HAZARD	NOTES
Fluorescent light bulbs	Mercury	
Fluorescent light ballasts	PCBs/DEHP	
Thermostats	Mercury	
Air conditioning units	CFCs	
Combination air conditioning/heating unit	CFCs	
Fan motors	Petroleum products, Oils	
Compressor fluid	Petroleum products, VOCs, Oils	

Asbestos Containing Materials Assessment
Building 23 HVAC Repairs

NAVAL HEALTH CARE NEW ENGLAND (NHCNE)
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND
FILE NO. 34043.03

Burns & McDonnell
Chesapeake, Virginia

Proactive By Design.
Our Company Commitment

GZA GeoEnvironmental, Inc.

530 Broadway | Providence, Rhode Island 02909
401-421-4140

27 Offices Nationwide
www.gza.com

Proactive by Design

GEOTECHNICAL
ENVIRONMENTAL
ECOLOGICAL
WATER
CONSTRUCTION MANAGEMENT

530 Broadway
Providence, RI 02909
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June 26, 2015
File No. 34043.03

Ms. Barbara Nemchek
Burns & McDonnell
1305 Executive Blvd., Suite 160
Chesapeake, Virginia 23320

RE: Asbestos Containing Materials Assessment
Building 23 HVAC Repairs
Naval Health Care New England (NHCNE)
Naval Station Newport
Newport, Rhode Island

Dear Ms. Nemchek:

This report presents the results of an asbestos containing materials (ACM) assessment conducted by GZA GeoEnvironmental, Inc. (GZA) for Burns & McDonnell (the Client) of the roofing components associated with proposed HVAC repairs to Building 23 located at the Naval Station Newport, Newport, Rhode Island (the Site). This report, our findings and opinions are subject to the limitations provided in Appendix A.

The intent of the ACM assessment was to evaluatethe project area for materials suspected to contain asbestos and collect representative bulk sampling of each homogeneous area of suspect asbestos containing materials in sufficient numbers to comply with USEPA criteria.

On June 11, 2015, representative samples were collected, by a Rhode Island Department of Health licensed asbestos inspector, of roofing materials from selected portions of the proposed project area. Analyses of the asbestos bulk samples were conducted at a Rhode Island-certified laboratory (See Appendix B for laboratory certificates of analysis) using polarized light microscopy with dispersion staining (PLM/DS), and visual estimation of resulting asbestos concentrations. No asbestos was detected in any of the samples collected within the project area. All roofing penetrations were repaired in kind by a licensed roofing contractor. A summary table of ACM samples and test results is attached in Appendix B. The laboratory analytical results are attached in Appendix C.

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Thank you for this opportunity to be of service. Please contact the undersigned with any questions you may have pertaining to the information in this report.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Erik M. Beloff
RIDOH-Licensed Asbestos Inspector
License # AAC-0938

Doug Le Do
Senior Project Manager

Edward A. Summerly, P.G.
Principal

DLD/EAS:jm

Attachments: Appendix A – Limitations
Appendix B – Suspect ACM Sample Inventory Table
Appendix C – Laboratory Analytical Report

J:\GEO\34043.03.DLD\REPORTS\ROOF REPORT\B23 ROOF REPORT 6-24-15_EMB.DOCX

APPENDIX A

LIMITATIONS

1. GZA's pre-renovation/demolition asbestos/hazardous materials evaluation was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same geographical area, and GZA observed the degree of care and skill generally exercised by other consultants under similar circumstances and conditions. GZA's findings and conclusions must be considered not as scientific certainties, but rather as our professional opinion concerning the significance of the limited data gathered during the course of the pre-renovation/demolition asbestos/hazardous materials evaluation. No other warranty, express or implied, is made. Specifically, GZA does not and cannot represent that the Site contains no asbestos-containing materials, or other latent condition beyond that observed by GZA during its pre-renovation/demolition asbestos/hazardous materials evaluation.

2. This survey report, which presents our findings, is not to be used as a bid document/work plan, or in place of a work plan, for conducting asbestos abatement. When an asbestos abatement work plan is prepared, the State of Rhode Island requires that the plan be prepared by a Rhode Island-certified and USEPA-accredited Asbestos Project Designer. GZA recommends that a work plan and technical abatement specifications be prepared and a bid walkthrough be administered by GZA personnel familiar with the on-site asbestos conditions.

3. The observations described in this report were made under the conditions stated herein. The conclusions presented in the report were based solely upon the services described therein, and not on scientific tasks or procedures beyond the proposed Scope of Services.

4. The conclusions and recommendations contained in this report are based on environmental sampling and visual observations, and were arrived at in accordance with generally accepted standards of industrial hygiene practice. No other warranty, express or implied, is made.

5. Where sample analyses were conducted by an outside laboratory, GZA GeoEnvironmental, Inc. (GZA) has relied upon the data provided, and has not conducted an independent evaluation of the reliability of these data.

6. The purpose of this report was to assess the physical characteristics of the subject Site with respect to the presence of ACMs, Lead Paint, and HBMs at the Site building. No specific attempt was made to check on the compliance by any party with federal, state, or local laws and regulations.

7. Observations were made of the Site as indicated within the report. While it was GZA's intent to conduct a thorough survey, it is important to note that we cannot guarantee that all asbestos materials within the surveyed area have been identified. ACMs have frequently been used in areas where detection is difficult until renovation, demolition, and/or asbestos abatement work begins and allows access to these remote areas. Where access to portions of the site was unavailable or limited, GZA has provided an opinion as to the likely presence of asbestos materials consistent with the information available.

