# LEAD HAZARD EVALUATION NOTICE

Address: 1108 Barnegat Avenue, Unit #1, Seaside Heights, New Jersey 0875

Evaluation Completed (circle one): Paint Inspection Paint Testing (Risk Assessment)

Date: 10/21/13

Summary of Results:

_X_ No lead-based paint or lead-based paint hazards were found.

____ Lead-based paint and/or lead-based paint hazards were found. See attachment for details

Contact person for more information about the risk evaluation:

Printed name: Feliks Kiselyuk
Signature:
Date: 10/31/13
Organization: Sky Environmental Services, Inc.
Street: 140 Boulevard
City & State Mountain Lakes, New Jersey
Zip 07046
Phone #: 201-679-2250

Person who prepared this notice:

Printed name: Michael Rattacasa
Signature:
Date: 10/30/13
Organization: Creative Environment Solutions Corp.
Street: 39 West 37th Street, 14th Fl.
City & State New York, New York,
Zip 10018
Phone #: 212-290-6323

| Contaminated Soil | | |
|---|---|---|
| **Area** | **mg/g (ppm)** | **Location** |
| _X_ None | | |
| ___ Perimeter | ___ mg/g (ppm) | |
| ___ Play Area | ___ mg/g (ppm) | |
| ___ Other | ___ mg/g (ppm) | |

| Contaminated Dust | | |
|---|---|---|
| **Area** | **µg/SF** | **Location** |
| _X_ None | | |
| ___ Windowsill | ___ µg/SF | |
| ___ Floor | ___ µg/SF | |
| ___ Other | ___ µg/SF | |
| ___ Other | ___ µg/SF | |

| Other Hazards | | | | |
|---|---|---|---|---|
| **Component*** | **Location** | **Condition (good, fair, poor)** | **Friction or Impact Surface?** | **Lead Content (if known)** |
| 1. | | | | ___ mg/cm² (ppm) |
| 2. | | | | ___ mg/cm² (ppm) |
| 3. | | | | ___ mg/cm² (ppm) |
| 4. | | | | ___ mg/cm² (ppm) |
| 5. | | | | ___ mg/cm² (ppm) |
| 6. | | | | ___ mg/cm² (ppm) |
| 7. | | | | ___ mg/cm² (ppm) |
| 8. | | | | ___ mg/cm² (ppm) |
| 9. | | | | ___ mg/cm² (ppm) |
| 10. | | | | ___ mg/cm² (ppm) |
| 11. | | | | ___ mg/cm² (ppm) |
| 12. | | | | ___ mg/cm² (ppm) |
| 13. | | | | ___ mg/cm² (ppm) |
| 14. | | | | ___ mg/cm² (ppm) |

***** Components include but are not limited to (interior and exterior) windows, doors, trim, fences, porches, walls and floors.

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Phone: 212.290.6323 Fax: 212.290.6325
LICENSED & APPROVED by NYS DOH/DOL/DOS, NYC DOB/DEP, FDNY, PIE

# LIMITED LEAD-BASED PAINT RISK ASSESSMENT REPORT

Site Location:

**1108 Barnegat Avenue,**
**Unit #1**
**Seaside Heights, New Jersey 08751**
**SRP0037053**

Prepared for:

**Gilbane Building Company**
**New Jersey LLRP Program**
3150 Brunswick Pike, Suite 300
Lawrenceville, New Jersey 08648

Prepared by:

**Creative Environment Solutions Corp.**
39 West 37th Street, 14th Floor
New York, New York 10018

October 31, 2013

**EXECUTIVE SUMMARY**

Creative Environment Solutions Corp. (CES) was retained by Gilbane Building Company; located at, 3150 Brunswick Pike, Suite 300, Lawrenceville, New Jersey 08648, to perform a limited Risk Assessment for Lead-Based Paint (LBP) at the Private Residence; located at, 1108 Barnegat Avenue, Unit #3, Seaside Heights, New Jersey 08751. The inspection was conducted in conjunction with the residence's participation in the New Jersey Landlord Repair Program (LLRP).

CES' New Jersey Department of Health and Senior Services certified Lead Paint Inspector/Risk Assessor, Feliks Kiselyuk, performed a LBP Risk Assessment at the above-referenced location. The inspection was conducted to identify the presence of any LBP and/or lead hazards located within the aforementioned interior and/or exterior of the residence. Mr. Kiselyuk utilized an [Innov-X System Alpha Series X-Ray Fluorescence Spectrometer] (XRF) to determine the presence or absence of lead in paint.

The analytical results from this Assessment effort identified the following lead-based paint (LBP) and Lead hazards, as defined by the United States Environmental Protection Agency (USEPA) and/or the department of Housing and Urban Development (HUD) standards:

Interior LBP

• No LBP was identified on the interior.

Exterior LBP

• No LBP was identified on the exterior.

Existing Lead-Based Paint Hazards and Potential Lead Hazards

There are no areas coated with LBP that is deteriorated and currently present existing lead-based paint hazards.

No dust hazards were identified.

No soil lead hazards were identified.

There were no areas coated with LBP that is intact and that do not currently present lead hazards. However, the upcoming renovation plans include work inside the house and scraping and repainting the exterior. If these renovations occur, lead-safe work practices will need to be implemented during the project to ensure that lead hazards are not created.

Future renovations plans were not provided to CES at the time of the inspection.

Please refer to the enclosed for further inspection details, XRF results and/or laboratory analytical results.

Please refer to Table I for a full summary of inspection results.

**IDENTIFYING INFORMATION**

A Lead Hazard Risk Assessment and Limited LBP Testing (Assessment) was conducted at 1108 Barnegat Avenue, Unit #1, Seaside Heights, New Jersey 08751 on October 21, 2013. The Assessment was conducted by Feliks Kiselyuk, (025263). The purpose of the Assessment was to identify the presence of lead hazards on and/or in a limited number of surfaces inside and outside the residence, as well as to identify the presence of deteriorated lead-based paint (LBP) and LBP that may be disturbed during planned renovation and/or restoration activities.

**PROPERTY RENOVATION AND REPAIR HISTORY**

Historic renovation and repair history for the subject property were not provided to CES at the time of the assessment.

**PREVIOUS SAMPLING AND TESTING**

Records regarding previous lead sampling and/or testing at the subject property were not provided to CES at the time of the assessment.

**IDENTIFIED LEAD HAZARDS**

The subject property was impacted by Hurricane Sandy; therefore, all materials coated with LBP have the potential to be impacted by future renovation and/or restoration activities.

**Existing Lead Hazards**

The following areas are coated with Lead-Based Paint (LBP) that is *deteriorated* and currently present existing lead-based paint hazards.

No areas were identified.

**Potential Lead Hazards**

The following areas are coated with LBP that is intact and that do not currently present lead hazards. However, the upcoming renovation plans include work inside the house and scraping and repainting the exterior. If these renovations occur, lead-safe work practices will need to be implemented during the project to ensure that lead hazards are not created.

No areas were identified

Please refer to the enclosed for further inspection details, XRF results and/or laboratory analytical results.

**PAINT SAMPLING AND TESTING**

Limited LBP Testing, conforming with HUD Guidelines 24 CFR 35 Section 35.930 (c), (d) was accomplished at this residence on surfaces found to have deteriorated paint and/or where it was indicated to the Assessor that planned renovation would occur. No paint chip samples were taken. On October 21, 2013, a total of forty three(43) tests (assays) were taken at a limited number of specified surfaces on the inside and outside of the residence using an x-ray fluorescence analyzer. Deteriorated paint and areas that were specified to be disturbed during the planned renovation project were tested. Lead concentrations that meet or exceed the HUD published levels identified as being potentially dangerous (e. g., greater than or equal to 1.1 milligrams per centimeter square [> 1.1 mg/cm2]) were not encountered.

It should be noted that lead concentrations (in paint) that are less than the levels that identify a surface coating as LBP still have the potential of causing lead poisoning. Should these or any potential LBP painted components and/or surfaces be disturbed in any manner that generates dust, extreme care must be taken to limit its spread. It should be assumed that any and all painted surfaces, components, or surfaces not requested to be tested as part of this investigation, or any previous investigations, are coated with LBP, and that renovation or repair activities in these areas dictate the use of safe work practices that limit dust generation and area contamination.

**INTERIOR DUST SAMPLING**

A total of five (5) single surface dust wipe samples were collected in an effort to help to determine the levels of lead-containing dust on the interior windowsills and floors. These samples were collected from areas most likely to be lead contaminated if lead-in-dust is present. These samples were collected in accordance with the requirements of ASTM Standard E-1728, Standard Practice for Field Collection of Settled Dust Samples Using Wipe Sampling Methods for Lead Determination by Atomic Spectrometry Techniques. USEPA and HUD regulations define the following as dangerous levels for lead dust in residences: floors – ≥40 µg/ft2 (micrograms per square foot); interior windowsills – ≥250 µg/ft2; and, interior window troughs – ≥400 µg/ft2. Please refer to Appendix B – Laboratory Analytical Results for the detailed information regarding dust sampling results. According to the laboratory analytical results, none of the five (5) samples collected exhibited lead concentrations in excess of the aforementioned regulatory thresholds.

**SOIL SAMPLING AND LABORATORY INFORMATION**

Three (3) composite soil samples were collected at this residence in accordance with the requirements of ASTM Standard E-1727, Standard Practice for Field Collection of Soil Samples for Lead Determination by Atomic Spectrometry Techniques. A Composite sample is a sample containing soil from a stated number of locations mixed together to form a Composite sample. The first sample consisted of soil from four locations on the west side at 1' on center (O.C.). The second sample was collected from four separate locations on the north side at 1' O.C. The third sample consisted of soil from four locations on the east side at 1' on center (O.C.). The samples were collected from bare soil areas only. The analytical results did not identify lead concentrations at or above the levels that the USEPA and HUD identifies as dangerous. Please refer to Appendix B – Laboratory Analytical Results for the detailed information regarding soil sampling results.

**ONGOING MONITORING**

Ongoing monitoring is necessary in all dwellings in which LBP is known or assumed to be present. At these dwellings, the very real potential exists for LBP hazards to develop. Hazards can develop by means such as, but not limited to: the failure of lead hazard control measures; previously intact LBP becoming deteriorated; dangerous levels of lead-in-dust (dust lead) re-accumulating through friction, impact, and deterioration of paint; or, through the introduction of contaminated exterior dust and soil into the interior of the structure. Ongoing monitoring typically includes two different activities: re-evaluation and annual visual surveys. A re-evaluation is a risk assessment that includes limited soil and dust sampling and a visual evaluation of paint films and any existing lead hazard controls. Re-evaluations are supplemented with visual surveys by the Owner, which should be conducted at least once a year. Owner conducted visual surveys do not replace the need for professional re-evaluations. Visual surveys should confirm that all Paint with known or suspected LBP are not deteriorating, that lead hazard control methods have not failed, and that structural problems do not threaten the integrity of any remaining known, assumed or suspected LBP. The partial table below is taken from Table 6.1, Standard Re-evaluation Schedules, as found in the HUD publication entitled: Guidelines for the Evaluation and Control of LBP Hazards in Housing, dated June 1995, with September 1997 revisions. It is intended as a guideline for the Owner to assess the condition of areas where hazard control activities occurred.

Factors at this residence require the use of Ongoing Monitoring Schedule item number one (1), to dictate monitoring protocol. Visual surveys by the Owner should occur on at least a yearly basis for all painted surfaces. All surfaces that have undergone the hazard control strategy of Interim Controls, Encapsulation or Enclosure should also be checked during this survey. If components are replaced (windows), no re-evaluation or visual survey would be needed, since the LBP would have been removed with the old windows. Please refer to your community development agency, housing authority, or other applicable agency for additional local/regional regulations and guidelines governing re-evaluation activities.

**Standard Re-evaluation Schedule**

| Schedule | Original Evaluation Results | Action taken | Re-evaluation Frequency & Duration | Visual Survey Schedule |
|---|---|---|---|---|
| 1 | Combination risk assessment/inspection finds no leaded dust or soil and no lead-based paint | None | None. | None |

**DISCLOSURE REGULATIONS**

A copy of this complete report must be made available to new lessees (tenants) and/or must be provided to purchasers of this property under Federal law before they become obligated under any future lease or sales contract transactions (Section 1018 of Title X – found in 24 CFR Part 35 and 40 CFR Part 745), until the demolition of this property. Landlords (Lessors) and/or sellers are also required to distribute an educational pamphlet developed by the EPA entitled "Protect Your Family From Lead in Your Home" and include standard warning language in their leases or sales contracts to ensure that parents have the information they need to protect their children from LBP hazards.

**FUTURE RENOVATION AND/OR REHABILITATION PRECAUTIONS**

It should be noted that during this Assessment, a limited number of areas were tested for the presence of LBP. All LBP, dust, and soil hazards that were identified are addressed in this report. However, LBP, dust lead hazards, and/or soil lead hazards may be present at other locations of the property. Additional paint testing should precede any future remodeling activities that occur at any untested areas. Additional dust and/or soil sample collection and analysis should follow any hazard control activity, repair, remodeling, or renovation effort, and any other work efforts that may in any way disturb LBP and/or any lead containing materials. These Assessment activities will help the Client and owner to ensure the health and safety of the occupants and the neighborhood. Details concerning lead safe work techniques and approved hazard control methods can be found in the HUD publication entitled: "Guidelines for the Evaluation and Control of LBP Hazards in Housing" (June 1995 & 1997 Revision).

**LEAD HAZARD CONTROL OPTIONS AND COST ESTIMATES**

Lead-safe work practices and worker/occupant protection practices complying with current EPA, HUD and OSHA standards will be necessary to safely complete all work involving the disturbance of LBP coated surfaces and components. In addition, any work considered Lead hazard control will enlist the use of interim control (temporary) methods and/or abatement (permanent) methods. It should be noted that all lead hazard control activities have the potential of creating additional hazards, or even creating hazards that were not present before. All persons and/or firms performing lead hazard control activities must have received proper training in Lead-Safe Work Practices and/or Lead Abatement. Details for the listed lead hazard control options and issues surrounding occupant/worker protection practices can be found in the publication entitled: Guidelines for the Evaluation and Control of LBP Hazards in Housing (June 1995 & 1997 Revision) published by the HUD, as well as in the Occupational Safety and Health Administration (OSHA) regulations found in 29 CFR, Part 1926.62, known as the OSHA Lead Exposure in Construction Industry Standard.

The associated cost estimates, unless otherwise noted, include the labor and materials to accomplish the stated activity and most additional funds typically found to be necessary to complete worker protection, site containment, and cleanup procedures. These are approximate estimates only and due to a variety of potential factors, may not accurately reflect all local cost factors. A precise estimate must be obtained from a certified LBP abatement contractor or a contractor trained in lead safe work practices. Properly trained and/or licensed persons, as well as properly licensed firms (as mandated) should accomplish all abatement/interim control activities conducted at this residence.

Interim controls, as defined by HUD, means a set of measures designed to temporarily reduce human exposure to LBP hazards and/or lead containing materials. These activities include, but are not limited to: component and/or substrate repairs; paint and varnish repairs; the removal of dust-lead hazards; renovation; remodeling; maintenance; temporary containment; placement of seed, sod or other forms of vegetation over bare soil areas; the placement of at least 6 inches of an appropriate mulch material over an impervious material, laid on top of bare soil areas; the tilling of bare soil areas; extensive and specialized cleaning; and, ongoing LBP maintenance activities.

Abatement, as defined by HUD, means any set of measures designed to permanently eliminate LBP and/or LBP hazards. The product manufacturer and/or contractor must warrant abatement methods to last a minimum of twenty (20) years, or these methods must have a design life of at least twenty (20) years. These activities include, but are not necessarily limited to: the removal of LBP from substrates and components; the replacement of components or fixtures with lead containing materials and/or lead containing paint; the permanent enclosure of LBP with construction materials; the encapsulation of LBP with approved products; the removal or permanent covering (concrete or asphalt) of soil-lead hazards; and, extensive and specialized cleaning activities.

**Special Cleaning Preceding Lead Hazard Control Activities**

Before any lead hazard control activities begin, the structure and site must be inspected and pre-cleaned following HUD specified cleaning protocols, as detailed in the Guidelines for the Evaluation and Control of LBP Hazards in Housing (June 1995 & 1997 Revision), published by the U.S. Department of Housing and Urban Development. Some of the required steps include removing large debris and paint chips followed by HEPA vacuuming of all horizontal surfaces (floors, windowsills, troughs, etc.). The cleaning protocols described in this publication can assist the contractor in doing a preliminary cleaning and improving the chances of passing clearance inspections after remediation.

**LIMITATIONS AND CONDITIONS**

CES has performed the tasks set forth above in a thorough and professional manner consistent with industry standards. CES cannot guarantee and does not warrant that this limited assessment has revealed all adverse environmental conditions affecting the site. Nor can CES warrant that the assessment requested will satisfy the dictates of, or provide a legal defense in connection with, environmental laws or regulations. The observations and findings were representative of the conditions from the site on the date of inspection. Often materials are located in confined or inaccessible locations with little or no visible manifestation of their presence. These materials may be found in various areas under existing flooring materials, above ceilings, behind walls, materials within fixtures, electrical wire casing, or buried pipes and wires. Due to the potential for hidden materials to be present, it may not be possible to determine if all suspect building materials have been identified, located, and subsequently tested. Destructive measures to access these and other potentially hidden materials were not employed by CES as part of this project. However, CES does warrant that its investigations and methodology reflect our best efforts based upon prevailing standard of care in the environmental industry.

The information contained in this report was prepared based upon specific parameters and regulations in force at the time of this report. The information herein is only for the specific use of the client and CES. CES accepts no responsibility for the use, interpretation, or reliance by other parties on the information contained herein, unless written authorization has been obtained from CES.

10/31/2013

Feliks Kiselyuk — Date

Certified Lead Paint Inspector/Risk Assessor

10/31/2013

Michael J. Rattacasa — Date

Operations Director

# APPENDIX A

XRF Testing Results Table

**1108 Barnegat Avenue, Unit 1**
**Seaside Heights, New Jersey 08751**

| Reading # | Date | Location | Room ID | Wall/ Elevation | Component | Substrate | Condition | Pb | Pass Fail Standard |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 10/21/2013 | | Standardization | | | | | | PASS |
| 2 | 10/21/2013 | | Calibration | Wall 1 | Wall | Plaster/sheetrock | Good | 0 | Negative |
| 3 | 10/21/2013 | | Calibration | Wall 1 | Wall | Plaster/sheetrock | Good | 0 | Negative |
| 4 | 10/21/2013 | | Calibration | Wall 1 | Wall | Plaster/sheetrock | Good | 0 | Negative |
| 5 | 10/21/2013 | Unit 1 | Room 1 | Wall 1 | Wall | Plaster/sheetrock | Poor | 0 | Negative |
| 6 | 10/21/2013 | Unit 1 | Room 1 | Wall 1 | Ceiling | Plaster/sheetrock | Good | 0 | Negative |
| 7 | 10/21/2013 | Unit 1 | Room 1 | Wall 1 | Door Frame | Wood | Good | 0 | Negative |
| 8 | 10/21/2013 | Unit 1 | Room 1 | Wall 1 | Door | Metal | Good | 0 | Negative |
| 9 | 10/21/2013 | Unit 1 | Room 2 | Wall 1 | Wall | Plaster/sheetrock | Poor | 0 | Negative |
| 10 | 10/21/2013 | Unit 1 | Room 2 | Wall 1 | Ceiling | Plaster/sheetrock | Good | 0 | Negative |
| 11 | 10/21/2013 | Unit 1 | Room 3 | Wall 1 | Ceiling | Plaster/sheetrock | Good | 0 | Negative |
| 12 | 10/21/2013 | Unit 1 | Room 3 | Wall 2 | Wall | Plaster/sheetrock | Poor | 0 | Negative |
| 13 | 10/21/2013 | Unit 1 | Room 4 | Wall 2 | Wall | Plaster/sheetrock | Poor | 0 | Negative |
| 14 | 10/21/2013 | Unit 1 | Room 4 | Wall 2 | Ceiling | Plaster/sheetrock | Good | 0 | Negative |
| 15 | 10/21/2013 | Unit 1 | Rear Entry | Wall 1 | Ceiling | Plaster/sheetrock | Good | 0.17 | Negative |
| 16 | 10/21/2013 | Unit 1 | Rear Entry | Wall 1 | Wall | Plaster/sheetrock | Poor | 0 | Negative |
| 17 | 10/21/2013 | Unit 1 | Rear Entry | Wall 2 | Door Frame | Wood | Poor | 0 | Negative |
| 18 | 10/21/2013 | Unit 1 | Rear Entry | Wall 2 | Door | Metal | Poor | 0 | Negative |
| 19 | 10/21/2013 | Unit 1 | Room 5 | Wall 1 | Wall | Plaster/sheetrock | Poor | 0 | Negative |
| 20 | 10/21/2013 | Unit 1 | Room 5 | Wall 1 | Ceiling | Plaster/sheetrock | Good | 0 | Negative |
| 21 | 10/21/2013 | Unit 1 | Room 5 | Wall 3 | Window Sill | Wood | Fair | 0 | Negative |
| 22 | 10/21/2013 | Unit 1 | Room 6 | Wall 1 | Wall | Plaster/sheetrock | Poor | 0 | Negative |
| 23 | 10/21/2013 | Unit 1 | Room 6 | Wall 1 | Ceiling | Plaster/sheetrock | Good | 0 | Negative |
| 24 | 10/21/2013 | Unit 1 | Room 6 | Wall 3 | Window Sill | Wood | Fair | 0 | Negative |
| 25 | 10/21/2013 | Unit 1 | Room 7 | Wall 1 | Door Frame | Wood | Poor | 0 | Negative |
| 26 | 10/21/2013 | Unit 1 | Room 7 | Wall 1 | Wall | Plaster/sheetrock | Good | 0 | Negative |
| 27 | 10/21/2013 | Unit 1 | Room 7 | Wall 1 | Ceiling | Plaster/sheetrock | Good | 0 | Negative |
| 28 | 10/21/2013 | Unit 1 | Room 7 | Wall 1 | Baseboard | Wood | Good | 0 | Negative |
| 29 | 10/21/2013 | Unit 1 | Room 7 | Wall 3 | Window Frame | Wood | Good | 0 | Negative |
| 30 | 10/21/2013 | Unit 1 | Room 7 | Wall 3 | Window Sill | Wood | Good | 0 | Negative |
| 31 | 10/21/2013 | Unit 1 | Room 7 | Wall 4 | Closet door Frame | Wood | Good | 0 | Negative |
| 32 | 10/21/2013 | Unit 1 | Room 7 | Wall 4 | Closet Wall | Plaster/sheetrock | Good | 0 | Negative |
| 33 | 10/21/2013 | Unit 1 | Exterior Facade | Wall 1 | Door | Metal | Good | 0 | Negative |
| 34 | 10/21/2013 | Unit 1 | Exterior Facade | Wall 1 | Door Frame | Wood | Good | 0 | Negative |
| 35 | 10/21/2013 | Unit 1 | Exterior Facade | Wall 1 | Siding | vinyl | Good | 0 | Negative |
| 36 | 10/21/2013 | Unit 1 | Exterior Facade | Wall 1 | Window Frame | vinyl | Good | 0 | Negative |
| 37 | 10/21/2013 | Unit 1 | Exterior Facade | Wall 2 | Window Frame | vinyl | Good | 0 | Negative |
| 38 | 10/21/2013 | Unit 1 | Exterior Facade | Wall 2 | Siding | vinyl | Good | 0 | Negative |
| 39 | 10/21/2013 | Unit 1 | Exterior Facade | Wall 3 | Siding | vinyl | Good | 0 | Negative |
| 40 | 10/21/2013 | Unit 1 | Exterior Facade | Wall 3 | Window Frame | vinyl | Good | 0 | Negative |
| 41 | 10/21/2013 | Unit 1 | Exterior Facade | Wall 4 | Window Frame | vinyl | Good | 0 | Negative |
| 42 | 10/21/2013 | Unit 1 | Exterior Facade | Wall 4 | Siding | vinyl | Good | 0 | Negative |
| 43 | 10/21/2013 | Unit 1 | Exterior Facade | Wall 4 | Foundation Wall | Concrete | Good | 0.02 | Negative |

# APPENDIX B

Laboratory Analytical Results

031341188

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# SAMPLING CHAIN-OF-CUSTODY FORM

PAGE ( 1 OF 1 )

| Date Collected: | Project Name: | Client: |
|---|---|---|
| 10/21/13 | Gilbane - SRP#: 0037053 - Unit 1 | Gilbane |
| **Collected by:** | **Project Location:** | **Project No.:** |
| Feliks Kiselyuk | 1108 Barnegat Ave, Seaside Heights, NJ | 13-07.339 |

**Task / Activity:** Background, Pre-Abatement/Clean-Up, During Abatement/Clean-Up, Post Abatement/Clean-Up, (Inspection,) Repair/ Interim Control, Construction/Alteration/Demolition, Other:_____

**Matrix:** S = SOIL; L = LIQUID; A = AIR; SL = SLUDGE; W = WIPE; P = PAINT CHIPS; B = BULK MATERIAL

**Laboratory:** EMSL ELAP No. 11506 **Analysis Requested:** NIOSH 7400A
_____ ELAP No. TEM (AHERA)
_____ ELAP No. Other: _____
As Indicated

| Sample ID | Matrix | Flow Rate Start | Flow Rate Finish | Average Flow Rate | Time Start | Time Finish | Total Minutes | Total Volume | Sample Location / Description | Analysis Requested/Results: Lead | Asbestos PLM | Asbestos TEM | VOC | SVOC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L1-1 | W | | | | | | | | Room 5 - Window Sill | ✓ | | | | |
| L1-2 | W | | | | | | | | Room 6 - " " | ✓ | | | | |
| L1-3 | W | | | | | | | | Room 7 - Floor | ✓ | | | | |
| L1-4 | W | | | | | | | | " " - Window Sill | ✓ | | | | |
| L1-5 | W | | | | | | | | Field Blank | ✓ | | | | |
| S1-1 | S | | | | | | | | Exterior - West side | ✓ | | | | |
| S1-2 | S | | | | | | | | " - North Side | ✓ | | | | |
| S1-3 | S | | | | | | | | " - East Side | ✓ | | | | |

EMSL MANHATTAN RECEIVED 2013 OCT 21 PM 8

**Turn-Around-Time:** Immediate, 4 Hr., 24 Hr., (48 Hr.), 72 Hr. 3-5 Days, 5-10 Days, Other

**Results to:** X Fax: 212-290-6325
X E-mail: [redacted]
Other: ccenter@ad.com

**Special Instructions:**

| Site | | Laboratory | |
|---|---|---|---|
| **Relinquished By** | **Delivery Method** | **Received By** | **Date** |
| Feliks Kiselyuk | Hand | | 10/21/13 8:43 pm |

**EMSL Analytical, Inc.**
**307 West 38th Street, New York, NY 10018**
Phone/Fax: (212) 290-0051 / (212) 290-0058
http://www.EMSL.com manhattanlab@emsl.com

| | |
|---|---|
| EMSL Order: | 031341188 |
| CustomerID: | CES50 |
| CustomerPO: | |
| ProjectID: | |

Attn: **Results**
**Creative Environment Solutions Corp.**
**39 West 37th Street**
**14th Floor**
**New York, NY 10018**

| | |
|---|---|
| Phone: | (212) 290-6323 |
| Fax: | (212) 290-6325 |
| Received: | 10/21/13 8:43 PM |
| Collected: | 10/21/2013 |

Project: **13-07.339/ GILBANE/ GILBANE SRP #0037053/ UNIT 1/ 1108 BARNEGAT AVE. SEASIDE HEIGHTS, NJ**

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

| *Client Sample Description* | *Lab ID* | *Collected* | *Analyzed* | *Lead* ***Concentration*** |
|---|---|---|---|---|
| S1-1 | *0006* | 10/21/2013 | 10/22/2013 | 190 mg/Kg |
| | Site: EXTERIOR/ WEST SIDE | | | |
| S1-2 | *0007* | 10/21/2013 | 10/22/2013 | 640 mg/Kg |
| | Site: EXTERIOR/ NORTH SIDE | | | |
| S1-3 | *0008* | 10/21/2013 | 10/22/2013 | 380 mg/Kg |
| | Site: EXTERIOR/ EAST SIDE | | | |

M. Apfeldorfer

Miron Apfeldorfer, Laboratory Manager
or other approved signatory

Reporting limit is 40 mg/kg based on the minimum sample weight per our SOP. The QC data associated with these sample results included in this report meet the method QC requirements, unless specifically indicated otherwise. 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. Results reported based on dry weight. *slight modification to methods applied. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request.

Samples analyzed by EMSL Analytical, Inc. New York, NY AIHA-LAP, LLC--ELLAP Accredited #102581, NYS ELAP 11506

Initial report from 10/22/2013 15:26:38

**EMSL Analytical, Inc.**
**307 West 38th Street, New York, NY 10018**
Phone/Fax: (212) 290-0051 / (212) 290-0058
http://www.EMSL.com manhattanlab@emsl.com

| | |
|---|---|
| EMSL Order: | 031341188 |
| CustomerID: | CES50 |
| CustomerPO: | |
| ProjectID: | |

Attn: **Results**
**Creative Environment Solutions Corp.**
**39 West 37th Street**
**14th Floor**
**New York, NY 10018**

| | |
|---|---|
| Phone: | (212) 290-6323 |
| Fax: | (212) 290-6325 |
| Received: | 10/21/13 8:43 PM |
| Collected: | 10/21/2013 |

Project: **13-07.339/ GILBANE/ GILBANE SRP #0037053/ UNIT 1/ 1108 BARNEGAT AVE. SEASIDE HEIGHTS, NJ**

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

| *Client Sample Description* | *Lab ID* | *Collected* | *Analyzed* | *Area Sampled* | *Lead* ***Concentration*** |
|---|---|---|---|---|---|
| L1-1 | *0001* | 10/21/2013 | 10/22/2013 | n/a | 12 µg/wipe |
| Site: ROOM 5/ WINDOW SILL | | | | | |
| L1-2 | *0002* | 10/21/2013 | 10/22/2013 | n/a | <10 µg/wipe |
| Site: ROOM 6/ WINDOW SILL | | | | | |
| L1-3 | *0003* | 10/21/2013 | 10/22/2013 | n/a | <10 µg/wipe |
| Site: ROOM 7/ FLOOR | | | | | |
| L1-4 | *0004* | 10/21/2013 | 10/22/2013 | n/a | 11 µg/wipe |
| Site: ROOM 7/ WINDOW SILL | | | | | |
| L1-5 | *0005* | 10/21/2013 | 10/22/2013 | n/a | <10 µg/wipe |
| Site: FIELD BLANK | | | | | |

M. Apfeldorfer

Miron Apfeldorfer, Laboratory Manager
or other approved signatory

Reporting limit is 10 ug/wipe. The QC data associated with these sample results included in this report meet the method quality control requirements, unless specifically indicated otherwise. 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.

