

MEL BLACKMAN
MASTER LEAD INSPECTOR

OSHA PRE-RENOVATION LEAD BASED PAINT
SURVEY

Project:

TISBURY SCHOOL
40 WEST WILLIAM STREET
VINEYARD HAVEN, MA

Date:

AUGUST 20, 2019, 2017

Prepared For:

FLI ENVIRONMENTAL
69 BRIDGE STREET
DEDHAM, MA 02026
781-251-0040

Prepared & Inspected By:

MEL BLACKMAN
P O BOX 358
STONEHAM, MA 02180
781-820-8611

MEL BLACKMAN

MASTER LEAD INSPECTOR

P.O. BOX 358 - STONEHAM, MA. 02180

PHONE / FAX (781) 665-3806

1 Executive Summary:

Mel Blackman was retained by FLI Environmental of Dedham, MA, to conduct an OSHA pre-renovation lead paint survey located at **The Tisbury Elementary School, in Vineyard Haven, Massachusetts on August 20, 2019.** The survey included representative sampling of interior accessible coated surfaces.

The intent of the lead paint survey was to identify building surfaces coated with lead based paint, utilizing XRF testing technology. The information collected, as a result of the testing, can be used to ensure OSHA compliance relative to worker exposure, occupant protection, and proper disposal and treating of renovation or demolition debris.

Some of the interior surfaces were found to contain high concentrations of lead based paint.

A summary of components coated with lead based paint can be found in section 5.

The information contained in this report summarizes the sampling and analytical methodologies, site description, materials found to contain lead, locations of surfaces, sample results and qualifications of personnel.

Massachusetts Childhood Lead Poisoning Prevention Program regulations CMR 160.00 define a dangerous level of lead for residential premises to be equal to or greater than 1.0 milligrams per square centimeter (mg/cm²).

The New Hampshire Rules HeP-1600 agrees with Massachusetts, however, refers to that level of lead content as a “lead based substance”.

OSHA believes that lead exposure with “any” lead content may cause a health risk to workers.

2 Site Description:

The building inspected for the presence of lead based paint is located at **40 West William Street, in Vineyard Haven, Massachusetts**. The structure is known as the “**Tisbury Elementary School**”, which was constructed in approximately 1920 with a newer addition built in the late 1990’s. The building plans are to perform “lead safe” renovations.

Surfaces tested consisted of interior walls, cinder block and tile walls, doors and trim, structural columns, windows and trim, radiators, ceilings, baseboards, cabinets, and lockers. The building exterior is brick with vinyl windows.

3 Survey Personnel:

The OSHA survey for lead based paint was conducted by Mel Blackman, Massachusetts licensed Master Lead Paint Inspector #M-1377.

4 Testing Methodology:

Lead in paint sampling of representative interior and exterior building surfaces was conducted to assist with contractor compliance with the United States Department of Labor (US DOL) Occupational Safety and Health Administration (OSHA) Lead Exposure in Construction Standard (29 CFR 1936.62), and EPA Hazardous Waste Disposal Regulations (40 CFR Parts 260 through 271), as well as EPA's Renovation, Repair and Painting Final Rule (40 CFR 745), if applicable.

Representative surfaces from selected accessible areas of the buildings were analyzed using an X-Ray Fluorescence Analyzer (XRF). A Heuresis Lead Paint Analyzer XRF, Serial # 2136 was used, which is a complete lead paint analysis system that quickly, accurately, and non-destructively measures the concentration of LBP on surfaces.

A Heuresis X-Ray Fluorescence Analyzer, Model Pb200i, serial # 2136 was used to perform the lead based paint survey. In conducting the determination, various representative architectural elements were tested. Not all painted surfaces in each functional space were tested for the presence of lead-based paint.

The contractor should assume that similar components that were not tested must be treated with the same caution and requirements as potentially having high lead concentrations. Surfaces, which are listed as N/A, were not reachable for testing, and therefore the condition of the paint was listed. At least three to ten readings were taken for all similar groups of components.

The Pb200i XRF relies on the measurement of the K-shell X-rays to determine the amount of lead present in the painted surface. K-shell X-rays can penetrate many layers of paint and allow a good measurement of the lead content of paint to be made without being significantly affected by the thickness or number of layers of paints on the surface of the sample.

