The Scott Lawson Group, Ltd.
Environmental, Health & Safety Consultants

January 31, 2013

Mr. Steven Paquin, Building Inspector
Town of Belmont
143 Main Street
Post Office Box 310
Belmont, New Hampshire 03220-0310

Re: OSHA Pre-renovation Lead Inspection - The Belmont Mill
SLGL File Number 13-1780

Dear Mr. Paquin:

EXECUTIVE SUMMARY

On January 24, 2013, *The Scott Lawson Group, Ltd. (SLGL)* and Mel Blackman, State of New Hampshire Master Lead Inspector; conducted a Lead Inspection for the Town of Belmont at their facility known as the Belmont Mill, located at 14 Mill Street, in Belmont, New Hampshire. The Lead Inspection was conducted to identify interior and exterior building surfaces coated with Lead-Based Paint (LBP) utilizing X-Ray Fluorescent (XRF) Analyzer technology, prior to scheduled renovations taking place. Additionally, the Town had requested a Certificate of Lead Safe for the first floor of The Belmont Mill that is currently occupied by the Belmont Early Learning Center, a licensed Child Care Provider. The Inspection was limited to testing of painted surfaces only; a Risk Assessment was not performed. A Risk Assessment requires extensive testing of surface dusts and soils. This inspection was not mandated by State Agencies in response to elevated Blood Lead Levels for residents.

The Belmont Mill is a four (4) story brick building constructed around 1833 with many renovations over the years. The latest renovations occurred following a major fire in 1992. Currently, the second floor houses the Belmont Senior Center, the third floor is occupied by Belknap Family Health Center and the fourth floor is vacant.

Based upon the site Inspection results, LBP has been identified on interior surfaces on each floor of the Mill building. Additionally, a wipe sample collected on the second floor has elevated levels of Lead. Further work and testing is required before a Certificate of Lead Safe can be issued for the first floor.

This report contains a summary of our findings. Appendix A contains the Occupational Safety and Health Administration (OSHA) Pre-renovation Lead-Based Paint Survey Report conducted by Mel Blackman. Support documents are in Appendix B and Appendix C contains analytical results for the wipe sample. A pamphlet for safe renovations can be found in Appendix D, and State of New Hampshire standard for in-place management of LBP is in Appendix E.

DISCUSSION

The objective of the Inspection was to identify and document the presence of Lead-Containing Paint (LCP) and/or LBPs within interior and exterior portions of the facility, with the primary focus being painted interior surfaces that are to be impacted by scheduled renovations. [Please note, that our work was not performed to comply with State of New Hampshire and/or HUD Lead regulations, nor was the Inspection mandated by State Agencies in response to elevated Blood Lead Levels for residents.]

The Inspection was accomplished by the preferred method of the United States Environmental Protection Agency (U.S. EPA), which utilizes a portable XRF that measures Lead content in paint without actually damaging the paint. The XRF analyzers provide a fast and reliable method for classifying painted surfaces. A Lead-based substance is a coated surface that when tested by XRF is equal to or greater than (>) 1.0 mg/cm^2 (milligrams per centimeter squared).

Lead is a highly toxic metal that was used for many years in paints to coat homes and commercial buildings, and was used in other products such as gasoline and batteries. Lead was added to paint as a bonding agent and preservative; adding Lead to paint made the paint more durable. Most enamel paint manufactured during the 1900's contains some Lead. In 1978 the Federal government banned LBP. Lead-contaminated dust is generated as LBP deteriorates over time, is rubbed off on friction or impact surfaces (such as doors and windows), or is disturbed during renovation, repair or remodeling projects. Large amounts of Lead dust can be created when LBP is dry scraped, dry sanded or burned. In adults, the primary route of exposure to Lead is via inhalation. Lead-containing particles can be inhaled, absorbed through the lungs and upper respiratory tract, and enter into the bloodstream.