* slight modifications to methods applied Samples received in good condition unless otherwise noted. Quality Control Data associated with this sample set is within acceptable limits, unless otherwise noted
Samples analyzed by EMSL Analytical, Inc. New York, NY AIHA-LAP, LLC--ELLAP Accredited #102581, NYS ELAP 11506

Initial report from 10/22/2013 15:26:38

# APPENDIX C

Licenses and Certifications

# Performance Characteristic Sheet

**EFFECTIVE DATE:** **December 1, 2006** **EDITION NO.: 1**

**MANUFACTURER AND MODEL:**

Make: ***Innov-X Systems, Inc.***
Models: ***LBP4000 with software version 1.4 and higher***
Source: ***X-ray tube***

## FIELD OPERATION GUIDANCE

**OPERATING PARAMETERS:**

Inspection mode, variable reading time.

**XRF CALIBRATION CHECK LIMITS:**

| |
|---|
| 1.0 to 1.1 mg/cm$^2$ (inclusive) |

**SUBSTRATE CORRECTION:**

Not applicable

**INCONCLUSIVE RANGE OR THRESHOLD:**

| INSPECTION MODE READING DESCRIPTION | SUBSTRATE | INCONCLUSIVE RANGE (mg/cm$^2$) |
|---|---|---|
| Results not corrected for substrate bias on any substrate | Brick | 0.6 to 1.1 |
| | Concrete | 0.6 to 1.1 |
| | Drywall | 0.6 to 1.1 |
| | Metal | 0.6 to 1.1 |
| | Plaster | 0.6 to 1.1 |
| | Wood | 0.6 to 1.1 |

INNOV-X SYSTEMS
Innovative XRF Technologies

# Certificate of Calibration

Certification No: 0111628-1

**Date Calibrated:** April 16, 2010

**Instrument No:** 11628

**Type:** I–3000

**This instrument was calibrated according to Innov-X Systems in-house calibration procedure. The calibration was verified using Alloy Certified Reference Materials produced by Analytical Reference Materials International (ARMI) and calibration was verified using Soil Certified Reference Materials produced by National Institute of Standards and Technology (NIST)**

**This instrument conforms to Innov-X Systems Quality Assurance standards.**

Test Technician

Q.A.

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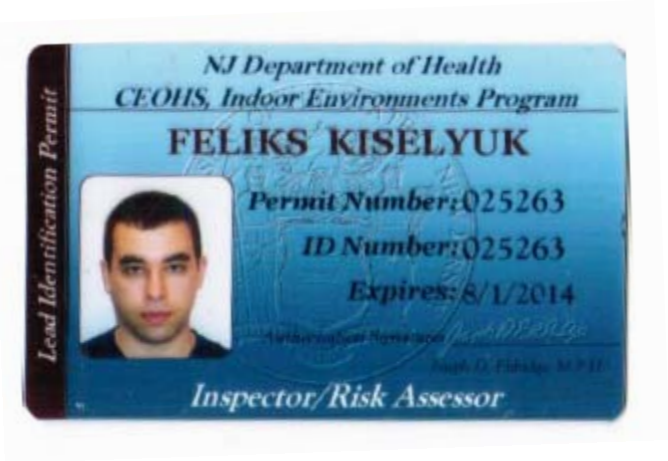
100 Sylvan Road, Suite 100, Woburn, MA 01801
(781) 938-5005 Fax: (781) 938-0128
www.innovxsys.com

WBE Certified
www.CEScenter.com

# Creative Environment Solutions Corp.

39 West 37th Street, 14th Floor, New York, NY 10018
Phone: 212.290.6323 Fax: 212.290.6325
LICENSED & APPROVED by NYS DOH/DOL/DOS, NYC DOB/DEP, FDNY, PIE



# LEAD HAZARD EVALUATION NOTICE

Address: 1108 Barnegat Avenue, Common Area, Seaside Heights, NJ

Evaluation Completed (circle one): Paint Inspection Paint Testing Risk Assessment

Date: 11/12/2013

Summary of Results:

X No lead-based paint or lead-based paint hazards were found.

____ Lead-based paint and/or lead-based paint hazards were found. See attachment for details

Contact person for more information about the risk evaluation:

Printed name: Firoz Jan

Signature: Firoz Jan

Date: 3/16/2014

Organization: PARS Environmental, Inc.

Street: 500 Horizon Drive, Suite 540

City & State Robbinsville, NJ

Zip 08691

Phone #: 609-890-7277

Person who prepared this notice:

Printed name: Margaret Halasnik

Signature: Margaret Halasnik

Date: 3/16/2014

Organization: PARS Environmental, Inc.

Street: 500 Horizon Drive, Suite 540

City & State Robbinsville, NJ

Zip 08691

Phone #: 609-890-7277

*Summarize the types and locations of lead-based paint hazards below or attach your own summary. The summary must list at least the bare soil locations, dust-lead locations, and/or building components (including type of room or space and the material underneath the paint), and types of lead-based paint hazards found:*

| Contaminated Soil | | |
|---|---|---|
| **Area** | **mg/g (ppm)** | **Location** |
| _X_ None | | See Table 4 |
| ___ Perimeter | ___ mg/g (ppm) | |
| ___ Play Area | ___ mg/g (ppm) | |
| ___ Other | ___ mg/g (ppm) | |

| Contaminated Dust | | |
|---|---|---|
| **Area** | **µg/SF** | **Location** |
| _X_ None | | See Table 3 |
| ___Windowsill | ___ µg/SF | |
| ___ Floor | ___ µg/SF | |
| ___ Other | ___ µg/SF | |
| ___ Other | ___ µg/SF | |

| Other Hazards | | | | |
|---|---|---|---|---|
| **Component*** | **Location** | **Condition (good, fair, poor)** | **Friction or Impact Surface?** | **Lead Content (if known)** |
| **1. See Table 1** | | | | ___ mg/cm² (ppm) |
| 2. | | | | ___ mg/cm² (ppm) |
| 3. | | | | ___ mg/cm² (ppm) |
| 4. | | | | ___ mg/cm² (ppm) |
| 5. | | | | ___ mg/cm² (ppm) |
| 6. | | | | ___ mg/cm² (ppm) |
| 7. | | | | ___ mg/cm² (ppm) |
| 8. | | | | ___ mg/cm² (ppm) |
| 9. | | | | ___ mg/cm² (ppm) |
| 10. | | | | ___ mg/cm² (ppm) |
| 11. | | | | ___ mg/cm² (ppm) |
| 12. | | | | ___ mg/cm² (ppm) |
| 13. | | | | ___ mg/cm² (ppm) |
| 14. | | | | ___ mg/cm² (ppm) |

***** Components include but are not limited to (interior and exterior) windows, doors, trim, fences, porches, walls and floors.

PARS
Environmental
Inc.

# LEAD-BASED PAINT SURVEY REPORT AND RISK ASSESSMENT 1108 BARNEGAT AVENUE, COMMON AREA SEASIDE HEIGHTS, NEW JERSEY SRP0037053

**PREPARED BY**

**PARS Environmental, Inc.**

**500 Horizon Drive Suite 540**

**Robbinsville, N.J. 08691**

**(609) 890-7277**

**PARS Project No.: 1011-02**

**MARCH 16, 2014**

**LEAD-BASED PAINT SURVEY REPORT AND RISK ASSESSMENT**
**1108 BARNEGAT AVENUE, COMMON AREA**
**SEASIDE HEIGHTS, NEW JERSEY**
**SRP0037053**

# TABLE OF CONTENTS

# LEAD-BASED PAINT SURVEY REPORT AND RISK ASSESSMENT
# 1108 BARNEGAT AVENUE, COMMON AREA
# SEASIDE HEIGHTS, NEW JERSEY
# SRP0037053

## EXECUTIVE SUMMARY

On November 12, 2013, PARS Environmental, Inc. (PARS) conducted a Lead-Based Paint (LBP) Inspection and Lead Hazard Risk Assessment (hereinafter the "Assessment") of the residential property located at 1108 Barnegat Avenue, Unit #2, Seaside Heights, New Jersey (hereinafter the "Property"). The Property had sustained damage during the October 2012 Hurricane Sandy and could be eligible for funding under the New Jersey Landlord Rental Repair (LRR) Program, which is being administered by the State of New Jersey Department of Community Affairs (NJDCA). NJDCA is providing funds made available by the US Department of Housing and Urban Development (HUD). PARS was authorized to perform this work by Gilbane Building Company (GBCO).

The purpose of the Assessment was to identify the potential presence of lead hazards on/ in painted surfaces inside and outside the structure, including deteriorated LBP and LBP that may be disturbed during planned renovations.

The apartment complex was constructed in the 1950s. **This Assessment presents the findings only for the Common Area of the structure.** Common areas are those locations utilized by all occupants of the Property. The interior of the building appeared to be in good condition at the time of the Assessment.

The results of the Assessment indicate that **no lead-based paint or lead-based paint hazards were identified in the area surveyed** at the time of the Assessment.

***Identified LBP Surfaces***

- **No LBP surfaces were identified during the Assessment.**

***Existing LBP Hazards and Potential Lead Hazards***

The following substrates coated with LBP are deteriorated (poor condition) and currently present existing LBP hazards:

- **No LBP hazards or potential Lead hazards were identified during the Assessment.**

***Identified Intact LBP Surfaces-No Current Hazard***

The following area is coated with LBP that is intact and does not currently present lead hazards.

- **No LBP surfaces were identified during the Assessment.**

***Lead Dust Hazards***

A lead dust hazard was identified in the following locations:

- **No lead dust hazards were identified during the Assessment.**

***Soil Contamination***
A lead hazard was identified in soil at the following building location:

- **No lead soil hazards were identified during the Assessment.**

***Non-LBP Renovation Components***
Renovation activities may include disturbance of the following components that do not contain LBP:

- Exterior siding in the areas that were tested.

***Recommendations***
No further action is recommended.

## 1.0 BACKGROUND, PURPOSE AND SCOPE OF WORK

On November 12, 2013, PARS Environmental, Inc. (PARS) conducted a Lead-Based Paint (LBP) Inspection and Lead Hazard Risk Assessment (hereinafter the "Assessment") of the residential property located at 1108 Barnegat Avenue, Common Area, Seaside Heights, New Jersey (hereinafter the "Property"). The Property had sustained damage during the October 2012 Hurricane Sandy and could be eligible for funding under the New Jersey Landlord Rental Repair (LRR) Program, which is being administered by the State of New Jersey Department of Community Affairs (NJDCA). NJDCA is providing funds made available by the US Department of Housing and Urban Development (HUD). PARS was authorized to perform this work by Gilbane Building Company (GBCO).

The purpose of the Assessment was to identify the potential presence of lead hazards on/ in surfaces inside and outside the structure, including deteriorated LBP and LBP that may be disturbed during planned renovations. HUD, the United States Environmental Protection Agency (USEPA), and the NJDCA New Jersey Lead Hazard Evaluation and Abatement Code (N.J.A.C. 5:17) consider painted surfaces containing lead at a concentration of 1.0 milligram per square centimeter ($mg/cm^2$) or greater to be LBP. LBP testing was conducted to assess whether LBP was present at levels exceeding the HUD, USEPA, and New Jersey Lead Hazard Evaluation and Abatement Code.

The Scope of Work included the following:

- Owner/occupant interviews and a visual inspection of all painted and coated interior and exterior surfaces of the dwelling, all common areas, and, if present, all outbuildings and fences;

- X-Ray Fluorescence (XRF) analyzer testing for lead content of all coatings on surfaces that maybe disturbed during the renovation;
- Lead hazard identification of deteriorated paint, friction, impact and chewable surfaces;
- Interior dust sampling; and
- Soil sampling, if appropriate.

## 2.0 APPLICABLE REGULATORY STANDARDS AND FIELD METHODOLOGIES

### 2.1 Applicable Regulatory Standards

The inspection and Assessment were performed in accordance with the regulatory standards listed below, as appropriate:

1. HUD Community Development Block Grant (CDBG) Lead Safe Housing Rule;
2. The guidelines of the Steel Structures Painting Council referenced in N.J.A.C. 5:17-1.3; and
3. Rules adopted by the U.S. Environmental Protection Agency at 40 C.F.R. 745.

### 2.2 Owner/Interview Visual Inspection

The Assessment was performed on November 12, 2013, by Mr. Firoz Jan, a licensed New Jersey Department of Health (NJDOH) Lead Inspector/Risk Assessor (Permit # 026145). PARS is certified by the NJDCA as a Lead Evaluation Contractor (Cert #00416E). The Assessment commenced at 12:00 pm and concluded at approximately 4:00 pm. A copy of Mr. Jan's license is provided in **Appendix A**.

The property owner contact information is:

| | |
|---|---|
| Owner: | Mr. Leonidas Kopsaftis |
| Address: | 16 Oak Glen Road |
| | Toms River, NJ 08753 |
| | Day Phone # 732-606-7233 |

Based on an interview with the Owner, there has not been previous LBP testing/assessment at the Property.

### 2.3 XRF Testing and Lead Hazard Identification

Painted surfaces were evaluated according to the specifications described in the protocols for LBP inspection in the HUD Guidelines for the Evaluation and Control of Lead-Based Paint and requirements of the Lead Hazard Evaluation and Abatement Code using an X-Ray Fluorescence (XRF) analyzer. The XRF used for this evaluation was an INNOV-X SYSTEM, Model No. ALPHA-6500, Serial No. 10768.

A rough sketch is made of the Property. Instrument calibrations are performed at least three times before the start of testing and performed at least every four hours, and at the end of each inspection. At least one test location per testing combination, four readings are obtained, one on each wall, (interior room equivalent or exterior). When upper and lower walls have a different painting history, four tests are required of each.

The selection of the test locations is representative of the paint over the areas which are most likely to be coated with old paint or other lead-based coatings. Thus, locations, where the paint appears to be thickest are selected. Locations where paint has worn away or been scraped off are not selected. At each test location:

- All layers of paint are included; and
- The XRF probe faceplate is placed flat against the surface.

Areas over pipes, electrical surfaces, nails and other possible interferences are avoided, if possible, as these materials may contain lead and contribute to the XRF reading. When testing combinations are repeated within a room equivalent (e.g., window, or door system), one test is taken on one part of the component system (e.g., the casing from window B) and another test from another part of the system from a separate component (e.g., the sash from window C-2), the same strategy would apply to the door system. If a room has two or more doors (including closet or pantry doors), the casing or jamb of the door itself is tested. If each door may have a different painting history, then each door system is tested separately.

Calibration and actual readings were taken using the Lead-in-Paint K+L variable reading time mode. The instrument calibration was performed in accordance with the Performance Characteristic Sheet (PCS) for this instrument. The instrument PCS is in **Appendix B**. The instrument was calibrated using the paint film nearest 1.0 mg/cm$^2$ in the National Institute of Standard & Technology (NIST) Standard Reference Material. At least three calibration readings were taken before and after the testing to insure manufacturer standards were met.

The tested surfaces included:

- Exterior Siding

Two measurements were taken from painted surfaces in the Common Area. The XRF measurements were collected following the regulatory standards referenced in Section 2.1 of this report to evaluate the potential presence of LBP in the dwelling.

### 2.4 Interior Dust Wipe Sampling

Interior dust wipe sampling is conducted in areas where the LBP surfaces are observed to be in deteriorated condition. USEPA and HUD define "*deteriorated paint*" as "*any interior or exterior paint or other coating that is peeling, chipping, chalking or cracking, or any paint or coating located on an interior or exterior surface or fixture that is otherwise damaged or separated from the substrate*". This definition is most typically associated with surface

conditions only. Usage of this term in describing conditions other than those associated with surface coatings are not known to be defined by USEPA or HUD.

Wipe sampling was conducted in the living areas (i.e., Front Entrance, Bathroom, Kitchen, Living Room, Common Areas, Bedrooms) to assess the presence of potential lead-dust concentrations. USEPA considers lead in dust to be a hazard if lead concentrations, as determined by wipe sampling, are equal to or greater than 40 micrograms per square foot (µg/ft$^2$) on floors, 250 µg/ft$^2$ on window sills, and 400 µg/ft$^2$ on troughs and exterior surfaces.

Four (4) wipe samples including two (2) Quality Control wipe samples were collected from the Common Area floors. The samples were collected from areas most likely to be lead contaminated if lead-in-dust is present, in accordance with the requirements of ASTM Standard E-1728, *Standard Practice for Field Collection of Settled Dust Samples Using Wipe Sampling Methods for Lead Determination by Atomic Spectrometry Techniques*. Samples were collected by wiping either a 12 inch x 12 inch surface area or other pre-measured surface with alcohol free Ghost Wipes. The surface area was wiped side-to-side in 'S' like motions. The samples were placed in plastic tubes and submitted for laboratory analysis to EMSL Analytical Inc. (EMSL) which is an American Industrial Hygiene Association, Environmental Lead Laboratory Accreditation Program (AIHA-ELLAP # 100194) certified laboratory.

### 2.5 Soil Sampling

Where necessary, soil samples are collected in accordance with the requirements of ASTM Standard E-1727, *Standard Practice for Field Collection of Soil Samples for Lead Determination by Atomic Spectrometry Techniques*. A minimum of two (2) soil samples are collected from the following areas:

- Drip line – soil closest to the exterior walls of the home; and
- Play Area – soil where children (if any) are known to be in contact with soil (i.e., near swing set, play equipment, etc.); or
- Bare Soil – soil that is exposed in the yard, but not necessarily a Play Area.

LBP hazards were not identified along the building exterior. Four (4) soil samples were collected from the foundation drip line. The samples were placed in a plastic tube and submitted for laboratory analysis to EMSL which is an AIHA-ELLAP certified and New Jersey Department of Environmental Protection (NJDEP) (#03036) certified laboratory.

## 3.0 RESULTS

### 3.1 Owner/Interview Visual Inspection

The apartment complex was constructed in the 1950s. The property building consists of five units. **This Assessment presents the findings only for the Common Area of the structure.** Common areas are those locations utilized by all occupants of the Property. The interior of the

building appeared to be in good condition at the time of the Assessment. The following potential LBP painted/coated surfaces were identified:

- Exterior Siding

### 3.2 XRF Testing and Lead Hazard Identification

XRF testing was conducted on painted components listed above. The XRF readings and their associated LBP levels are summarized in **Table 1**. XRF Direct Readings are provided in **Table 2**.

***Identified LBP Surfaces***

LBP in amounts equal to or exceeding the USEPA and/or HUD criteria of 1.0 mg/cm$^2$ was found on the following painted substrates:

- **No LBP surfaces were identified during the Assessment.**

***Existing LBP Hazards***

The following substrates coated with LBP are deteriorated (poor condition) and currently present existing LBP hazards:

- **No LBP hazards or potential Lead hazards were identified during the Assessment.**

A glossary of terms and a list of publications and resources addressing lead hazards and their health effects is provided in **Appendix C.**

***Intact LBP Surfaces-No Current Hazard***

The following area is coated with LBP that is intact and does not currently present lead hazards.

- **No LBP surfaces were identified during the Assessment.**

### 3.3 Interior Dust Wipe Sampling

**None of the four (4) wipe samples exceeded the lead dust concentrations of 40 µg/ft$^2$ on floors.** The results of the wipe sampling are presented as **Table 3**. Laboratory analytical results are provided in **Appendix D**.

### 3.4 Soil Sampling

**Soil contamination exceeding 1,200 parts per million (ppm) or milligrams per kilogram (mg/kg) of lead was not found.** The results of the soil sampling are presented as **Table 4**. Laboratory analytical results are provided in **Appendix E**.

## 4.0 LEAD HAZARD CONTROL OPTIONS

Lead-safe work practices and worker/occupant protection practices complying with current USEPA, HUD, and Occupational Safety and Health Administration (OSHA) standards will be necessary to safely complete all work involving the disturbance of LBP coated surfaces and components. In addition, any work considered lead hazard control will enlist the use of interim control (temporary) methods and/or abatement (permanent) methods. It should be noted that all lead hazard control activities have the potential of creating additional hazards, or even creating hazards that were not present before. All persons and/or firms performing lead hazard control activities must have received proper training in Lead-Safe Work Practices and/or Lead Abatement. Details for the listed lead hazard control options and issues surrounding occupant/worker protection practices can be found in the publication titled: *Guidelines for the Evaluation and Control of LBP Hazards in Housing (Second Edition, July 2012)* (HUD Guidelines), published by HUD, as well as in the OSHA regulations found in 29 CPR, Part 1926.62, known as the OSHA Lead Exposure in Construction Industry Standard.

The associated cost estimates, unless otherwise noted, include the labor and materials to accomplish the stated activity and most additional funds typically found to be necessary to complete worker protection, site containment, and cleanup procedures. These are approximate estimates only and due to a variety of potential factors, may not accurately reflect all local cost factors. A precise estimate must be obtained from a NJ certified LBP abatement contractor or a contractor trained in lead safe work practices. Properly trained and/or licensed persons, as well as properly licensed firms (as mandated) should accomplish all abatement/interim control activities conducted at this residence.

*Interim controls,* as defined by HUD, means a set of measures designed to temporarily reduce human exposure to LBP hazards and/or lead containing materials. These measures include, but are not limited to: component and/or substrate repairs; paint and varnish repairs; the removal of dust-lead hazards; renovation; remodeling; maintenance; temporary containment; placement of seed, sod or other forms of vegetation over bare soil areas; the placement of at least six (6) inches of an appropriate mulch material over an impervious material, laid on top of bare soil areas; the tilling of bare soil areas; extensive and specialized cleaning; and ongoing LBP maintenance activities.

*Abatement,* as defined by HUD, means any set of measures designed to permanently eliminate LBP and/or LBP hazards. The product manufacturer and/or contractor must warrant abatement methods to last a minimum of 20 years, or these methods must have a design life of at least 20 years. These activities include, but are not limited to:

- The removal of LBP from substrates and components;
- The replacement of components or fixtures with lead containing materials and/or LBP;
- The permanent enclosure of LBP with construction materials;

- The encapsulation of LBP with approved products;
- The removal or permanent covering (concrete or asphalt) of soil-lead hazards; and,
- Extensive and specialized cleaning activities.

Based on the findings of the Assessment, PARS recommends the following action be implemented to minimize the potential exposure to LBP:

- **No further action is recommended.**

## 5.0 SPECIAL CLEANING PRECEDING LEAD HAZARD CONTROL ACTIVITIES

No special cleaning preceding lead hazard control activities are warranted at this time.

## 6.0 SPECIAL CLEANING FOLLOWING LEAD HAZARD CONTROL ACTIVITIES

No special cleaning following lead hazard control activities are warranted at this time.

## 7.0 ONGOING MONITORING

Ongoing monitoring is necessary in all dwellings in which LBP is known or assumed to be present. At these dwellings, the very real potential exists for LBP hazards to develop. Hazards can develop by means such as, but not limited to: the failure of lead hazard control measures; previously intact LBP becoming deteriorated; dangerous levels of lead-in-dust (dust lead) re-accumulating through friction, impact, and deterioration of paint; or, through the introduction of contaminated exterior dust and soil into the interior of the structure.

Ongoing monitoring typically includes two different activities: re-evaluation and annual visual surveys. A re-evaluation is a risk assessment that includes limited soil and dust sampling and a visual evaluation of paint films and any existing lead hazard controls. Re-evaluations are supplemented with visual surveys by the Homeowner, which should be conducted at least once a year. Homeowner conducted visual surveys do not replace the need for professional re-evaluations. Visual surveys should confirm that all paint with known or suspected LBP are not deteriorating, that lead hazard control methods have not failed, and that structural problems do not threaten the integrity of any remaining known, assumed or suspected LBP. The partial table below is taken from **Table 6.1, Standard Re-evaluation Schedules**, as found in the HUD Guidelines. It is intended as a guideline for the Homeowner to assess the condition of areas where hazard control activities occurred.

Factors at this residence require the use of **Ongoing Monitoring Schedule Number 1 (No Action)** to dictate monitoring protocol.

| LBP Schedule | Original Evaluation Results | Action taken | Re-evaluation Frequency & Duration | Visual Survey Schedule |
|---|---|---|---|---|
| 1 | Combination risk assessment/inspection finds no leaded dust or soil and no lead-based paint. | None. | None. | None |

## 8.0 DISCLOSURE REGULATIONS

Every purchaser of any interest in residential real property on which a residential dwelling was built prior to 1978 must be notified that such property may present exposure to lead from LBP that may place young children at risk of developing lead poisoning. The seller must disclose any known information concerning LBP or LBP hazards. The seller must also disclose information such as the location of the LBP and/or LBP hazards, and the condition of the painted surfaces. Lead poisoning in young children may produce permanent neurological damage, including learning disabilities, reduced intelligence quotient, behavioral problems, and impaired memory. Lead poisoning also poses a particular risk to pregnant women. The seller of any interest in residential real property is required to provide the buyer with any information on LBP hazards from risk assessments or inspections in the seller's possession and notify the buyer of any known lead-based paint hazards. A risk assessment or inspection for possible LBP hazards is recommended prior to purchase.

## 9.0 FUTURE REMODELING PRECAUTIONS

Deteriorated or disturbed painted surfaces may still contain LBP and may pose a hazard, especially during renovation. The OSHA Lead in Construction Standard 29 CFR 1926.62 states that those "negative" readings (i.e., those below the HUD/USEPA definition of what constitutes LBP (1.0 $mg/cm^2$)) do not relieve contractors from performing exposure assessments (personal air monitoring) on their employees, and should not be interpreted as lead free. Although a reading may indicate "negative", airborne lead concentrations still may exceed the OSHA Action Level or the OSHA Permissible Exposure Limit (PEL) depending on the work activity.

Each painted surface observed during the Assessment was tested for the presence of LBP. Only LBP hazards that were identified are addressed in this report. However, LBP, dust lead hazards, and/or soil lead hazards may be present at other locations on the property. Additional paint testing should precede any future remodeling activities that occur at any untested areas. Additional dust and/or soil sample collection and analysis should follow any hazard control activity, repair, remodeling, or renovation effort, and any other work efforts that may in any way disturb LBP and/or any lead containing materials. These Assessment activities will help the Homeowner to ensure the health and safety of the occupants and the neighborhood. Details concerning lead safe work techniques and approved hazard control methods can be found in the

HUD publication titled*: "Guidelines for the Evaluation and Control of LBP Hazards in Housing" (Second Edition, July 2012).*

## 10.0 CONDITIONS AND LIMITATIONS

This report is prepared for the sole benefit of NJDCA and GBCO under the LRR Program and may not be relied upon by any other person or entity without the written authorization of PARS. This is our report of a visual survey, XRF analysis of the tested components, wipe samples, and soil samples. The presence or absence of LBP or LBP hazards applies only to the tested or assessed surfaces on the date of the field visit and it should be understood that the conditions may change due to deterioration or maintenance. The results and material conditions noted within this report were accurate at the time of the evaluation and in no way reflect the conditions at the site tested after November 12, 2013. No other environmental concerns or conditions were addressed during this evaluation.

**-o0o-**

PARS appreciates the opportunity to assist the NJDCA and GBCO with this project. Should you have any questions or comments please feel free to contact us at (609) 890-7277.

Respectfully submitted,

**PARS ENVIRONMENTAL, INC.**

Firoz Jan
Project Industrial Hygienist
NJDOH Lead Inspector / Risk Assessor
Permit # 026145

Margaret Halasnik
Principal Environmental Scientist

# TABLE 1

# XRF Lead-Based Paint Test Results

PARS ENVIRONMENTAL INC.

**TABLE 1**
**XRF Lead-Based Paint Test Results**
**1108 Barnegat Avenue, Common Area**
**Seaside Heights, NJ**
**SRP0037053**

| Date | Reading | Room | Component | Substrate | Paint Condition | Paint Color | Friction, Impact, or Teeth Marked Surface | Result | Lead Content ($mg/cm^2$) |
|---|---|---|---|---|---|---|---|---|---|
| 12-Nov-13 | 1 | Standardization | | | | | | PASS | |
| **12-Nov-13** | **2** | **Calibration** | **Red Film** | **Metal** | **Good** | **Red** | | **Positive** | **1.08** |
| **12-Nov-13** | **3** | **Calibration** | **Red Film** | **Metal** | **Good** | **Red** | | **Positive** | **1.06** |
| **12-Nov-13** | **4** | **Calibration** | **Red Film** | **Metal** | **Good** | **Red** | | **Positive** | **1.04** |
| 12-Nov-13 | 51 | Exterior | Siding | Metal | Good | Beige | | Negative | 0 |
| 12-Nov-13 | 52 | Exterior | Siding | Metal | Good | Beige | | Negative | 0 |
| **12-Nov-13** | **53** | **Calibration** | **Red Film** | **Metal** | **Good** | **Red** | | **Positive** | **1.11** |
| **12-Nov-13** | **54** | **Calibration** | **Red Film** | **Metal** | **Good** | **Red** | | **Positive** | **1.08** |
| **12-Nov-13** | **55** | **Calibration** | **Red Film** | **Metal** | **Good** | **Red** | | **Positive** | **1.08** |

# TABLE 2

# XRF Direct Reading Results

PARS ENVIRONMENTAL INC.