The Pb200i has the ability to analyze and compute corrections for the difference in the energy spectrums relating the different substrates. This analysis of the energy spectrum means that the lead paint reading displayed on the instrument already accounts for any substrate effects and no correction is required by the operator. The Pb200i's field of view is limited to a depth of 3/8", deep enough to handle virtually all painted surfaces, but not prone to detect lead objects located behind the surface.

There are two measurement modes of operation in the Pb200i analyzer namely the "Standard Mode" and the "Quick Mode". In the "Standard" mode, the operator selects a fixed measurement time that remains constant irrespective of the lead signal.

In the "Quick" mode, the analyzer automatically adjusts the measurement time to be the least time that is needed to make a definitive measurement with a 95% confidence level (2 sigma).

The Pb200i analyzer will finish a measurement once the 2-sigma confidence level is achieved and the data is statistically meaningful.

This time period for conclusive measurements is typically between 1 to 5 seconds, but can extend to a measurement of 60 seconds depending on the action level for abatement.

I utilized the Pb200i in the "Quick" mode to achieve a 95% confidence level down to 0.2 mg/cm² for the testing performed at this unit. The highest level of LBP reported by the Pb200i using the "Quick" mode is a result of >99.9 mg/cm² (greater than 9.9 mg/cm²). Calibrations conducted indicated the instrument was functioning within the standard deviation as defined by the manufacturer.

Following the manufacturers' requirements for calibration, here are the results:

Cal. In: 1.0, 1.0, 1.2 mg/cm²
Cal. Out: 0.8, 1.0, 1.0 mg/cm²

5 Summary of XRF Testing Results:

The following list is arranged by location and component type. Surfaces found to have higher lead concentrations are listed first in each section.

The contractor should assume that similar components that were not tested should be treated with the same caution and requirements as potentially having high lead concentrations. Surfaces, which are listed as N/A, were not reachable for testing, and therefore it is assumed that they contain lead paint. The condition of the majority of painted surfaces containing high concentrations of lead paint is loose.