8. Since GZA has no control over labor and materials costs and design, the estimates of abatement costs have been made on the basis of prior experience and discussions with contractors. The actual costs for various items will depend on actual market conditions when the project is bid. GZA does not guarantee the accuracy of cost estimates to contractor’s bids for abatement costs.

APPENDIX B

SUSPECT ACM SAMPLE INVENTORY TABLE

APPENDIX B
SUSPECT ACM SAMPLE INVENTORY
Building 23 HVAC Repairs
Naval Health Care New England (NHCNE)
Naval Station Newport
Newport, Rhode Island

SAMPLE NUMBER	MATERIAL DESCRIPTION	MATERIAL LOCATION	ANALYTICAL RESULTS
1-Shingle	Built-up asphalt roofing	Roof, CU-2	NAD
1-Felt	Felt compounds	Roof, CU-2	NAD
2	Fire block, white	Roof, CU-2	NAD
3	Foam board, white	Roof, CU-2	NAD
4	Paper, black	Roof, CU-2	NAD
5-Shingle	Built-up asphalt roofing, patch	Roof, CU-2, patch	NAD
5-Felt	Felt compounds	Roof, CU-2, patch	NAD
6	Asphalt sealant, black	Roof, CU-2, patch	NAD
7	Curb box sealant, dark gray	Roof, CU-2, curb box	NAD
8	Curb box caulk, flexible, light gray	Roof, CU-2, curb box	NAD
9-Shingle	Built-up asphalt roofing	Roof, CU-6	NAD
9-Felt	Felt compounds	Roof, CU-6	NAD
10	Fire block, white	Roof, CU-6	NAD
11-Foam Board	Foam board, white	Roof, CU-6	NAD
11-Paper	Paper, black	Roof, CU-6	NAD
12	Paper, black	Roof, CU-6	NAD
13	Curb box sealant, dark gray	Roof, CU-6, curb box	NAD
14	Curb box caulk, flexible, light gray	Roof, CU-6, curb box	NAD
15-Shingle	Built-up asphalt roofing, patch	Roof, CU-7	NAD
15-Felt	Felt compounds	Roof, CU-7	NAD
16	Fire block, white	Roof, CU-7	NAD
17	Foam board, white	Roof, CU-7	NAD
18	Asphalt sealant, black	Roof, CU-7, patch	NAD

NOTES:
NAD - No Asbestos Detected
NA/PS - Sample Not Analyzed Due To Positive Stop

APPENDIX C

LABORATORY ANALYTICAL REPORT

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

EMSL Order:	041517039
CustomerID:	GZA61
CustomerPO:	
ProjectID:	

Attn: **Erik Beloff**
GZA GeoEnvironmental, Inc.
530 Broadway
Providence, RI 02909-1820

Phone:	(401) 421-4140
Fax:	(401) 751-8613
Received:	06/12/15 9:20 AM
Analysis Date:	6/19/2015
Collected:	6/11/2015

Project: **34043.03**

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by PLM via EPA 600/R-93/116 section 2.3

SAMPLE ID	DESCRIPTION	APPEARANCE	% MATRIX MATERIAL	% NON-ASBESTOS FIBERS	ASBESTOS TYPES
1-Shingle *041517039-0001*	CU-2 - Built-up Asphalt Roofing w/ Felt Compounds	Gray Fibrous Homogeneous	86.4	13.6 Glass	No Asbestos Detected
1-Felt *041517039-0001A*	CU-2 - Built-up Asphalt Roofing w/ Felt Compounds	Black Fibrous Homogeneous	76.8	23.2 Glass	No Asbestos Detected
2 *041517039-0002*	CU-2 - White, Fire-Block Material, Gypsum-like	White Non-Fibrous Homogeneous	95.8	4.2 Glass	No Asbestos Detected
3 *041517039-0003*	CU-2 - White, Foam Board	White Fibrous Homogeneous	100	None	No Asbestos Detected
4 *041517039-0004*	CU-2 - Black, Paper, beneath Foam Board	Black Fibrous Homogeneous	94.8	5.2 Glass	No Asbestos Detected
5-Shingle *041517039-0005*	CU-2, Patch - Built-up Asphalt Roofing w/ Felt Compounds	Gray Fibrous Homogeneous	95.2	4.8 Glass	No Asbestos Detected
5-Felt *041517039-0005A*	CU-2, Patch - Built-up Asphalt Roofing w/ Felt Compounds	Black Fibrous Homogeneous	97.0	3.0 Glass	No Asbestos Detected
6 *041517039-0006*	CU-2, Patch - Black, Asphalt Sealant	Black Fibrous Homogeneous	100	None	No Asbestos Detected
7 *041517039-0007*	CU-2, Curb Box - Dark Gray, Sealant	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected

Analyst(s)

Clarissa Turton (23)

Benjamin Ellis, Laboratory Manager
or other approved signatory

Initial report from 06/19/2015 12:28:27

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

EMSL Order:	041517039
CustomerID:	GZA61
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Attn: **Erik Beloff**
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Phone:	(401) 421-4140
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Collected:	6/11/2015

Project: **34043.03**

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by PLM via EPA 600/R-93/116 section 2.3