**Table 2**
**XRF Direct Reading Results**
**1108 Barnegat Avenue-Common Area**
**Seaside Heights, NJ**
**SRP0037053**

| Date | Time | Reading | Mode | LiveTime | Pass Fail Standard | Pb | Pb +/- |
|---|---|---|---|---|---|---|---|
| 12-Nov-13 | 12:24:10 | 1 | Standardization | 49.7 | PASS | | |
| **12-Nov-13** | **12:25:53** | **2** | **Lead Paint Fixed-Time** | **23.53** | **Positive** | **1.08** | **0.04** |
| **12-Nov-13** | **12:27:01** | **3** | **Lead Paint Fixed-Time** | **23.57** | **Positive** | **1.06** | **0.04** |
| **12-Nov-13** | **12:27:43** | **4** | **Lead Paint Fixed-Time** | **23.53** | **Positive** | **1.04** | **0.04** |
| 12-Nov-13 | 13:08:09 | 51 | Lead Paint Fixed-Time | 22.61 | Negative | 0 | 0 |
| 12-Nov-13 | 13:08:50 | 52 | Lead Paint Fixed-Time | 23.57 | Negative | 0 | 0 |
| **12-Nov-13** | **13:10:17** | **53** | **Lead Paint Fixed-Time** | **22.97** | **Positive** | **1.11** | **0.04** |
| **12-Nov-13** | **13:10:59** | **54** | **Lead Paint Fixed-Time** | **23.23** | **Positive** | **1.08** | **0.04** |
| **12-Nov-13** | **13:11:40** | **55** | **Lead Paint Fixed-Time** | **23.19** | **Positive** | **1.08** | **0.04** |

# TABLE 3

# Lead Dust Wipe Sample Results

PARS ENVIRONMENTAL INC.

**TABLE 3**
**LBP Dust Wipe Sample Test Results**
**1108 Barnegat Avenue, Common Area**
**Seaside Heights, NJ**
**SRP0037053**

| Sample ID | Date | Room | Location | Lead Dust Concentration indicative of Lead Hazard ($\mu g/ft^2$) | Wipe Sample Result ($\mu g/ft^2$) |
|---|---|---|---|---|---|
| BA-05 | 11/12/2013 | Common area | Floor | 40 | <10 |
| BA-09 | 11/12/2013 | QC | QC | N/A | <10 |
| PB-08 | 11/12/2013 | Common area | Floor | 40 | <10 |
| PB-09 | 11/12/2013 | QC | QC | N/A | <10 |

**500=** Exceeds lead dust concentration

# TABLE 4

# Lead In Soil Sample Results

PARS ENVIRONMENTAL INC.

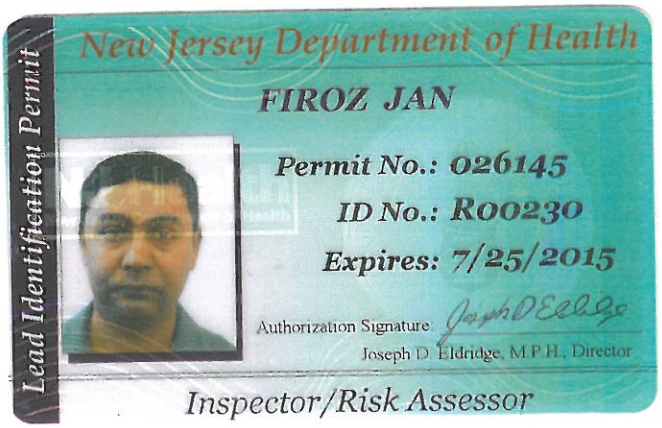
**Table 4**
**Lead In Soil Contamination**
**1108 Barnegat Avenue, Common Area**
**Seaside Heights, NJ**
**SRP0037053**

| Sample ID | Date | Location | Lead in Soil Concentration indicative of Lead Hazard (mg/kg) | Soil Sample Result (mg/kg) |
|---|---|---|---|---|
| U-01 | 12-Nov-13 | East side-House Exterior Dripline | 1,200 | 240 |
| U-02 | 12-Nov-13 | West side-House Exterior Dripline | 1,200 | 270 |
| S-01 | 12-Nov-13 | North side-House Exterior Dripline | 1,200 | 230 |
| S-02 | 12-Nov-13 | South side-House Exterior Dripline | 1,200 | 260 |

**1201 =** Exceeds lead in soil concentration
mg/kg = milligrams per kilogram

# APPENDIX A

## Licenses


Lead Identification Permit
New Jersey Department of Health
FIROZ JAN
Permit No.: 026145
ID No.: R00230
Expires: 7/25/2015
Authorization Signature
Joseph D. Eldridge, M.P.H., Director
Inspector/Risk Assessor

36948

# National Asbestos & Environmental Training Institute

## CERTIFICATE OF COMPLETION

*This is to certify that*

## *Firoz Jan*

*Successfully completed the course entitled*

**1-Day New Jersey/EPA Model Lead Inspector/Risk Assessor Refresher on November 21, 2012**

*Examination Passed on November 21, 2012* *Expiration Date November 21, 2014*

~~Doris L. Adler~~
*President, NAETI*

Language: English | 3 CE Units | ABIH 1 CM POINT

**3321 Doris Avenue, Building B, Ocean, NJ 07712** **Phone (732) 531-5571** **Fax (732) 531-5956** **www.naeti.com**

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

LOCATION
101 SOUTH BROAD STREET
TRENTON, NEW JERSEY 08618

STATE OF NEW JERSEY
DEPARTMENT OF COMMUNITY AFFAIRS
DIVISION OF CODES AND STANDARDS
BUREAU OF CODE SERVICES
LEAD HAZARD ABATEMENT

RICHARD E. CONSTABLE, III
Commissioner

MAILING ADDRESS
PO BOX 816
TRENTON, NJ 08625-0816

## Certificate - Lead Evaluation Contractor

This is to certify that the Department of Community Affairs has

( ) CERTIFIED
(XX) RECERTIFIED

PARS ENVIRONMENTAL
500 HORIZON DRIVE
SUITE 540
ROBBINSVILLE, NJ 08691

To act as a Lead Evaluation Contractor on the following projects

Residential
Public Buildings

Cert # 00416 E

Effective Date: MARCH 1, 2014

Date of Expiration: FEBRUARY 29, 2016

Certificate Type: 2 YEAR

Sincerely,

James L. Amici
Supervisor of Certification
Lead Hazard Abatement Unit

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

LOCATION
101 SOUTH BROAD STREET
TRENTON, NEW JERSEY 08618

STATE OF NEW JERSEY
DEPARTMENT OF COMMUNITY AFFAIRS
DIVISION OF CODES AND STANDARDS
BUREAU OF CODE SERVICES
LEAD HAZARD ABATEMENT

RICHARD E. CONSTABLE, III
Acting Commissioner

MAILING ADDRESS
PO BOX 816
TRENTON, NJ 08625-0816

## Certificate - Lead Evaluation Contractor

This is to certify that the Department of Community Affairs has

( ) CERTIFIED
(XX) RECERTIFIED

PARS ENVIRONMENTAL
500 HORIZON DRIVE
SUITE 540
ROBBINSVILLE, NJ 08691

To act as a Lead Evaluation Contractor on the following projects

Residential
Public Buildings

Cert # 00416 E

Effective Date: MARCH 1, 2012

Date of Expiration: FEBRUARY 28, 2014

Certificate Type: 2 YEAR

Sincerely,

James L. Amici
Supervisor of Certification
Lead Hazard Abatement Unit

# APPENDIX B

## Performance Characteristic Sheet

# Performance Characteristic Sheet

**EFFECTIVE DATE:** **October 12, 2006** **EDITION NO.: 1**

**MANUFACTURER AND MODEL:**

Make: ***Innov-X Systems, Inc.***
Models: ***LBP4000 with software version 1.4 and higher***
Source: ***X-ray tube (no radioactive isotopes)***

## FIELD OPERATION GUIDANCE

**OPERATING PARAMETERS**:

Inspection mode, variable reading time.

**XRF CALIBRATION CHECK LIMITS**:

| |
|---|
| 1.0 to 1.1 mg/cm$^2$ (inclusive) |

**SUBSTRATE CORRECTION:**

Not applicable

**INCONCLUSIVE RANGE OR THRESHOLD:**

| INSPECTION MODE READING DESCRIPTION | SUBSTRATE | INCONCLUSIVE RANGE (mg/cm$^2$) |
|---|---|---|
| Results not corrected for substrate bias on any substrate | Brick | 0.6 to 1.1 |
| | Concrete | 0.6 to 1.1 |
| | Drywall | 0.6 to 1.1 |
| | Metal | 0.6 to 1.1 |
| | Plaster | 0.6 to 1.1 |
| | Wood | 0.6 to 1.1 |

## BACKGROUND INFORMATION

**EVALUATION DATA SOURCE AND DATE:**

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated from the EPA/HUD evaluation using archived building components. Testing was conducted on 146 test locations, with two separate instruments, in December 2005.

**OPERATING PARAMETERS:**

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

**XRF CALIBRATION CHECK:**

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm$^2$ in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm$^2$ film).

If the average (rounded to 1 decimal place) of three readings is outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instrument into control before XRF testing proceeds.

**SUBSTRATE CORRECTION VALUE COMPUTATION**:

Chapter 7 of the HUD Guidelines provides guidance on correcting XRF results for substrate bias. Supplemental guidance for using the paint film nearest 1.0 mg/cm$^2$ for substrate correction is provided:

XRF results are corrected for substrate bias by subtracting from each XRF result a correction value determined separately in each house for single-family housing or in each development for multifamily housing, for each substrate. The correction value is an average of XRF readings taken over the NIST SRM paint film nearest to 1.0 mg/cm$^2$ at test locations that have been scraped bare of their paint covering. Compute the correction values as follows:

Using the same XRF instrument, take three readings on a bare substrate area covered with the NIST SRM paint film nearest 1 mg/cm$^2$. Repeat this procedure by taking three more readings on a second bare substrate area of the same substrate covered with the NIST SRM.

Compute the correction value for each substrate type where XRF readings indicate substrate correction is needed by computing the average of all six readings as shown below.

For each substrate type (the 1.02 mg/cm$^2$ NIST SRM is shown in this example; use the actual lead loading of the NIST SRM used for substrate correction):

Correction value = (1st + 2nd + 3rd + 4th + 5th + 6th *Reading*) / 6 - 1.02 mg/cm$^2$

Repeat this procedure for each substrate requiring substrate correction in the house or housing development.

**EVALUATING THE QUALITY OF XRF TESTING:**

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing.

Take one XRF reading on each of the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below.

Compute the Retest Tolerance Limit by the following steps:

Calculate the average of the original XRF reading and the retest XRF reading for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF readings.

Compute the average of all ten re-test XRF readings.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

**TESTING TIMES:**

For the variable-time inspection paint test mode, the instrument continues to read until it has determined whether the result is positive or negative (with respect to the 1.0 mg/cm$^2$ Federal standard), with 95% confidence. The following table provides testing time information for this testing mode.

| **Testing Times Using Variable Reading Time Inspection Mode (Seconds)** | | | | | | |
|---|---|---|---|---|---|---|
| | All Data | | | Median for laboratory-measured lead levels (mg/cm$^2$) | | |
| Substrate | 25$^{th}$ Percentile | Median | 75$^{th}$ Percentile | Pb < 0.25 | 0.25 ≤ Pb < 1.0 | 1.0 ≤ Pb |
| Wood, Drywall | 2.1 | 2.3 | 5.4 | 2.2 | 5.4 | 2.2 |
| Metal | 2.6 | 3.2 | 5.3 | 2.7 | 5.1 | 5.1 |
| Brick, Concrete, Plaster | 3.1 | 4.0 | 5.7 | 3.2 | 4.0 | 5.9 |

**CLASSIFICATION OF RESULTS:**

When an inconclusive range is specified on the *Performance Characteristic Sheet*, XRF results are classified as positive if they are greater than the upper boundary of the inconclusive range, negative if they are less than the lower boundary of the inconclusive range, or inconclusive if in between. The inconclusive range includes both its upper and lower bounds. If the instrument reads "> x mg/cm$^2$", the value "x" should be used for classification purposes, ignoring the ">". For example, a reading reported as ">1.0 mg/cm$^2$" is classified as 1.0 mg/cm$^2$ , or inconclusive. When the inconclusive range reported in this PCS is used to classify the readings obtained in the EPA/HUD evaluation, the following False Positive, False Negative and Inconclusive rates are obtained:

FALSE POSITIVE RATE: 2.5% (2/80)

FALSE NEGATIVE RATE**:** 1.9% (4/212)

INCONCLUSIVE RATE: 16.4% (48/212)

**DOCUMENTATION:**

A document titled *Methodology for XRF Performance Characteristic Sheets* provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. For a copy of this document call the National Lead Information Center Clearinghouse at 1-800-424-LEAD.

This XRF Performance Characteristic Sheet was developed by the Midwest Research Institute (MRI) and QuanTech, Inc., under a contract between MRI and the XRF manufacturer. XRF Performance Characteristic Sheets were originally developed by the MRI under a grant from the U. S. Environmental Protection Agency and the U.S. Department of Housing and Urban Development. HUD has determined that the information provided here is acceptable when used as guidance in conjunction with Chapter 7, Lead-Based Paint Inspection, of HUD's *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*.

## Margaret Halasnik

**From:** Juan Payan <juan.payan@olympusndt.com>
**Sent:** Monday, August 12, 2013 12:58 PM
**To:** Margaret Halasnik
**Subject:** Performance Characteristics Sheet
**Attachments:** Lead paint Hud sheet.pdf

Hi Margaret,

Please see the Performance Characteristics Sheet attached, and let me know if you need anything else. This sheet is valid for all Alpha models.

*Regards,*

*JC Payan*
*Technical Support*
*Olympus NDT - Analytical Instruments Division*
*241 Riverview Ave*
*Auburndale, MA 02466*
*T: 781-419-3900*
*F: 781-973-2200*

# APPENDIX C

# Lead Glossary

# APPENDIX C

## "LEAD SPEAK" A BRIEF GLOSSARY

### COMMON LBP TERMS

LBP: Any and all paint that contains at least 1 milligram of lead per square centimeter of surface area (1.0 mg/cm$^2$). This is infrequently expressed as 0.5% lead by weight and/or 5,000 parts per million lead concentrations by dry weight.

LBP HAZARDS: Housing conditions that cause human exposure to unsafe levels of lead from paint. These conditions include, but are not necessarily limited to: deteriorated LBP; friction, impact, or chewable surfaces; lead contaminated dust; or lead contaminated soil.

PAINT: Any and all paints, stains, varnishes, shellacs, epoxies, lacquers, polyurethanes, etc.

HOUSE WALL IDENTIFICATION GUIDE: The exterior wall that contains the front entry to the house is labeled as the A wall of the house. Proceeding clock-wise around the house label the remaining walls B, C, and D respectively. The interior room walls correspond to the exterior walls

LEAD HAZARD EVALUATION METHODS

VISUAL EVALUATION: A visual evaluation of interior and exterior paint and surfaces in an effort to try to identify specific conditions that contribute to LBP hazards. A certified risk assessor or a Housing Quality Standards inspector trained in visual assessments should perform these inspections.

PAINT TESTING: Testing of specific surfaces that are coated with paint, by XRF (x-ray fluorescence) or laboratory analysis, to determine the lead content of these surfaces, performed by a NJ certified Lead Inspector/Risk Assessor.

RISK ASSESSMENT: An on-site investigation to help determine the existence of LBP hazards. This can include paint testing, dust, and soil sampling, water sampling and a visual inspection. The risk assessment report identifies lead hazards and potential options for lead hazard control. A certified risk assessor must conduct the assessment.

CLEARANCE EXAMINATION: Clearance is performed after hazard reduction, rehabilitation, renovation, repair, modernization, or maintenance activities to determine if a unit is safe for occupancy. It involves a visual inspection, analysis of dust and soil samples, and preparation of a report. A certified risk assessor that is independent from the company or individual conducting the lead hazard control activities should conduct the clearance examination.

X-RAY FLUORESCENCE ANALYZER (XRF): This device, often called an XRF, is used to help identify levels of lead in paint without disturbing the painted surfaces themselves. The unit uses X-rays to measure the lead content in the paint on a per square centimeter basis.

# APPENDIX C

## "LEAD SPEAK" A BRIEF GLOSSARY

LEAD POISONING: Environmental Intervention Blood Lead Level (EIBLL): The level of lead in blood that requires intervention in a child under the age of seventy-two (72) months (6 years). This is typically defined as a blood lead level of 20 µg/dL (micrograms per deciliter) of whole blood or above for a single test, or blood levels of 15-19 in two tests taken at least three months apart.

KEY UNITS OF MEASUREMENT

µg (Microgram): A microgram is 1/1000$^{th}$ of a milligram. To put this into perspective, a penny weighs 2 grams. To get a microgram, you would need to divide the penny into 2 million pieces. A microgram is one of those two million pieces.

µg/dL (microgram per deciliter): Used to measure the level of lead in children's and worker's blood to establish whether intervention is needed. A deciliter is a little less than a half a cup.

µg/ft$^2$ (micrograms per square foot): the unit used to express levels of lead in dust samples. All reports should report levels of lead in dust in µg/ft$^2$, mg/cm$^2$ (milligrams per centimeter square): used to report levels of lead in paint thru XRF testing.

PPM (parts per million): Typically used to express the concentrations of lead in soil. Can also be used to express the amount of lead in a surface coating on a mass concentration basis. This measurement can also be shown as: µg/gram or mg/kg (soil) or mg/1 (aqueous).

PPB (parts per billion)**:** Typically used to express the amount of lead found in drinking water. This measurement is also sometimes expressed as: µg/l.

EPA/HUD PUBLISHED LBP STANDARDS

Dust-thresholds for Lead Contamination

- Floors: less than (<) 40 µg/ft$^2$
- Interior Window Sills: <250 µg/ft$^2$
- Window Troughs: <400 µg/ft$^2$

Soil-thresholds for Lead Contamination

- Play areas used by children 6 and under: <400 µg/gram or 400 PPM
- Other areas: < 1200 µg/gram or 1200 PPM
- Threshold for abatement: <5000 µg/gram or 5000 PPM

# APPENDIX C

## "LEAD SPEAK" A BRIEF GLOSSARY

NATIONAL CENTER FOR HEALTHY HOUSING: http://www.leadsafehousing.org/

NATIONAL LEAD INFORMATION CENTER AND CLEARINGHOUSE:
1-800-424 LEAD, Fax: 301-585-7976 www.epa.gov/lead/nlic.htm

NATIONAL LEAD ASSESSMENT AND ABATEMENT COUNCIL:
1-800-590-6522 Fax: 301-924-0265 http://www.nlaac.org

HUD's OFFICE OF HEALTH HOMES AND LEAD HAZARD CONTROL:
http://www.hud.gov/offices/lead

THE ALLIANCE TO END CHILDHOOD LEAD POISONING:
http://www.aeclp.org

THE ENVIRONMENTAL PROTECTION AGENCY LEAD PROGRAMS:
http://www.epa.gov/opptintr/lead Voice: 1-202-260-2090

NEW JERSEY DEPARTMENT OF HEALTH, INDOOR ENVIRONMENTS PROGRAM
http://www.state.nj.us/health/iep/lead.shtml

ADDITIONAL INFORMATION:
Lists of recalled products containing lead: www.safetyalerts.com. The Lead listing for info On lead-safe service providers and EPA accredited laboratories throughout the United States: http://www.leadlisting.org

# APPENDIX D

# EMSL Laboratories Lead Report

**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: | 201311911 |
| CustomerID: | PARS51 |
| CustomerPO: | 1101 |
| ProjectID: | GILBANE |

Attn: **Firoz Jan**
**PARS Environmental**
**500 Horizon Drive**
**Suite 540**
**Robbinsville, NJ 08691**

Phone: (609) 890-7277
Fax: (609) 890-9116
Received: 11/12/13 6:11 PM
Collected:

Project: **Gilbane Unit #2 / 1108 Barnegat Ave Seaside Heights,NJ**

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

| Client Sample Description | Lab ID | Collected | Analyzed | Area Sampled | Lead Concentration |
|---|---|---|---|---|---|
| BA-01 | 0001 | | 11/13/2013 | 144 in² | <10 µg/ft² |
| Site: Front Entrance Door/Floor | | | | | |
| BA-02 | 0002 | | 11/13/2013 | 144 in² | <10 µg/ft² |
| Site: Bathroom/Floor | | | | | |
| BA-03 | 0003 | | 11/13/2013 | 144 in² | <10 µg/ft² |
| Site: Kitchen Floor | | | | | |
| BA-04 | 0004 | | 11/13/2013 | 64 in² | <23 µg/ft² |
| Site: Living Room/Window Sill | | | | | |
| BA-05 | 0005 | | 11/13/2013 | 144 in² | <10 µg/ft² |
| Site: Common Area/Floor | | | | | |
| BA-06 | 0006 | | 11/13/2013 | 64 in² | <23 µg/ft² |
| Site: Bedroom #1 Window Sill | | | | | |
| BA-07 | 0007 | | 11/13/2013 | 64 in² | 24 µg/ft² |
| Site: Bedroom #2 Window Sill | | | | | |
| BA-08 | 0008 | | 11/13/2013 | 144 in² | <10 µg/ft² |
| Site: Living Room Floor | | | | | |
| BA-09 | 0009 | | 11/13/2013 | n/a | <10 µg/wipe |
| Site: Blank | | | | | |

Julie Smith - Laboratory Director
NJ-NELAP Accredited:03036
or other approved signatory

Reporting limit is 10 ug/wipe. ug/wipe = ug/ft2 x area sampled in ft2. 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 (such as volume sampled) or analytical method limitations. Samples received in good condition unless otherwise noted. QC data associated with this sample set is within acceptable limits, unless otherwise noted. The lab is not responsible for data reported in µg/ft² which is dependant on the area provided by non-lab personnel. The test results contained within this report meet the requirements of NELAC unless otherwise noted. * slight modifications to methods applied. "<" (less than) results signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request.

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 11/13/2013 17:28:02

201311911

# Lead (Pb) Chain of Custody

**EMSL Order ID** *(Lab Use Only):* 201311911

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Unit H2 GILBANE

1108 BARNEGAT AVE-SEASIDE HEIGHTS-NJ

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

| | |
|---|---|
| **Company:** PARS Environmental Inc. | **EMSL-Bill to:** ☐ Same ☐ Different<br>If Bill to is Different note instructions in Comments**<br>*Third Party Billing requires written authorization from third party* |
| **Street:** 500 HORIZON DR. | |
| **City:** Robbinsville **State/Province:** NJ | **Zip/Postal Code:** **Country:** |
| **Report To (Name):** FIROZ Jan | **Telephone #:** |
| **Email Address:** FJan@ParsEnviro.com | **Fax #:** **Purchase Order:** |
| **Project Name/Number:** 1108 BARNEGAT AVE | **Please Provide Results:** ☐ Fax ☐ Email |
| **U.S. State Samples Taken:** Seaside Heights. | **CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt |

**Turnaround Time (TAT) Options* - Please Check**

☐ 3 Hour | ☐ 6 Hour | ☒ 24 Hour | ☐ 48 Hour | ☐ 72 Hour | ☐ 96 Hour | ☐ 1 Week | ☐ 2 Week

**Analysis completed in accordance with EMSL's Terms and Conditions located in the Price Guide*

| Matrix | Method | Instrument | Reporting Limit | Check |
|---|---|---|---|---|
| **Chips** ☐ % by wt. ☐ mg/cm² ☐ ppm | SW846-7000B | Flame Atomic Absorption | 0.01% | ☐ |
| **Air** | NIOSH 7082 | Flame Atomic Absorption | 4 µg/filter | ☐ |
| | NIOSH 7105 | Graphite Furnace AA | 0.03 µg/filter | ☐ |
| | NIOSH 7300 modified | ICP-AES/ICP-MS | 0.5 µg/filter | ☐ |
| **Wipe*** ASTM ☑ non ASTM ☐ *if no box is checked, non-ASTM Wipe is assumed | SW846-7000B | Flame Atomic Absorption | 10 µg/wipe | ☐ |
| | SW846-6010B or C | ICP-AES | 1.0 µg/wipe | ☐ |
| | SW846-7000B/7010 | Graphite Furnace AA | 0.075 µg/wipe | ☐ |
| **TCLP** | SW846-1311/7000B/SM 3111B | Flame Atomic Absorption | 0.4 mg/L (ppm) | ☐ |
| | SW846-1131/SW846-6010B or C | ICP-AES | 0.1 mg/L (ppm) | ☐ |
| **Soil** | SW846-7000B | Flame Atomic Absorption | 40 mg/kg (ppm) | ☐ |
| | SW846-7010 | Graphite Furnace AA | 0.3 mg/kg (ppm) | ☐ |
| | SW846-6010B or C | ICP-AES | 2 mg/kg (ppm) | ☐ |
| **Wastewater** Unpreserved ☐ Preserved with $HNO_3$ pH < 2 ☐ | SM3111B/SW846-7000B | Flame Atomic Absorption | 0.4 mg/L (ppm) | ☐ |
| | EPA 200.9 | Graphite Furnace AA | 0.003 mg/L (ppm) | ☐ |
| | EPA 200.7 | ICP-AES | 0.020 mg/L (ppm) | ☐ |
| **Drinking Water** Unpreserved ☐ Preserved with $HNO_3$ pH < 2 ☐ | EPA 200.9 | Graphite Furnace AA | 0.003 mg/L (ppm) | ☐ |
| | EPA 200.8 | ICP-MS | 0.001 mg/L (ppm) | ☐ |
| **TSP/SPM Filter** | 40 CFR Part 50 | ICP-AES | 12 µg/filter | ☐ |
| | 40 CFR Part 50 | Graphite Furnace AA | 3.6 µg/filter | ☐ |
| **Other:** | | | | ☐ |

**Name of Sampler:** FIROZ Jan **Signature of Sampler:**

| Sample # | Location | Volume/Area | Date/Time Sampled |
|---|---|---|---|
| | | | |
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**Client Sample #'s** - **Total # of Samples:** 9

**Relinquished (Client):** **Date:** 11/12/13 **Time:**

**Received (Lab):** **Date:** 11/12/13 **Time:** 6:10pm

**Comments:**

Recd 11/12/13

9

201311911

201311911

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

# LEAD (Pb) CHAIN OF CUSTODY

**EMSL ORDER ID** *(Lab Use Only):*

Gilbane

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

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

| | Sample # | Location | Volume/Area | Date/Time Sampled |
|---|---|---|---|---|
| 1. | BA-01 | Front entrace dor / Flor | 12"x12" | |
| 2. | BA-02 | BATHROOM 1 Flor | 12"x12" | |
| 3. | BA 03 | KITCHEN Flor | 12"x12" | |
| 4. | BA-04 | Living Room/window SILL | 8"x8" | |
| 5. | BA-05 | common area/ Flor. | 12"x12" | |
| 6. | BA-06 | Bedroom # 1 Window SILL | 8"x8" | |
| 7. | BA-07 | Bedroom #2 window SILL | 8"x8" | |
| 8. | BA-08 | Living Room Flor | 12"x12" | |
| 9. | BA-09 | Blank | — | |
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**Comments/Special Instructions:**

**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: | 201311909 |
| CustomerID: | PARS51 |
| CustomerPO: | |
| ProjectID: | GILBANE |

Attn: **Firoz Jan**
**PARS Environmental**
**500 Horizon Drive**
**Suite 540**
**Robbinsville, NJ 08691**

| | |
|---|---|
| Phone: | (609) 890-7277 |
| Fax: | (609) 890-9116 |
| Received: | 11/12/13 6:09 PM |
| Collected: | 11/12/2013 |

Project: **Gilbane Unit #5 / 1108 Barnegat Avenue Seaside Heights,NJ**

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

| *Client Sample Description* | *Lab ID* | *Collected* | *Analyzed* | *Area Sampled* | *Lead Concentration* |
|---|---|---|---|---|---|
| Pb-01 | *0001* | 11/12/2013 | 11/13/2013 | 144 in² | <10 µg/ft² |
| Site: Front Entrance Door/Floor | | | | | |
| Pb-02 | *0002* | 11/12/2013 | 11/13/2013 | 144 in² | <10 µg/ft² |
| Site: Bathroom Floor/Floor | | | | | |
| Pb-03 | *0003* | 11/12/2013 | 11/13/2013 | 144 in² | <10 µg/ft² |
| Site: Kitchen Floor/Floor | | | | | |
| Pb-04 | *0004* | 11/12/2013 | 11/13/2013 | 64 in² | 25 µg/ft² |
| Site: Living Room Window Sill | | | | | |
| Pb-05 | *0005* | 11/12/2013 | 11/13/2013 | 64 in² | <23 µg/ft² |
| Site: Kitchen Window Sill | | | | | |
| Pb-06 | *0006* | 11/12/2013 | 11/13/2013 | 64 in² | 26 µg/ft² |
| Site: Bedroom #1/Window Sill | | | | | |
| Pb-07 | *0007* | 11/12/2013 | 11/13/2013 | 64 in² | 44 µg/ft² |
| Site: Bedroom #2/Window Sill | | | | | |
| Pb-08 | *0008* | 11/12/2013 | 11/13/2013 | 144 in² | <10 µg/ft² |
| Site: Common Area-Floor | | | | | |
| Pb-09 | *0009* | 11/12/2013 | 11/13/2013 | n/a | <10 µg/wipe |
| Site: Blank | | | | | |

Julie Smith - Laboratory Director
NJ-NELAP Accredited:03036
or other approved signatory

Reporting limit is 10 ug/wipe. ug/wipe = ug/ft2 x area sampled in ft2. 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 (such as volume sampled) or analytical method limitations. Samples received in good condition unless otherwise noted. QC data associated with this sample set is within acceptable limits, unless otherwise noted. The lab is not responsible for data reported in µg/ft² which is dependant on the area provided by non-lab personnel. The test results contained within this report meet the requirements of NELAC unless otherwise noted. * slight modifications to methods applied. "<" (less than) results signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request.