Once in the bloodstream, Lead can be circulated through the body, causing harmful effects. While some of the Lead is filtered and excreted from the body, the remainder gets stored in bones and tissues. The stored Lead can later be released back into the bloodstream and continue to cause harmful effects.

Belmont Early Learning Center and first floor

A Certificate of Lead Safe could not be issued for this area on the first floor, as loose and flaking LBP was identified in both entrances to the child care facility. Lead from paint, especially peeling and/or flaking paint, can be swallowed by young children during normal hand-to-mouth activities. These loose and flaking paints will need to be abated prior to a Certificate of Lead Safe being issued. *SLGL* recommends that this work be performed by a certified LBP contractor. Following LBP abatement, additional sampling and visual inspections will need to be performed by a Master Lead Inspector.

Upper Floors

LBP was identified on interior brick walls, window lintels, ceilings and the underside of flooring members. Of particular concern is the condition of the paint that coats the ceilings or floor boards and beams on the upper floors. The paint is in very poor condition and any disturbance could create a hazard by depositing Lead chips/particles or dust to the occupied areas. The upper floors have suspended ceilings with open grids to the ceiling plenum, for ventilation. A wipe sample of settled dust collected below one of these grids on the second floor revealed 1,300 micrograms of Lead in dust per square foot (1,300 $\mu g/ft^2$), exceeding a general guideline from OSHA.

As part of the U.S. EPA and State of New Hampshire ongoing efforts to protect children from Lead poisoning, standards to identify dangerous levels of Lead in paint, dusts, and soils were developed. Under these standards, Lead is considered a hazard if there is greater than:

- 40 $\mu g/ft^2$ on floors;
- 250 $\mu g/ft^2$ of Lead on interior window sills; and
- 400 parts per million (ppm) of Lead in bare soil in children's play areas or;
- 1,200 ppm average for bare soil in the rest of the yard.

The paint has deteriorated and settled onto the ceiling tiles, and movement of these tiles could result in the disturbance of the paint chips and dusts, and becoming airborne and inhaled. Settled Lead dust on flooring and other surfaces can also become re-entrained in the air through normal movement, causing additional exposure.

SLGL recommends that a Lead Paint Operations and Maintenance (O&M) Plan be developed for the Belmont Mill. A Lead Paint O&M Plan is an ongoing program designed to oversee building repair and general maintenance. When Lead paint is present, an O&M Plan is an important safety program, and is designed to protect employees, contractors, and occupants and to reduce the facility's potential liability.

The objective of an O&M Plan should be to minimize and/or eliminate exposure to building occupants to the hazards of Lead paint. To accomplish this objective, the O&M Plan includes practices to:

- Maintain identified Lead painted surfaces in a good condition;
- Ensure proper cleanup of Lead dusts and repair of damaged surfaces;
- Monitor the condition of painted surfaces through periodic and routine inspections;
- Communicate Lead-related information to employees and building occupants;
- Document and record Lead paint related activities.

The use of a properly implemented O&M plan is considered by the EPA to be an appropriate Lead paint control strategy. O&M Plans are an economic alternative to removal (abatement) of Lead coated surfaces/building materials. If buildings occupants and staff are properly prepared regarding the issues associated with managing Lead paint in place, the potential for release of Lead dust into the environment is minimized, and consequently, the health risk to building occupants can be reduced to a negligible level.

CONCLUSION

LBP has been identified on several painted surfaces at the Belmont Mill. A summary of surfaces coated with LPB is included in the attached OSHA Pre-renovation Lead-Based Paint Survey Report. Except for the most elementary measures, dealing with LBP removal is a complex task. LBP in most instances should be removed by professionals with the training, certifications, and insurances. LBP removal requires specific procedures to minimize and control Lead-contaminated dusts created by the remediation processes. Following remediation of LBP and cleaning of horizontal surfaces, required visual inspections and clearance testing of the work areas should be performed by a Lead Inspector.

In summary, *SLGL* feels that based upon the condition of the LBP, and levels of Lead detected in the wipe sample, that there could be a source of Lead exposure to occupants.

