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From the Desk of Nelson Miles
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Hazardous Material Survey Report

ORION Project 020-0277

JULY 31, 2020

Verna Curry, MS
V Environmental
PO Box 819
Hayden, Idaho 83835
(253) 939-9369

RE: Osborn Elementary School Demolition
225 Central Avenue
Leavenworth, Washington 98826

Dear Mrs Curry,

The purpose of this report is to present the results of a hazardous material survey performed on July 16 and 17, 2020 at the subject location referenced above. This survey was conducted in general accordance with the terms of the agreement between ORION Environmental and V Environmental of Idaho (owner's representative) authorizing us to perform this service. We understand that this survey was requested for future demolition of the building. State laws require hazards be identified before structures or components are impacted as part of renovation or demolition activities.

The survey was designed to identify asbestos containing materials (ACM), lead-containing paint (LCP), Polychlorinated Biphenyls (PCBS) and Mercury (Hg)-containing components. This survey was conducted by Industrial Hygienists with appropriate accreditations and experiences.

Professionally Yours,

ORION Environmental Services, Inc.

Carole Seng, Environmental Scientist
Certified AHERA Building Inspector
July 31, 2020

Nelson Miles, Industrial Hygienist
Certified AHERA Building Inspector
Certified Lead Paint Risk Assessor
July 31, 2020

Nate Reynolds, IH Technician
Certified AHERA Building Inspector
July 31, 2020

Hazardous Materials Survey Report

Osborn Building Demolition
Cascade School District

225 Central Avenue
Leavenworth, Washington 98826

July 31, 2020
ORION Project Number 020-0277

Prepared for:
V Environmental

Prepared by
ORION Environmental Services
Federal Way, Washington

EXECUTIVE SUMMARY

The purpose of this hazardous materials survey is to support the proposed demolition of Osborn Elementary School located at 225 Central Avenue in Leavenworth, Washington. The survey was performed on July 16 and 17, 2020. Our scope of services included collection and analysis of suspected asbestos-containing materials (ACM) and suspected lead-containing paint, and identification, by visual inspection of polychlorinated biphenyl (PCB)-containing fluorescent light ballasts (FLBs), and mercury (Hg)-containing light tubes or thermostat/switches.

Upon completion of the survey and sample analyses, the following information are our findings:

- Asbestos-containing materials (ACM) – None
- Lead-containing paint (main themes) – Cabinets in Rooms 5, 6 and 7
- PCB-containing ballasts – None
- Potential Mercury (Hg)-containing light tubes – 637
- Hg switches/thermostats – None

Inaccessible locations included a sealed utilidor that is presumed to contain asbestos pipe insulation.

This summary is intended for introductory purposes only. We recommend a thorough reading of the complete report.

Table of Contents

1.0 INTRODUCTION

ORION Environmental Services, Inc. (OES) was hired by V Environmental of Idaho (Owner's Representative) to conduct a hazardous material survey regarding materials and components that may be impacted during demolition. The purpose of this survey is to support the proposed demolition of the building by evaluating the presence of hazardous materials at the subject location, and to provide this evaluation to V Environmental and the Cascade School District. OES' assessment was conducted on July 16 and 17, 2020 and was performed in accordance with federal, state and local regulatory requirements. The assessment was conducted by Carole Seng and Nate Reynolds of OES and their accreditations can be found as an attachment to this report.

1.1 Building Information

The John H. Osborn Elementary School is a masonry-constructed, single-story commercial building built in 1955 which approximately 25,000 square feet will be impacted during demolition of the building. The building was used as a public school by the Cascade School District and is now permanently closed. The only known renovation is the addition of the multi-purpose room which was built in 1983, along with the roof, exterior siding and mechanical equipment being updated. Interior wall systems are comprised primarily of wallboard with skim coat texture in some locations. Flooring consists of vinyl flooring and concrete. Heating is by force air HVAC with piping covered with fiberglass and hard fittings. Lighting includes incandescent and fluorescent fixtures. The roof is constructed of metal over wood.