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 11/13/2013 17:29:38

201311909

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

# Lead (Pb) Chain of Custody

**EMSL Order ID** *(Lab Use Only):*

GILBANE UNIT #5 201311909

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

| | |
|---|---|
| **Company:** PARS Environmental Inc. | **EMSL-Bill to:** ☐ Same ☐ Different<br>If Bill to is Different note instructions in Comments** |
| **Street:** 500 HORIZON DRIVE | *Third Party Billing requires written authorization from third party* |
| **City:** Robbinsville **State/Province:** NJ | **Zip/Postal Code:** **Country:** |
| **Report To (Name):** FIROZ Jan | **Telephone #:** 215-435-3674 |
| **Email Address:** FJan@Parsenviro.com | **Fax #:** **Purchase Order:** |
| **Project Name/Number:** 1108, BARNEGAT Ave. | **Please Provide Results:** ☐ Fax ☐ Email |
| **U.S. State Samples Taken:** SEASIDE HEIGHTS-NJ | **CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt |

**Turnaround Time (TAT) Options* - Please Check**

☐ 3 Hour | ☐ 6 Hour | ☑ 24 Hour | ☐ 48 Hour | ☐ 72 Hour | ☐ 96 Hour | ☐ 1 Week | ☐ 2 Week

**Analysis completed in accordance with EMSL's Terms and Conditions located in the Price Guide*

| Matrix | Method | Instrument | Reporting Limit | Check |
|---|---|---|---|---|
| **Chips** ☐ % by wt. ☐ mg/cm² ☐ ppm | SW846-7000B | Flame Atomic Absorption | 0.01% | ☐ |
| **Air** | NIOSH 7082 | Flame Atomic Absorption | 4 µg/filter | ☐ |
| | NIOSH 7105 | Graphite Furnace AA | 0.03 µg/filter | ☐ |
| | NIOSH 7300 modified | ICP-AES/ICP-MS | 0.5 µg/filter | ☐ |
| **Wipe*** ASTM ☑ non ASTM ☐ *if no box is checked, non-ASTM Wipe is assumed | SW846-7000B | Flame Atomic Absorption | 10 µg/wipe | ☐ |
| | SW846-6010B or C | ICP-AES | 1.0 µg/wipe | ☐ |
| | SW846-7000B/7010 | Graphite Furnace AA | 0.075 µg/wipe | ☐ |
| **TCLP** | SW846-1311/7000B/SM 3111B | Flame Atomic Absorption | 0.4 mg/L (ppm) | ☐ |
| | SW846-1131/SW846-6010B or C | ICP-AES | 0.1 mg/L (ppm) | ☐ |
| **Soil** | SW846-7000B | Flame Atomic Absorption | 40 mg/kg (ppm) | ☐ |
| | SW846-7010 | Graphite Furnace AA | 0.3 mg/kg (ppm) | ☐ |
| | SW846-6010B or C | ICP-AES | 2 mg/kg (ppm) | ☐ |
| **Wastewater** Unpreserved ☐ Preserved with $HNO_3$ pH < 2 ☐ | SM3111B/SW846-7000B | Flame Atomic Absorption | 0.4 mg/L (ppm) | ☐ |
| | EPA 200.9 | Graphite Furnace AA | 0.003 mg/L (ppm) | ☐ |
| | EPA 200.7 | ICP-AES | 0.020 mg/L (ppm) | ☐ |
| **Drinking Water** Unpreserved ☐ Preserved with $HNO_3$ pH < 2 ☐ | EPA 200.9 | Graphite Furnace AA | 0.003 mg/L (ppm) | ☐ |
| | EPA 200.8 | ICP-MS | 0.001 mg/L (ppm) | ☐ |
| **TSP/SPM Filter** | 40 CFR Part 50 | ICP-AES | 12 µg/filter | ☐ |
| | 40 CFR Part 50 | Graphite Furnace AA | 3.6 µg/filter | ☐ |
| **Other:** | | | | ☐ |

**Name of Sampler:** FIROZ Jan **Signature of Sampler:** Firoz Jan

| Sample # | Location | Volume/Area | Date/Time Sampled |
|---|---|---|---|
| | | | |
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**Client Sample #'s** - **Total # of Samples:** 9

**Relinquished (Client):** Firoz Jan **Date:** 11/12/13 **Time:**

**Received (Lab):** **Date:** 11/12/13 **Time:** 6:10 PM

**Comments:**

Rec'd Emailed 11/12/13

201311909

201311909

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

# LEAD (Pb) CHAIN OF CUSTODY

**EMSL ORDER ID** *(Lab Use Only):*

GILBANE

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

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

| | Sample # | Location | Volume/Area | Date/Time Sampled |
|---|---|---|---|---|
| 1. | Pb-01 | Front entrance floor / Floor | 12"x12" | 11/12/13 |
| 2. | Pb-02 | Bathroom floor / floor | 12"x12" | |
| 3. | Pb-03 | KITCHEN floor / floor | 12"x12" | |
| 4. | Pb-04 | Living Room window sill | 8"x8" | |
| 5. | Pb-05 | KITCHEN window sill | 8"x8" | |
| 6. | Pb-06 | Bed Rm #1 / window sill | 8"x8" | |
| 7. | Pb-07 | Bed Rm #2 / window sill | 8"x8" | |
| 8. | Pb-08 | Common area - floor | 12"x12" | |
| 9. | Pb-09 | Blank | | |
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**Comments/Special Instructions:**

# APPENDIX E

# EMSL Laboratories Lead in Soil Report

**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: | 201311904 |
| CustomerID: | PARS51 |
| CustomerPO: | |
| ProjectID: | GILBANE |

Attn: **Firoz Jan**
**PARS Environmental**
**500 Horizon Drive**
**Suite 540**
**Robbinsville, NJ 08691**

| | |
|---|---|
| Phone: | (609) 890-7277 |
| Fax: | (609) 890-9116 |
| Received: | 11/12/13 6:11 PM |
| Collected: | |

Project: **Gilbane / Unit #2; 1108 Barnegat Ave. Seaside Heights,NJ**

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

| *Client Sample Description* | *Lab ID* | *Collected* | *Analyzed* | *Lead Concentration* |
|---|---|---|---|---|
| U-01 | *0001* | | 11/13/2013 | 240 mg/Kg |
| | Site: East Side- along the dripline | | | |
| U-02 | *0002* | | 11/13/2013 | 270 mg/Kg |
| | Site: West Side- along the dripline | | | |

Julie Smith - Laboratory Director
NJ-NELAP Accredited:03036
or other approved signatory

Reporting limit is 40 mg/kg based on the minimum sample weight per our SOP. The QC data associated with these sample results included in this report meet the method QC requirements, unless specifically indicated otherwise. 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. Results reported based on dry weight. *slight modification to methods applied. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request.

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 11/13/2013 17:21:56

201311904

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

# Lead (Pb) Chain of Custody

**EMSL Order ID** *(Lab Use Only):* 201311904

GILBANE / Unit H 2

1108 BARNEGAT AVE - SEASIDE HEIGHTS NJ

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

| | |
|---|---|
| **Company:** PARS environmental Inc. | **EMSL-Bill to:** ☐ Same ☐ Different<br>If Bill to is Different note instructions in Comments** |
| **Street:** 500, HORIZON DR. | *Third Party Billing requires written authorization from third party* |
| **City:** ROBBINSVILLE **State/Province:** NJ | **Zip/Postal Code:** **Country:** |
| **Report To (Name):** FIROZ JAN | **Telephone #:** |
| **Email Address:** FJAN@PARSENVIRO-EN | **Fax #:** **Purchase Order:** |
| **Project Name/Number:** UNIT H 2 / 1108 BARNE | **Please Provide Results:** ☐ Fax ☐ Email |
| **U.S. State Samples Taken:** Seaside Heights - NJ SAT. | **CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt |

**Turnaround Time (TAT) Options* - Please Check**

☐ 3 Hour | ☐ 6 Hour | ☒ 24 Hour | ☐ 48 Hour | ☐ 72 Hour | ☐ 96 Hour | ☐ 1 Week | ☐ 2 Week

**Analysis completed in accordance with EMSL's Terms and Conditions located in the Price Guide*

| Matrix | Method | Instrument | Reporting Limit | Check |
|---|---|---|---|---|
| **Chips** ☐ % by wt. ☐ mg/cm² ☐ ppm | SW846-7000B | Flame Atomic Absorption | 0.01% | ☐ |
| **Air** | NIOSH 7082 | Flame Atomic Absorption | 4 µg/filter | ☐ |
| | NIOSH 7105 | Graphite Furnace AA | 0.03 µg/filter | ☐ |
| | NIOSH 7300 modified | ICP-AES/ICP-MS | 0.5 µg/filter | ☐ |
| **Wipe*** ASTM ☐ non ASTM ☐ *if no box is checked, non-ASTM Wipe is assumed | SW846-7000B | Flame Atomic Absorption | 10 µg/wipe | ☐ |
| | SW846-6010B or C | ICP-AES | 1.0 µg/wipe | ☐ |
| | SW846-7000B/7010 | Graphite Furnace AA | 0.075 µg/wipe | ☐ |
| **TCLP** | SW846-1311/7000B/SM 3111B | Flame Atomic Absorption | 0.4 mg/L (ppm) | ☐ |
| | SW846-1131/SW846-6010B or C | ICP-AES | 0.1 mg/L (ppm) | ☐ |
| **Soil** | SW846-7000B | Flame Atomic Absorption | 40 mg/kg (ppm) | ☐ |
| | SW846-7010 | Graphite Furnace AA | 0.3 mg/kg (ppm) | ☐ |
| | SW846-6010B or C | ICP-AES | 2 mg/kg (ppm) | ☐ |
| **Wastewater** Unpreserved ☐ Preserved with $HNO_3$ pH < 2 ☐ | SM3111B/SW846-7000B | Flame Atomic Absorption | 0.4 mg/L (ppm) | ☐ |
| | EPA 200.9 | Graphite Furnace AA | 0.003 mg/L (ppm) | ☐ |
| | EPA 200.7 | ICP-AES | 0.020 mg/L (ppm) | ☐ |
| **Drinking Water** Unpreserved ☐ Preserved with $HNO_3$ pH < 2 ☐ | EPA 200.9 | Graphite Furnace AA | 0.003 mg/L (ppm) | ☐ |
| | EPA 200.8 | ICP-MS | 0.001 mg/L (ppm) | ☐ |
| **TSP/SPM Filter** | 40 CFR Part 50 | ICP-AES | 12 µg/filter | ☐ |
| | 40 CFR Part 50 | Graphite Furnace AA | 3.6 µg/filter | ☐ |
| **Other:** | | | | ☐ |

**Name of Sampler:** FIROZ JAN **Signature of Sampler:**

| Sample # | Location | Volume/Area | Date/Time Sampled |
|---|---|---|---|
| U-01 | East side - along the dig line | | |
| U-02 | west side along the drip line | | |
| | | | |
| | | | |
| | | | |

**Client Sample #'s** - **Total # of Samples:** 2

**Relinquished (Client):** **Date:** 11/12/13 **Time:**

**Received (Lab):** **Date:** 11/12/13 **Time:** 6:10 PM

**Comments:**

hdg 11-13-13 BCL



2

**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: | 201311903 |
| CustomerID: | PARS51 |
| CustomerPO: | |
| ProjectID: | GILBANE |

Attn: **Firoz Jan**
**PARS Environmental**
**500 Horizon Drive**
**Suite 540**
**Robbinsville, NJ 08691**

| | |
|---|---|
| Phone: | (609) 890-7277 |
| Fax: | (609) 890-9116 |
| Received: | 11/12/13 6:19 PM |
| Collected: | |

Project: **Gilbane; Unit #5**

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

| *Client Sample Description* | *Lab ID* | *Collected* | *Analyzed* | *Lead Concentration* |
|---|---|---|---|---|
| S-01 | *0001* | | 11/13/2013 | 230 mg/Kg |
| | Site: North Side- along the dripline | | | |
| S-02 | *0002* | | 11/13/2013 | 260 mg/Kg |
| | Site: South Side- along the dripline | | | |

Julie Smith - Laboratory Director
NJ-NELAP Accredited:03036
or other approved signatory

Reporting limit is 40 mg/kg based on the minimum sample weight per our SOP. The QC data associated with these sample results included in this report meet the method QC requirements, unless specifically indicated otherwise. 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. Results reported based on dry weight. *slight modification to methods applied. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request.

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 11/13/2013 17:22:08

201311903

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

# ~~Lead (Pb)~~ SOIL Chain of Custody

**EMSL Order ID** *(Lab Use Only):*

GILBANE.
UNIT # 5 20131903

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

| | |
|---|---|
| **Company:** PARS Environmental Inc. | **EMSL-Bill to:** ☐ Same ☐ Different<br>If Bill to is Different note instructions in Comments**<br>*Third Party Billing requires written authorization from third party* |
| **Street:** 500- Horizon Dr. | |
| **City:** Robbinsville **State/Province:** NJ | **Zip/Postal Code:** **Country:** |
| **Report To (Name):** Firoz Jan | **Telephone #:** 215-435-3674 |
| **Email Address:** fjan@parsenviro.com | **Fax #:** **Purchase Order:** |
| **Project Name/Number:** 1108, BARNEGAT Ave | **Please Provide Results:** ☐ Fax ☐ Email |
| **U.S. State Samples Taken:** SEASIDE HEIGHTS- NJ | **CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt |

**Turnaround Time (TAT) Options* - Please Check**

☐ 3 Hour ☐ 6 Hour ☒ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

**Analysis completed in accordance with EMSL's Terms and Conditions located in the Price Guide*

| Matrix | Method | Instrument | Reporting Limit | Check |
|---|---|---|---|---|
| Chips ☐ % by wt. ☐ mg/cm² ☐ ppm | SW846-7000B | Flame Atomic Absorption | 0.01% | ☐ |
| Air | NIOSH 7082 | Flame Atomic Absorption | 4 µg/filter | ☐ |
| | NIOSH 7105 | Graphite Furnace AA | 0.03 µg/filter | ☐ |
| | NIOSH 7300 modified | ICP-AES/ICP-MS | 0.5 µg/filter | ☐ |
| Wipe* ASTM ☐ non ASTM ☐ *if no box is checked, non-ASTM Wipe is assumed | SW846-7000B | Flame Atomic Absorption | 10 µg/wipe | ☐ |
| | SW846-6010B or C | ICP-AES | 1.0 µg/wipe | ☐ |
| | SW846-7000B/7010 | Graphite Furnace AA | 0.075 µg/wipe | ☐ |
| TCLP | SW846-1311/7000B/SM 3111B | Flame Atomic Absorption | 0.4 mg/L (ppm) | ☐ |
| | SW846-1131/SW846-6010B or C | ICP-AES | 0.1 mg/L (ppm) | ☐ |
| Soil | ~~SW846-7000B~~ | ~~Flame Atomic Absorption~~ | 40 mg/kg (ppm) | ☐ |
| | SW846-7010 | Graphite Furnace AA | 0.3 mg/kg (ppm) | ☐ |
| | SW846-6010B or C | ICP-AES | 2 mg/kg (ppm) | ☐ |
| Wastewater Unpreserved ☐ Preserved with $HNO_3$ pH < 2 ☐ | SM3111B/SW846-7000B | Flame Atomic Absorption | 0.4 mg/L (ppm) | ☐ |
| | EPA 200.9 | Graphite Furnace AA | 0.003 mg/L (ppm) | ☐ |
| | EPA 200.7 | ICP-AES | 0.020 mg/L (ppm) | ☐ |
| Drinking Water Unpreserved ☐ Preserved with $HNO_3$ pH < 2 ☐ | EPA 200.9 | Graphite Furnace AA | 0.003 mg/L (ppm) | ☐ |
| | EPA 200.8 | ICP-MS | 0.001 mg/L (ppm) | ☐ |
| TSP/SPM Filter | 40 CFR Part 50 | ICP-AES | 12 µg/filter | ☐ |
| | 40 CFR Part 50 | Graphite Furnace AA | 3.6 µg/filter | ☐ |
| Other: | | | | ☐ |

**Name of Sampler:** Firoz Jan **Signature of Sampler:** Firoz Jan

| Sample # | Location | Volume/Area | Date/Time Sampled |
|---|---|---|---|
| 1 S-01 | North side- along the dripline | | |
| 2 S-02 | South side along the dripline | | |
| | | | |
| | | | |
| | | | |

**Client Sample #'s** - **Total # of Samples:** 2

**Relinquished (Client):** Firoz Jan **Date:** 11/12/13 **Time:**

**Received (Lab):** **Date:** 11/12/13 **Time:** 6.10pm

**Comments:**

Lmorgan 11-13-13 810 A



2

# LEAD HAZARD EVALUATION NOTICE

Address: 1108 Barnegat Avenue, Unit 2, Seaside Heights, NJ

Evaluation Completed (circle one): Paint Inspection Paint Testing Risk Assessment

Date: 11/12/2013

Summary of Results:

_X_ No lead-based paint or lead-based paint hazards were found.

____ Lead-based paint and/or lead-based paint hazards were found. See attachment for details

Contact person for more information about the risk evaluation:

Printed name: Firoz Jan

Signature: 

Date: 3/16/2014

Organization: PARS Environmental, Inc.

Street: 500 Horizon Drive, Suite 540

City & State Robbinsville, NJ

Zip 08691

Phone #: 609-890-7277

Person who prepared this notice:

Printed name: Margaret Halasnik

Signature: 

Date: 3/16/2014

Organization: PARS Environmental, Inc.

Street: 500 Horizon Drive, Suite 540

City & State Robbinsville, NJ

Zip 08691

Phone #: 609-890-7277

*Summarize the types and locations of lead-based paint hazards below or attach your own summary. The summary must list at least the bare soil locations, dust-lead locations, and/or building components (including type of room or space and the material underneath the paint), and types of lead-based paint hazards found:*

| Contaminated Soil | | |
|---|---|---|
| **Area** | **mg/g (ppm)** | **Location** |
| ___ None | | **Refer to Common Area** |
| ___ Perimeter | ___ mg/g (ppm) | **Report** |
| ___ Play Area | ___ mg/g (ppm) | |
| ___ Other | ___ mg/g (ppm) | |

| Contaminated Dust | | |
|---|---|---|
| **Area** | **µg/SF** | **Location** |
| _**X**_ None | | **See Table 3** |
| ___Windowsill | ___ µg/SF | |
| ___ Floor | ___ µg/SF | |
| ___ Other | ___ µg/SF | |
| ___ Other | ___ µg/SF | |

| Other Hazards | | | | |
|---|---|---|---|---|
| **Component*** | **Location** | **Condition (good, fair, poor)** | **Friction or Impact Surface?** | **Lead Content (if known)** |
| **1. See Table 1** | | | | ___ mg/cm² (ppm) |
| 2. | | | | ___ mg/cm² (ppm) |
| 3. | | | | ___ mg/cm² (ppm) |
| 4. | | | | ___ mg/cm² (ppm) |
| 5. | | | | ___ mg/cm² (ppm) |
| 6. | | | | ___ mg/cm² (ppm) |
| 7. | | | | ___ mg/cm² (ppm) |
| 8. | | | | ___ mg/cm² (ppm) |
| 9. | | | | ___ mg/cm² (ppm) |
| 10. | | | | ___ mg/cm² (ppm) |
| 11. | | | | ___ mg/cm² (ppm) |
| 12. | | | | ___ mg/cm² (ppm) |
| 13. | | | | ___ mg/cm² (ppm) |
| 14. | | | | ___ mg/cm² (ppm) |

***** Components include but are not limited to (interior and exterior) windows, doors, trim, fences, porches, walls and floors.

PARS
Environmental
Inc.

# LEAD-BASED PAINT SURVEY REPORT AND RISK ASSESSMENT
# 1108 BARNEGAT AVENUE, UNIT #2
# SEASIDE HEIGHTS, NEW JERSEY
# SRP0037053

**PREPARED BY**

**PARS Environmental, Inc.**

**500 Horizon Drive Suite 540**

**Robbinsville, N.J. 08691**

**(609) 890-7277**

**PARS Project No.: 1011-02**

**NOVEMBER 17, 2013**

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# LEAD-BASED PAINT SURVEY REPORT AND RISK ASSESSMENT
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## EXECUTIVE SUMMARY

On November 12, 2013, PARS Environmental, Inc. (PARS) conducted a Lead-Based Paint (LBP) Inspection and Lead Hazard Risk Assessment (hereinafter the "Assessment") of the residential property located at 1108 Barnegat Avenue, Unit #2, Seaside Heights, New Jersey (hereinafter the "Property"). The Property had sustained damage during the October 2012 Hurricane Sandy and could be eligible for funding under the New Jersey Landlord Rental Repair (LRR) Program, which is being administered by the State of New Jersey Department of Community Affairs (NJDCA). NJDCA is providing funds made available by the US Department of Housing and Urban Development (HUD). PARS was authorized to perform this work by Gilbane Building Company (GBCO).

The purpose of the Assessment was to identify the potential presence of lead hazards on/ in painted surfaces inside and outside the structure, including deteriorated LBP and LBP that may be disturbed during planned renovations.

The apartment complex was constructed in the 1950s. Unit #2 is located on the second floor of the Property. It consists of three bedrooms, living room, bathroom, and a kitchen area. The interior of the building appeared to be in good condition at the time of the Assessment.

The results of the Assessment indicate that **no lead-based paint or lead-based paint hazards were identified in the area surveyed** at the time of the Assessment.

***Identified LBP Surfaces***

- **No LBP surfaces were identified during the Assessment.**

***Existing LBP Hazards and Potential Lead Hazards***

The following substrates coated with LBP are deteriorated (poor condition) and currently present existing LBP hazards:

- **No LBP hazards or potential Lead hazards were identified during the Assessment.**

***Identified Intact LBP Surfaces-No Current Hazard***

The following area is coated with LBP that is intact and does not currently present lead hazards.

- **No LBP surfaces were identified during the Assessment.**

***Lead Dust Hazards***

A lead dust hazard was identified in the following locations:

- **No lead dust hazards were identified during the Assessment.**

***Soil Contamination***
A lead hazard was identified in soil at the following building location:

- **Soil at the Property is common to each unit and is addressed under separate cover.**

***Non-LBP Renovation Components***
Renovation activities may include disturbance of the following components that do not contain LBP:

- Interior walls in the rooms that were tested;
- Interior doors and door components that were tested; and
- Interior windows and window components that were tested.

***Recommendations***
No further action is recommended.

## 1.0 BACKGROUND, PURPOSE AND SCOPE OF WORK

On November 12, 2013, PARS Environmental, Inc. (PARS) conducted a Lead-Based Paint (LBP) Inspection and Lead Hazard Risk Assessment (hereinafter the "Assessment") of the residential property located at 1108 Barnegat Avenue, Unit #2, Seaside Heights, New Jersey (hereinafter the "Property"). The Property had sustained damage during the October 2012 Hurricane Sandy and could be eligible for funding under the New Jersey Landlord Rental Repair (LRR) Program, which is being administered by the State of New Jersey Department of Community Affairs (NJDCA). NJDCA is providing funds made available by the US Department of Housing and Urban Development (HUD). PARS was authorized to perform this work by Gilbane Building Company (GBCO).

The purpose of the Assessment was to identify the potential presence of lead hazards on/ in surfaces inside and outside the structure, including deteriorated LBP and LBP that may be disturbed during planned renovations. HUD, the United States Environmental Protection Agency (USEPA), and the NJDCA New Jersey Lead Hazard Evaluation and Abatement Code (N.J.A.C. 5:17) consider painted surfaces containing lead at a concentration of 1.0 milligram per square centimeter ($mg/cm^2$) or greater to be LBP. LBP testing was conducted to assess whether LBP was present at levels exceeding the HUD, USEPA, and New Jersey Lead Hazard Evaluation and Abatement Code.

The Scope of Work included the following:

- Owner/occupant interviews and a visual inspection of all painted and coated interior and exterior surfaces of the dwelling, all common areas, and, if present, all outbuildings and fences;
- X-Ray Fluorescence (XRF) analyzer testing for lead content of all coatings on surfaces that maybe disturbed during the renovation;
- Lead hazard identification of deteriorated paint, friction, impact and chewable surfaces;
- Interior dust sampling; and
- Soil sampling, if appropriate.

## 2.0 APPLICABLE REGULATORY STANDARDS AND FIELD METHODOLOGIES

### 2.1 Applicable Regulatory Standards

The inspection and Assessment were performed in accordance with the regulatory standards listed below, as appropriate:

1. HUD Community Development Block Grant (CDBG) Lead Safe Housing Rule;
2. The guidelines of the Steel Structures Painting Council referenced in N.J.A.C. 5:17-1.3; and
3. Rules adopted by the U.S. Environmental Protection Agency at 40 C.F.R. 745.

### 2.2 Owner/Interview Visual Inspection

The Assessment was performed on November 12, 2013, by Mr. Firoz Jan, a licensed New Jersey Department of Health (NJDOH) Lead Inspector/Risk Assessor (Permit # 026145). PARS is certified by the NJDCA as a Lead Evaluation Contractor (Cert #00416E). The Assessment commenced at 12:00 pm and concluded at approximately 4:00 pm. A copy of Mr. Jan's license is provided in **Appendix A**.

The property owner contact information is:

| | |
|---|---|
| Owner: | Mr. Leonidas Kopsaftis |
| Address: | 1108 Barnegat Avenue, Unit 2<br>Seaside Heights, NJ 08751<br>Day Phone # 732-606-7233 |

Based on an interview with the Owner, there has not been previous LBP testing/assessment at the Property.

### 2.3 XRF Testing and Lead Hazard Identification

Painted surfaces were evaluated according to the specifications described in the protocols for LBP inspection in the HUD Guidelines for the Evaluation and Control of Lead-Based Paint and

requirements of the Lead Hazard Evaluation and Abatement Code using an X-Ray Fluorescence (XRF) analyzer. The XRF used for this evaluation was an INNOV-X SYSTEM, Model No. ALPHA-6500, Serial No. 10768.

A rough sketch is made of the Property. Instrument calibrations are performed at least three times before the start of testing and performed at least every four hours, and at the end of each inspection. At least one test location per testing combination, four readings are obtained, one on each wall, (interior room equivalent or exterior). When upper and lower walls have a different painting history, four tests are required of each.

The selection of the test locations is representative of the paint over the areas which are most likely to be coated with old paint or other lead-based coatings. Thus, locations, where the paint appears to be thickest are selected. Locations where paint has worn away or been scraped off are not selected. At each test location:

- All layers of paint are included; and
- The XRF probe faceplate is placed flat against the surface.

Areas over pipes, electrical surfaces, nails and other possible interferences are avoided, if possible, as these materials may contain lead and contribute to the XRF reading. When testing combinations are repeated within a room equivalent (e.g., window, or door system), one test is taken on one part of the component system (e.g., the casing from window B) and another test from another part of the system from a separate component (e.g., the sash from window C-2), the same strategy would apply to the door system. If a room has two or more doors (including closet or pantry doors), the casing or jamb of the door itself is tested. If each door may have a different painting history, then each door system is tested separately.

Calibration and actual readings were taken using the Lead-in-Paint K+L variable reading time mode. The instrument calibration was performed in accordance with the Performance Characteristic Sheet (PCS) for this instrument. The instrument PCS is in **Appendix B**. The instrument was calibrated using the paint film nearest 1.0 mg/cm$^2$ in the National Institute of Standard & Technology (NIST) Standard Reference Material. At least three calibration readings were taken before and during testing to insure manufacturer standards were met.
The tested surfaces included:

- Walls / Ceilings (Drywall/Wood)
- Doors, Frames, and Jambs
- Windows, Frames, and Sills
- Baseboards

A total of 50 measurements were taken from painted surfaces. The XRF measurements were collected following the regulatory standards referenced in Section 2.1 of this report to evaluate the potential presence of LBP in the dwelling.

## 2.4 Interior Dust Wipe Sampling

Interior dust wipe sampling is conducted in areas where the LBP surfaces are observed to be in deteriorated condition. USEPA and HUD define "*deteriorated paint*" as "*any interior or exterior paint or other coating that is peeling, chipping, chalking or cracking, or any paint or coating located on an interior or exterior surface or fixture that is otherwise damaged or separated from the substrate*". This definition is most typically associated with surface conditions only. Usage of this term in describing conditions other than those associated with surface coatings are not known to be defined by USEPA or HUD. Wipe samples are collected from locations as observed during the Assessment:

1) In or near areas testing positive for LBP (window troughs, window sills, etc.);
2) In or near friction or impact areas (window troughs/sills, floors at doorway entrances, etc.);
3) In high traffic /common areas (doorway entrances, laundry rooms, bedrooms, etc.); and,
4) In or near areas where deteriorated paint exists (wherever observed during the Assessment).

Wipe sampling was conducted in the living areas (i.e., Front Entrance, Bathroom, Kitchen, Living Room, Common Areas, Bedrooms) to assess the presence of potential lead-dust concentrations. USEPA considers lead in dust to be a hazard if lead concentrations, as determined by wipe sampling, are equal to or greater than 40 micrograms per square foot ($\mu g/ft^2$) on floors, 250 $\mu g/ft^2$ on window sills, and 400 $\mu g/ft^2$ on troughs and exterior surfaces.

Eight (8) wipe samples including one (1) Quality Control wipe sample were collected from the floors at the Front Entrance, Bathroom, Kitchen, and Living Room and window sills in Bedrooms #1 and #2 and Living Room. The samples were collected from areas most likely to be lead contaminated if lead-in-dust is present, in accordance with the requirements of ASTM Standard E-1728, *Standard Practice for Field Collection of Settled Dust Samples Using Wipe Sampling Methods for Lead Determination by Atomic Spectrometry Techniques*.

Samples were collected by wiping either a 12 inch x 12 inch surface area or other pre-measured surface with alcohol free Ghost Wipes. The surface area was wiped side-to-side in 'S' like motions. The samples were placed in plastic tubes and submitted for laboratory analysis to EMSL Analytical Inc. (EMSL) which is an American Industrial Hygiene Association, Environmental Lead Laboratory Accreditation Program (AIHA-ELLAP # 100194) certified laboratory.