SAMPLE ID	DESCRIPTION	APPEARANCE	% MATRIX MATERIAL	% NON-ASBESTOS FIBERS	ASBESTOS TYPES
8 *041517039-0008*	CU-2, Curb Box - Light Gray, Flexible, Caulk	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
9-Shingle *041517039-0009*	CU-6 - Built-up Asphalt Roofing w/ Felt Compounds	Gray Fibrous Homogeneous	93.7	6.3 Glass	No Asbestos Detected
9-Felt *041517039-0009A*	CU-6 - Built-up Asphalt Roofing w/ Felt Compounds	Black Fibrous Homogeneous	91.6	8.4 Glass	No Asbestos Detected
10 *041517039-0010*	CU-6 - White, Fire-Block Material	White Non-Fibrous Homogeneous	95.7	4.3 Glass	No Asbestos Detected
11-Foam Board *041517039-0011*	CU-6 - White, Foam Board	White Fibrous Homogeneous	100	None	No Asbestos Detected
11-Paper *041517039-0011A*	CU-6 - White, Foam Board	Black Fibrous Homogeneous	94.9	5.1 Glass	No Asbestos Detected
12 *041517039-0012*	CU-6 - Black, Paper, beneath Foam Board	Black Fibrous Homogeneous	98.1	1.9 Glass	No Asbestos Detected
13 *041517039-0013*	CU-6, Curb Box - Dark Gray, Sealant	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
14 *041517039-0014*	CU-6, Curb Box - Light Gray, Flexible, Caulk	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected

Analyst(s)

Clarissa Turton (23)

Benjamin Ellis, Laboratory Manager
or other approved signatory

Initial report from 06/19/2015 12:28:27

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
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Phone:	(401) 421-4140
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Received:	06/12/15 9:20 AM
Analysis Date:	6/19/2015
Collected:	6/11/2015

Project: **34043.03**

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by PLM via EPA 600/R-93/116 section 2.3

SAMPLE ID	DESCRIPTION	APPEARANCE	% MATRIX MATERIAL	% NON-ASBESTOS FIBERS	ASBESTOS TYPES
15-Shingle *041517039-0015*	CU-7 - Built-up Asphalt Roofing w/ Felt Compounds	Gray Fibrous Homogeneous	91.0	9.0 Glass	No Asbestos Detected
15-Felt *041517039-0015A*	CU-7 - Built-up Asphalt Roofing w/ Felt Compounds	Black Fibrous Homogeneous	88.9	11.1 Glass	No Asbestos Detected
16 *041517039-0016*	CU-7 - White, Fire-Block Material	White Non-Fibrous Homogeneous	85.2	14.8 Glass	No Asbestos Detected
17 *041517039-0017*	CU-7 - White, Foam Board	White Fibrous Homogeneous	100	<0.25 Glass	No Asbestos Detected
18 *041517039-0018*	CU-7, Patch - Black, Asphalt Sealant	Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected

Analyst(s)

Clarissa Turton (23)

Benjamin Ellis, Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported 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. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. This report contains data that is (are) not covered by the NVLAP accreditation. Samples received in good condition unless otherwise noted. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NYS ELAP 10872, PA ID# 68-00367

Initial report from 06/19/2015 12:28:27

Form # CAA 40-82F-2	Technician Service and Inventory Tracking for ALL Appliances	ALL

PWD		Technician Name & W/C		R/HCFC #	

Service Date	Work Order, Contract or PO # MRI # for Refrigerant Purchase	Building # and Location details	Asset # or Model & S/N	Appliance & Service Description (Include Unit POUNDS Normal Charge)	LBS (+/-) V/R/D

INSTRUCTIONS FOR COMPLETING FORM # CAA 40-82F-2 (SERVICE & INVENTORY FOR ALL APPLIANCES)

PWD	*Location of unit being serviced (PWD Norfolk, etc.)*	Technician Name & W/C	*Who is performing service & completing form (technician must have appropriate EPA certification)*	R/HCFC #	*Example: R22*

Service Date	Work Order, Contract or PO # MRI # for Refrigerant Purchase	Building # and Location details	Asset # or Model & S/N	Appliance & Service Description (Include Unit POUNDS Normal Charge)	LBS (+/-) V/R/D
	Work order, contract , or purchase order number authorizing costs for the service. For refrigerant purchases, include MRI #.	*Bldg. # as found in MAXIMO where service or refrigerant transfer is happening. Include details of location as needed. Examples: N-26 Roof; X-275;*	*Asset # as found in Maximo (if asset # unknown, log model & serial numbers)*	*Equipment industry name or MAXIMO UNIFORMAT NAME; also describe refrigerant related service and log unit's normal charge (pounds)*	*See Note 3*

1. Technician shall keep original forms in binder on work truck for 3 years, make binders available upon request for audit/inspection, and provide copies of forms to supervisor weekly. Supervisor shall maintain copies for 5 years.
2. Complete form any time refrigerant is added/subtracted from your inventory (whether truck stocking or disposal to reclaimer or local storage) or any appliance. If unit normal charge is ≥ 50 pounds, also complete Form CAA 40-82F-1. If unit is being disposed, also complete CAA 40-82F-3.
3. Log pounds added or removed from inventory or equipment; explain whether the refrigerant removal/addition is to "inventory" or "equipment" in "Appliance & Service Description" column. If refrigerant is being purchased, include MRI number in "work Order, Contract or PO#" column. Indicate "V, R or D", where: (V) is virgin refrigerant; (R) is recovered/recycled (used/serviceable); (D) is recovered (unusable) for disposal
4. If unit has more than 1 circuit, and circuits are independent (designed to avoid mingling of refrigerant) normal charge is determined per circuit.
5. For units under 50 lbs. normal charge: Whenever 5+ lbs. refrigerant is added to an appliance it must be checked for leaks. If leak is not repaired as part of maintenance action, notify Supervisor so that they can request a follow-up ticket from the Requirements Branch for repair at a later date.