There is a utilidor underneath the building that was inaccessible at the time of the assessment.

1.2 Scope of Services

a. Collection samples of suspected ACM and suspected LCP;

b. Analysis of those samples at a laboratory selected by ORION;

c. Identification, by visual inspection, of PCB-containing FLBs, and Hg-containing light tubes or thermostats; and

d. Preparation of this report.

Our scope of services did not include:

a. Disassembly of electrical panels or other machinery;

b. Investigation of areas with access restrictions due to locked rooms (utilidor)

c. Investigation of hazardous materials other than ACM, LCP, PCB-containing FLBs, and Hg-containing light tubes or thermostats.

d. Investigation of non-building materials; or

Within the scope of services

- The asbestos survey was conducted in general accordance with the, "Good Faith" asbestos survey requirements in the Washington Administrative Code (WAC) 296-62-07721 (Communication of Hazards to Employees) as required by Washington State Department of Occupational Safety Health (DOSH) and regionally by the Northwest Clean Air Agency (NWCAA) for buildings or building sections that are to be renovated and/or demolished.

- The lead survey was conducted in general accordance with WAC 296-155-17605 regarding the identification of lead as it applies to all construction work where an employee may occupationally-exposed during construction activities.

- The visual examination of PCB-containing FLB and Hg-containing light tubes was conducted to identify potential hazards regulated by Washington State Department of Ecology (DOE) WAC 173-303 and Washington State Department of Occupational Safety and Health (DOSH) WAC 296-841.

1.3 Limitation of the Assessment

This targeted assessment was limited to building components that would be impacted regarding renovation and demolition activities. The conclusions within this report are professional opinions based solely upon visual site observations and interpretations of analytical data as described in this report.

Typical construction techniques can render portions of the building inaccessible. As a result, additional ACBM may be present in inaccessible areas (e.g., ground or components beneath the concrete slab). Suspect ACM, LCP and other hazardous materials within inaccessible areas should be presumed until characterized.

The opinions presented herein apply to the site conditions existing at the time of the investigation and interpretation of current regulation pertaining to asbestos and lead. Opinions and recommendations provided herein may not apply to future conditions that may exist at the site. Regulatory requirement in effect at the time of the work should be verified prior to any work that impacts hazardous materials. This report represents the finding of this survey only and is not intended to establish scope or contractual terms to hazardous material abatement.

2.0 ASBESTOS SURVEY METHODOLOGY

This section describes the sampling methodology. Supporting documentation provided within the survey reports incudes materials summary tables, photographs, laboratory analytical repots, chain of custody forms, etc.

2.1 Survey Methodology

A "walk-through" inspection of accessible areas was conducted to identify suspect ACBM and PACM. The asbestos survey was performed by AHERA-certified building inspectors in accordance with a sampling protocol appropriate for the demolition of the garage. The inspectors' AHERA certifications are provided in the Appendices. The sampling protocol was modeled after 40 CFR 763.86 and DOSH regulation (WAC 296.62.07721). The approximate quantity of materials was obtained from field measurements.

2.2 Sampling and Sample Documentation

Suspect ACBM was grouped into homogeneous sampling areas and categorized as TSI, surfacing material, or miscellaneous material. The sampling plan included, at a minimum, the collection and analysis of samples as follows:

Thermal System Insulation

- In a distributive manner, a minimum of three samples of each homogeneous area that was not PACM
- At least one bulk sample from each homogeneous area of patched TSI if the patch was less than 6 square feet.

Surfacing Material

- In a distributive manner, a minimum of three samples collected from each homogeneous area that was less than 1,000 square feet

- A minimum of five samples collected from each homogeneous area that was greater than 1,000 square feet but less than or equal to 5,000 square feet.
- A minimum of seven samples collected from each homogeneous area that was greater than 5,000 square feet.

Miscellaneous Material

- In a distributive manner as deemed sufficient by the AHERA Building Inspector. At least one sample was collected of each suspect miscellaneous material not PACM.