SLGL's suggestion is that you follow the recommendations detailed in the State of New Hampshire Licensed Lead Inspector Mel Blackman's, OSHA Pre-renovation Lead Based Paint Survey Report, and that a detailed Lead Paint O&M Plan be developed and implemented for the site. A Certificate of Lead Safe can be issued for the first floor following successful LBP remediation and additional testing.

We trust that you will find everything in order; however, should you have any questions or comments regarding the contents of this report, the inspection or the analytical reports, please feel free to contact me at your earliest convenience.

Sincerely,

The Scott Lawson Group, Ltd.

Stephen McPherson
Senior Safety & Health Professional

Enclosures

WARRANTY

The conclusions and recommendations contained in this report are based on the information available to *SLGL* as of January 24, 2013. *SLGL* provides no warranties on information provided by third parties and contained herein. Data compiled were in accordance with *SLGL's* approved scope of services and should not be construed beyond their limitations. Any interpretations or use of this report other than those expressed herein are not warranted. The use, partial use, or duplication of this report without the expressed written consent of *The Scott Lawson Group, Ltd.*, is strictly prohibited.

APPENDIX A

OSHA PRE-RENOVATION LEAD-BASED PAINT SURVEY REPORT

MEL BLACKMAN
MASTER LEAD INSPECTOR

OSHA PRE-RENOVATION LEAD BASED PAINT SURVEY

Project:

14 Mill Street
Belmont, New Hampshire

Date:

January 24, 2013

Prepared For:

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1 Executive Summary:

Mel Blackman was retained by The Scott Lawson Group, Ltd. of Concord, New Hampshire, to conduct an OSHA pre-renovation lead paint survey located at **14 Mill Street,** in **Belmont, New Hampshire** on **January 24, 2013.** The survey included representative sampling of most interior and exterior painted 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 and proper disposal of renovation or demolition debris.

Few of the interior surfaces were found to contain high concentrations of lead based paint. Components coated with high concentrations of lead based paint include specific:

- Brick walls
- Ceilings and ceiling beams(mostly above suspended ceiling tiles)
- Interior window lintels

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 105 CMR 460.00 defines 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 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 **14 Mill Street** in **Belmont, New Hampshire.** This property is a single building, originally constructed as a cotton mill in 1833. In 1992 there was a major fire and the building had large scale renovations, rebuilding, and an addition.

The purpose of this survey is to locate and address hazardous materials throughout the building. The exterior of the building is brick with wood windows. The entire roof and trim were replaced after the fire. The building presently houses a Day Care on the 1st floor, Senior Center on the 2nd, a Family Practice Health Center on the 3rd floor, and a 4th floor that is vacant.

Surfaces tested consisted of interior walls, doors and trim, windows & trim, ceilings, baseboards, ceiling beams, support beams, floors, radiators, staircase components, sprinkler pipes, and exterior components.

3 Survey Personnel:

The OSHA survey for lead based paint was conducted by Mel Blackman, Massachusetts licensed Master Lead Inspector #M-1377, and New Hampshire Risk Assessor #RA-0026.

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). An RMD, LPA-1 Lead Paint Analyzer XRF, Serial Number 1409 was used, which is a complete lead paint analysis system that quickly, accurately, and non-destructively measures the concentration of LBP on surfaces.

An RMD X-Ray Fluorescence Analyzer, Model LPA-1, 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 LPA-1 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 LPA-1 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 LPA-1'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 LPA-1 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 LPA-1 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 LPA-1 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 LPA-1 using the "Quick" mode is a result of >9.9 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, 1.1 mg/cm2
Cal. Out: 1.1, 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.

