



United States Coast Guard
Housing Units in Barnegat Light, New Jersey
LBP Inspection and Risk Assessment Report

FINAL Lead-Based Paint Inspection and Risk Assessment Report

**U.S. Coast Guard Housing Units
20 West 6th Street and 601 Bayview Avenue
Barnegat Light, New Jersey 08006**

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1.0 INTRODUCTION

Prior to the late 1970s many paints contained lead. When these paints become damaged, i.e., peeling or flaking, or the painted surface is renovated or demolished, lead can be released into the environment constituting an environmental and worker health hazard. Depending on the age of structures, lead-based paint (LBP) may potentially exist, either exposed or covered over with other paints or materials as a result of subsequent renovation. Flaking or peeling paint that could be lead-based should be removed or encapsulated appropriately.

Federal law, 20 CFR Part 35 and 40 CFR Part 745, requires sellers or lessors of residential units constructed prior to 1978, except housing for the elderly or persons with disabilities (unless any child who is less than six years of age resides or is expected to reside in such housing) or any zero-bedroom dwelling to disclose and provide a copy of a Lead Risk Assessment Report to new purchasers or lessees before they become obligated under a lease or sales contract. Property owners and sellers are also required to distribute an educational pamphlet approved by the US EPA and include standard warning language in sales contracts or in or attached to lease contracts to ensure that parents have the information they need to protect children from LBP hazards.

Based on the age of the Site, it is possible that LBP was used for painting the interior and exterior of the walls of the structure. As such, AMEC conducted an LBP inspection and risk assessment at the housing units.



2.0 LEAD-BASED PAINT

AMEC subcontracted Lead Consultants of America, Inc. (LCA) to perform an LBP inspection during the Environmental Compliance Due Diligence Activities. The objective of the LBP inspection was to determine if LBP exists on the property and if so, the locations and concentration of each painted surface.

An X-ray Fluorescence (XRF) lead analyzer was used to test the paint for lead. The analyzer is a nondestructive method of testing paint and provides immediate results for each test conducted. If paint contains lead equal to or greater than 1.0 milligram per square centimeter (mg/cm^2), as defined by the United States Environmental Protection Agency (USEPA)/Housing and Urban Development (HUD), it is considered to be lead-based paint. The higher the reading on the XRF, the higher the lead content of the paint. Reading greater than 9.9 (>9.9) are considered above the highest readout settings.

LCA obtained 493 test readings on interior and exterior coated surfaces. This testing was conducted on 5 August 2013, by Mr. Carl Mastykarz of LCA using select portions of Chapter 7 of Housing and Urban Development (HUD) *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* (1997 revision), to document whether lead-based coatings were present. A copy of Mr. Mastykarz' certification is included in **Attachment A**.

The LBP inspection indicated that out of the 493 tested locations none showed lead concentrations at or above the USEPA/HUD definition of lead-based paint (at or above $1.0 \text{ mg}/\text{cm}^2$) on tested coatings. The LBP survey maps are included in **Attachment B**. The complete LBP survey table is included in **Attachment C**.



3.0 LEAD IN WATER

Potable water at the housing units is provided by the City of Barnegat Light and there is no drinking water wells within the housing units. Hence, no water samples were taken and the lead in drinking water hazard of the LBP is not anticipated to occur.



4.0 LEAD IN SOIL

As part of the LBP inspection and risk assessment, and in accordance with the Scope of Work (SOW), AMEC collected two soil samples per exterior structure wall. Soil sample locations were within five feet (drip line) of each exterior wall. A total of 50 soil samples were collected. Two soil samples were collected at each location, at the surface (0 inches below ground surface [bgs]) and 6 inches bgs. The samples were containerized and shipped under standard chain of custody procedures to CT Laboratories, Inc. located in Baraboo, Wisconsin. The samples were submitted for total lead analysis by USEPA SW-846 Method 6010C. The sampling results, findings, and recommendations are included in the *Lead in Soil Sampling Report* prepared by AMEC dated April 2014.