Non-Suspect Materials

According to 40 CFR 763-86(4), sampling of the following materials are not required where the accredited inspector has deemed the materials to be fiberglass, foam glass, rubber or other recognized non-ACBM.

Samples were collected by carefully removing small portions of the suspect material with a sharp knife or other hand tool suitable to the materials being sampled. Each sample was placed in a labeled plastic container immediately after collection. Sample containers were then placed in a large re-sealable plastic bag for transportation to the laboratory. The sampling instrument was wiped with a clean moist cloth to decontaminate the tool and minimize the potential release of asbestos fibers or contamination of the subsequent samples. Data pertinent to each sample (e.g., date, sample number, material description, and material category) was recorded on a field data sheet.

2.3 Laboratory Analysis

Asbestos bulk samples and chain-of-custody submittal sheets were delivered Batta Laboratory of Delaware, who are accredited by the National Voluntary Laboratory Accreditation Program (NVLAP); accreditation no. 101032-0. As specified in 40 CFR Chapter I (1-1-87 edition) Part 763, Subpart F, Appendix A, each sample was analyzed using PLM/dispersion staining techniques, in accordance with EPA Method 600/R-93/116). The detection limit for this type of analysis is approximately one percent (by volume). Materials containing more than one percent asbestos are considered to ACBM. BATTA performs stratified Point Count Method (400-point count) analysis of any materials initially determined by PLM to less than 10 percent asbestos.

3.0 LEAD PAINT SURVEY METHODOLOGY

3.1 General

The survey was conducted using a NITON XLp300A X-ray fluorescence (XRF) instrument. The purpose of the assessment was to identify the presence of lead in the paint for components being impacted or to identify painted surfaces that may be impacted as a result of renovation, demolition, upgrades and

repairs. Testing was performed on representative main-theme painted components with the intent of ascertaining the presence of lead-based paint above specified regulatory action levels of any measurable concentration. If lead-based paint was found, the survey would identify architectural components and their respective lead concentrations as positive or negative.

3.2 How the Instrument Works

The XRF directs high-energy X-rays into a surface. These high-energy rays strike atoms in the surface, causing electrons to be ejected from their orbits. Characteristic X-ray energy is emitted when another electron fills the void in the shell. The emitted energy is detected by the XRF instrument and converted to a quantitative measure. For the lead atom, characteristic frequencies are emitted from the K-and L-shells, its two innermost electron orbits. Energy emitted from these shells (energy bands) are referred to as K X-rays and L X-rays respectively. The length of each test can vary based on the strength of the radioactive source.

Testing was performed by state-accredited lead paint inspectors and lead paint risk assessor who are trained and licensed in the use of the NITON XRF. At no time were the instrument used while non-trained personnel were in the area. This includes testing wall where individual may be on the opposite side.

3.3 Calibration

Calibration is performed both directly on bare substrates and on National Institute of Standards and Technology (NIST) standard reference material (SRM) films placed over the bare areas. The NIST SRM used during calibration has a lead level of 1.02 mg/cm^2. The measurements taken on the NIST SRM film (with the 1.02 mg/cm^2 lead level) placed over the bare areas were obtained to examine the performance of the instrument.

4.0 REGULATORY OVERVIEW

4.1 Asbestos

The NESHAP regulation for asbestos regulates asbestos fiber emissions and asbestos waste disposal practices. It requires the identification of existing asbestos-containing building materials (ACBM) according to friability prior to demolition or renovation activity. Friable is a material containing more than 1% asbestos that, when dry, may be crumbled, pulverized or reduced to powder by hand pressure.

The NESHAP regulation classifies ACBM as either regulated asbestos-containing material (RACM), Category I non-friable ACBM or Category II non-friable ACBM. RACM includes all friable ACBM, along with Category I non-friable ACBM that has become friable or will be or has been subjected to sanding, grinding,

cutting or abrading, and Category II non-friable ACBM that has a high probability of becoming or has become crumbled, pulverized, or reduced to power in the course of renovation or demolition activity. Category I non-friable ACBM are exclusively asbestos-containing packings, gaskets, resilient floor coverings, floor covering mastics and asphalt roofing products that contain more than 1% asbestos. Category II non-friable ACBM are all other non-friable materials other than Category I non-friable ACBM that contain more than 1% asbestos. RACM must be removed prior to renovation or demolition activities.