INTERIOR SECOND FLOOR – BELMONT SENIOR CENTER
Green and beige wood ceiling and beams above ceiling tiles 0.2 – 9.9 mg/cm2 loose
Gray metal radiator 0.1 – 0.5 mg/cm2
Painted brick walls 0.2 – 0.5 mg/cm2
Blue and red metal door frames 0.2 – 0.4 mg/cm2
White wood windows 0.1 – 0.3 mg/cm2
Brown wood window trim 0.0 – 0.2 mg/cm2
Blue sheetrock walls 0.0 – 0.1 mg/cm2

INTERIOR THIRD FLOOR – BELKNAP FAMILY HEALTH CENTER
Painted brick walls in custodian closet at elevator 3.2 – 9.9 mg/cm2 loose
Gray, white and beige wood ceiling and beams above ceiling tiles in scattered areas of health center 9.9 mg/cm2 loose
Red, green, and black metal door frames 0.2 – 0.5 mg/cm2
Gray and white sheetrock walls 0.1 – 0.3 mg/cm2
White sheetrock ceiling 0.1 – 0.3 mg/cm2
Gray metal radiators 0.0 – 0.2 mg/cm2
Brown wood stained window trim 0.0 – 0.1 mg/cm2
White wood windows 0.0 – 0.1 mg/cm2

INTERIOR FOURTH FLOOR
Painted brick walls 0.4 – 1.8 mg/cm2 loose
White sheetrock walls 0.0 – 0.2 mg/cm2
Beige wood window and trim 0.0 – 0.2 mg/cm2
White metal radiator 0.1 – 0.2 mg/cm2
Brown wood door and trim 0.0 – 0.2 mg/cm2

Brown and gray metal lally columns 0.0 – 0.1 mg/cm2
Brown metal sprinkler pipes 0.0 – 0.1 mg/cm2

INTERIOR FRONT STAIRCASE
Painted brick walls 0.0 – 9.9 mg/cm2 loose
Beige and black metal third floor window lintel 1.3 – 1.4 mg/cm2 loose
Gray metal door 0.1 – 0.5 mg/cm2
Red metal door trim 0.2 – 0.5 mg/cm2
Gray wood treads 0.1 – 0.4 mg/cm2
Gray wood risers 0.1 – 0.4 mg/cm2
White wood newel posts 0.1 – 0.4 mg/cm2
White wood lower walls 0.1 – 0.4 mg/cm2
White wood railing caps 0.1 – 0.4 mg/cm2
White wood ceiling under staircase 0.1 – 0.4 mg/cm2
White metal window 0.2 – 0.4 mg/cm2
White and brown metal lintels in brick walls 0.2 – 0.3 mg/cm2
Purple metal handrails 0.0 – 0.3 mg/cm2
White wood window and trim 0.0 – 0.2 mg/cm2
Red metal sprinkler pipes 0.0 – 0.2 mg/cm2

INTERIOR REAR STAIRCASE AT ELEVATOR
Painted brick walls 0.3 – 9.9 mg/cm2 loose

EXTERIOR
White metal door and side lights 0.3 – 0.4 mg/cm2
White wood windows 0.0 – 0.3 mg/cm2
(Window trim covered with aluminum)
White wood overhang 0.0 – 0.2 mg/cm2
White wood upper trim recently replaced roof NA/intact

Conclusions and Recommendations:

Some of the interior surfaces tested contain 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 demolition(if applicable) of this building an OSHA site specific lead compliance plan should be developed including wasted segregation to minimize the potential generation of hazardous waste.

A dust wipe was taken on the top of a magazine rack in the second floor Senior Center. That dust wipe represented debris which included potential lead paint chips falling through the suspended ceiling tile and settling on the magazine rack. The laboratory report shows the results of the dust wipe to be 1300ug/ft2 (micrograms per square foot).

That lead exposure and dealing with the clean-up and prevention will be addressed in the safety portion of the full survey report

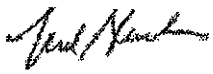
In areas where demolition is to occur and lead is present, the demolition debris waste stream should be further analyzed during segregation for compliance with EPA and NH DES regulations to ensure proper disposal. TCLP testing should be performed to characterize all waste prior to disposal. TCLP testing 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, if applicable, 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.

Respectfully submitted



Mel Blackman