Form # CAA 40-82F-3	Technician Appliance Disposal Invoice (All Appliances)		DISPOSAL
Technician Name		Work Center	
Technician's Office Location (Building and Street Address)		PWD	
Date of Refrigerant Recovery			
Work Order (or contract PO) #			
Building # / Equipment Location			
Additional Location (room #, roof, N side, etc.)			
Asset # (if unknown then Model # and Serial #)			
Appliance Description			
Refrigerant # (Type) Removed			
Refrigerant Amount Removed			
Refrigerant Disposition (R/D)			
Oil Type and Amount Removed			
Technician Signature*			

**Signature certifies that all refrigerant and oil that had not leaked was removed from appliance prior to disposal i.a.w. 40 CFR 82 and that a weatherproof label has been affixed to the appliance stating the same*

INSTRUCTIONS FOR FORM CAA 40-82F-3 (Technician Appliance Disposal Invoice, All Appliances)

5/30/14

Technician Name	*Who is performing service & completing form (technician must have appropriate EPA certification)*	Work Center	
Technician's Office Location (Building and Street Address)		PWD	*Location of unit (PWD Norfolk, etc.)*
Date of Refrigerant Recovery			
Work Order (or contract PO) #	*Work order, contract , or purchase order number authorizing costs for the service*		
Building # / Equipment Location	*Location of unit that the technician is removing refrigerant from*		
Additional Location (room #, roof, N side, etc.)	*Additional description of equipment location in/around the building*		
Asset # (if unknown then Model # and Serial #)	*As found in Maximo; if no Asset #, provide model and S/erial Number*		
Appliance Description	*Equipment industry name or MAXIMO UNIFORMAT NAME*		
Refrigerant # (Type) Removed	*For example, R-22*		
Refrigerant Amount Removed	*Total amount refrigerant REMOVED from appliance (indicate pounds or ounces)*		
Refrigerant Disposition (R/D)	*(R) is recovered/recycled (used/serviceable for future use); (D) is recovered (unusable) for disposal*		
Oil Type and Amount Removed			
Technician Signature*	*Signature of technician removing/reclaiming refrigerant. The signature is the technician's certification that all refrigerant and oil that had not leaked from the appliance has been removed i.a.w. 40 CFR 82 and that a weatherproof label has been affixed to the appliance stating the same.*		

Technician shall keep original forms in binder on work truck for 3 years, make binders available upon request for audit/inspection, and provide copies of forms to supervisor weekly. Supervisor shall maintain copies for 5 years.

Form # CAA 40-82F-1	Technician Service Invoice (Appliances with 50+ lbs. Normal Refrigerant Charge)							50+
PWD					Technician Name			
Date of Service					Work Order (or contract PO) #			
Appliance Description					Building #		Refrigerant # (Type)	
Asset #			Circuit #		Location (room #, roof, N side, etc.)			
Model #					Serial #			
Service Description					leak repair details (cause, location, repair description)			
Refrigerant pounds added (indicate V/R)		Refrigerant pounds removed (indicate R/D)			Virgin refrigerant MRI #		Pounds refrigerant LEAKED	
Date leak was DISCOVERED		Date leak was REPAIRED			Date of successful INITIAL leak repair verification test		Date of successful FOLLOW-UP leak repair verification test	

AREA BELOW IS FOR FMD USE: FMD must report to Environmental (EV) within 3 days any leak > 15% that has or could last > 30 days from discovery

Name				Annual Leak Rate (%)		IF leak rate > 15% AND leak duration is or could be > 30 days	
Normal Full Charge (pounds)		Pounds leaked past 365 days		Leak Duration (days)		Notify EV; log date & EV POC	

INSTRUCTIONS FOR COMPLETING FORM # CAA 40-82F-1 (UNITS WITH 50+ POUNDS NORMAL CHARGE)

PWD	*Location of unit being serviced (PWD Norfolk, etc.)*			Technician Name	*Who is performing service & completing form (technician must have appropriate EPA certification)*		
Date of Service				Work Order (or contract PO) #	*Work order, contract , or purchase order number authorizing costs for the service*		
Appliance Description	*Equipment industry name or MAXIMO UNIFORMAT NAME*	Circuit #	see note 5	Building #	*As found in Maximo*	Refrigerant # (Type)	*Example: R22, R410A etc.*
Asset #	*As found in Maximo; if no Asset #, provide model and S/N*			Location (room #, roof, etc.)	*Additional description of equipment location in/around the building*		
Model #				Serial #			
Service Description	*describe refrigerant related service*			leak repair details	*List leak cause & location; describe repair actions*		
Refrigerant pounds added (indicate V/R)	*See notes 1 & 2*	Refrigerant pounds removed (indicate R/D)	*See note 1*	Virgin refrigerant MRI #		Pounds refrigerant LEAKED	
Date leak was DISCOVERED		Date leak was REPAIRED		Date of successful INITIAL leak repair verification test	*Perform as soon as practical after repair; if unit was evacuated, test prior to replacing full charge.*	Date of successful FOLLOW-UP leak repair verification test	*Perform within 30 days of return to normal operation*

AREA BELOW IS FOR FMD USE: FMD must report to Environmental (EV) within 3 days any leak > 15% that has or could last > 30 days from discovery

Name	*Who is completing this section of the form?*			Leak Duration (days)	*discovery to repair*	IF leak rate > 15% AND leak duration is or could be > 30 days	
Normal Full Charge (pounds)	*See note 5*	Pounds leaked past 365 days	*or since last leak repair if < 1 yr*	Annual Leak Rate (%)	*See note 6*	Notify EV; log date & EV POC	*See note 4*