Washington Administrative Code (WAC) 173-400-075 adopts the federal NESHAP rule by reference. In the State of Washington, authority to administer NESHAP requirements is delegated to the regional air pollution authorities (e.g., the local Clean Air Agency or the Washington State Department of Ecology. In Thurston County, the NESHAP requirements are administered by the Northwest Clean Air Agency (NWCAA). NWCAA must be notified at least 10 working days prior to demolition of any structure with a projected roof greater than 120 square feet, regardless of whether any asbestos was identified. Notification is not required for renovation projects, unless the project involves the disturbance of friable asbestos containing materials. The owner or operator must also provide Washington State Department of Occupational Safety and Health (DOSH) with written notification at least 10 working days prior to the commencement of asbestos removal projects involving at least 10 linear feet or 48 square feet or RACM. Removal of RACM must be conducted by a State of Washington-certified asbestos abatement contractor.

In the State of Washington, worker exposures to asbestos are governed by Labor and Industries; (L&I's) DOSH. The administrative rule WAC 296-62-07705 requires that employee exposure to airborne asbestos fibers be maintained below 0.1 asbestos fibers per cubic centimeters of air (0.1 f/cc) as an eight hour time weighted average. State of Washington Occupational Safety and Health rules also classify construction and maintenance activities which could disturb ACBM, and specify work practices and precautions which employers must follow when their employees engage in each class of regulated work.

4.2 Lead

Lead was commonly used in most products until 1978, when it was banned from residential paints at concentrations greater than 600 parts per million (PPM); however, commercial applications with lead were still utilized and are still available. Lead is poisonous to the human body and presents a potential health hazard during any kind of disturbance (such as maintenance, including grinding, welding and cutting) and if improperly disposed, where lead can enter drinking water supplies.

EPA and Washington State defines lead-based paint as a concentration of 1.0 milligrams per square centimeters squared (mg/cm^2) or greater by X-ray fluorescence (XRF) or 0.5 percent by weight or greater by total lead analysis (equivalent to 5,000 ppm). This EPA action level triggers requirements for protection of the environment, maintenance workers, and building occupants. It also triggers training and certification requirements for inspectors, project designers, contractors, supervisors and workers. The training requirements apply to certain residential structures and/or child occupied facilities, which this building fits well into the description of consideration.

The Occupational Safety and Health Administration (OSHA) and Washington State Department of Occupational Safety and Health (DOSH) worker protection regulations has not defined a minimum concentration for regulating lead and has clarified that lead at any detectable concentration shall be considered regulated (29 CFR 1926.62; WAC 296-62-176). OSHA and DOSH applies to all construction work and to general industry where an employee may be occupationally exposed to lead. 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 are 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;
- Installation of products containing lead
- Lead contamination/emergency cleanup;
- Transportation, disposal, storage, or containment of lead or materials containing lead on the site or location at which construction activities are performed, and
- Maintenance operations associated with the construction activities described in this paragraph.

As defined by OSHA, any detectable concentration of lead creates the requirement for implementing worker, and in some cases, environmental protection. The current OSHA standard (29 CFR 1926.62) and DOSH (WAC) 296-155 for standards, when the PEL is exceeded, the hierarchy of controls requires employers to institute feasible engineering and work practice controls as the primary means to reduce and maintain employee exposures to levels at or below the PEL.