## 2.5 Soil Sampling

Soil at the Property is common to each unit and is addressed under separate cover.

# 3.0 RESULTS

## 3.1 Owner/Interview Visual Inspection

The apartment complex was constructed in the 1950s. Unit #2 is located on the second floor of the Property. It consists of three bedrooms, living room, bathroom, and a kitchen area. The interior of the building appeared to be in good condition at the time of the Assessment. The following potential LBP painted/coated surfaces were identified:

- Walls / Ceilings (Drywall/Wood)
- Doors, Frames, and Jambs
- Windows, Frames, and Sills
- Baseboards

## 3.2 XRF Testing and Lead Hazard Identification

XRF testing was conducted on painted components listed above. The XRF readings and their associated LBP levels are summarized in **Table 1**. XRF Direct Readings are provided in **Table 2**.

***Identified LBP Surfaces***

LBP in amounts equal to or exceeding the USEPA and/or HUD criteria of 1.0 mg/cm$^2$ was found on the following painted substrates:

- **No LBP surfaces were identified during the Assessment.**

***Existing LBP Hazards***

The following substrates coated with LBP are deteriorated (poor condition) and currently present existing LBP hazards:

- **No LBP hazards or potential Lead hazards were identified during the Assessment.**

A glossary of terms and a list of publications and resources addressing lead hazards and their health effects is provided in **Appendix C.**

***Intact LBP Surfaces-No Current Hazard***

The following area is coated with LBP that is intact and does not currently present lead hazards.

- **No LBP surfaces were identified during the Assessment.**

### 3.3 Interior Dust Wipe Sampling

**None of the eight (8) wipe samples exceeded the lead dust concentrations of 40 µg/ft$^2$ on floors or 250 µg/ft$^2$ on window sills.** The results of the wipe sampling are presented as **Table 3**. Laboratory analytical results are provided in **Appendix D**.

### 3.4 Soil Sampling

**Soil at the Property is common to each unit and is addressed under separate cover.**

## 4.0 LEAD HAZARD CONTROL OPTIONS

Lead-safe work practices and worker/occupant protection practices complying with current USEPA, HUD, and Occupational Safety and Health Administration (OSHA) standards will be necessary to safely complete all work involving the disturbance of LBP coated surfaces and components. In addition, any work considered lead hazard control will enlist the use of interim control (temporary) methods and/or abatement (permanent) methods. It should be noted that all lead hazard control activities have the potential of creating additional hazards, or even creating hazards that were not present before. All persons and/or firms performing lead hazard control activities must have received proper training in Lead-Safe Work Practices and/or Lead Abatement. Details for the listed lead hazard control options and issues surrounding occupant/worker protection practices can be found in the publication titled: *Guidelines for the Evaluation and Control of LBP Hazards in Housing (Second Edition, July 2012)* (HUD Guidelines), published by HUD, as well as in the OSHA regulations found in 29 CPR, Part 1926.62, known as the OSHA Lead Exposure in Construction Industry Standard.

The associated cost estimates, unless otherwise noted, include the labor and materials to accomplish the stated activity and most additional funds typically found to be necessary to complete worker protection, site containment, and cleanup procedures. These are approximate estimates only and due to a variety of potential factors, may not accurately reflect all local cost factors. A precise estimate must be obtained from a NJ certified LBP abatement contractor or a contractor trained in lead safe work practices. Properly trained and/or licensed persons, as well as properly licensed firms (as mandated) should accomplish all abatement/interim control activities conducted at this residence.

*Interim controls*, as defined by HUD, means a set of measures designed to temporarily reduce human exposure to LBP hazards and/or lead containing materials. These measures include, but are not limited to: component and/or substrate repairs; paint and varnish repairs; the removal of dust-lead hazards; renovation; remodeling; maintenance; temporary containment; placement of seed, sod or other forms of vegetation over bare soil areas; the placement of at least six (6) inches of an appropriate mulch material over an impervious material, laid on top of bare soil areas; the tilling of bare soil areas; extensive and specialized cleaning; and ongoing LBP maintenance activities.

*Abatement*, as defined by HUD, means any set of measures designed to permanently eliminate LBP and/or LBP hazards. The product manufacturer and/or contractor must warrant abatement methods to last a minimum of 20 years, or these methods must have a design life of at least 20 years. These activities include, but are not limited to:

- The removal of LBP from substrates and components;
- The replacement of components or fixtures with lead containing materials and/or LBP;
- The permanent enclosure of LBP with construction materials;
- The encapsulation of LBP with approved products;
- The removal or permanent covering (concrete or asphalt) of soil-lead hazards; and,
- Extensive and specialized cleaning activities.

Based on the findings of the Assessment, PARS recommends the following action be implemented to minimize the potential exposure to LBP:

- **No further action is recommended.**

## 5.0 SPECIAL CLEANING PRECEDING LEAD HAZARD CONTROL ACTIVITIES

No special cleaning preceding lead hazard control activities are warranted at this time.

## 6.0 SPECIAL CLEANING FOLLOWING LEAD HAZARD CONTROL ACTIVITIES

No special cleaning following lead hazard control activities are warranted at this time.

## 7.0 ONGOING MONITORING

Ongoing monitoring is necessary in all dwellings in which LBP is known or assumed to be present. At these dwellings, the very real potential exists for LBP hazards to develop. Hazards can develop by means such as, but not limited to: the failure of lead hazard control measures; previously intact LBP becoming deteriorated; dangerous levels of lead-in-dust (dust lead) re-accumulating through friction, impact, and deterioration of paint; or, through the introduction of contaminated exterior dust and soil into the interior of the structure.

Ongoing monitoring typically includes two different activities: re-evaluation and annual visual surveys. A re-evaluation is a risk assessment that includes limited soil and dust sampling and a visual evaluation of paint films and any existing lead hazard controls. Re-evaluations are supplemented with visual surveys by the Homeowner, which should be conducted at least once a year. Homeowner conducted visual surveys do not replace the need for professional re-evaluations. Visual surveys should confirm that all paint with known or suspected LBP are not

deteriorating, that lead hazard control methods have not failed, and that structural problems do not threaten the integrity of any remaining known, assumed or suspected LBP. The partial table below is taken from **Table 6.1, Standard Re-evaluation Schedules**, as found in the HUD Guidelines. It is intended as a guideline for the Homeowner to assess the condition of areas where hazard control activities occurred.

Factors at this residence require the use of **Ongoing Monitoring Schedule Number 1 (No Action)** to dictate monitoring protocol.

| LBP Schedule | Original Evaluation Results | Action taken | Re-evaluation Frequency & Duration | Visual Survey Schedule |
|---|---|---|---|---|
| 1 | Combination risk assessment/inspection finds no leaded dust or soil and no lead-based paint. | None. | None. | None |

## 8.0 DISCLOSURE REGULATIONS

Every purchaser of any interest in residential real property on which a residential dwelling was built prior to 1978 must be notified that such property may present exposure to lead from LBP that may place young children at risk of developing lead poisoning. The seller must disclose any known information concerning LBP or LBP hazards. The seller must also disclose information such as the location of the LBP and/or LBP hazards, and the condition of the painted surfaces. Lead poisoning in young children may produce permanent neurological damage, including learning disabilities, reduced intelligence quotient, behavioral problems, and impaired memory. Lead poisoning also poses a particular risk to pregnant women. The seller of any interest in residential real property is required to provide the buyer with any information on LBP hazards from risk assessments or inspections in the seller's possession and notify the buyer of any known lead-based paint hazards. A risk assessment or inspection for possible LBP hazards is recommended prior to purchase.

## 9.0 FUTURE REMODELING PRECAUTIONS

Deteriorated or disturbed painted surfaces may still contain LBP and may pose a hazard, especially during renovation. The OSHA Lead in Construction Standard 29 CFR 1926.62 states that those "negative" readings (i.e., those below the HUD/USEPA definition of what constitutes LBP (1.0 $mg/cm^2$)) do not relieve contractors from performing exposure assessments (personal air monitoring) on their employees, and should not be interpreted as lead free. Although a reading may indicate "negative", airborne lead concentrations still may exceed the OSHA Action Level or the OSHA Permissible Exposure Limit (PEL) depending on the work activity.

Each painted surface observed during the Assessment was tested for the presence of LBP. Only LBP hazards that were identified are addressed in this report. However, LBP, dust lead hazards, and/or soil lead hazards may be present at other locations on the property. Additional paint testing should precede any future remodeling activities that occur at any untested areas. Additional dust and/or soil sample collection and analysis should follow any hazard control activity, repair, remodeling, or renovation effort, and any other work efforts that may in any way disturb LBP and/or any lead containing materials. These Assessment activities will help the Homeowner to ensure the health and safety of the occupants and the neighborhood. Details concerning lead safe work techniques and approved hazard control methods can be found in the HUD publication titled*: "Guidelines for the Evaluation and Control of LBP Hazards in Housing" (Second Edition, July 2012).*

## 10.0CONDITIONS AND LIMITATIONS

This report is prepared for the sole benefit of NJDCA and GBCO under the LRR Program and may not be relied upon by any other person or entity without the written authorization of PARS. This is our report of a visual survey, XRF analysis of the tested components, and wipe samples. The presence or absence of LBP or LBP hazards applies only to the tested or assessed surfaces on the date of the field visit and it should be understood that the conditions may change due to deterioration or maintenance. The results and material conditions noted within this report were accurate at the time of the evaluation and in no way reflect the conditions at the site tested after November 12, 2013. No other environmental concerns or conditions were addressed during this evaluation.

**-o0o-**

PARS appreciates the opportunity to assist the NJDCA and GBCO with this project. Should you have any questions or comments please feel free to contact us at (609) 890-7277.

Respectfully submitted,

**PARS ENVIRONMENTAL, INC.**

Firoz Jan
Project Industrial Hygienist
NJDOH Lead Inspector / Risk Assessor
Permit # 026145

Margaret Halasnik
Principal Environmental Scientist

# TABLE 1

# XRF Lead-Based Paint Test Results

PARS ENVIRONMENTAL INC.

**TABLE 1**
**XRF Lead-Based Paint Test Results**
**1108 Barnegat Avenue, Unit # 2**
**Seaside Heights, NJ**
**SRP0037053**

| Date | Reading | Room | Component | Substrate | Paint Condition | Paint Color | Friction, Impact, or Teeth Marked Surface F/I/TM | Result | Lead Content ($mg/cm^2$) |
|---|---|---|---|---|---|---|---|---|---|
| 12-Nov-13 | 56 | Standardization | | | | | | PASS | |
| **12-Nov-13** | **57** | **Calibration** | **Red Film** | **Metal** | **Good** | **Red** | | **Positive** | **1.05** |
| **12-Nov-13** | **58** | **Calibration** | **Red Film** | **Metal** | **Good** | **Red** | | **Positive** | **1.08** |
| **12-Nov-13** | **59** | **Calibration** | **Red Film** | **Metal** | **Good** | **Red** | | **Positive** | **1.05** |
| 12-Nov-13 | 60 | Bedroom RM-1 | North Wall | Drywall | Good | Beige | | Negative | 0 |
| 12-Nov-13 | 61 | Bedroom RM-1 | South Wall | Drywall | Good | Beige | | Negative | 0 |
| 12-Nov-13 | 62 | Bedroom RM-1 | East Wall | Drywall | Good | Beige | | Negative | 0 |
| 12-Nov-13 | 63 | Bedroom RM-1 | West Wall | Drywall | Good | Beige | | Negative | 0 |
| 12-Nov-13 | 64 | Bedroom RM-1 | Door | Wood | Good | Blue | | Negative | 0 |
| 12-Nov-13 | 65 | Bedroom RM-1 | Door Jamb | Wood | Good | Blue | | Negative | 0 |
| 12-Nov-13 | 66 | Bedroom RM-1 | Door Frame | Wood | Good | Blue | | Negative | 0 |
| 12-Nov-13 | 67 | Bedroom RM-1 | Window Sill | Wood | Good | Blue | | Negative | 0 |
| 12-Nov-13 | 68 | Bedroom RM-1 | Window Frame | Wood | Good | Blue | | Negative | 0 |
| 12-Nov-13 | 69 | Bedroom RM-1 | Window sash | Wood | Good | Blue | | Negative | 0 |
| 12-Nov-13 | 70 | Bedroom RM-1 | Base board | Wood | Good | Blue | | Negative | 0 |
| 12-Nov-13 | 71 | Bedroom RM-1 | Ceiling | Drywall | Good | Beige | | Negative | 0 |
| 12-Nov-13 | 72 | Bedroom RM-2 | East Wall | Drywall | Good | Beige | | Negative | 0 |
| 12-Nov-13 | 73 | Bedroom RM-2 | West Wall | Drywall | Good | Beige | | Negative | 0 |
| 12-Nov-13 | 74 | Bedroom RM-2 | North Wall | Drywall | Good | Beige | | Negative | 0 |
| 12-Nov-13 | 75 | Bedroom RM-2 | South Wall | Drywall | Good | Beige | | Negative | 0 |
| 12-Nov-13 | 76 | Bedroom RM-2 | Window Frame | Wood | Good | Blue | | Negative | 0.01 |
| 12-Nov-13 | 77 | Bedroom RM-2 | Window Sill | Wood | Good | Blue | | Negative | 0 |
| 12-Nov-13 | 78 | Bedroom RM-2 | Window Sash | Wood | Good | Blue | | Negative | 0 |
| 12-Nov-13 | 79 | Bedroom RM-2 | Door Frame | Wood | Good | Blue | | Negative | 0 |
| 12-Nov-13 | 80 | Bedroom RM-2 | Door Jamb | Wood | Good | Blue | | Negative | 0 |
| 12-Nov-13 | 81 | Bedroom RM-2 | Door | Wood | Good | Beige | | Negative | 0 |
| 12-Nov-13 | 82 | Bedroom RM-3 | West Wall | Drywall | Good | Beige | | Negative | 0 |

PARS ENVIRONMENTAL INC.

**TABLE 1**
**XRF Lead-Based Paint Test Results**
**1108 Barnegat Avenue, Unit # 2**
**Seaside Heights, NJ**
**SRP0037053**

| Date | Reading | Room | Component | Substrate | Paint Condition | Paint Color | Friction, Impact, or Teeth Marked Surface F/I/TM | Result | Lead Content ($mg/cm^2$) |
|---|---|---|---|---|---|---|---|---|---|
| 12-Nov-13 | 83 | Bedroom RM-3 | North Wall | Drywall | Good | Beige | | Negative | 0 |
| 12-Nov-13 | 84 | Bedroom RM-3 | East Wall | Drywall | Good | Beige | | Negative | 0 |
| 12-Nov-13 | 85 | Bedroom RM-3 | South Wall | Drywall | Good | Beige | | Negative | 0 |
| 12-Nov-13 | 86 | Bedroom RM-3 | Window Frame | Wood | Good | Blue | | Negative | 0 |
| 12-Nov-13 | 87 | Bedroom RM-3 | Window Sill | Wood | Good | Blue | | Negative | 0 |
| 12-Nov-13 | 88 | Bedroom RM-3 | Window sash | Wood | Good | Blue | | Negative | 0 |
| 12-Nov-13 | 89 | Bedroom RM-3 | Door | Wood | Good | Blue | | Negative | 0 |
| 12-Nov-13 | 90 | Bedroom RM-3 | Door Jamb | Wood | Good | Blue | | Negative | 0 |
| 12-Nov-13 | 91 | Bedroom RM-3 | Door Frame | Wood | Good | Blue | | Negative | 0 |
| 12-Nov-13 | 92 | Entrance Door | Door | Wood | Good | Green | | Negative | 0 |
| 12-Nov-13 | 93 | Entrance Door | Door Jamb | Wood | Good | Green | | Negative | 0 |
| 12-Nov-13 | 94 | Entrance Door | Door Frame | Wood | Good | Green | | Negative | 0 |
| 12-Nov-13 | 95 | Bathroom | North Wall | Drywall | Good | Beige | | Negative | 0 |
| 12-Nov-13 | 96 | Bathroom | West Wall | Drywall | Good | Beige | | Negative | 0 |
| 12-Nov-13 | 97 | Bathroom | South Wall | Drywall | Good | Beige | | Negative | 0 |
| 12-Nov-13 | 98 | Bathroom | East Wall | Drywall | Good | Beige | | Negative | 0 |
| 12-Nov-13 | 99 | Bathroom | Door | Wood | Good | Blue | | Negative | 0 |
| 12-Nov-13 | 100 | Bathroom | Door Jamb | Wood | Good | Blue | | Negative | 0 |
| 12-Nov-13 | 101 | Bathroom | Door Frame | Wood | Good | Blue | | Negative | 0 |
| 12-Nov-13 | 102 | Living /Kitchen | North Wall | Drywall | Good | Beige | | Negative | 0 |
| 12-Nov-13 | 103 | Living /Kitchen | East Wall | Drywall | Good | Beige | | Negative | 0 |
| 12-Nov-13 | 104 | Living /Kitchen | South Wall | Drywall | Good | Beige | | Negative | 0 |
| 12-Nov-13 | 105 | Living /Kitchen | West Wall | Drywall | Good | Beige | | Negative | 0 |
| 12-Nov-13 | 106 | Living /Kitchen | Window Frame | Wood | Good | Blue | | Negative | 0 |
| 12-Nov-13 | 107 | Living /Kitchen | Window sill | Wood | Good | Blue | | Negative | 0 |
| 12-Nov-13 | 108 | Living /Kitchen | Window sash | Wood | Good | Red | | Negative | 0 |
| **12-Nov-13** | **109** | **Calibration** | **Red Film** | **Metal** | **Good** | **Red** | | **Positive** | **1.05** |

PARS ENVIRONMENTAL INC.

**TABLE 1**
**XRF Lead-Based Paint Test Results**
**1108 Barnegat Avenue, Unit # 2**
**Seaside Heights, NJ**
**SRP0037053**

| Date | Reading | Room | Component | Substrate | Paint Condition | Paint Color | Friction, Impact, or Teeth Marked Surface F/I/TM | Result | Lead Content ($mg/cm^2$) |
|---|---|---|---|---|---|---|---|---|---|
| 12-Nov-13 | 110 | Calibration | Red Film | Metal | Good | Red | | Positive | 1.05 |
| 12-Nov-13 | 111 | Calibration | Red Film | Metal | Good | Red | | Positive | 1.08 |

# TABLE 2

# XRF Direct Reading Results

PARS ENVIRONMENTAL INC.

**Table 2**
**XRF Direct Reading Results**
**1108 Barnegat Avenue, Unit # 2**
**Seaside Heights, NJ**
**SRP0037053**

| Date | Time | Reading | Mode | LiveTime | Pass Fail Standard | Pb | Pb +/- |
|---|---|---|---|---|---|---|---|
| 12-Nov-13 | 15:13:18 | 56 | Standardization | 48.52 | PASS | | |
| **12-Nov-13** | **15:14:38** | **57** | **Lead Paint Fixed-Time** | **23.14** | **Positive** | **1.05** | **0.04** |
| **12-Nov-13** | **15:15:47** | **58** | **Lead Paint Fixed-Time** | **22.83** | **Positive** | **1.08** | **0.04** |
| **12-Nov-13** | **15:16:29** | **59** | **Lead Paint Fixed-Time** | **23** | **Positive** | **1.05** | **0.04** |
| 12-Nov-13 | 15:17:43 | 60 | Lead Paint Fixed-Time | 23.55 | Negative | 0 | 0 |
| 12-Nov-13 | 15:18:24 | 61 | Lead Paint Fixed-Time | 24.51 | Negative | 0 | 0 |
| 12-Nov-13 | 15:19:06 | 62 | Lead Paint Fixed-Time | 24.52 | Negative | 0 | 0 |
| 12-Nov-13 | 15:19:48 | 63 | Lead Paint Fixed-Time | 24.63 | Negative | 0 | 0 |
| 12-Nov-13 | 15:20:28 | 64 | Lead Paint Fixed-Time | 23.13 | Negative | 0 | 0 |
| 12-Nov-13 | 15:21:09 | 65 | Lead Paint Fixed-Time | 23.42 | Negative | 0 | 0 |
| 12-Nov-13 | 15:21:50 | 66 | Lead Paint Fixed-Time | 22.91 | Negative | 0 | 0 |
| 12-Nov-13 | 15:22:55 | 67 | Lead Paint Fixed-Time | 23.12 | Negative | 0 | 0 |
| 12-Nov-13 | 15:23:36 | 68 | Lead Paint Fixed-Time | 23.91 | Negative | 0 | 0 |
| 12-Nov-13 | 15:24:17 | 69 | Lead Paint Fixed-Time | 23.67 | Negative | 0 | 0 |
| 12-Nov-13 | 15:25:02 | 70 | Lead Paint Fixed-Time | 23.07 | Negative | 0 | 0 |
| 12-Nov-13 | 15:25:43 | 71 | Lead Paint Fixed-Time | 24.27 | Negative | 0 | 0 |
| 12-Nov-13 | 15:27:20 | 72 | Lead Paint Fixed-Time | 24.21 | Negative | 0 | 0 |
| 12-Nov-13 | 15:28:01 | 73 | Lead Paint Fixed-Time | 24.34 | Negative | 0 | 0 |
| 12-Nov-13 | 15:28:42 | 74 | Lead Paint Fixed-Time | 24.45 | Negative | 0 | 0 |
| 12-Nov-13 | 15:29:23 | 75 | Lead Paint Fixed-Time | 24.54 | Negative | 0 | 0 |
| 12-Nov-13 | 15:30:04 | 76 | Lead Paint Fixed-Time | 23.04 | Negative | 0.01 | 0.02 |
| 12-Nov-13 | 15:30:45 | 77 | Lead Paint Fixed-Time | 22.95 | Negative | 0 | 0 |
| 12-Nov-13 | 15:31:27 | 78 | Lead Paint Fixed-Time | 22.91 | Negative | 0 | 0 |
| 12-Nov-13 | 15:32:08 | 79 | Lead Paint Fixed-Time | 23.12 | Negative | 0 | 0 |
| 12-Nov-13 | 15:32:50 | 80 | Lead Paint Fixed-Time | 24.1 | Negative | 0 | 0 |
| 12-Nov-13 | 15:33:32 | 81 | Lead Paint Fixed-Time | 23.98 | Negative | 0 | 0 |
| 12-Nov-13 | 15:35:16 | 82 | Lead Paint Fixed-Time | 24.48 | Negative | 0 | 0 |
| 12-Nov-13 | 15:35:58 | 83 | Lead Paint Fixed-Time | 24.71 | Negative | 0 | 0 |
| 12-Nov-13 | 15:36:40 | 84 | Lead Paint Fixed-Time | 24.15 | Negative | 0 | 0 |
| 12-Nov-13 | 15:37:21 | 85 | Lead Paint Fixed-Time | 24.5 | Negative | 0 | 0 |
| 12-Nov-13 | 15:38:02 | 86 | Lead Paint Fixed-Time | 23.16 | Negative | 0 | 0 |
| 12-Nov-13 | 15:38:43 | 87 | Lead Paint Fixed-Time | 22.64 | Negative | 0 | 0 |
| 12-Nov-13 | 15:39:25 | 88 | Lead Paint Fixed-Time | 21.66 | Negative | 0 | 0 |
| 12-Nov-13 | 15:40:25 | 89 | Lead Paint Fixed-Time | 22.06 | Negative | 0 | 0 |
| 12-Nov-13 | 15:41:05 | 90 | Lead Paint Fixed-Time | 23.03 | Negative | 0 | 0 |
| 12-Nov-13 | 15:41:43 | 91 | Lead Paint Fixed-Time | 23.05 | Negative | 0 | 0 |
| 12-Nov-13 | 15:42:27 | 92 | Lead Paint Fixed-Time | 24.01 | Negative | 0 | 0 |
| 12-Nov-13 | 15:43:08 | 93 | Lead Paint Fixed-Time | 22.8 | Negative | 0 | 0 |
| 12-Nov-13 | 15:43:47 | 94 | Lead Paint Fixed-Time | 22.39 | Negative | 0 | 0 |
| 12-Nov-13 | 15:45:11 | 95 | Lead Paint Fixed-Time | 24.39 | Negative | 0 | 0 |
| 12-Nov-13 | 15:45:53 | 96 | Lead Paint Fixed-Time | 24.24 | Negative | 0 | 0 |
| 12-Nov-13 | 15:46:35 | 97 | Lead Paint Fixed-Time | 24.35 | Negative | 0 | 0 |

PARS ENVIRONMENTAL INC.

**Table 2**
**XRF Direct Reading Results**
**1108 Barnegat Avenue, Unit # 2**
**Seaside Heights, NJ**
**SRP0037053**

| Date | Time | Reading | Mode | LiveTime | Pass Fail Standard | Pb | Pb +/- |
|---|---|---|---|---|---|---|---|
| 12-Nov-13 | 15:47:16 | 98 | Lead Paint Fixed-Time | 24.2 | Negative | 0 | 0 |
| 12-Nov-13 | 15:48:13 | 99 | Lead Paint Fixed-Time | 22.91 | Negative | 0 | 0 |
| 12-Nov-13 | 15:48:54 | 100 | Lead Paint Fixed-Time | 22.98 | Negative | 0 | 0 |
| 12-Nov-13 | 15:49:33 | 101 | Lead Paint Fixed-Time | 22.38 | Negative | 0 | 0 |
| 12-Nov-13 | 15:50:33 | 102 | Lead Paint Fixed-Time | 24.46 | Negative | 0 | 0 |
| 12-Nov-13 | 15:51:14 | 103 | Lead Paint Fixed-Time | 24.54 | Negative | 0 | 0 |
| 12-Nov-13 | 15:51:58 | 104 | Lead Paint Fixed-Time | 24.31 | Negative | 0 | 0 |
| 12-Nov-13 | 15:52:39 | 105 | Lead Paint Fixed-Time | 24.57 | Negative | 0 | 0 |
| 12-Nov-13 | 15:53:22 | 106 | Lead Paint Fixed-Time | 22.38 | Negative | 0 | 0 |
| 12-Nov-13 | 15:54:04 | 107 | Lead Paint Fixed-Time | 22.87 | Negative | 0 | 0 |
| 12-Nov-13 | 15:54:44 | 108 | Lead Paint Fixed-Time | 22.57 | Negative | 0 | 0 |
| **12-Nov-13** | **15:55:49** | **109** | **Lead Paint Fixed-Time** | **23.15** | **Positive** | **1.05** | **0.04** |
| **12-Nov-13** | **15:56:30** | **110** | **Lead Paint Fixed-Time** | **22.65** | **Positive** | **1.05** | **0.04** |
| **12-Nov-13** | **15:57:11** | **111** | **Lead Paint Fixed-Time** | **22.86** | **Positive** | **1.08** | **0.04** |

# TABLE 3

# Lead Dust Wipe Sample Results

PARS ENVIRONMENTAL INC.

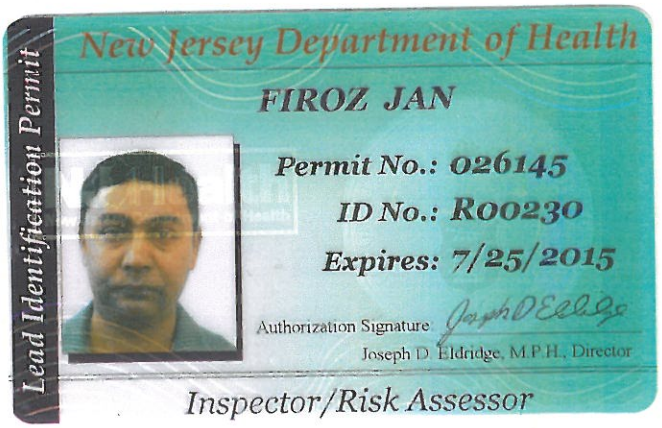
**TABLE 3**
**LBP Dust Wipe Sample Test Results**
**1108 Barnegat Avenue, Unit # 2**
**Seaside Heights, NJ**
**SRP0037053**

| Sample ID | Date | Room | Location | Lead Dust Concentration indicative of Lead Hazard ($\mu g/ft^2$) | Wipe Sample Result ($\mu g/ft^2$) |
|---|---|---|---|---|---|
| BA-01 | 11/12/2013 | Front entrance door | Floor | 40 | <10 |
| BA-02 | 11/12/2013 | Bathroom Floor | Floor | 40 | <10 |
| BA-03 | 11/12/2013 | Kitchen Floor | Floor | 40 | <10 |
| BA-04 | 11/12/2013 | Living room | Window Sill | 250 | <23 |
| BA-06 | 11/12/2013 | Bedroom # 1 | Window Sill | 250 | <23 |
| BA-07 | 11/12/2013 | Bedroom # 2 | Window Sill | 250 | 24 |
| PB-08 | 11/12/2013 | Living room | Floor | 40 | <10 |
| PB-09 | 11/12/2013 | QC | QC | N/A | <10 |

**500=** Exceeds lead dust concentration

# APPENDIX A

## Licenses


Lead Identification Permit
New Jersey Department of Health
FIROZ JAN
Permit No.: 026145
ID No.: R00230
Expires: 7/25/2015
Authorization Signature
Joseph D. Eldridge, M.P.H., Director
Inspector/Risk Assessor

36948

# National Asbestos & Environmental Training Institute

## CERTIFICATE OF COMPLETION

*This is to certify that*

## *Firoz Jan*

*Successfully completed the course entitled*

**1-Day New Jersey/EPA Model Lead Inspector/Risk Assessor Refresher on November 21, 2012**

*Examination Passed on November 21, 2012* *Expiration Date November 21, 2014*

~~Doris L. Adler~~
*President, NAETI*

Language: English | 3 CE Units | ABIH 1 CM POINT

**3321 Doris Avenue, Building B, Ocean, NJ 07712** **Phone (732) 531-5571** **Fax (732) 531-5956** **www.naeti.com**

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

LOCATION
101 SOUTH BROAD STREET
TRENTON, NEW JERSEY 08618

STATE OF NEW JERSEY
DEPARTMENT OF COMMUNITY AFFAIRS
DIVISION OF CODES AND STANDARDS
BUREAU OF CODE SERVICES
LEAD HAZARD ABATEMENT

RICHARD E. CONSTABLE, III
Acting Commissioner

MAILING ADDRESS
PO BOX 816
TRENTON, NJ 08625-0816

## Certificate - Lead Evaluation Contractor

This is to certify that the Department of Community Affairs has

( ) CERTIFIED
(XX) RECERTIFIED

PARS ENVIRONMENTAL
500 HORIZON DRIVE
SUITE 540
ROBBINSVILLE, NJ 08691

To act as a Lead Evaluation Contractor on the following projects

Residential
Public Buildings

Cert # 00416 E

Effective Date: MARCH 1, 2012

Date of Expiration: FEBRUARY 28, 2014

Certificate Type: 2 YEAR

Sincerely,

James L. Amici
Supervisor of Certification
Lead Hazard Abatement Unit

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

LOCATION
101 SOUTH BROAD STREET
TRENTON, NEW JERSEY 08618

STATE OF NEW JERSEY
DEPARTMENT OF COMMUNITY AFFAIRS
DIVISION OF CODES AND STANDARDS
BUREAU OF CODE SERVICES
LEAD HAZARD ABATEMENT

RICHARD E. CONSTABLE, III
Commissioner

MAILING ADDRESS
PO BOX 816
TRENTON, NJ 08625-0816

## Certificate - Lead Evaluation Contractor

This is to certify that the Department of Community Affairs has

( ) CERTIFIED
(XX) RECERTIFIED

PARS ENVIRONMENTAL
500 HORIZON DRIVE
SUITE 540
ROBBINSVILLE, NJ 08691

To act as a Lead Evaluation Contractor on the following projects

Residential
Public Buildings

Cert # 00416 E

Effective Date: MARCH 1, 2014

Date of Expiration: FEBRUARY 29, 2016

Certificate Type: 2 YEAR

Sincerely,

James L. Amici
Supervisor of Certification
Lead Hazard Abatement Unit

# APPENDIX B

## Performance Characteristic Sheet

# Performance Characteristic Sheet

**EFFECTIVE DATE:** **October 12, 2006** **EDITION NO.: 1**

**MANUFACTURER AND MODEL:**

Make: ***Innov-X Systems, Inc.***
Models: ***LBP4000 with software version 1.4 and higher***
Source: ***X-ray tube (no radioactive isotopes)***

## FIELD OPERATION GUIDANCE

**OPERATING PARAMETERS**:

Inspection mode, variable reading time.