1. Indicate "V, R or D", where: (V) is virgin refrigerant; (R) is recovered/recycled (used/serviceable); (D) is recovered (unusable) for disposal.
2. If ANY refrigerant is added the appliance must be checked for leaks. If leak is not repaired notify supervisor who will request follow-up ticket.
3. HVAC technician is responsible to perform initial and follow up verification tests and to notify supervisor immediately of failed follow up verification tests.
4. Technician shall keep original forms in binder on work truck for 3 years, make binders available upon request for audit/inspection, and provide copies of forms to supervisor weekly. Supervisor shall keep records 5 years and provide copies to FMD weekly. FMD shall complete their portion within 1 week of receipt, retain copies for 5 years, and notify EV via copy of form w/in 3 business days IF leak rate > 15% (35% for refrigeration) AND LEAK lasts or could last > 30 days.
5. Indicate circuit number if applicable. If circuits are independent (designed to avoid mingling of refrigerant) normal charge is determined per circuit.
6. Annual Leak Rate (%) = 100 x (lbs added over past 365 days or since last leak repair if < one year) ÷ (lbs normal charge)

5/30/14

27 July 2016

Subject: Guide for Technicians on Required Practices when Handling Equipment containing refrigerants.

References:

(a) 40 CFR Subpart F 82.150— Purpose and scope.
(b) 40 CFR Subpart F 82.152 — Definitions.
(c) 40 CFR Subpart F 82.154 — Prohibitions.
(d) 40 CFR Subpart F 82.156 — Required practices.
(e) 40 CFR Subpart F 82.158 — Standards for recycling and recovery equipment.
(f) 40 CFR Subpart F 82.161 — Technician certification.
(g) 40 CFR Subpart F 82.162 — Certification by owners of recovery and recycling equipment.
(h) 40 CFR Subpart F 82.164 — Reclaimer certification.
(i) 40 CFR Subpart F 82.166 — Reporting and recordkeeping requirements.
(j) 40 CFR Subpart F 82.169 — Suspension and revocation procedures.
(k) Refrigerant Transition and Recovery Certification Program Manual for HVACR Technicians

Enclosures:

(1) Recordkeeping Forms
- Form CAA 40-82F-1 Technician Service Invoice for Appliances with 50 lbs or More Normal Refrigerant Charge.
- Form CAA 40-82F-2 Technician Refrigerant and Service Inventory Tracking.
- Form CAA 40-82F-3 Refrigerant Disposal Invoice, All Appliances
- Instructions for filling out recordkeeping forms

1. Purpose.

(a) Provide instruction for Naval Station Newport's (NSN) compliance with 40 CFR Part 82 - Protection of Stratospheric Ozone with an emphasis on Subpart F – Recycling and Emissions Reduction. The purpose of the Environmental Protection Agency's (EPA) Clean Air Act (CAA) regulation is to reduce emissions of refrigerants during repair, maintenance, service, and disposal of appliances. Compliance is accomplished through technician certification, proper work practices, recordkeeping, reporting, and inventory management of refrigerants. Refrigerants include both Class I and Class II Ozone Depleting Substances (ODS) and suitable ODS substitutes.
(b) Provide instruction for a consistent method of refrigerant management procedures throughout NSN. Procedures include the documentation (recordkeeping) necessary to show compliance with refrigerant inventory control for both ODS and ODS substitute refrigerants. Procedures are outlined to comply with the requirement to calculate the leak rate each time refrigerant is added to equipment normally containing 50 pounds or more refrigerant charge, and to report non-compliance with the leak rate restrictions to EPA if necessary.

(c) Initiate service practices that maximize recovery and recycling of refrigerants during the service, maintenance, repair, and disposal of appliances (i.e., air-conditioning and refrigeration equipment).

This instruction details the responsibilities for applicable stakeholders to meet EPA regulatory requirements for refrigerants.

2. Discussion.

Compliance with the Clean Air Act is the responsibility of all parties who have a role and responsibility outlined in this Guide. Appliances range from water fountains and window units (small appliances) to chillers, condensing units and water source heat pumps (WSHP). Requested services range from purchasing and installing appliances to servicing and repairing equipment to final disposal.

The Clean Air Act requires the owners, operators and technicians to document servicing, maintaining, repairing, replacing and disposing of appliances containing refrigerants. Owners with appliances normally containing 50 pounds or more of refrigerant have very stringent recordkeeping requirements of invoices for all service actions in order to minimize "De minimis" or unintentional venting of refrigerants.

References (a) through (j) detail the practices that must be followed to comply with the Clean Air Act, including prohibitions, required practices, and associated recordkeeping and reporting. The process for ensuring these requirements are met is outlined in this document. Reference (k) is training material used to certify technicians and goes into more detail on how to implement the portions of the Clean Air Act that are affected.

Contractor technicians must follow the required practices listed in References (a) through (j). They are urged to follow the practices listed in this document to assure that the government complies with the requirements of the Clean Air Act.

i. Technicians
    1. Technicians who handle refrigerants shall track all refrigerant usage that they transfer to or from any equipment or facility using Form CAA 40-82F-2. Fill out Form CAA 40-82F-2 each time refrigerant is purchased, input or removed by a technician.
        a. Whenever 5 pounds or more of refrigerant is added to an appliance the technician must investigate the unit for leaks. If a leak is identified and repairs are not completed as part of the maintenance action then a follow-up ticket shall be requested from the Requirements Branch for repair at a later date. If the equipment normally contains 50 or more lbs of refrigerant charge, the leak

must be brought down below EPA action levels within 30 days of discovery. This is discussed in more detail below.

b. Any refrigerant taken into custody, or removed from custody, by a technician must be documented on Form CAA 40-82F-2. This includes virgin refrigerant inventory placed in their truck stock, refrigerant added to any appliance, recovered/recycled/reclaimed from facility appliances and refrigerant removed from their truck for disposal to a reclaim facility, or temporary storage for disposal to a reclaim facility.