When all feasible engineering and work practice controls have been implemented but have proven inadequate to meet the PEL, employers must nonetheless implement these controls and must supplement them with appropriate respiratory protection. The employer also must ensure that employees wear the respiratory protection provided when it is required

As referenced in OSHA's Technical Manual – Controlling Lead Exposures in the Construction Industry: Engineering and Work Practice Controls; Appendix V: 3-1 provides a construction task table and their presumed 8-hour TWA exposure levels:

> 50 to 500 µg/m³	**> 500 µg/m³ to 2,500 µg/m³**	**> 2,500 µg/m³**
Manual demolition	Using lead-containing mortar	Abrasive blasting
Dry manual scraping	Lead burning	Welding
Dry manual sanding	Rivet busting	Torch cutting
Heat gun use	Power tool cleaning without dust collection systems	Torch burning

Power tool cleaning w/ dust collection systems	Cleanup dry expendable abrasive blasting jobs
Spray painting with lead paint	Abrasive blasting enclosure movement and removal

The current lead standard for construction is unique in that it groups tasks presumed to create employee exposures above the PEL of 50 µg/m^3 as an 8-hour TWA. Until the employer performs an employee exposure assessment and determines actual employee exposure, the employer must assume that employees performing one of these tasks are exposed to the levels of lead indicated for that task as referenced above. For all three groups of tasks, employers are required to provide respiratory protection appropriate to the task's presumed exposure level, protective work clothing and equipment, change areas, hand-washing facilities, training, and initial medical surveillance as prescribed by paragraph (d)(2)(v) of the standard. The only difference in the provisions applying to these groups is in the degree of respiratory protection required

4.3 PCB

Washington state Department of Ecology (DOE) references that concentrations of PCBs greater then 50 mg/Kg in solids or liquids is considered contaminated to be contaminated, which special procedures handling and disposal will be required. Department of Occupational Safety and Health (DOSH) has established worker protection guidelines for the disturbance of PCB containing compounds materials when:

1) Leaching PCBS to the surface and skin contacts occur;

2) Causing PCB contamination of the air, including dust, above the permissible exposure level of 0.5 mg/m^3; or

3) Pentrated by water.

When removing PCBs, skin contact must be avoided. As with other hazardous substances, a heirarchy of control measures must be considered for the handling of PCBs with include:

1. Isolation to control the emission of PCBs or PCB dusts;

2. Engineering controls to minimize the direct handling of compouns and to minimize generating any airborne dusts;

3. Adoption of safe work practices; and

4. Where other effective means for control listed above are not practicable, suitable personal protectie equipment is to be used.

The demolition process may give rise to two types of exposure – that from the PCB compounds itself and that from the dust. Prior to demolition, any regulated PCB containing compound in the structure must be removed in accordance with state regulations. Bulk removal is required (see PCB light ballasts below). As with any demolition process, dust will be generated and may constitute a hazard depending on how it will be impacted, which appropriate dust control must be implemented (see Butimen expansion joint below).

The screening for ballasts was performed in accordance with EPA 909B-00-002 entitled "Removing PCBs from Light Fixtures". No samples were collected as part of this work.

4.4 Fluorescent Light Bulbs

Fluorescent light bulbs are present throughout the building and may be mercury vapor containing, which can be classified as universal waste. Universal wastes are a subset of hazardous wastes that are ubiquitous throughout commercial and industrial buildings. In accordance with EPA requirements, identified universal wastes must either be recycled where appropriate or disposed of as universal waste.

5.0 LIMITATIONS

This hazardous material survey was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the professions currently practicing under similar conditions in the same locale. The results, conclusions and recommendations expressed in this report are based on the conditions observed during our assessment of the work area being impacted. The information contained in this report is relevant to the date on which this assessment was performed, and should not be relied upon to represent conditions at a later date. This report has been prepared on behalf of and exclusively for the use by NWCI and Modawell Group for specific application to their project as discussed. This report is not a bidding document. Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary. ORION does not warrant the work of regulatory agencies, laboratories or other third parties supplying information which may have been used in the preparation of this report. No warranty, express or implied is made.

6.0 CONCLUSIONS AND RECOMENDATIONS

- Materials being impacted that were not identified in the reports must be presumed as asbestos or lead containing until subsequent sampling can be conducted by an accredited professional.
- Fluorescent light fixtures within the building (if not certified as non-mercury containing) must be recycled in accordance with Washington State Department of Ecology Regulations.