**XRF CALIBRATION CHECK LIMITS**:

| |
|---|
| 1.0 to 1.1 mg/cm$^2$ (inclusive) |

**SUBSTRATE CORRECTION:**

Not applicable

**INCONCLUSIVE RANGE OR THRESHOLD:**

| INSPECTION MODE READING DESCRIPTION | SUBSTRATE | INCONCLUSIVE RANGE (mg/cm$^2$) |
|---|---|---|
| Results not corrected for substrate bias on any substrate | Brick | 0.6 to 1.1 |
| | Concrete | 0.6 to 1.1 |
| | Drywall | 0.6 to 1.1 |
| | Metal | 0.6 to 1.1 |
| | Plaster | 0.6 to 1.1 |
| | Wood | 0.6 to 1.1 |

## BACKGROUND INFORMATION

**EVALUATION DATA SOURCE AND DATE:**

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated from the EPA/HUD evaluation using archived building components. Testing was conducted on 146 test locations, with two separate instruments, in December 2005.

**OPERATING PARAMETERS:**

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

**XRF CALIBRATION CHECK:**

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm$^2$ in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm$^2$ film).

If the average (rounded to 1 decimal place) of three readings is outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instrument into control before XRF testing proceeds.

**SUBSTRATE CORRECTION VALUE COMPUTATION**:

Chapter 7 of the HUD Guidelines provides guidance on correcting XRF results for substrate bias. Supplemental guidance for using the paint film nearest 1.0 mg/cm$^2$ for substrate correction is provided:

XRF results are corrected for substrate bias by subtracting from each XRF result a correction value determined separately in each house for single-family housing or in each development for multifamily housing, for each substrate. The correction value is an average of XRF readings taken over the NIST SRM paint film nearest to 1.0 mg/cm$^2$ at test locations that have been scraped bare of their paint covering. Compute the correction values as follows:

Using the same XRF instrument, take three readings on a bare substrate area covered with the NIST SRM paint film nearest 1 mg/cm$^2$. Repeat this procedure by taking three more readings on a second bare substrate area of the same substrate covered with the NIST SRM.

Compute the correction value for each substrate type where XRF readings indicate substrate correction is needed by computing the average of all six readings as shown below.

For each substrate type (the 1.02 mg/cm$^2$ NIST SRM is shown in this example; use the actual lead loading of the NIST SRM used for substrate correction):

Correction value = (1st + 2nd + 3rd + 4th + 5th + 6th *Reading*) / 6 - 1.02 mg/cm$^2$

Repeat this procedure for each substrate requiring substrate correction in the house or housing development.

**EVALUATING THE QUALITY OF XRF TESTING:**

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing.

Take one XRF reading on each of the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below.

Compute the Retest Tolerance Limit by the following steps:

Calculate the average of the original XRF reading and the retest XRF reading for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF readings.

Compute the average of all ten re-test XRF readings.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

**TESTING TIMES:**

For the variable-time inspection paint test mode, the instrument continues to read until it has determined whether the result is positive or negative (with respect to the 1.0 mg/cm$^2$ Federal standard), with 95% confidence. The following table provides testing time information for this testing mode.

| **Testing Times Using Variable Reading Time Inspection Mode (Seconds)** | | | | | | |
|---|---|---|---|---|---|---|
| | All Data | | | Median for laboratory-measured lead levels (mg/cm$^2$) | | |
| Substrate | 25$^{th}$ Percentile | Median | 75$^{th}$ Percentile | Pb < 0.25 | 0.25 ≤ Pb < 1.0 | 1.0 ≤ Pb |
| Wood, Drywall | 2.1 | 2.3 | 5.4 | 2.2 | 5.4 | 2.2 |
| Metal | 2.6 | 3.2 | 5.3 | 2.7 | 5.1 | 5.1 |
| Brick, Concrete, Plaster | 3.1 | 4.0 | 5.7 | 3.2 | 4.0 | 5.9 |

**CLASSIFICATION OF RESULTS:**

When an inconclusive range is specified on the *Performance Characteristic Sheet*, XRF results are classified as positive if they are greater than the upper boundary of the inconclusive range, negative if they are less than the lower boundary of the inconclusive range, or inconclusive if in between. The inconclusive range includes both its upper and lower bounds. If the instrument reads "> x mg/cm$^2$", the value "x" should be used for classification purposes, ignoring the ">". For example, a reading reported as ">1.0 mg/cm$^2$" is classified as 1.0 mg/cm$^2$ , or inconclusive. When the inconclusive range reported in this PCS is used to classify the readings obtained in the EPA/HUD evaluation, the following False Positive, False Negative and Inconclusive rates are obtained:

FALSE POSITIVE RATE: 2.5% (2/80)

FALSE NEGATIVE RATE**:** 1.9% (4/212)

INCONCLUSIVE RATE: 16.4% (48/212)

**DOCUMENTATION:**

A document titled *Methodology for XRF Performance Characteristic Sheets* provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. For a copy of this document call the National Lead Information Center Clearinghouse at 1-800-424-LEAD.

This XRF Performance Characteristic Sheet was developed by the Midwest Research Institute (MRI) and QuanTech, Inc., under a contract between MRI and the XRF manufacturer. XRF Performance Characteristic Sheets were originally developed by the MRI under a grant from the U. S. Environmental Protection Agency and the U.S. Department of Housing and Urban Development. HUD has determined that the information provided here is acceptable when used as guidance in conjunction with Chapter 7, Lead-Based Paint Inspection, of HUD's *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*.

## Margaret Halasnik

**From:** Juan Payan <juan.payan@olympusndt.com>
**Sent:** Monday, August 12, 2013 12:58 PM
**To:** Margaret Halasnik
**Subject:** Performance Characteristics Sheet
**Attachments:** Lead paint Hud sheet.pdf

Hi Margaret,

Please see the Performance Characteristics Sheet attached, and let me know if you need anything else. This sheet is valid for all Alpha models.

*Regards,*

*JC Payan*
*Technical Support*
*Olympus NDT - Analytical Instruments Division*
*241 Riverview Ave*
*Auburndale, MA 02466*
*T: 781-419-3900*
*F: 781-973-2200*

# APPENDIX C

# Lead Glossary

# APPENDIX C

## "LEAD SPEAK" A BRIEF GLOSSARY

### COMMON LBP TERMS

LBP: Any and all paint that contains at least 1 milligram of lead per square centimeter of surface area (1.0 mg/cm$^2$). This is infrequently expressed as 0.5% lead by weight and/or 5,000 parts per million lead concentrations by dry weight.

LBP HAZARDS: Housing conditions that cause human exposure to unsafe levels of lead from paint. These conditions include, but are not necessarily limited to: deteriorated LBP; friction, impact, or chewable surfaces; lead contaminated dust; or lead contaminated soil.

PAINT: Any and all paints, stains, varnishes, shellacs, epoxies, lacquers, polyurethanes, etc.

HOUSE WALL IDENTIFICATION GUIDE: The exterior wall that contains the front entry to the house is labeled as the A wall of the house. Proceeding clock-wise around the house label the remaining walls B, C, and D respectively. The interior room walls correspond to the exterior walls

LEAD HAZARD EVALUATION METHODS

VISUAL EVALUATION: A visual evaluation of interior and exterior paint and surfaces in an effort to try to identify specific conditions that contribute to LBP hazards. A certified risk assessor or a Housing Quality Standards inspector trained in visual assessments should perform these inspections.

PAINT TESTING: Testing of specific surfaces that are coated with paint, by XRF (x-ray fluorescence) or laboratory analysis, to determine the lead content of these surfaces, performed by a NJ certified Lead Inspector/Risk Assessor.

RISK ASSESSMENT: An on-site investigation to help determine the existence of LBP hazards. This can include paint testing, dust, and soil sampling, water sampling and a visual inspection. The risk assessment report identifies lead hazards and potential options for lead hazard control. A certified risk assessor must conduct the assessment.

CLEARANCE EXAMINATION: Clearance is performed after hazard reduction, rehabilitation, renovation, repair, modernization, or maintenance activities to determine if a unit is safe for occupancy. It involves a visual inspection, analysis of dust and soil samples, and preparation of a report. A certified risk assessor that is independent from the company or individual conducting the lead hazard control activities should conduct the clearance examination.

X-RAY FLUORESCENCE ANALYZER (XRF): This device, often called an XRF, is used to help identify levels of lead in paint without disturbing the painted surfaces themselves. The unit uses X-rays to measure the lead content in the paint on a per square centimeter basis.

# APPENDIX C

## "LEAD SPEAK" A BRIEF GLOSSARY

LEAD POISONING: Environmental Intervention Blood Lead Level (EIBLL): The level of lead in blood that requires intervention in a child under the age of seventy-two (72) months (6 years). This is typically defined as a blood lead level of 20 µg/dL (micrograms per deciliter) of whole blood or above for a single test, or blood levels of 15-19 in two tests taken at least three months apart.

KEY UNITS OF MEASUREMENT

µg (Microgram): A microgram is 1/1000$^{th}$ of a milligram. To put this into perspective, a penny weighs 2 grams. To get a microgram, you would need to divide the penny into 2 million pieces. A microgram is one of those two million pieces.

µg/dL (microgram per deciliter): Used to measure the level of lead in children's and worker's blood to establish whether intervention is needed. A deciliter is a little less than a half a cup.

µg/ft$^2$ (micrograms per square foot): the unit used to express levels of lead in dust samples. All reports should report levels of lead in dust in µg/ft$^2$, mg/cm$^2$ (milligrams per centimeter square): used to report levels of lead in paint thru XRF testing.

PPM (parts per million): Typically used to express the concentrations of lead in soil. Can also be used to express the amount of lead in a surface coating on a mass concentration basis. This measurement can also be shown as: µg/gram or mg/kg (soil) or mg/1 (aqueous).

PPB (parts per billion)**:** Typically used to express the amount of lead found in drinking water. This measurement is also sometimes expressed as: µg/l.

EPA/HUD PUBLISHED LBP STANDARDS

Dust-thresholds for Lead Contamination

- Floors: less than (<) 40 µg/ft$^2$
- Interior Window Sills: <250 µg/ft$^2$
- Window Troughs: <400 µg/ft$^2$

Soil-thresholds for Lead Contamination

- Play areas used by children 6 and under: <400 µg/gram or 400 PPM
- Other areas: < 1200 µg/gram or 1200 PPM
- Threshold for abatement: <5000 µg/gram or 5000 PPM

# APPENDIX C

## "LEAD SPEAK" A BRIEF GLOSSARY

NATIONAL CENTER FOR HEALTHY HOUSING: http://www.leadsafehousing.org/

NATIONAL LEAD INFORMATION CENTER AND CLEARINGHOUSE:
1-800-424 LEAD, Fax: 301-585-7976 www.epa.gov/lead/nlic.htm

NATIONAL LEAD ASSESSMENT AND ABATEMENT COUNCIL:
1-800-590-6522 Fax: 301-924-0265 http://www.nlaac.org

HUD's OFFICE OF HEALTH HOMES AND LEAD HAZARD CONTROL:
http://www.hud.gov/offices/lead

THE ALLIANCE TO END CHILDHOOD LEAD POISONING:
http://www.aeclp.org

THE ENVIRONMENTAL PROTECTION AGENCY LEAD PROGRAMS:
http://www.epa.gov/opptintr/lead Voice: 1-202-260-2090

NEW JERSEY DEPARTMENT OF HEALTH, INDOOR ENVIRONMENTS PROGRAM
http://www.state.nj.us/health/iep/lead.shtml

ADDITIONAL INFORMATION:
Lists of recalled products containing lead: www.safetyalerts.com. The Lead listing for info On lead-safe service providers and EPA accredited laboratories throughout the United States: http://www.leadlisting.org

# APPENDIX D

# EMSL Laboratories Lead Report

**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: | 201311911 |
| CustomerID: | PARS51 |
| CustomerPO: | 1101 |
| ProjectID: | GILBANE |

Attn: **Firoz Jan**
**PARS Environmental**
**500 Horizon Drive**
**Suite 540**
**Robbinsville, NJ 08691**

Phone: (609) 890-7277
Fax: (609) 890-9116
Received: 11/12/13 6:11 PM
Collected:

Project: **Gilbane Unit #2 / 1108 Barnegat Ave Seaside Heights,NJ**

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

| Client Sample Description | Lab ID | Collected | Analyzed | Area Sampled | Lead Concentration |
|---|---|---|---|---|---|
| BA-01 | 0001 | | 11/13/2013 | 144 in² | <10 µg/ft² |
| Site: Front Entrance Door/Floor | | | | | |
| BA-02 | 0002 | | 11/13/2013 | 144 in² | <10 µg/ft² |
| Site: Bathroom/Floor | | | | | |
| BA-03 | 0003 | | 11/13/2013 | 144 in² | <10 µg/ft² |
| Site: Kitchen Floor | | | | | |
| BA-04 | 0004 | | 11/13/2013 | 64 in² | <23 µg/ft² |
| Site: Living Room/Window Sill | | | | | |
| BA-05 | 0005 | | 11/13/2013 | 144 in² | <10 µg/ft² |
| Site: Common Area/Floor | | | | | |
| BA-06 | 0006 | | 11/13/2013 | 64 in² | <23 µg/ft² |
| Site: Bedroom #1 Window Sill | | | | | |
| BA-07 | 0007 | | 11/13/2013 | 64 in² | 24 µg/ft² |
| Site: Bedroom #2 Window Sill | | | | | |
| BA-08 | 0008 | | 11/13/2013 | 144 in² | <10 µg/ft² |
| Site: Living Room Floor | | | | | |
| BA-09 | 0009 | | 11/13/2013 | n/a | <10 µg/wipe |
| Site: Blank | | | | | |

Julie Smith - Laboratory Director
NJ-NELAP Accredited:03036
or other approved signatory

Reporting limit is 10 ug/wipe. ug/wipe = ug/ft2 x area sampled in ft2. 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 (such as volume sampled) or analytical method limitations. Samples received in good condition unless otherwise noted. QC data associated with this sample set is within acceptable limits, unless otherwise noted. The lab is not responsible for data reported in µg/ft² which is dependant on the area provided by non-lab personnel. The test results contained within this report meet the requirements of NELAC unless otherwise noted. * slight modifications to methods applied. "<" (less than) results signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request.

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 11/13/2013 17:28:02

201311911

# Lead (Pb) Chain of Custody

**EMSL Order ID** *(Lab Use Only):* 201311911

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Unit H2 GILBANE

1108 BARNEGAT AVE-SEASIDE HEIGHTS-NJ

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

| | |
|---|---|
| **Company:** PARS Environmental Inc. | **EMSL-Bill to:** ☐ Same ☐ Different<br>If Bill to is Different note instructions in Comments**<br>*Third Party Billing requires written authorization from third party* |
| **Street:** 500 HORIZON DR. | |
| **City:** Robbinsville **State/Province:** NJ | **Zip/Postal Code:** **Country:** |
| **Report To (Name):** FIROZ Jan | **Telephone #:** |
| **Email Address:** FJan@ParsEnviro.com | **Fax #:** **Purchase Order:** |
| **Project Name/Number:** 1108 BARNEGAT AVE | **Please Provide Results:** ☐ Fax ☐ Email |
| **U.S. State Samples Taken:** Seaside Heights. | **CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt |

**Turnaround Time (TAT) Options* - Please Check**

☐ 3 Hour | ☐ 6 Hour | ☒ 24 Hour | ☐ 48 Hour | ☐ 72 Hour | ☐ 96 Hour | ☐ 1 Week | ☐ 2 Week

**Analysis completed in accordance with EMSL's Terms and Conditions located in the Price Guide*

| Matrix | Method | Instrument | Reporting Limit | Check |
|---|---|---|---|---|
| **Chips** ☐ % by wt. ☐ mg/cm² ☐ ppm | SW846-7000B | Flame Atomic Absorption | 0.01% | ☐ |
| **Air** | NIOSH 7082 | Flame Atomic Absorption | 4 µg/filter | ☐ |
| | NIOSH 7105 | Graphite Furnace AA | 0.03 µg/filter | ☐ |
| | NIOSH 7300 modified | ICP-AES/ICP-MS | 0.5 µg/filter | ☐ |
| **Wipe*** ASTM ☑ non ASTM ☐ *if no box is checked, non-ASTM Wipe is assumed | SW846-7000B | Flame Atomic Absorption | 10 µg/wipe | ☐ |
| | SW846-6010B or C | ICP-AES | 1.0 µg/wipe | ☐ |
| | SW846-7000B/7010 | Graphite Furnace AA | 0.075 µg/wipe | ☐ |
| **TCLP** | SW846-1311/7000B/SM 3111B | Flame Atomic Absorption | 0.4 mg/L (ppm) | ☐ |
| | SW846-1131/SW846-6010B or C | ICP-AES | 0.1 mg/L (ppm) | ☐ |
| **Soil** | SW846-7000B | Flame Atomic Absorption | 40 mg/kg (ppm) | ☐ |
| | SW846-7010 | Graphite Furnace AA | 0.3 mg/kg (ppm) | ☐ |
| | SW846-6010B or C | ICP-AES | 2 mg/kg (ppm) | ☐ |
| **Wastewater** Unpreserved ☐ Preserved with $HNO_3$ pH < 2 ☐ | SM3111B/SW846-7000B | Flame Atomic Absorption | 0.4 mg/L (ppm) | ☐ |
| | EPA 200.9 | Graphite Furnace AA | 0.003 mg/L (ppm) | ☐ |
| | EPA 200.7 | ICP-AES | 0.020 mg/L (ppm) | ☐ |
| **Drinking Water** Unpreserved ☐ Preserved with $HNO_3$ pH < 2 ☐ | EPA 200.9 | Graphite Furnace AA | 0.003 mg/L (ppm) | ☐ |
| | EPA 200.8 | ICP-MS | 0.001 mg/L (ppm) | ☐ |
| **TSP/SPM Filter** | 40 CFR Part 50 | ICP-AES | 12 µg/filter | ☐ |
| | 40 CFR Part 50 | Graphite Furnace AA | 3.6 µg/filter | ☐ |
| **Other:** | | | | ☐ |

**Name of Sampler:** FIROZ Jan **Signature of Sampler:**

| Sample # | Location | Volume/Area | Date/Time Sampled |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

**Client Sample #'s** - **Total # of Samples:** 9

**Relinquished (Client):** **Date:** 11/12/13 **Time:**

**Received (Lab):** **Date:** 11/12/13 **Time:** 6:10pm

**Comments:**

Recd 11/12/13

9

201311911

201311911

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

# LEAD (Pb) CHAIN OF CUSTODY

**EMSL ORDER ID** *(Lab Use Only):*

Gilbane

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

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

| | Sample # | Location | Volume/Area | Date/Time Sampled |
|---|---|---|---|---|
| 1. | BA-01 | Front entrace dor / Flor | 12"x12" | |
| 2. | BA-02 | BATHROOM 1 Flor | 12"x12" | |
| 3. | BA 03 | KITCHEN Flor | 12"x12" | |
| 4. | BA-04 | Living Room/window SILL | 8"x8" | |
| 5. | BA-05 | common area/ Flor. | 12"x12" | |
| 6. | BA-06 | Bedroom # 1 Window SILL | 8"x8" | |
| 7. | BA-07 | Bedroom #2 window SILL | 8"x8" | |
| 8. | BA-08 | Living Room Flor | 12"x12" | |
| 9. | BA-09 | Blank | — | |
| | | | | |
| | | | | |
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RECEIVED
EMSL
CINNAMINSON, NJ
13 NOV 12 PM 6:11

**Comments/Special Instructions:**

# LEAD HAZARD EVALUATION NOTICE

Address: 1108 Barnegat Avenue, Unit #3, Seaside Heights, New Jersey 0875

Evaluation Completed (circle one): Paint Inspection Paint Testing (Risk Assessment)

Date: 10/21/13

Summary of Results:

_X_ No lead-based paint or lead-based paint hazards were found.

____ Lead-based paint and/or lead-based paint hazards were found. See attachment for details

Contact person for more information about the risk evaluation:

Printed name: Feliks Kiselyuk
Signature:
Date: 10/31/13
Organization: Sky Environmental Services, Inc.
Street: 140 Boulevard
City & State Mountain Lakes, New Jersey
Zip 07046
Phone #: 201-679-2250

Person who prepared this notice:

Printed name: Michael Rattacasa
Signature:
Date: 10/30/13
Organization: Creative Environment Solutions Corp.
Street: 39 West 37th Street, 14th Fl.
City & State New York, New York,
Zip 10018
Phone #: 212-290-6323

| Contaminated Soil | | |
|---|---|---|
| **Area** | **mg/g (ppm)** | **Location** |
| _X_ None | | |
| ___ Perimeter | ___ mg/g (ppm) | |
| ___ Play Area | ___ mg/g (ppm) | |
| ___ Other | ___ mg/g (ppm) | |

| Contaminated Dust | | |
|---|---|---|
| **Area** | **µg/SF** | **Location** |
| _X_ None | | |
| ___ Windowsill | ___ µg/SF | |
| ___ Floor | ___ µg/SF | |
| ___ Other | ___ µg/SF | |
| ___ Other | ___ µg/SF | |

| Other Hazards | | | | |
|---|---|---|---|---|
| **Component*** | **Location** | **Condition (good, fair, poor)** | **Friction or Impact Surface?** | **Lead Content (if known)** |
| 1. | | | | ___ mg/cm² (ppm) |
| 2. | | | | ___ mg/cm² (ppm) |
| 3. | | | | ___ mg/cm² (ppm) |
| 4. | | | | ___ mg/cm² (ppm) |
| 5. | | | | ___ mg/cm² (ppm) |
| 6. | | | | ___ mg/cm² (ppm) |
| 7. | | | | ___ mg/cm² (ppm) |
| 8. | | | | ___ mg/cm² (ppm) |
| 9. | | | | ___ mg/cm² (ppm) |
| 10. | | | | ___ mg/cm² (ppm) |
| 11. | | | | ___ mg/cm² (ppm) |
| 12. | | | | ___ mg/cm² (ppm) |
| 13. | | | | ___ mg/cm² (ppm) |
| 14. | | | | ___ mg/cm² (ppm) |

***** Components include but are not limited to (interior and exterior) windows, doors, trim, fences, porches, walls and floors.

WBE Certified
www.CEScenter.com

**Creative Environment Solutions Corp.**
39 West 37th Street, 14th Floor, New York, NY 10018
Phone: 212.290.6323 Fax: 212.290.6325
LICENSED & APPROVED by NYS DOH/DOL/DOS, NYC DOB/DEP, FDNY, PIE

# LIMITED LEAD-BASED PAINT RISK ASSESSMENT REPORT

Site Location:

**1108 Barnegat Avenue**
**Unit #3**
**Seaside Heights, New Jersey 08751**
**SRP0037053**

Prepared for:

**Gilbane Building Company**
**New Jersey LLRP Program**
3150 Brunswick Pike, Suite 300
Lawrenceville, New Jersey 08648

Prepared by:

**Creative Environment Solutions Corp.**
39 West 37th Street, 14th Floor
New York, New York 10018

October 31, 2013

**EXECUTIVE SUMMARY**

Creative Environment Solutions Corp. (CES) was retained by Gilbane Building Company; located at, 3150 Brunswick Pike, Suite 300, Lawrenceville, New Jersey 08648, to perform a limited Risk Assessment for Lead-Based Paint (LBP) at the Private Residence; located at, 1108 Barnegat Avenue, Unit #3, Seaside Heights, New Jersey 08751. The inspection was conducted in conjunction with the residence's participation in the New Jersey Landlord Repair Program (LLRP).

CES' New Jersey Department of Health and Senior Services certified Lead Paint Inspector/Risk Assessor, Feliks Kiselyuk, performed a LBP Risk Assessment at the above-referenced location. The inspection was conducted to identify the presence of any LBP and/or lead hazards located within the aforementioned interior and/or exterior of the residence. Mr. Kiselyuk utilized an [Innov-X System Alpha Series X-Ray Fluorescence Spectrometer] (XRF) to determine the presence or absence of lead in paint.

The analytical results from this Assessment effort identified the following lead-based paint (LBP) and Lead hazards, as defined by the United States Environmental Protection Agency (USEPA) and/or the department of Housing and Urban Development (HUD) standards:

Interior LBP

• No LBP was identified within the interior.

Exterior LBP

• No LBP was identified within the exterior.

Existing Lead-Based Paint Hazards and Potential Lead Hazards

There were no areas coated with LBP that is deteriorated and currently present existing lead-based paint hazards. All component substrates are wood.

No dust hazards were identified.

No soil lead hazards were identified.

There were no areas coated with LBP that is intact and that do not currently present lead hazards. However, the upcoming renovation plans include work inside the house and scraping and repainting the exterior. If these renovations occur, lead-safe work practices will need to be implemented during the project to ensure that lead hazards are not created.

Future renovations plans were not provided to CES at the time of the inspection.

Please refer to the enclosed for further inspection details, XRF results and/or laboratory analytical results.

Please refer to Table I for a full summary of inspection results.

**IDENTIFYING INFORMATION**

A Lead Hazard Risk Assessment and Limited LBP Testing (Assessment) was conducted at 1108 Barnegat Avenue, Unit #3, Seaside Heights, New Jersey 08751 on October 21, 2013. The Assessment was conducted by Feliks Kiselyuk, (025263). The purpose of the Assessment was to identify the presence of lead hazards on and/or in a limited number of surfaces inside and outside the residence, as well as to identify the presence of deteriorated lead-based paint (LBP) and LBP that may be disturbed during planned renovation and/or restoration activities.

**PROPERTY RENOVATION AND REPAIR HISTORY**

Historic renovation and repair history for the subject property were not provided to CES at the time of the assessment.

## PREVIOUS SAMPLING AND TESTING

Records regarding previous lead sampling and/or testing at the subject property were not provided to CES at the time of the assessment.

## IDENTIFIED LEAD HAZARDS

The subject property was impacted by Hurricane Sandy; therefore, all materials coated with LBP have the potential to be impacted by future renovation and/or restoration activities.

### Existing Lead Hazards

The following areas are coated with Lead-Based Paint (LBP) that is *deteriorated* and currently present existing lead-based paint hazards.

No areas were identified.

### Potential Lead Hazards

The following areas are coated with LBP that is intact and that do not currently present lead hazards. However, the upcoming renovation plans include work inside the house and scraping and repainting the exterior. If these renovations occur, lead-safe work practices will need to be implemented during the project to ensure that lead hazards are not created.

No areas were identified.

Please refer to the enclosed for further inspection details, XRF results and/or laboratory analytical results.

## PAINT SAMPLING AND TESTING

Limited LBP Testing, conforming with HUD Guidelines 24 CFR 35 Section 35.930 (c), (d) was accomplished at this residence on surfaces found to have deteriorated paint and/or where it was indicated to the Assessor that planned renovation would occur. No paint chip samples were taken. On October 21, 2013, a total of twenty seven (27) tests (assays) were taken at a limited number of specified surfaces on the inside and outside of the residence using an XRF analyzer. Deteriorated paint and areas that were specified to be disturbed during the planned renovation project were tested. Lead concentrations that meet or exceed the HUD published levels identified as being potentially dangerous (e. g., greater than or equal to 1.1 milligrams per centimeter square [> 1.1 mg/cm2]) were not encountered.