1920'S BUILDING

ROOM 216

White plaster walls above newly covered sheetrock walls
18.6 – 19.2 mg/cm² loose

White plaster ceiling 1.7 – 1.9 mg/cm² loose

Brown wood window sills 0.3 – 0.4 mg/cm²

Beige wood window trim 0.2 – 0.5 mg/cm²

Beige metal radiators 0.1 – 0.4 mg/cm²

Brown wood closets 0.0 – 0.3 mg/cm²

Brown wood baseboard 0.1 – 0.4 mg/cm²

ROOM 215

White metal radiators 1.3 – 1.4 mg/cm² loose

White plaster exposed walls and trim 1.0 – 1.2 mg/cm² loose

Blue wood window trim 0.3 – 0.5 mg/cm²

Blue wood baseboards 0.1 – 0.4 mg/cm²

Blue wood ceiling trim 0.2 – 0.3 mg/cm²

ROOM 217

White plaster walls above chalkboard 1.3 – 1.4 mg/cm²
loose

Blue wood baseboards 0.1 – 0.5 mg/cm²

Blue wood door and trim 0.1 – 0.4 mg/cm²

Blue wood window trim 0.3 – 0.5 mg/cm²

White sheetrock ceiling 0.1 – 0.3 mg/cm²

ROOM 204

Beige wood door trim 0.2 – 0.4 mg/cm²

Beige wood window trim 0.1 – 0.3 mg/cm²

Beige wood closet and drawers 0.1 – 0.3 mg/cm²

Blue sheetrock walls and ceiling 0.0 – 0.2 mg/cm²

SECOND FLOOR

BOYS BATHROOM

White sheetrock walls 1.1 – 1.3 mg/cm² loose

White wood window trim and black window sill 0.2 – 0.4 mg/cm²

White metal radiators 0.2 – 0.3 mg/cm²

GIRLS BATHROOM

White sheetrock walls 1.0 – 1.2 mg/cm²

Blue wood door trim 0.0 – 0.2 mg/cm²

CAFETERIA

White sheetrock walls 1.1 – 1.3 mg/cm² loose

White wood door trim 0.1 – 0.4 mg/cm²

White wood window trim 0.0 – 0.3 mg/cm²

ROOM 111

Blue and black wood window trim 0.2 – 0.4 mg/cm²

White sheetrock walls 0.0 – 0.4 mg/cm²

Blue wood door trim 0.0 – 0.4 mg/cm²

Blue sheetrock ceiling 0.1 – 0.3 mg/cm²

ROOM 113

Blue wood window trim 0.0 – 0.3 mg/cm²

KINDERGARTEN

ROOMS 117 AND 118

Blue metal door trim 0.1 – 0.3 mg/cm²

White sheetrock walls 0.1 – 0.2 mg/cm²

White wood window trim 0.0 – 0.1 mg/cm²

ROOM 102

Blue wood window trim 0.0 – 0.4 mg/cm²

Blue wood door trim 0.0 – 0.3 mg/cm²

Beige sheetrock walls 0.0 – 0.2 mg/cm²

ROOM 313

Orange plaster walls above sheetrock walls 7.2 – 7.4 mg/cm² loose

White metal radiator 8.1 – 8.4 mg/cm² loose

White sheetrock walls 0.1 – 0.4 mg/cm²

Blue wood window trim 0.0 – 0.2 mg/cm²

ROOM 312

White metal radiators 5.6 – 5.9 mg/cm² loose

THIRD FLOOR BOYS BATHROOM

White sheetrock walls 1.6 – 1.8 mg/cm²

THIRD FLOOR LANDING

Storage lockers 0.0 – 0.2 mg/cm²

ROOM 303

White metal radiator 0.2 – 0.4 mg/cm²

White sheetrock walls 0.0 – 0.2 mg/cm²

ROOM 302

Orange plaster walls N/A loose

White metal radiators 0.4 – 0.5 mg/cm²

AUDITORIUM/GYMNASIUM

Brown wood walls, baseboards, doors, and trim 0.0 – 0.4 mg/cm²

Beige sheetrock walls 0.2 – 0.3 mg/cm²

Beige cinderblock walls 0.0 – 0.2 mg/cm²

Blue metal door trim 0.0 – 0.2 mg/cm²

SPANISH ROOM

Beige cinderblock walls 3.2 – 3.7 mg/cm²

Beige brick walls 0.0 – 0.1 mg/cm²

VOCAL MUSIC ROOM

White cinderblock walls 1.0 – 1.3 mg/cm²

Blue wood window trim 0.0 – 0.2 mg/cm²

ROOM 008 - GIRLS LOCKER ROOM

Yellow ceramic tile walls 0.0 – 0.2 mg/cm²

Conclusions and Recommendations:

Some of the interior surfaces tested contains high levels of lead paint. A composite sampling of the aggregate waste stream from demolition would be necessary to determine whether the TCLP testing is considered hazardous waste.

Prior to renovations of this building an OSHA site specific lead compliance plan should be developed including wasted segregation to minimize the potential generation of hazardous waste.

In areas where demolition is to occur and lead is present, the demolition debris waste stream should be further analyzed during segregation for compliance with EPA and MA DES regulations to ensure proper disposal.

TCLP testing should be performed to characterize all waste prior to disposal.

TCLP testing can be performed prior to waste segregation but results may not be indicative of the actual waste streams produced during demolition.

Demolition/renovation workers should be trained and protected in accordance with OSHA regulations 29 CFR 1926.62 and EPA's Renovation, Repair and Painting Final Rule (40 CFR 745), if applicable.

This section applies to all construction work where an employee may be occupationally exposed to lead. All construction work excluded from coverage in the general industry for lead by 29 CFR 1910.1025 (a) (2) is covered by this standard.

Construction work is defined as work for construction, alteration and/or repair, including painting and decorating. It includes but is not limited to the following:

- Demolition or salvage of structures where lead or materials containing lead is present
- Removal or encapsulation of materials containing lead
- New Construction, alteration, repair, or renovation of structures, substrates, or portions thereof that contain lead, or materials containing lead.
- Handlers of salvageable materials and the treatment/disposal facility must be informed of the material's lead content. All personnel involved must be trained in personal protection and proper work practice procedures in accordance with OSHA regulations.

- All waste contaminated with lead paint should be disposed of in accordance with all state, local, and federal regulations.

Recommendations specific for this site are as follows:

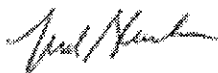
Due to the sensitive nature of the student population and faculty, I recommend employing a License Deleading Contractor to perform the work as well as the cleanup of the site.

A licensed lead paint inspector should be hired to take the “clearance dust wipes” at the conclusion of the building repairs.

The building department should carefully lay out a plan to select a Deleading Contractor and develop all of the criteria for protective procedures before, during, and after the “ maintenance project” is completed.

Further testing might be recommended before the final plan of the work is designed.

Respectfully submitted



Mel Blackman