ATTACHMENT 1
Asbestos Findings and Recommendations

Suspect Material Table
Photographs
Certificate of Analysis
Sample Location Drawing
Inspectors' Accreditation

SUSPECT MATERIAL TABLE

A total of forty-four (44) samples consisting of various suspect materials were processed. **No asbestos was identified in these samples.** Components sampled are listed in the following table. Laboratory analytical reports and sample location maps are included in this attachment

SUSPECT MATERIAL	HOMOGENEOUS IDENTIFICATION	SAMPLE NO.	DESCRIPTION	RESULTS
Mastic	MAS 1	01	Carpet mastic in school entry	No Asbestos
	MAS 2	02	Carpet mastic in Admin.	No Asbestos
	MAS 3	15	Panel board mastic in Library	No Asbestos
	MAS 4	17	Wainscotting Mastic in Special Ed	No Asbestos
	MAS 5	18	Floor leveler in Kitchen	No Asbestos
	CBM 1	07	2" Cove Base w/Yellow Mastic throughout building	No Asbestos
	CBM 2	16	2" Cove Base/Yellow Mastic throughout building	No Asbestos
	CBM 3	23	2" Cove Base/Yellow Mastic in Gym	No Asbestos
Vinyl Flooring	VS 1 & VS 2	3	Multiple-layered sheeting in closet across from Principal's Office	No Asbestos
	VS 1	31	Vinyl Sheeting Custodian Closet across from Room 6	No Asbestos
	VS 2	32	Vinyl Sheeting in Room 4	No Asbestos
Insulation	INS 1	04	Foam Insulation in Principal's Office	No Asbestos
Ceiling Tile	CT 1	05	2 x 4 Ceiling Tile in Principal's Office and throughout building	No Asbestos
Ceramic Tile	CRT 1	08	Ceramic Tile Set in Admin Bathroom (wall)	No Asbestos
	CRT 2	09	Ceramic Tile Set in Admin Bathroom (floor)	No Asbestos
	CRT 3	13	Ceramic Tile Set in Bathrooms	No Asbestos

SUSPECT MATERIAL	HOMOGENEOUS IDENTIFICATION	SAMPLE NO.	DESCRIPTION	RESULTS
Sink Undercoat	SNK 1	10	Dark Sink Undercoat in Nurse Office	No Asbestos
Wall System	WS 1	11	Wallboard and Taping Mud throughout building	No Asbestos
	WS 2	12	Brick Grout in Entry and Hallway	No Asbestos
	WS 3	14	Wallboard and Taping Mud throughout building	No Asbestos
	WS 4	19	Skim Coat, Green Board and Vapor Barrier in Kitchen	No Asbestos
	WS 5	24	Wallboard, Joint Compound and Mastic on Gym Walls	No Asbestos
	WS 6	36	Multiple layered wall system on Exterior Soffit	No Asbestos
Surfacing Material	SM 1	20, 21	Skim Coat in Kitchen	No Asbestos
	SM 2	37, 38, 39, 40, 41, 42, 43	Skim Coat on Exterior soffit and walls	No Asbestos
Miscellaneous	MISC 1	06	Vinyl Paper, mastic and wallboard in Admin.	No Asbestos
	MISC 2	22	Vinyl Flooring Pad in Gym	No Asbestos
	MIS 3	34	Fiberglass Pipe Wrap with/Caulked Ends	No Asbestos
Pipe Insulation	TSI 1	25, 26, 27	2" Mudded Fittings in Outside Kitchen	No Asbestos
	TSI 2	28, 29, 30	4" Mudded Fittings in Custodian Closet	No Asbestos
Caulking	CLK 1	33	Interior Window Caulking in Classrooms	No Asbestos
	CLK 2	35	Window Caulk in Admin.	No Asbestos
	CLK 3	44	Exterior Window Caulk	No Asbestos

NOTE: Asbestos-containing pipe insulation is presumed inside sealed for utilidor for an estimated quantity of 3,500 linear feet (not including debris). Confirmation to determine material as non-asbestos containing (if existing) will need to be performed by an accredited AHERA Building inspector.