2. Each time a technician inputs or removes refrigerant from an appliance whose normal refrigerant charge is 50 pounds or more, the following additional requirements apply.
    a. Technician shall complete Form CAA 40-82F-1 for all refrigerant related service or repairs.
    b. Whenever any amount of refrigerant is added to an appliance the technician must investigate the unit for leaks. If a leak is identified and repairs are not completed as part of the maintenance action then a follow-up ticket shall be requested from the Requirements Branch for repair as soon as possible but no later than 30 days after the leak is found. The FMD will use the calculated annualized leak rate to prioritize repairs for units that are leaking above the EPA action level.
    c. Copies of all completed Forms CAA 40-82F-1 shall be forwarded to FMD on a weekly basis so that the annualized leak rate can be calculated.
    d. After leaks are repaired, the technician must perform an initial leak verification test prior to replacing the full charge but before the appliance returns to normal operating condition. The technician must also perform a follow-up leak repair verification test within 30 days of the appliance's return to normal operation. Immediately report any failed verification tests to FMD and Environmental as these require reporting to EPA. Record results of leak verification tests on Form CAA 40-82-F-1.
    e. Units which have failed leak repair verification testing shall be treated as an unrepaired unit.
3. All appliances must have refrigerant and oil removed by an EPA certified technician prior to disposal. Document on Form CAA 40-82F-3 and attach a weatherproof label/tag to the appliance stating that all refrigerant and oil that had not leaked from the unit was recovered i.a.w. 40 CFR 82.

Engineering Change Notice

To: NAVFAC MID ATLANTIC Bethany Collard 1 Simonpietri Drive Naval Station Newport Newport, RI 02841	Engineering Change Notice: 001 Requested By: Burns & McDonnell Date Issued: 07/29/2016
Subject: BLDG. 23 HVAC REPAIRS NAVAL HEALTH CLINIC NEW ENGLAND – ECN 001	
Contract No.: N62470-13-D-3025-008	
Specification Reference: *N/A*	
Drawing Reference: *See Below*	
Reason for Change: [ ] Change in Scope [ ] Unforeseen Condition [X] Error or Omission	

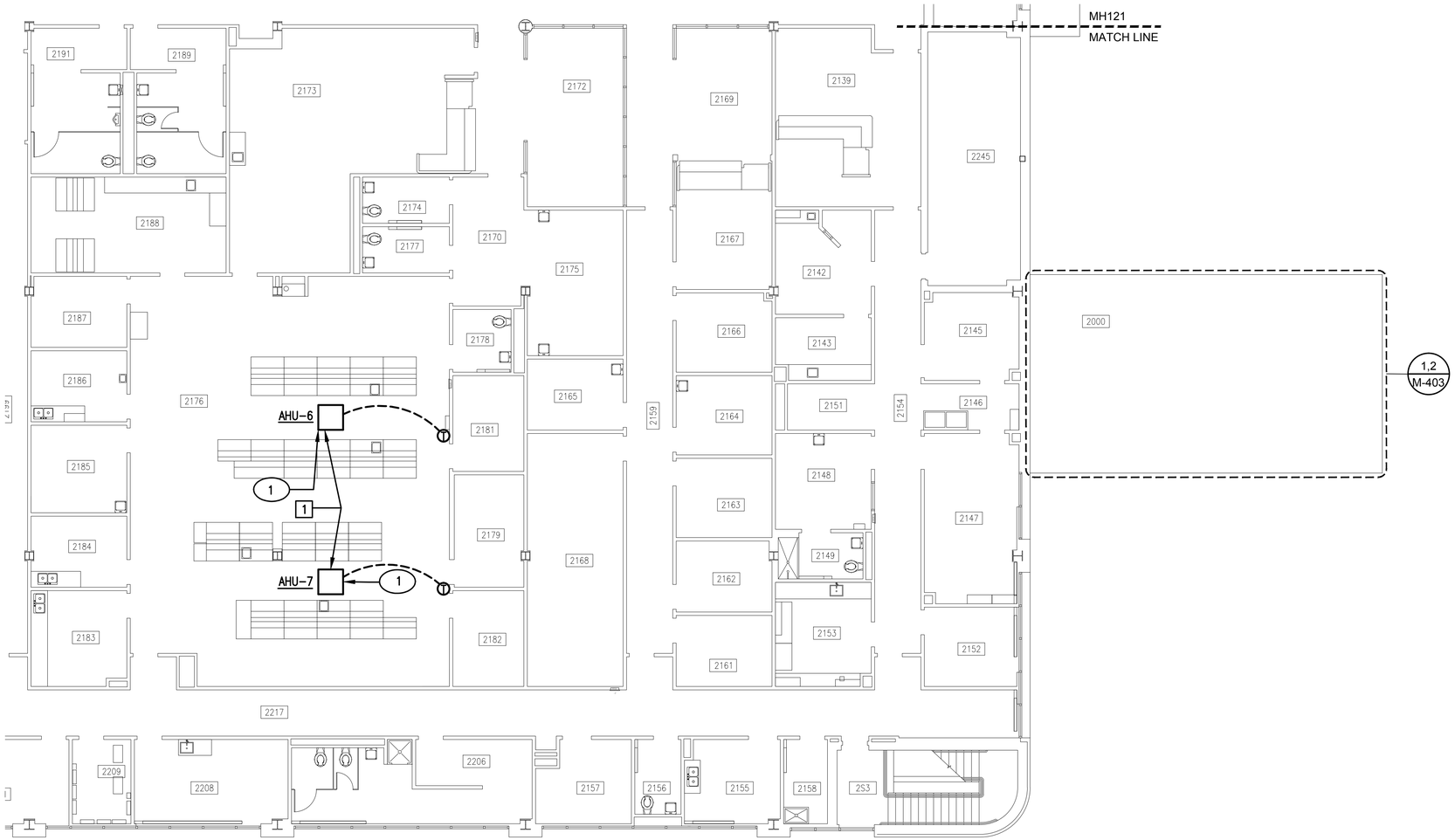
Description of Scope Change:

This ECN is an update to the contract drawings to reflect additional Owner direction, and/or changes in design as follows:

The following Sheets and Sketches are being issued to reflect this change in work scope:

1. **Sheet MH122***:* Revised Demolition Note #1 to include the removal and recycling of the existing thermostats for AHU-6 and AHU-7 per Spec Section 01 74 19 Construction and Demolition Waste Management, paragraph 1.9.2.

Attached Documents: Indicated above.



PLAN NORTH

SECOND FLOOR SOUTH DUCTWORK PLAN

SCALE: 1/8" = 1'-0"

GENERAL NOTES:

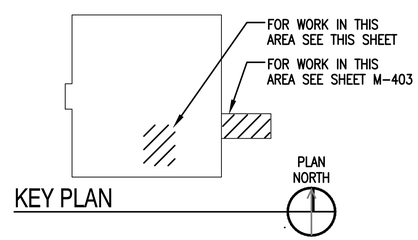
1. SEE SHEET M-001 FOR MECHANICAL LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. UNLESS OTHERWISE NOTED, ALL EXISTING EQUIPMENT IS TO REMAIN.

DEMOLITION NOTES:

1. DEMOLISH AHU-6,7 (EXISTING) AND ALL EXISTING REFRIGERANT PIPING BETWEEN AHU-6,7 AND CU-6,7. REMOVE AND RECYCLE THE THERMOSTATS FOR AHU-6 AND AHU-7 PER SPEC SECTION 01 74 19 CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT, 1.9.2.

NEW WORK NOTES:

1. PROVIDE AHU-6,7 IN LOCATION OF DEMOLISHED AHU-6, 7. MODIFY EXISTING CEILING TILES/GRID AT SPLIT UNITS AS NECESSARY. IF UNIT IS SMALLER THAN EXISTING OR EXISTING CEILING IS DAMAGED DURING CONSTRUCTION CONTRACTOR TO PROVIDE CEILING TILES/GRID TO MATCH EXISTING



KEY PLAN

GRAPHIC SCALE:

1/8" = 1'-0"

0 4' 8' 16'

NO.	DESCRIPTION	DATE	APPR
1	ECN001	07/29/16	BAN

NAVFAC

COMMONWEALTH OF VIRGINIA
JOHN PATRICK CASTELVECCHI, JR.
Lic. No.043782
PROFESSIONAL ENGINEER
SEAL

BURNS MCDONNELL
1305 EXECUTIVE BLVD.
SUITE 160
CHESAPEAKE, VA 23321
757-548-2056

A/E INFO

APPROVED:

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES: PC DRW: JL CHK: RM

PM

BRANCH MANAGER

CHIEF ENG/ARCH

<XXX>?

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND – MIDLANT
NEWPORT, RHODE ISLAND
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND
BLDG. 23 NAVAL HEALTH CLINIC
NEW ENGLAND HVAC REPAIRS
SECOND FLOOR SOUTH DUCTWORK PLAN
EFT-NORTHEAST

SCALE: AS NOTED
EPROJECT NO.: 1359590
CONSTR. CONTR. NO. N62470-13-D-3025-0008
NAVSTA DRAWING NO. 42925-397
NAVFAC DRAWING NO. 12700570
SHEET 26 OF 44

MH122

DRAWFORM REVISION: 10 MAY 2014

Soil Management Plan
Naval Station Newport, Newport, RI

This Soil Management Plan (SMP) has been prepared to establish procedures that will be followed should future construction, demolition or maintenance activities at the Naval Station Newport (NAVSTA) require the need to manage disturbed or excavated soil. The plan cannot be used to manage soils on Navy Installation Restoration (IR) sites, soils with known contamination, such as PCBs, asbestos, or mercury, soils regulated by the State of RI with contamination other than arsenic, and on property leased to private entities (e.g. privatized Housing).

Background

The property, located in Newport, RI, was established in 1869 with the construction of a torpedo station. The Navy War College was added in 1884 and the site was used for sailor training and housing and fueling facilities during World War II. Post WWII the property footprint and training activities were reduced while research and development efforts were increased. The soils on the property were found to contain arsenic that exceeds regulatory levels during a property-wide site investigation that included the collection and analysis of more than 1000 soil samples These soils must be removed and disposed of, or covered with Department (i.e. State of Rhode Island Department of Environmental Management) approved engineered controls, consisting of building foundations, asphalt pavement, and landscaping and environmental land use controls (ELUR) in order to prevent direct exposure to regulated soils.

Applicable Area

This SMP, and affiliated ELUR (when applicable), restricts the property to industrial or commercial usage, and pertains to the entire property. See attached site figure.

Soil Management

The direct exposure pathway is the primary concern at the site. Individuals engaged in activities at the site may be exposed through incidental ingestion, dermal contact, or inhalation of entrained soil particles if proper precautions are not taken. Therefore, the following procedures will be followed to minimize the potential of exposure.