5.0 LEAD HAZARD LEVELS

Lead is hazardous, especially for children who are six years of age or younger. Lead can reduce intelligence, cause behavior and learning problems, slow growth and impair hearing. Children can get lead in their bodies by breathing or swallowing lead dust, or by eating soil or paint chips with lead in them.

5.1 LEAD BASED PAINT

Lead-based paint is any paint or surface coating that contains lead equal to or in excess of 1.0 mg/cm² or equal to or in excess of 0.5% by weight. Lead-based paint is hazardous when it is:

- On a **friction surface**. The paint on surfaces like window sashes and jambs can break down during normal use and release lead dust. If dust levels on the nearest flat surface exceed acceptable levels, then the friction surface is a hazard.
- On a **chewable surface** that has evidence of teeth marks. These are surfaces, such as window sills, railings, door edges and stair edges that that a young child can mouth or chew.
- On an **impact surface** where there is damaged or otherwise deteriorated paint from impact from a related building component (such as a door and door frame banging together).
- **Deteriorated, e.g., peeling, chipping, chalking, or cracking**. When lead paint breaks down or is disturbed due to remodeling, renovating, dry scraping or water damage, paint chips and dust can be released that can contaminate the home and be easily ingested by young children through hand-to-mouth activity.

5.2 LEAD DUST HAZARD LEVELS

- 40 micrograms per square foot ($\mu\text{g}/\text{ft}^2$) on floors of interior or exterior living areas or on any horizontal surface other than a window sill or trough;
- 250 $\mu\text{g}/\text{ft}^2$ on interior window sills or exterior living area window sills; or,
- 400 $\mu\text{g}/\text{ft}^2$ for window troughs.

5.3 LEAD SOIL HAZARD LEVELS

- 400 mg/kg for bare soil in play areas; or,
- 1200 mg/kg (composite or average) in bare soil in non-play areas.

5.4 WATER HAZARD LEVELS

- 15 parts per billion (ppb) or microgram per liter ($\mu\text{g}/\text{L}$) for lead in drinking water.



6.0 LEAD HAZARD CONTROL METHODS

The methods of controlling lead hazards are listed below:

- **Deteriorated Lead-Based Paint on Non-friction or Non-impact Surfaces:** Examples include interior or exterior walls, ceilings, trim, casings, baseboards, etc.
 - a. Removal of the lead-based painted component and replacement with a lead-free component;
 - b. Paint removal by separation of the lead-based paint from the substrate using heat guns (operated below eleven hundred degrees Fahrenheit), chemicals, or certain abrasive measures either onsite or offsite;
 - c. Enclosure of the lead-based painted component with durable materials. Durable materials include wallboard, drywall, paneling, siding, coil stock and the sealing or caulking of edges and joints so as to prevent or control chalking, flaking, peeling, scaling or loose lead-containing substances from becoming part of house dust or otherwise accessible to children;
 - d. Encapsulation of the lead-based painted component by coating and sealing of the component with a durable surface coating approved in rule 3701-32-13 of the Administrative Code;
 - e. Paint stabilization as defined in rule 3701-32-01 of the Administrative Code and a written ongoing maintenance and monitoring schedule; or
 - f. Any other lead-safe method of permanently removing the lead hazard.
- **Deteriorated Lead-Based Paint on Friction or Impact Surfaces:** Examples include window systems, doors, floors, etc.
 - a. Removal of the lead-based painted component and replacement with lead-free components;
 - b. Lead-based paint removal by separation of the lead-based paint from the substrate using heat guns (operated below eleven hundred degrees Fahrenheit), chemicals or certain abrasive measures either onsite or offsite;
 - c. Enclosure of the impact surfaces with durable materials. Durable materials include wallboard, drywall, paneling, a quarter inch or thicker plywood or other underlayment for floors, coil stock and the sealing or caulking of edges and joints so as to prevent or control chalking, flaking, peeling scaling, or loose lead-containing substances from becoming part of house dust or otherwise accessible to children. The underlayment for floors must be covered with a cleanable, impermeable surface;
 - d. Elimination of the friction points or application of a treatment that will prevent abrasion of the friction surface and a written ongoing maintenance and monitoring schedule; or
 - e. Any other lead-safe method of permanently removing the lead hazard.