It should be noted that lead concentrations (in paint) that are less than the levels that identify a surface coating as LBP still have the potential of causing lead poisoning. Should these or any potential LBP painted components and/or surfaces be disturbed in any manner that generates dust, extreme care must be taken to limit its spread. It should be assumed that any and all painted surfaces, components, or surfaces not requested to be tested as part of this investigation, or any previous investigations, are coated with LBP, and that renovation or repair activities in these areas dictate the use of safe work practices that limit dust generation and area contamination.

## INTERIOR DUST SAMPLING

A total of five (5) single surface dust wipe samples were collected in an effort to help to determine the levels of lead-containing dust on the interior windowsills and floors. These samples were collected from areas most likely to be lead contaminated if lead-in-dust is present. These samples were collected in accordance with the requirements of ASTM Standard E-1728, Standard Practice for Field Collection of Settled Dust Samples Using Wipe Sampling Methods for Lead Determination by Atomic Spectrometry Techniques. USEPA and HUD regulations define the following as dangerous levels for lead dust in residences: floors – ≥40 µg/ft2 (micrograms per square foot); interior windowsills – ≥250 µg/ft2; and, interior window troughs – ≥400 µg/ft2. Please refer to Appendix B – Laboratory Analytical Results for the detailed information regarding dust sampling results. According to the laboratory analytical results, no samples collected exhibited lead concentrations in excess of the aforementioned regulatory thresholds.

**SOIL SAMPLING AND LABORATORY INFORMATION**

Three (3) composite soil samples were collected at this residence in accordance with the requirements of ASTM Standard E-1727, Standard Practice for Field Collection of Soil Samples for Lead Determination by Atomic Spectrometry Techniques. A Composite sample is a sample containing soil from a stated number of locations mixed together to form a Composite sample. The first sample consisted of soil from four locations on the west side at 1' on center (O.C.). The second sample was collected from four separate locations on the north side at 1' O.C. The third sample was collected from four separate locations on the south side at 1' O.C. The samples were collected from bare soil areas only. The analytical results did not identify lead concentrations at or above the levels that the USEPA and HUD identifies as dangerous. Please refer to Appendix B – Laboratory Analytical Results for the detailed information regarding soil sampling results.

**ONGOING MONITORING**

Ongoing monitoring is necessary in all dwellings in which LBP is known or assumed to be present. At these dwellings, the very real potential exists for LBP hazards to develop. Hazards can develop by means such as, but not limited to: the failure of lead hazard control measures; previously intact LBP becoming deteriorated; dangerous levels of lead-in-dust (dust lead) re-accumulating through friction, impact, and deterioration of paint; or, through the introduction of contaminated exterior dust and soil into the interior of the structure. Ongoing monitoring typically includes two different activities: re-evaluation and annual visual surveys. A re-evaluation is a risk assessment that includes limited soil and dust sampling and a visual evaluation of paint films and any existing lead hazard controls. Re-evaluations are supplemented with visual surveys by the Owner, which should be conducted at least once a year. Owner conducted visual surveys do not replace the need for professional re-evaluations. Visual surveys should confirm that all Paint with known or suspected LBP are not deteriorating, that lead hazard control methods have not failed, and that structural problems do not threaten the integrity of any remaining known, assumed or suspected LBP. The partial table below is taken from **Table 6.1, Standard Re-evaluation Schedules,** as found in the HUD publication entitled; **Gudelines for the Evaluation and Control of LBP Hazards in Housing,** dated June 1995, with September 1997 revisions. It is intended as a guideline for the Owner to assess the condition of areas where hazard control activities occurred.

Factors at this residence require the use of Ongoing Monitoring Schedule item number one (1), to dictate monitoring protocol. Visual surveys by the Owner should occur on at least a yearly basis for all painted surfaces. All surfaces that have undergone the hazard control strategy of Interim Controls, Encapsulation or Enclosure should also be checked during this survey. If components are replaced (windows), no re-evaluation or visual survey would be needed, since the LBP would have been removed with the old windows. Please refer to your community development agency, housing authority, or other applicable agency for additional local/regional regulations and guidelines governing re-evaluation activities.

**Standard Re-evaluation Schedule**

| Schedule | Original Evaluation Results | Action taken | Re-evaluation Frequency & Duration | Visual Survey Schedule |
|---|---|---|---|---|
| 1 | Combination risk assessment/inspection finds no leaded dust or soil and no lead-based paint. | None | None. | None |

**DISCLOSURE REGULATIONS**

A copy of this complete report must be made available to new lessees (tenants) and/or must be provided to purchasers of this property under Federal law before they become obligated under any future lease or sales contract transactions (Section 1018 of Title X – found in 24 CFR Part 35 and 40 CFR Part 745), until the demolition of this property. Landlords (Lessors) and/or sellers are also required to distribute an educational pamphlet developed by the EPA entitled "Protect Your Family From Lead in Your Home" and include standard warning language in their leases or sales contracts to ensure that parents have the information they need to protect their children from LBP hazards.

**FUTURE RENOVATION AND/OR REHABILITATION PRECAUTIONS**

It should be noted that during this Assessment, a limited number of areas were tested for the presence of LBP. All LBP, dust, and soil hazards that were identified are addressed in this report. However, LBP, dust lead hazards, and/or soil lead hazards may be present at other locations of the property. Additional paint testing should precede any future remodeling activities that occur at any untested areas. Additional dust and/or soil sample collection and analysis should follow any hazard control activity, repair, remodeling, or renovation effort, and any other work efforts that may in any way disturb LBP and/or any lead containing materials. These Assessment activities will help the Client and owner to ensure the health and safety of the occupants and the neighborhood. Details concerning lead safe work techniques and approved hazard control methods can be found in the HUD publication entitled: "Guidelnes for the Evaluation and Control of LBP Hazards in Housing" (June 1995 & 1997 Revision).

**LEAD HAZARD CONTROL OPTIONS AND COST ESTIMATES**

Lead-safe work practices and worker/occupant protection practices complying with current EPA, HUD and OSHA standards will be necessary to safely complete all work involving the disturbance of LBP coated surfaces and components. In addition, any work considered Lead hazard control will enlist the use of interim control (temporary) methods and/or abatement (permanent) methods. It should be noted that all lead hazard control activities have the potential of creating additional hazards, or even creating hazards that were not present before. All persons and/or firms performing lead hazard control activities must have received proper training in Lead-Safe Work Practices and/or Lead Abatement. Details for the listed lead hazard control options and issues surrounding occupant/worker protection practices can be found in the publication entitled: Guidelines for the Evaluation and Control of LBP Hazards in Housing (June 1995 & 1997 Revision) published by the HUD, as well as in the Occupational Safety and Health Administration (OSHA) regulations found in 29 CFR, Part 1926.62, known as the OSHA Lead Exposure in Construction Industry Standard.

The associated cost estimates, unless otherwise noted, include the labor and materials to accomplish the stated activity and most additional funds typically found to be necessary to complete worker protection, site containment, and cleanup procedures. These are approximate estimates only and due to a variety of potential factors, may not accurately reflect all local cost factors. A precise estimate must be obtained from a certified LBP abatement contractor or a contractor trained in lead safe work practices. Properly trained and/or licensed persons, as well as properly licensed firms (as mandated) should accomplish all abatement/interim control activities conducted at this residence.

Interim controls, as defined by HUD, means a set of measures designed to temporarily reduce human exposure to LBP hazards and/or lead containing materials. These activities include, but are not limited to: component and/or substrate repairs; paint and varnish repairs; the removal of dust-lead hazards; renovation; remodeling; maintenance; temporary containment; placement of seed, sod or other forms of vegetation over bare soil areas; the placement of at least 6 inches of an appropriate mulch material over an impervious material, laid on top of bare soil areas; the tilling of bare soil areas; extensive and specialized cleaning; and, ongoing LBP maintenance activities.

Abatement, as defined by HUD, means any set of measures designed to permanently eliminate LBP and/or LBP hazards. The product manufacturer and/or contractor must warrant abatement methods to last a minimum of twenty (20) years, or these methods must have a design life of at least twenty (20) years. These activities include, but are not necessarily limited to: the removal of LBP from substrates and components; the replacement of components or fixtures with lead containing materials and/or lead containing paint; the permanent enclosure of LBP with construction materials; the encapsulation of LBP with approved products; the removal or permanent covering (concrete or asphalt) of soil-lead hazards; and, extensive and specialized cleaning activities.

**Special Cleaning Preceding Lead Hazard Control Activities**

Before any lead hazard control activities begin, the structure and site must be inspected and pre-cleaned following HUD specified cleaning protocols, as detailed in the Guidelines for the Evaluation and Control of LBP Hazards in Housing (June 1995 & 1997 Revision), published by the U.S. Department of Housing and Urban Development. Some of the required steps include removing large debris and paint chips followed by HEPA vacuuming of all horizontal surfaces (floors, windowsills, troughs, etc.). The cleaning protocols described in this publication can assist the contractor in doing a preliminary cleaning and improving the chances of passing clearance inspections after remediation.

**LIMITATIONS AND CONDITIONS**

CES has performed the tasks set forth above in a thorough and professional manner consistent with industry standards. CES cannot guarantee and does not warrant that this limited assessment has revealed all adverse environmental conditions affecting the site. Nor can CES warrant that the assessment requested will satisfy the dictates of, or provide a legal defense in connection with, environmental laws or regulations. The observations and findings were representative of the conditions from the site on the date of inspection. Often materials are located in confined or inaccessible locations with little or no visible manifestation of their presence. These materials may be found in various areas under existing flooring materials, above ceilings, behind walls, materials within fixtures, electrical wire casing, or buried pipes and wires. Due to the potential for hidden materials to be present, it may not be possible to determine if all suspect building materials have been identified, located, and subsequently tested. Destructive measures to access these and other potentially hidden materials were not employed by CES as part of this project. However, CES does warrant that its investigations and methodology reflect our best efforts based upon prevailing standard of care in the environmental industry.

The information contained in this report was prepared based upon specific parameters and regulations in force at the time of this report. The information herein is only for the specific use of the client and CES. CES accepts no responsibility for the use, interpretation, or reliance by other parties on the information contained herein, unless written authorization has been obtained from CES.

10/31/2013

Feliks Kiselyuk — Date

Certified Lead Paint Inspector/Risk Assessor

10/31/2013

Michael J. Rattacasa — Date

Operations Director

# APPENDIX A

XRF Testing Results Table

**1108 Barnegat Avenue, Unit 3**
**Seaside Heights, New Jersey 08751**

| Reading # | Date | Location | Room ID | Wall/ Elevation | Component | Substrate | Condition | Pb | Pb +/- | Pass Fail Standard |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10/21/2013 | Unit 3 | Room 1 | Wall 1 | Door Frame | Wood | Good | 0 | 0 | Negative |
| 2 | 10/21/2013 | Unit 3 | Room 1 | Wall 1 | Door | Metal | Good | 0 | 0 | Negative |
| 3 | 10/21/2013 | Unit 3 | Room 1 | Wall 1 | Wall | Plaster/sheetrock | Poor | 0.01 | 0.02 | Negative |
| 4 | 10/21/2013 | Unit 3 | Room 1 | Wall 1 | Ceiling | Plaster/sheetrock | Poor | 0 | 0 | Negative |
| 5 | 10/21/2013 | Unit 3 | Room 1 | Wall 2 | Closet Wall | Plaster/sheetrock | Poor | 0 | 0 | Negative |
| 6 | 10/21/2013 | Unit 3 | Room 2 | Wall 1 | Ceiling | Plaster/sheetrock | Good | 0 | 0 | Negative |
| 7 | 10/21/2013 | Unit 3 | Room 2 | Wall 3 | Wall | Plaster/sheetrock | Poor | 0 | 0 | Negative |
| 8 | 10/21/2013 | Unit 3 | Room 3 | Wall 3 | Wall | Plaster/sheetrock | Poor | 0 | 0 | Negative |
| 9 | 10/21/2013 | Unit 3 | Room 3 | Wall 3 | Window Frame | Wood | Good | 0 | 0 | Negative |
| 10 | 10/21/2013 | Unit 3 | Room 3 | Wall 3 | Window Sill | Wood | Good | 0 | 0 | Negative |
| 11 | 10/21/2013 | Unit 3 | Room 3 | Wall 3 | Ceiling | Plaster/sheetrock | Good | 0 | 0 | Negative |
| 12 | 10/21/2013 | Unit 3 | Room 4 | Wall 1 | Wall | Plaster/sheetrock | Poor | 0 | 0 | Negative |
| 13 | 10/21/2013 | Unit 3 | Room 4 | Wall 1 | Ceiling | Plaster/sheetrock | Poor | 0 | 0 | Negative |
| 14 | 10/21/2013 | Unit 3 | Room 4 | Wall 4 | Window Frame | Wood | Good | 0 | 0 | Negative |
| 15 | 10/21/2013 | Unit 3 | Room 4 | Wall 4 | Window Sill | Wood | Good | 0 | 0.01 | Negative |
| 16 | 10/21/2013 | Unit 3 | Room 5 | Wall 1 | Ceiling | Plaster/sheetrock | Good | 0 | 0 | Negative |
| 17 | 10/21/2013 | Unit 3 | Room 5 | Wall 2 | Window Frame | Wood | Good | 0 | 0 | Negative |
| 18 | 10/21/2013 | Unit 3 | Room 5 | Wall 2 | Window Sill | Wood | Poor | 0 | 0 | Negative |
| 19 | 10/21/2013 | Unit 3 | Room 6 | Wall 1 | Ceiling | Plaster/sheetrock | Good | 0 | 0 | Negative |
| 20 | 10/21/2013 | Unit 3 | Room 6 | Wall 1 | Wall | Plaster/sheetrock | Poor | 0 | 0 | Negative |
| 21 | 10/21/2013 | Unit 3 | Exterior Facade | Wall 1 | Door Frame | Wood | Fair | 0 | 0 | Negative |
| 22 | 10/21/2013 | Unit 3 | Exterior Facade | Wall 1 | Door | Metal | Good | 0 | 0 | Negative |
| 23 | 10/21/2013 | Unit 3 | Exterior Facade | Wall 1 | Siding | vinyl | Good | 0 | 0 | Negative |
| 24 | 10/21/2013 | Unit 3 | Exterior Facade | Wall 1 | Window Frame | vinyl | Good | 0 | 0 | Negative |
| 25 | 10/21/2013 | Unit 3 | Exterior Facade | Wall 2 | Siding | vinyl | Good | 0 | 0 | Negative |
| 26 | 10/21/2013 | Unit 3 | Exterior Facade | Wall 3 | Siding | vinyl | Good | 0 | 0 | Negative |
| 27 | 10/21/2013 | Unit 3 | Exterior Facade | Wall 3 | Window Frame | vinyl | Good | 0 | 0 | Negative |

# APPENDIX B

Laboratory Analytical Results

031341171

**Creative Environment Solutions Corp.**
39 West 37th Street, 14th Floor, New York, NY 10018
Phone: 212.290.6323 Fax: 212.290.6325
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# SAMPLING CHAIN-OF-CUSTODY FORM PAGE (1 OF 1)

| Date Collected: | Project Name: | Client: |
|---|---|---|
| 10/21/13 | Gilbane - SRP#: 0037053-Unit 334 | Gilbane |
| **Collected by:** | **Project Location:** | **Project No.:** |
| Feliks Kiselyuk | 1108 Barnegat Ave, Seaside Heights, NJ | 13-07.339 |

**Task / Activity:** Background, Pre-Abatement/Clean-Up, During Abatement/Clean-Up, Post Abatement/Clean-Up, (Inspection), Repair/ Interim Control, Construction/Alteration/Demolition, Other:_____

**Matrix:** S = SOIL; L = LIQUID; A = AIR; SL = SLUDGE; W = WIPE; P = PAINT CHIPS; B = BULK MATERIAL

**Laboratory:** EMSL ELAP No. 11506
ELAP No.
ELAP No.

**Analysis Requested:** NIOSH 7400A
TEM (AHERA)
Other:
As Indicated

| Sample ID | Matrix | Flow Rate Start | Flow Rate Finish | Average Flow Rate | Time Start | Time Finish | Total Minutes | Total Volume | Sample Location / Description | Analysis Requested/Results: Lead | Asbestos PLM | Asbestos TEM | VOC | SVOC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L3-1 | W | | | | | | | | Room 1 - Window Sill | ✓ | | | | |
| L3-2 | W | | | | | | | | Room 3 - " " | ✓ | | | | |
| L3-3 | W | | | | | | | | Room 4 - " " | ✓ | | | | |
| L3-4 | W | | | | | | | | Room 5 - " " | ✓ | | | | |
| L3-5 | W | | | | | | | | Field Blank | ✓ | | | | |
| L4-1 | W | | | | | | | | Room 1 - Window Sill | ✓ | | | | |
| L4-2 | W | | | | | | | | Room 4 - " " | ✓ | | | | |
| L4-3 | W | | | | | | | | Room 5 - " " | ✓ | | | | |
| L4-4 | W | | | | | | | | Room 1 - Floor | ✓ | | | | |
| L4-5 | W | | | | | | | | Field Blank | ✓ | | | | |
| S34-1 | S | | | | | | | | Exterior - West Side | ✓ | | | | |
| S34-2 | S | | | | | | | | Exterior - North Side | ✓ | | | | |
| S34-3 | S | | | | | | | | Exterior - South Side | ✓ | | | | |

2013 OCT 21 PM 8:42
EMSL MANHATTAN LAB RECEIVED

**Turn-Around-Time:** Immediate, 4 Hr., 24 Hr., (48 Hr.), 72 Hr., 3-5 Days, 5-10 Days, Other

**Results to:** X Fax: 212-290-6325
X E-mail: [redacted]
Other: cescenter@aol.com

**Special Instructions:**

| Site | | Laboratory | |
|---|---|---|---|
| **Relinquished By** | **Delivery Method** | **Received By** | **Date** |
| Feliks Kiselyuk | Hand | | 10/21/13 8:42pm |

**EMSL Analytical, Inc.**
**307 West 38th Street, New York, NY 10018**
Phone/Fax: (212) 290-0051 / (212) 290-0058
http://www.EMSL.com manhattanlab@emsl.com

| | |
|---|---|
| EMSL Order: | 031341171 |
| CustomerID: | CES50 |
| CustomerPO: | |
| ProjectID: | |

Attn: **Creative Environment Solutions Corp.**
**39 West 37th Street**
**14th Floor**
**New York, NY 10018**

| | |
|---|---|
| Phone: | (212) 290-6323 |
| Fax: | (212) 290-6325 |
| Received: | 10/21/13 8:42 PM |
| Collected: | 10/21/2013 |

Project: **13-07.339/ GILBANE/ GILBANE SRP #0037053/ UNIT 3&4/ 1108 BARNEGAT AVE. SEASIDE HEIGHTS, NJ**

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

| *Client Sample Description* | *Lab ID* | *Collected* | *Analyzed* | *Lead* ***Concentration*** |
|---|---|---|---|---|
| S34-1 | *0011* | 10/21/2013 | 10/22/2013 | 310 mg/Kg |
| | Site: EXTERIOR/ WEST SIDE | | | |
| S34-2 | *0012* | 10/21/2013 | 10/22/2013 | 46 mg/Kg |
| | Site: EXTERIOR/ NORTH SIDE | | | |
| S34-3 | *0013* | 10/21/2013 | 10/22/2013 | 210 mg/Kg |
| | Site: EXTERIOR/ SOUTH SIDE | | | |

M. Apfeldorfer

Miron Apfeldorfer, Laboratory Manager
or other approved signatory

Reporting limit is 40 mg/kg based on the minimum sample weight per our SOP. The QC data associated with these sample results included in this report meet the method QC requirements, unless specifically indicated otherwise. 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. Results reported based on dry weight. *slight modification to methods applied. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request.

Samples analyzed by EMSL Analytical, Inc. New York, NY AIHA-LAP, LLC--ELLAP Accredited #102581, NYS ELAP 11506

Initial report from 10/22/2013 15:34:21

**EMSL Analytical, Inc.**
**307 West 38th Street, New York, NY 10018**
Phone/Fax: (212) 290-0051 / (212) 290-0058
http://www.EMSL.com manhattanlab@emsl.com

| | |
|---|---|
| EMSL Order: | 031341171 |
| CustomerID: | CES50 |
| CustomerPO: | |
| ProjectID: | |

Attn: **Creative Environment Solutions Corp.**
**39 West 37th Street**
**14th Floor**
**New York, NY 10018**

| | |
|---|---|
| Phone: | (212) 290-6323 |
| Fax: | (212) 290-6325 |
| Received: | 10/21/13 8:42 PM |
| Collected: | 10/21/2013 |

Project: **13-07.339/ GILBANE/ GILBANE SRP #0037053/ UNIT 3&4/ 1108 BARNEGAT AVE. SEASIDE HEIGHTS, NJ**

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

| *Client Sample Description* | *Lab ID* | *Collected* | *Analyzed* | *Area Sampled* | *Lead* **Concentration** |
|---|---|---|---|---|---|
| L3-1 | *0001* | 10/21/2013 | 10/22/2013 | n/a | <10 µg/wipe |
| Site: RM 1/ WINDOW SILL | | | | | |
| L3-2 | *0002* | 10/21/2013 | 10/22/2013 | n/a | <10 µg/wipe |
| Site: RM 3/ WINDOW SILL | | | | | |
| L3-3 | *0003* | 10/21/2013 | 10/22/2013 | n/a | <10 µg/wipe |
| Site: RM 4/ WINDOW SILL | | | | | |
| L3-4 | *0004* | 10/21/2013 | 10/22/2013 | n/a | <10 µg/wipe |
| Site: RM 5/ WINDOW SILL | | | | | |
| L3-5 | *0005* | 10/21/2013 | 10/22/2013 | n/a | <10 µg/wipe |
| Site: FIELD BLANK | | | | | |
| L4-1 | *0006* | 10/21/2013 | 10/22/2013 | n/a | <10 µg/wipe |
| Site: RM 1/ WINDOW SILL | | | | | |
| L4-2 | *0007* | 10/21/2013 | 10/22/2013 | n/a | <10 µg/wipe |
| Site: RM 4/ WINDOW SILL | | | | | |
| L4-3 | *0008* | 10/21/2013 | 10/22/2013 | n/a | 89 µg/wipe |
| Site: RM 5/ WINDOW SILL | | | | | |
| L4-4 | *0009* | 10/21/2013 | 10/22/2013 | n/a | 64 µg/wipe |
| Site: RM 1/ FLOOR | | | | | |
| L4-5 | *0010* | 10/21/2013 | 10/22/2013 | n/a | <10 µg/wipe |
| Site: FIELD BLANK | | | | | |

M. Apfeldorfer

Miron Apfeldorfer, Laboratory Manager
or other approved signatory

Reporting limit is 10 ug/wipe. The QC data associated with these sample results included in this report meet the method quality control requirements, unless specifically indicated otherwise. 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.

* slight modifications to methods applied Samples received in good condition unless otherwise noted. Quality Control Data associated with this sample set is within acceptable limits, unless otherwise noted
Samples analyzed by EMSL Analytical, Inc. New York, NY AIHA-LAP, LLC--ELLAP Accredited #102581, NYS ELAP 11506

Initial report from 10/22/2013 15:34:21

# APPENDIX C

Licenses and Certifications

# Performance Characteristic Sheet

**EFFECTIVE DATE:** **December 1, 2006** **EDITION NO.: 1**

**MANUFACTURER AND MODEL:**

Make: ***Innov-X Systems, Inc.***
Models: ***LBP4000 with software version 1.4 and higher***
Source: ***X-ray tube***

## FIELD OPERATION GUIDANCE

**OPERATING PARAMETERS:**

Inspection mode, variable reading time.

**XRF CALIBRATION CHECK LIMITS:**

| |
|---|
| 1.0 to 1.1 mg/cm$^2$ (inclusive) |

**SUBSTRATE CORRECTION:**

Not applicable

**INCONCLUSIVE RANGE OR THRESHOLD:**

| INSPECTION MODE READING DESCRIPTION | SUBSTRATE | INCONCLUSIVE RANGE (mg/cm$^2$) |
|---|---|---|
| Results not corrected for substrate bias on any substrate | Brick | 0.6 to 1.1 |
| | Concrete | 0.6 to 1.1 |
| | Drywall | 0.6 to 1.1 |
| | Metal | 0.6 to 1.1 |
| | Plaster | 0.6 to 1.1 |
| | Wood | 0.6 to 1.1 |

INNOV-X SYSTEMS
Innovative XRF Technologies

# Certificate of Calibration

Certification No: 0111628-1

**Date Calibrated:** April 16, 2010

**Instrument No:** 11628

**Type:** I–3000

**This instrument was calibrated according to Innov-X Systems in-house calibration procedure. The calibration was verified using Alloy Certified Reference Materials produced by Analytical Reference Materials International (ARMI) and calibration was verified using Soil Certified Reference Materials produced by National Institute of Standards and Technology (NIST)**

**This instrument conforms to Innov-X Systems Quality Assurance standards.**

Test Technician

Q.A.

**The Netherlands**
(P) +31 (0) 7362 72590
(F) +31 (0) 7362 72599

**Hong Kong**
(P) +852 2 515 0999
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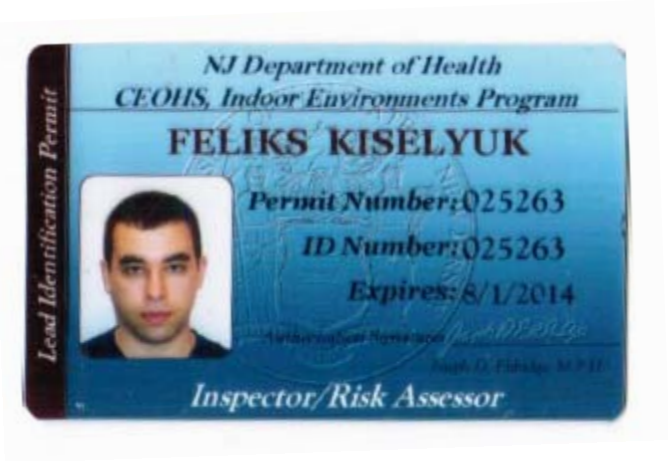
**Worldwide Headquarters**
100 Sylvan Road, Suite 100, Woburn, MA 01801
(781) 938-5005 Fax: (781) 938-0128
www.innovxsys.com

WBE Certified
www.CEScenter.com

# Creative Environment Solutions Corp.

39 West 37th Street, 14th Floor, New York, NY 10018
Phone: 212.290.6323 Fax: 212.290.6325
LICENSED & APPROVED by NYS DOH/DOL/DOS, NYC DOB/DEP, FDNY, PIE



# LEAD HAZARD EVALUATION NOTICE

Address: 1108 Barnegat Avenue, Unit #4, Seaside Heights, New Jersey 0875_

_____

Evaluation Completed (circle one): Paint Inspection Paint Testing Risk Assessment

Date: __10/21/13___

Summary of Results:

____ No lead-based paint or lead-based paint hazards were found.

_X_ Lead-based paint and/or lead-based paint hazards were found. See attachment for details

Contact person for more information about the risk evaluation:

Printed name: _Feliks Kiselyuk_____
Signature: _____
Date: _10/31/13_____
Organization: _Sky Environmental Services, Inc.__
Street: _140 Boulevard_____
City & State _Mountain Lakes, New Jersey_____
Zip _07046_____
Phone #: _201-679-2250_____

Person who prepared this notice:

Printed name: ___Michael Rattacasa_____
Signature: ___[signature]_____
Date: __10/30/13_____
Organization: Creative Environment Solutions Corp.
Street: __39 West 37th Street, 14th Fl._____
City & State __New York, New York,_____
Zip __10018_____
Phone #: __212-290-6323_____

| Contaminated Soil | | |
|---|---|---|
| **Area** | **mg/g (ppm)** | **Location** |
| _X_ None | | |
| ___ Perimeter | ___ mg/g (ppm) | |
| ___ Play Area | ___ mg/g (ppm) | |
| ___ Other | ___ mg/g (ppm) | |

| Contaminated Dust | | |
|---|---|---|
| **Area** | **µg/SF** | **Location** |
| ___ None | | |
| ___ Windowsill | ___ µg/SF | |
| _X_ Floor | _64 µg/SF | Room One |
| ___ Other | ___ µg/SF | |
| ___ Other | ___ µg/SF | |

| Other Hazards | | | | |
|---|---|---|---|---|
| **Component*** | **Location** | **Condition (good, fair, poor)** | **Friction or Impact Surface?** | **Lead Content (if known)** |
| 1. | | | | ___ mg/cm² (ppm) |
| 2. | | | | ___ mg/cm² (ppm) |
| 3. | | | | ___ mg/cm² (ppm) |
| 4. | | | | ___ mg/cm² (ppm) |
| 5. | | | | ___ mg/cm² (ppm) |
| 6. | | | | ___ mg/cm² (ppm) |
| 7. | | | | ___ mg/cm² (ppm) |
| 8. | | | | ___ mg/cm² (ppm) |
| 9. | | | | ___ mg/cm² (ppm) |
| 10. | | | | ___ mg/cm² (ppm) |
| 11. | | | | ___ mg/cm² (ppm) |
| 12. | | | | ___ mg/cm² (ppm) |
| 13. | | | | ___ mg/cm² (ppm) |
| 14. | | | | ___ mg/cm² (ppm) |

***** Components include but are not limited to (interior and exterior) windows, doors, trim, fences, porches, walls and floors.

WBE Certified
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**Creative Environment Solutions Corp.**
39 West 37th Street, 14th Floor, New York, NY 10018
Phone: 212.290.6323 Fax: 212.290.6325
LICENSED & APPROVED by NYS DOH/DOL/DOS, NYC DOB/DEP, FDNY, PIE

# LIMITED LEAD-BASED PAINT RISK ASSESSMENT REPORT

Site Location:

**1108 Barnegat Avenue**
**Unit #4**
**Seaside Heights, New Jersey 08751**
**SRP0037053**

Prepared for:

**Gilbane Building Company**
**New Jersey LLRP Program**
3150 Brunswick Pike, Suite 300
Lawrenceville, New Jersey 08648

Prepared by:

**Creative Environment Solutions Corp.**
39 West 37th Street, 14th Floor
New York, New York 10018

October 31, 2013

**EXECUTIVE SUMMARY**

Creative Environment Solutions Corp. (CES) was retained by Gilbane Building Company; located at, 3150 Brunswick Pike, Suite 300, Lawrenceville, New Jersey 08648, to perform a limited Risk Assessment for Lead-Based Paint (LBP) at the Private Residence; located at, 1108 Barnegat Avenue, Unit #4, Seaside Heights, New Jersey 08751. The inspection was conducted in conjunction with the residence's participation in the New Jersey Landlord Repair Program (LLRP).