During site work, the appropriate precautions will be taken to restrict unauthorized access to the property.

During all site/earth work, dust suppression (i.e. watering) techniques must be employed at all times. In the event that an unexpected observation or situation arises during site work, such activities will immediately stop (such as olfactory or visual evidence of waste material or contamination, PCB contamination or asbestos debris disposal). Workers will not attempt to handle the situation themselves but will contact the appropriate authority for further direction.

1 / 2010

If excess soil is generated /excavated from the property, the soil is to remain on-site for analytical testing, to be performed by an environmental professional, in order to determine the appropriate disposal and/or management options. The soil must be placed on and covered with polyethylene/plastic sheeting during the entire duration of its staging and secured with appropriate controls to limit the loss of the cover and protect against storm-water and/or wind erosion (i.e. hay bales, silt fencing, rocks, etc).

Excavated soils will be staged and temporarily stored in a designated area of the property. Within reason, the storage location will be selected to limit the unauthorized access to the materials (i.e. away from public roadways/walkways). No soil will be stockpiled on-site for greater than 60 days without prior Department approval.

Soils excavated from the site may not be re-used as fill on residential property. Excavated fill material shall not be re-used as fill on commercial or industrial properties unless it meets the Department's Method 1 Residential Direct Exposure Criteria for all constituents listed in Table 1 of the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Remediation Regulations).

Excavated soil to be reused on non-Navy commercial or industrial properties must be sampled and analyzed, by a qualified environmental professional, at a frequency of one sample per 500 tons for all constituents in Table 1. Copies of the laboratory analysis results shall be maintained by the site owner and included in the annual inspection report for the site, or the closure report if applicable. In the event that the soil does not meet any of these criteria, the material must be properly managed and disposed of off site at a licensed facility.

Site soils, which are to be disposed of off-site (and not reused off-site), must be done so at a licensed facility in accordance with all local, state, and federal laws. Copies of the material shipping records associated with the disposal of the material shall be maintained by the site owner and included in the annual inspection report for the site.

Best soil management practices should be employed at all times and regulated soils should be segregated into separate piles (or cells or containers) as appropriate based upon the results of analytical testing, when multiple reuse options are planned (i.e. reuse on-site, reuse at a Department approved industrial/commercial property, or disposal at a Department approved licensed facility).

All non-disposable equipment used during the soil disturbance activities will be properly decontaminated as appropriate prior to removal from the site. All disposable equipment used during the soil disturbance activities will be properly containerized and disposed of following completion of the work. All vehicles utilized during the work shall be properly decontaminated as appropriate prior to leaving the site.

At the completion of site work, all exposed soils that remain on the site (i.e. have not been removed to licensed disposal facility) are required to be recapped with Department approved engineered controls (i.e. 2 feet of clean fill or equivalent; building foundations; 4 inches of pavement/concrete underlain with 6 inches of clean fill; and/or 1 foot of clean

fill underlain with a geotextile liner) consistent or better than the site surface conditions prior to the work that took place. These measures must also be consistent with the Department approved ELUR recorded on the property. Any clean fill material brought on site is required to meet the Department's Method 1 Residential Direct Exposure Criteria or be designated by an Environmental Professional as Non-Jurisdictional under the Remediation Regulations. The Annual Inspection Report for the site, or Closure Report if applicable, should include either analytical sampling results from the fill demonstrating compliance or alternatively include written certification by an Environmental Professional that the fill is not jurisdictional.

Worker Health and Safety

To ensure the health and safety of on-site workers, persons involved in the excavation and handling of the material on site are required to wear a minimum of Level D personal protection equipment, including gloves, work boots and eye protection. Workers are also required to wash their hands with soap and water prior to eating, drinking, smoking, or leaving the site.

Department Approval

In accordance with the Departments' requirements, no soil at the property is to be disturbed after an engineering control has been implemented in any manner without prior written permission of the Department's Office of Waste Management, except for minor inspections, maintenance, and landscaping activities that do not disturb the contaminated soil that is left in place.

As part of the notification process, the Navy shall publish a notice, annually in the *Newport Daily News* that indicates that soil contain arsenic above the Department's Method 1 Direct Exposure Criteria, that soil work is planned on the property, and that individuals will be notified if work is to be done adjacent to privately-owned property.

In addition, the Navy will prepare an annual report to be submitted to the Department that summarizes construction work done on the property were soil was removed and inspections of sites on the property were soils with arsenic have been left in place and land use restrictions have been applied.

For soil that is removed, the report will identify the location, quantity, and ultimate destination. For sites with land use restrictions the inspections will include the location of the site and certification that the engineering controls remain in place.

David Dorocz, PE
Environmental Division Director
Naval Station Newport

Leo Hellsted, PE 6-3-10
Chief of Office of Waste Management
Department of Environmental Management

NAVSTA Newport

Commander Navy Region
Mid-Atlantic GeoReadiness
Center

Legend

- Gates
- Base Boundary
- Existing Structures
- Ammunition Storage Area
- Fence Line
- Runway
- Taxiway
- Helipad
- Apron
- Shoulder Overrun
- Aircraft Parking Area
- Railroad
- Golf Course
- Playground
- Swimming Pool
- Athletic Court
- Athletic Field
- Existing Piers
- Drydock

Print Date: 15 Oct, 2021

N
W E
S

0 1,000 2,000 4,000 Feet
0 0.4 0.8 Miles

Coordinate System: WGS 84 UTM Zone 17 N

GeoReadiness Center

AM-GIS Mid-Atlantic
Norfolk, Va 23511
(757) 444-3013

GeoReadiness Center