- **Chewable Surfaces:** Examples include window sills, railings and other child-accessible surfaces that show evidence of teeth marks.
 - a. **Removal** of the lead-based painted component and replacement with lead-free components;
 - b. **Lead-based paint removal** by separation of the lead-based paint from the substrate using heat guns (operated below eleven hundred degrees Fahrenheit), chemicals or certain abrasive measures either onsite or offsite;
 - c. **Enclosure** of the lead-based painted component with a material that cannot be penetrated by a child's teeth;
 - d. **Encapsulation** of the lead-based painted component by coating and sealing of the component with a durable surface coating approved in rule 3701-32-13 of the Administrative Code; or
 - e. Any other lead safe method of permanently removing the lead hazard.
- **Lead-contaminated Dust:**
 - a. Elimination or control of the source creating the lead-contaminated dust using an appropriate control method listed above and followed specialized cleaning to eliminate the lead-contaminated dust. Specialized cleaning includes the use of high-efficiency particulate absorption (HEPA) vacuum, wet mopping and/or wet scrubbing; or
 - b. Elimination of the lead-contaminated dust when the source creating the lead-contaminated dust cannot be identified through specialized cleaning and a written ongoing maintenance and monitoring schedule. Specialized cleaning includes the use of HEPA vacuum, wet mopping and/or wet scrubbing.
- **Lead-contaminated Soil:**
 - a. **Covering** of the lead-contaminated bare soil with a permanent covering such as concrete or asphalt;
 - b. **Removal** of the top six inches of lead-contaminated bare soil and replacing it with six inches of new soil having a lead concentration of less than two hundred parts per million;
 - c. Covering of the lead-contaminated soil with an impermanent covering and a written ongoing maintenance and monitoring schedule. Impermanent covering includes sod and artificial turf. Gravel and mulch may be used as an impermanent covering if applied at a minimum of six inches in depth; or
 - d. Any other lead safe method of permanently removing the lead hazard.

The following practices are **PROHIBITED**:

1. Open flame burning or torching;



2. Machine sanding or grinding without a HEPA local vacuum exhaust tool;
3. Abrasive blasting or sandblasting without a HEPA local vacuum exhaust tool;
4. Use of a heat gun operating above one thousand one hundred degrees Fahrenheit;
5. Charring paint;
6. Dry sanding;
7. Dry scraping, except when done as follows:
 - a. In conjunction with a heat gun operating at not more than one thousand one hundred degrees Fahrenheit;
 - b. Within one foot of an electrical outlet;
 - c. To treat defective paint spots totaling not more than two square feet in an interior room or space or twenty square feet on an exterior surface.
8. Uncontained hydroblasting or high-pressure washing; and
9. Paint stripping in a poorly ventilated space using a volatile stripper that is considered a hazardous substance under 16 Code of Federal Regulations (CFR) 1500.3 or a hazardous chemical under 29 CFR 1910.1200 or 29 CFR 1926.59 in the type of work being performed.

Important Notes:

- Residents, especially children and pregnant women, must be kept away from the lead hazard control area. Proper and thorough cleanup is important so that dust and paint chips are not left behind at the end of the job.
- After lead hazard control work is done, the home must pass a clearance examination, which may include dust wipe samples, to ensure that no lead dust, debris or paint chips are left behind.
- Paint stabilization, interim window treatments and impermanent covering of lead-contaminated soil require a written ongoing maintenance and monitoring schedule and an annual clearance examination. It is recommended that a visual check of past repairs involving painted surfaces should be done annually and at unit turnover.
- Other surfaces that measured below hazard limits should also be addressed to prevent them from becoming hazardous. It is recommended that lead-safe work practices be used when such surfaces are repaired or replaced.



7.0 CONCLUSION AND RECOMMENDATIONS

7.1 CONCLUSION

No lead hazards were identified at any of the housing units.

7.2 RECOMMENDATIONS

No lead hazards were identified at any of the housing units; therefore, there are no recommendations.



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ATTACHMENT A

LBP INSPECTOR'S CERTIFICATION



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ATTACHMENT B

LBP SURVEY MAPS



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ATTACHMENT C

LBP INSPECTION RESULTS TABLE