CES' New Jersey Department of Health and Senior Services certified Lead Paint Inspector/Risk Assessor, Feliks Kiselyuk, performed a LBP Risk Assessment at the above-referenced location. The inspection was conducted to identify the presence of any LBP and/or lead hazards located within the aforementioned interior and/or exterior of the residence. Mr. Kiselyuk utilized an [Innov-X System Alpha Series X-Ray Fluorescence Spectrometer] (XRF) to determine the presence or absence of lead in paint.

The analytical results from this Assessment effort identified the following lead-based paint (LBP) and Lead hazards, as defined by the United States Environmental Protection Agency (USEPA) and/or the department of Housing and Urban Development (HUD) standards:

Interior LBP

• No LBP was identified on the interior.

Exterior LBP

• No LBP was identified on the exterior.

Existing Lead-Based Paint Hazards and Potential Lead Hazards

There were no areas coated with Lead-Based Paint (LBP) that is deteriorated and currently present existing lead-based paint hazards. All component substrates are wood.

Dust hazards were identified within the Room One's floor..

No soil lead hazards were identified.

There were no areas coated with LBP that is intact and that do not currently present lead hazards. However, the upcoming renovation plans include work inside the house and scraping and repainting the exterior. If these renovations occur, lead-safe work practices will need to be implemented during the project to ensure that lead hazards are not created.

Future renovations plans were not provided to CES at the time of the inspection.

Please refer to the enclosed for further inspection details, XRF results and/or laboratory analytical results.

Please refer to Table I for a full summary of inspection results.

**IDENTIFYING INFORMATION**

A Lead Hazard Risk Assessment and Limited LBP Testing (Assessment) was conducted at 1108 Barnegat Avenue, Unit #4, Seaside Heights, New Jersey 08751 on October 7, 2013. The Assessment was conducted by Feliks Kiselyuk, (025263). The purpose of the Assessment was to identify the presence of lead hazards on and/or in a limited number of surfaces inside and outside the residence, as well as to identify the presence of deteriorated lead-based paint (LBP) and LBP that may be disturbed during planned renovation and/or restoration activities.

**PROPERTY RENOVATION AND REPAIR HISTORY**

Historic renovation and repair history for the subject property were not provided to CES at the time of the assessment.

**PREVIOUS SAMPLING AND TESTING**

Records regarding previous lead sampling and/or testing at the subject property were not provided to CES at the time of the assessment.

**IDENTIFIED LEAD HAZARDS**

The subject property was impacted by Hurricane Sandy; therefore, all materials coated with LBP have the potential to be impacted by future renovation and/or restoration activities.

**Existing Lead Hazards**

The following areas are coated with Lead-Based Paint (LBP) that is *deteriorated* and currently present existing lead-based paint hazards.

No areas were identified

**Potential Lead Hazards**

The following areas are coated with LBP that is intact and that do not currently present lead hazards. However, the upcoming renovation plans include work inside the house and scraping and repainting the exterior. If these renovations occur, lead-safe work practices will need to be implemented during the project to ensure that lead hazards are not created.

No areas were identified.

Please refer to the enclosed for further inspection details, XRF results and/or laboratory analytical results.

**PAINT SAMPLING AND TESTING**

Limited LBP Testing, conforming with HUD Guidelines 24 CFR 35 Section 35.930 (c), (d) was accomplished at this residence on surfaces found to have deteriorated paint and/or where it was indicated to the Assessor that planned renovation would occur. No paint chip samples were taken. On October 21, 2013, a total of twenty five (25) tests (assays) were taken at a limited number of specified surfaces on the inside and outside of the residence using an XRF analyzer. Deteriorated paint and areas that were specified to be disturbed during the planned renovation project were tested. Lead concentrations that meet or exceed the HUD published levels identified as being potentially dangerous (e. g., greater than or equal to 1.1 milligrams per centimeter square [> 1.1 mg/cm2]) were not encountered.

It should be noted that lead concentrations (in paint) that are less than the levels that identify a surface coating as LBP still have the potential of causing lead poisoning. Should these or any potential LBP painted components and/or surfaces be disturbed in any manner that generates dust, extreme care must be taken to limit its spread. It should be assumed that any and all painted surfaces, components, or surfaces not requested to be tested as part of this investigation, or any previous investigations, are coated with LBP, and that renovation or repair activities in these areas dictate the use of safe work practices that limit dust generation and area contamination.

**INTERIOR DUST SAMPLING**

A total of five (5) single surface dust wipe samples were collected in an effort to help to determine the levels of lead-containing dust on the interior windowsills and floors. These samples were collected from areas most likely to be lead contaminated if lead-in-dust is present. These samples were collected in accordance with the requirements of ASTM Standard E-1728, Standard Practice for Field Collection of Settled Dust Samples Using Wipe Sampling Methods for Lead Determination by Atomic Spectrometry Techniques. USEPA and HUD regulations define the following as dangerous levels for lead dust in residences: floors – ≥40 µg/ft2 (micrograms per square foot); interior windowsills – ≥250 µg/ft2; and, interior window troughs – ≥400 µg/ft2. Please refer to **Appendix B – Laboratory Analytical Results** for the detailed information regarding dust sampling results. According to the laboratory analytical results, one (1) of the five (5) samples collected exhibited lead concentrations in excess of the aforementioned regulatory thresholds. This sample was obtained from Room one's floor and constitutes a dust-lead hazard in that room.

**SOIL SAMPLING AND LABORATORY INFORMATION**

Three (3) composite soil samples were collected at this residence in accordance with the requirements of ASTM Standard E-1727, Standard Practice for Field Collection of Soil Samples for Lead Determination by Atomic Spectrometry Techniques. A Composite sample is a sample containing soil from a stated number of locations mixed together to form a Composite sample. The first sample consisted of soil from four locations on the west side at 1' on center (O.C.). The second sample was collected from four separate locations on the north side at 1' O.C. The third sample was collected from four separate locations on the south side at 1' O.C. The samples were collected from bare soil areas only. The analytical results did not identify lead concentrations at or above the levels that the USEPA and HUD identifies as dangerous. Please refer to Appendix B – Laboratory Analytical Results for the detailed information regarding soil sampling results.

**ONGOING MONITORING**

Ongoing monitoring is necessary in all dwellings in which LBP is known or assumed to be present. At these dwellings, the very real potential exists for LBP hazards to develop. Hazards can develop by means such as, but not limited to: the failure of lead hazard control measures; previously intact LBP becoming deteriorated; dangerous levels of lead-in-dust (dust lead) re-accumulating through friction, impact, and deterioration of paint; or, through the introduction of contaminated exterior dust and soil into the interior of the structure. Ongoing monitoring typically includes two different activities: re-evaluation and annual visual surveys. A re-evaluation is a risk assessment that includes limited soil and dust sampling and a visual evaluation of paint films and any existing lead hazard controls. Re-evaluations are supplemented with visual surveys by the Owner, which should be conducted at least once a year. Owner conducted visual surveys do not replace the need for professional re-evaluations. Visual surveys should confirm that all Paint with known or suspected LBP are not deteriorating, that lead hazard control methods have not failed, and that structural problems do not threaten the integrity of any remaining known, assumed or suspected LBP. The partial table below is taken from Table 6.1, Standard Re-evaluation Schedules, as found in the HUD publication entitled: Guidelines for the Evaluation and Control of LBP Hazards in Housing, dated June 1995, with September 1997 revisions. It is intended as a guideline for the Owner to assess the condition of areas where hazard control activities occurred.

Factors at this residence require the use of Ongoing Monitoring Schedule item number three (3), to dictate monitoring protocol. Visual surveys by the Owner should occur on at least a yearly basis for all painted surfaces. All surfaces that have undergone the hazard control strategy of Interim Controls, Encapsulation or Enclosure should also be checked during this survey. If components are replaced (windows), no re-evaluation or visual survey would be needed, since the LBP would have been removed with the old windows. Please refer to your community development agency, housing authority, or other applicable agency for additional local/regional regulations and guidelines governing re-evaluation activities.

**Standard Re-evaluation Schedule**

| Schedule | Original Evaluation Results | Action taken | Re-evaluation Frequency & Duration | Visual Survey Schedule |
|---|---|---|---|---|
| 3 | The average of leaded dust levels on all floors, interior windows, or window troughs sampled exceeds the applicable standard, but by less than a factor of 10. | A. Interim controls and/or hazard abatement (or mixture of the two), including, but not necessarily limited to, dust removal. This schedule does not include window replacement. | 1-2 Years | Annually and whenever information indicates a possible problem except for encapsulants. The first visual survey of encapsulants should be done one month after clearance; the second should be done 6 months later and annually thereafter. |
| | | B. Treatments specified in section A plus replacement of all windows with lead hazards. | 1 Year | |
| | | C. Abatement of all lead-based paint using encapsulation or enclosure. | None. | Same as above |
| | | D. Removal of all lead-based paint. | None. | None |

**DISCLOSURE REGULATIONS**

A copy of this complete report must be made available to new lessees (tenants) and/or must be provided to purchasers of this property under Federal law before they become obligated under any future lease or sales contract transactions (Section 1018 of Title X – found in 24 CFR Part 35 and 40 CFR Part 745), until the demolition of this property. Landlords (Lessors) and/or sellers are also required to distribute an educational pamphlet developed by the EPA entitled "Protect Your Family From Lead in Your Home" and include standard warning language in their leases or sales contracts to ensure that parents have the information they need to protect their children from LBP hazards.

**FUTURE RENOVATION AND/OR REHABILITATION PRECAUTIONS**

It should be noted that during this Assessment, a limited number of areas were tested for the presence of LBP. All LBP, dust, and soil hazards that were identified are addressed in this report. However, LBP, dust lead hazards, and/or soil lead hazards may be present at other locations of the property. Additional paint testing should precede any future remodeling activities that occur at any untested areas. Additional dust and/or soil sample collection and analysis should follow any hazard control activity, repair, remodeling, or renovation effort, and any other work efforts that may in any way disturb LBP and/or any lead containing materials. These Assessment activities will help the Client and owner to ensure the health and safety of the occupants and the neighborhood. Details concerning lead safe work techniques and approved hazard control methods can be found in the HUD publication entitled: "Guidelnes for the Evaluation and Control of LBP Hazards in Housing" (June 1995 & 1997 Revision).

**LEAD HAZARD CONTROL OPTIONS AND COST ESTIMATES**

Lead-safe work practices and worker/occupant protection practices complying with current EPA, HUD and OSHA standards will be necessary to safely complete all work involving the disturbance of LBP coated surfaces and components. In addition, any work considered Lead hazard control will enlist the use of interim control (temporary) methods and/or abatement (permanent) methods. It should be noted that all lead hazard control activities have the potential of creating additional hazards, or even creating hazards that were not present before. All persons and/or firms performing lead hazard control activities must have received proper training in Lead-Safe Work Practices and/or Lead Abatement. Details for the listed lead hazard control options and issues surrounding occupant/worker protection practices can be found in the publication entitled: Guidelines for the Evaluation and Control of LBP Hazards in Housing (June 1995 & 1997 Revision) published by the HUD, as well as in the Occupational Safety and Health Administration (OSHA) regulations found in 29 CFR, Part 1926.62, known as the OSHA Lead Exposure in Construction Industry Standard.

The associated cost estimates, unless otherwise noted, include the labor and materials to accomplish the stated activity and most additional funds typically found to be necessary to complete worker protection, site containment, and cleanup procedures. These are approximate estimates only and due to a variety of potential factors, may not accurately reflect all local cost factors. A precise estimate must be obtained from a certified LBP abatement contractor or a contractor trained in lead safe work practices. Properly trained and/or licensed persons, as well as properly licensed firms (as mandated) should accomplish all abatement/interim control activities conducted at this residence.

Interim controls, as defined by HUD, means a set of measures designed to temporarily reduce human exposure to LBP hazards and/or lead containing materials. These activities include, but are not limited to: component and/or substrate repairs; paint and varnish repairs; the removal of dust-lead hazards; renovation; remodeling; maintenance; temporary containment; placement of seed, sod or other forms of vegetation over bare soil areas; the placement of at least 6 inches of an appropriate mulch material over an impervious material, laid on top of bare soil areas; the tilling of bare soil areas; extensive and specialized cleaning; and, ongoing LBP maintenance activities.

Abatement, as defined by HUD, means any set of measures designed to permanently eliminate LBP and/or LBP hazards. The product manufacturer and/or contractor must warrant abatement methods to last a minimum of twenty (20) years, or these methods must have a design life of at least twenty (20) years. These activities include, but are not necessarily limited to: the removal of LBP from substrates and components; the replacement of components or fixtures with lead containing materials and/or lead containing paint; the permanent enclosure of LBP with construction materials; the encapsulation of LBP with approved products; the removal or permanent covering (concrete or asphalt) of soil-lead hazards; and, extensive and specialized cleaning activities.

**Special Cleaning Preceding Lead Hazard Control Activities**

Before any lead hazard control activities begin, the structure and site must be inspected and pre-cleaned following HUD specified cleaning protocols, as detailed in the Guidelines for the Evaluation and Control of LBP Hazards in Housing (June 1995 & 1997 Revision), published by the U.S. Department of Housing and Urban Development. Some of the required steps include removing large debris and paint chips followed by HEPA vacuuming of all horizontal surfaces (floors, windowsills, troughs, etc.). The cleaning protocols described in this publication can assist the contractor in doing a preliminary cleaning and improving the chances of passing clearance inspections after remediation.

**Table II: Lead in Dust/Soil Contamination Cost Estimate**

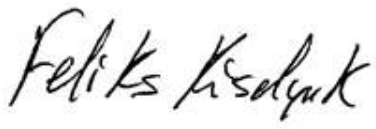
| Line Items | Material(s) | Cost Estimate |
|---|---|---|
| 1 | Room One Floor | $1,900.00 |

*The aforereferenced cost estimate assumes all abatement activities are conducted by Union Labor. Additionally the cost estimate assumes that the residency achieves regulatory compliance following one(1) contamination clean-up.

**LIMITATIONS AND CONDITIONS**

CES has performed the tasks set forth above in a thorough and professional manner consistent with industry standards. CES cannot guarantee and does not warrant that this limited assessment has revealed all adverse environmental conditions affecting the site. Nor can CES warrant that the assessment requested will satisfy the dictates of, or provide a legal defense in connection with, environmental laws or regulations. The observations and findings were representative of the conditions from the site on the date of inspection. Often materials are located in confined or inaccessible locations with little or no visible manifestation of their presence. These materials may be found in various areas under existing flooring materials, above ceilings, behind walls, materials within fixtures, electrical wire casing, or buried pipes and wires. Due to the potential for hidden materials to be present, it may not be possible to determine if all suspect building materials have been identified, located, and subsequently tested. Destructive measures to access these and other potentially hidden materials were not employed by CES as part of this project. However, CES does warrant that its investigations and methodology reflect our best efforts based upon prevailing standard of care in the environmental industry.

The information contained in this report was prepared based upon specific parameters and regulations in force at the time of this report. The information herein is only for the specific use of the client and CES. CES accepts no responsibility for the use, interpretation, or reliance by other parties on the information contained herein, unless written authorization has been obtained from CES.



10/31/2013

Feliks Kiselyuk — Date
Certified Lead Paint Inspector/Risk Assessor

10/31/2013

Michael J. Rattacasa — Date
Operations Director

# APPENDIX A

XRF Testing Results Table

**1108 Barnegat Avenue, Unit 4**
**Seaside Heights, New Jersey 08751**

| Reading # | Date | Location | Room ID | Wall/ Elevation | Component | Substrate | Condition | Pb | Pass Fail Standard |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 10/21/2013 | Unit 4 | Room 1 | Wall 1 | Door Frame | Wood | Good | 0 | Negative |
| 2 | 10/21/2013 | Unit 4 | Room 1 | Wall 1 | Door | Metal | Good | 0 | Negative |
| 3 | 10/21/2013 | Unit 4 | Room 1 | Wall 1 | Wall | Plaster/sheetrock | Poor | 0 | Negative |
| 4 | 10/21/2013 | Unit 4 | Room 1 | Wall 1 | Ceiling | Plaster/sheetrock | Good | 0 | Negative |
| 5 | 10/21/2013 | Unit 4 | Room 1 | Wall 1 | Window Frame | Wood | Good | 0 | Negative |
| 6 | 10/21/2013 | Unit 4 | Room 1 | Wall 1 | Window Sill | Wood | Poor | 0 | Negative |
| 7 | 10/21/2013 | Unit 4 | Room 2 | Wall 1 | Wall | Plaster/sheetrock | Poor | 0 | Negative |
| 8 | 10/21/2013 | Unit 4 | Room 2 | Wall 1 | Ceiling | Plaster/sheetrock | Good | 0 | Negative |
| 9 | 10/21/2013 | Unit 4 | Room 3 | Wall 1 | Ceiling | Plaster/sheetrock | Good | 0 | Negative |
| 10 | 10/21/2013 | Unit 4 | Room 4 | Wall 1 | Ceiling | Plaster/sheetrock | Good | 0 | Negative |
| 11 | 10/21/2013 | Unit 4 | Room 4 | Wall 3 | Wall | Plaster/sheetrock | Poor | 0 | Negative |
| 12 | 10/21/2013 | Unit 4 | Room 5 | Wall 1 | Wall | Plaster/sheetrock | Poor | 0 | Negative |
| 13 | 10/21/2013 | Unit 4 | Room 5 | Wall 1 | Ceiling | Plaster/sheetrock | Poor | 0 | Negative |
| 14 | 10/21/2013 | Unit 4 | Room 5 | Wall 1 | Door | Metal | Poor | 0 | Negative |
| 15 | 10/21/2013 | Unit 4 | Room 5 | Wall 1 | Door Frame | Wood | Poor | 0 | Negative |
| 16 | 10/21/2013 | Unit 4 | Exterior Facade | Wall 1 | Door Frame | Wood | Poor | 0 | Negative |
| 17 | 10/21/2013 | Unit 4 | Exterior Facade | Wall 1 | Door | Metal | Poor | 0 | Negative |
| 18 | 10/21/2013 | Unit 4 | Exterior Facade | Wall 1 | Siding | vinyl | Good | 0 | Negative |
| 19 | 10/21/2013 | Unit 4 | Exterior Facade | Wall 1 | Window Frame | vinyl | Good | 0 | Negative |
| 20 | 10/21/2013 | Unit 4 | Exterior Facade | Wall 3 | Siding | vinyl | Good | 0 | Negative |
| 21 | 10/21/2013 | Unit 4 | Exterior Facade | Wall 4 | Siding | vinyl | Good | 0 | Negative |
| 22 | 10/21/2013 | Unit 4 | Exterior Facade | Wall 4 | Window Frame | vinyl | Good | 0 | Negative |
| 23 | 10/21/2013 | | Calibration | Wall 1 | Wall | Plaster/sheetrock | Good | 0 | Negative |
| 24 | 10/21/2013 | | Calibration | Wall 1 | Wall | Plaster/sheetrock | Good | 0 | Negative |
| 25 | 10/21/2013 | | Calibration | Wall 1 | Wall | Plaster/sheetrock | Good | 0 | Negative |

# APPENDIX B

Laboratory Analytical Results

031341171

**Creative Environment Solutions Corp.**
39 West 37th Street, 14th Floor, New York, NY 10018
Phone: 212.290.6323 Fax: 212.290.6325
WBE Certified
www.CEScenter.com
LICENSED & APPROVED by NYS DOH/DOL/DOS, NYC DOB/DEP, FDNY, PIE

# SAMPLING CHAIN-OF-CUSTODY FORM PAGE (1 OF 1)

| Date Collected: | Project Name: | Client: |
|---|---|---|
| 10/21/13 | Gilbane - SRP#: 0037053-Unit 334 | Gilbane |
| **Collected by:** | **Project Location:** | **Project No.:** |
| Feliks Kiselyuk | 1108 Barnegat Ave, Seaside Heights, NJ | 13-07.339 |

**Task / Activity:** Background, Pre-Abatement/Clean-Up, During Abatement/Clean-Up, Post Abatement/Clean-Up, (Inspection), Repair/ Interim Control, Construction/Alteration/Demolition, Other:_____

**Matrix:** S = SOIL; L = LIQUID; A = AIR; SL = SLUDGE; W = WIPE; P = PAINT CHIPS; B = BULK MATERIAL

**Laboratory:** EMSL ELAP No. 11506
ELAP No.
ELAP No.

**Analysis Requested:** NIOSH 7400A
TEM (AHERA)
Other:
As Indicated

| Sample ID | Matrix | Flow Rate Start | Flow Rate Finish | Average Flow Rate | Time Start | Time Finish | Total Minutes | Total Volume | Sample Location / Description | Analysis Requested/Results: Lead | Asbestos PLM | Asbestos TEM | VOC | SVOC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L3-1 | W | | | | | | | | Room 1 - Window Sill | ✓ | | | | |
| L3-2 | W | | | | | | | | Room 3 - " " | ✓ | | | | |
| L3-3 | W | | | | | | | | Room 4 - " " | ✓ | | | | |
| L3-4 | W | | | | | | | | Room 5 - " " | ✓ | | | | |
| L3-5 | W | | | | | | | | Field Blank | ✓ | | | | |
| L4-1 | W | | | | | | | | Room 1 - Window Sill | ✓ | | | | |
| L4-2 | W | | | | | | | | Room 4 - " " | ✓ | | | | |
| L4-3 | W | | | | | | | | Room 5 - " " | ✓ | | | | |
| L4-4 | W | | | | | | | | Room 1 - Floor | ✓ | | | | |
| L4-5 | W | | | | | | | | Field Blank | ✓ | | | | |
| S34-1 | S | | | | | | | | Exterior - West Side | ✓ | | | | |
| S34-2 | S | | | | | | | | Exterior - North Side | ✓ | | | | |
| S34-3 | S | | | | | | | | Exterior - South Side | ✓ | | | | |

2013 OCT 21 PM 8:42
EMSL MANHATTAN LAB RECEIVED

**Turn-Around-Time:** Immediate, 4 Hr., 24 Hr., (48 Hr.), 72 Hr., 3-5 Days, 5-10 Days, Other

**Results to:** X Fax: 212-290-6325
X E-mail: [redacted]
Other: cescenter@aol.com

**Special Instructions:**

| Site | | Laboratory | |
|---|---|---|---|
| **Relinquished By** | **Delivery Method** | **Received By** | **Date** |
| Feliks Kiselyuk | Hand | | 10/21/13 8:42pm |

**EMSL Analytical, Inc.**
**307 West 38th Street, New York, NY 10018**
Phone/Fax: (212) 290-0051 / (212) 290-0058
http://www.EMSL.com manhattanlab@emsl.com

| | |
|---|---|
| EMSL Order: | 031341171 |
| CustomerID: | CES50 |
| CustomerPO: | |
| ProjectID: | |

Attn: **Creative Environment Solutions Corp.**
**39 West 37th Street**
**14th Floor**
**New York, NY 10018**

| | |
|---|---|
| Phone: | (212) 290-6323 |
| Fax: | (212) 290-6325 |
| Received: | 10/21/13 8:42 PM |
| Collected: | 10/21/2013 |

Project: **13-07.339/ GILBANE/ GILBANE SRP #0037053/ UNIT 3&4/ 1108 BARNEGAT AVE. SEASIDE HEIGHTS, NJ**

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

| *Client Sample Description* | *Lab ID* | *Collected* | *Analyzed* | *Lead* ***Concentration*** |
|---|---|---|---|---|
| S34-1 | *0011* | 10/21/2013 | 10/22/2013 | 310 mg/Kg |
| | Site: EXTERIOR/ WEST SIDE | | | |
| S34-2 | *0012* | 10/21/2013 | 10/22/2013 | 46 mg/Kg |
| | Site: EXTERIOR/ NORTH SIDE | | | |
| S34-3 | *0013* | 10/21/2013 | 10/22/2013 | 210 mg/Kg |
| | Site: EXTERIOR/ SOUTH SIDE | | | |

M. Apfeldorfer

Miron Apfeldorfer, Laboratory Manager
or other approved signatory

Reporting limit is 40 mg/kg based on the minimum sample weight per our SOP. The QC data associated with these sample results included in this report meet the method QC requirements, unless specifically indicated otherwise. 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. Results reported based on dry weight. *slight modification to methods applied. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request.

Samples analyzed by EMSL Analytical, Inc. New York, NY AIHA-LAP, LLC--ELLAP Accredited #102581, NYS ELAP 11506

Initial report from 10/22/2013 15:34:21

**EMSL Analytical, Inc.**
**307 West 38th Street, New York, NY 10018**
Phone/Fax: (212) 290-0051 / (212) 290-0058
http://www.EMSL.com manhattanlab@emsl.com

| | |
|---|---|
| EMSL Order: | 031341171 |
| CustomerID: | CES50 |
| CustomerPO: | |
| ProjectID: | |

Attn: **Creative Environment Solutions Corp.**
**39 West 37th Street**
**14th Floor**
**New York, NY 10018**

| | |
|---|---|
| Phone: | (212) 290-6323 |
| Fax: | (212) 290-6325 |
| Received: | 10/21/13 8:42 PM |
| Collected: | 10/21/2013 |

Project: **13-07.339/ GILBANE/ GILBANE SRP #0037053/ UNIT 3&4/ 1108 BARNEGAT AVE. SEASIDE HEIGHTS, NJ**

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

| *Client Sample Description* | *Lab ID* | *Collected* | *Analyzed* | *Area Sampled* | *Lead* **Concentration** |
|---|---|---|---|---|---|
| L3-1 | *0001* | 10/21/2013 | 10/22/2013 | n/a | <10 µg/wipe |
| Site: RM 1/ WINDOW SILL | | | | | |
| L3-2 | *0002* | 10/21/2013 | 10/22/2013 | n/a | <10 µg/wipe |
| Site: RM 3/ WINDOW SILL | | | | | |
| L3-3 | *0003* | 10/21/2013 | 10/22/2013 | n/a | <10 µg/wipe |
| Site: RM 4/ WINDOW SILL | | | | | |
| L3-4 | *0004* | 10/21/2013 | 10/22/2013 | n/a | <10 µg/wipe |
| Site: RM 5/ WINDOW SILL | | | | | |
| L3-5 | *0005* | 10/21/2013 | 10/22/2013 | n/a | <10 µg/wipe |
| Site: FIELD BLANK | | | | | |
| L4-1 | *0006* | 10/21/2013 | 10/22/2013 | n/a | <10 µg/wipe |
| Site: RM 1/ WINDOW SILL | | | | | |
| L4-2 | *0007* | 10/21/2013 | 10/22/2013 | n/a | <10 µg/wipe |
| Site: RM 4/ WINDOW SILL | | | | | |
| L4-3 | *0008* | 10/21/2013 | 10/22/2013 | n/a | 89 µg/wipe |
| Site: RM 5/ WINDOW SILL | | | | | |
| L4-4 | *0009* | 10/21/2013 | 10/22/2013 | n/a | 64 µg/wipe |
| Site: RM 1/ FLOOR | | | | | |
| L4-5 | *0010* | 10/21/2013 | 10/22/2013 | n/a | <10 µg/wipe |
| Site: FIELD BLANK | | | | | |

M. Apfeldorfer

Miron Apfeldorfer, Laboratory Manager
or other approved signatory

Reporting limit is 10 ug/wipe. The QC data associated with these sample results included in this report meet the method quality control requirements, unless specifically indicated otherwise. 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.

* slight modifications to methods applied Samples received in good condition unless otherwise noted. Quality Control Data associated with this sample set is within acceptable limits, unless otherwise noted
Samples analyzed by EMSL Analytical, Inc. New York, NY AIHA-LAP, LLC--ELLAP Accredited #102581, NYS ELAP 11506

Initial report from 10/22/2013 15:34:21

# APPENDIX C

Licenses and Certifications

# Performance Characteristic Sheet

**EFFECTIVE DATE:** **December 1, 2006** **EDITION NO.: 1**

**MANUFACTURER AND MODEL:**

Make: ***Innov-X Systems, Inc.***
Models: ***LBP4000 with software version 1.4 and higher***
Source: ***X-ray tube***

## FIELD OPERATION GUIDANCE

**OPERATING PARAMETERS:**

Inspection mode, variable reading time.

**XRF CALIBRATION CHECK LIMITS:**

| |
|---|
| 1.0 to 1.1 mg/cm$^2$ (inclusive) |

**SUBSTRATE CORRECTION:**

Not applicable

**INCONCLUSIVE RANGE OR THRESHOLD:**

| INSPECTION MODE READING DESCRIPTION | SUBSTRATE | INCONCLUSIVE RANGE (mg/cm$^2$) |
|---|---|---|
| Results not corrected for substrate bias on any substrate | Brick | 0.6 to 1.1 |
| | Concrete | 0.6 to 1.1 |
| | Drywall | 0.6 to 1.1 |
| | Metal | 0.6 to 1.1 |
| | Plaster | 0.6 to 1.1 |
| | Wood | 0.6 to 1.1 |

INNOV-X SYSTEMS
Innovative XRF Technologies

# Certificate of Calibration

Certification No: 0111628-1

**Date Calibrated:** April 16, 2010

**Instrument No:** 11628

**Type:** I–3000

**This instrument was calibrated according to Innov-X Systems in-house calibration procedure. The calibration was verified using Alloy Certified Reference Materials produced by Analytical Reference Materials International (ARMI) and calibration was verified using Soil Certified Reference Materials produced by National Institute of Standards and Technology (NIST)**

**This instrument conforms to Innov-X Systems Quality Assurance standards.**

Test Technician

Q.A.

**The Netherlands**
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