Dedicated to a Cleaner Environment Since 1982

NY ELAP LAB# 11993 for PCM, PLM, TEM & Lead

batta LABORATORIES

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EPA Lab ID #DE004

NVLAP Lab Code: 101032-0

Dept. Code: PLM

Rev. #: 0
Batch#: N/A
COC#: N/A

CERTIFICATE OF PLM ANALYSIS

Test Method: EPA/600/R-93/116 in conjunction with Batta SOP

Report Date: 07/23/20

Sampling Data

Date Sampled: 07/16/20
BLI Project #: R100815
Sampled By: CLIENT
Project Name: ORION ENV-O20-0277 Osborne Elementary- 225 Central Ave, Leavenworth, WA
Date Analyzed: 07/23/20

Sample ID		Client-supplied Data			Analytical Data		Reported Results	
Lab Sample#	Client Sample#	Sample Description	Material Type	Friable?	Texture/ Gross	Color	Non-asbestiform Components	Asbestiform Components
1147543	01	School Entry	Carpet Mastic	n/a	Firm Homogeneous	Tan	100% Non-fibrous Material	No Asbestos Found
1147544	02	Admin	Carpet Mastic	n/a	Firm Homogeneous	Tan	100% Non-fibrous Material	No Asbestos Found
1147545	03	Closet Across from Principal	Vinyl Sheeting	n/a	Firm Homogeneous	Gray Pink	100% Non-fibrous Material	No Asbestos Found
1147546	03 (Layer 1)	Closet Across from Principal	Vinyl Sheeting	n/a	Firm Homogeneous	Tan	5% Synthetic Fiber 5% Fiber Glass 90% Non-fibrous Material	No Asbestos Found
1147547	04	Principal	Foam Insulation	n/a	Fibrous Homogeneous	Brown	100% Mineral Wool	No Asbestos Found

Note 1 *Due to limitations of the EPA PLM method, floor tiles may yield false negative (<1%) results by this method. As such, the EPA recommends further analysis by electron microscopy. Batta recommends the NY 198.4 over the Chatfield method.*

Note 2 Unless otherwise specified, Tr=Trace and correlates to <0.25% (based on a 400-point EPA point count).

Note 3 Materials containing vermiculite are not good candidates for analysis using standard EPA 600 PLM protocol. Results may be low-biased due to inherent limitations caused by the material. The EPA recommends that vermiculite attic insulation (VAI) be prepped and analyzed using EPA 600/R-04/004, known as "The Cincinnati Method".

ANALYST: REP

REVIEWED BY: RM

QA/QC Officer/Signatory

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*This report does not constitute endorsement by NVLAP and/or any other US government agencies.

*The test data pertain only to the items tested. No assumptions or conclusions should be made to materials or samples not analyzed. Furthermore, Batta Laboratories, LLC assumes no responsibility for the accuracy of results influenced by the use of improper collection techniques or equipment.

*Organically-bound, nonfriable material may interfere with the accurate and reproducible quantification of asbestos. In these cases, the EPA recommends further analysis by a matrix-reduction method. Batta recommends the NY ELAP Item 198.6/198.4 over the Chatfield method. When point count techniques are utilized on organically-bound, nonfriable materials without the EPA-recommended matrix reduction steps, Batta Laboratories assumes no responsibility regarding the accuracy or precision associated with these results. In these cases, Batta employs a modified version of the EPA point count method.

*WRTA refers to a group of fibrous Amphiboles typically associated with 'Libby Amphibole'. Within this classification are: winchite, richterite, tremolite, and actinolite.

Dedicated to a Cleaner Environment Since 1982

NY ELAP LAB# 11993 for PCM, PLM, TEM & Lead

batta LABORATORIES

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EPA Lab ID #DE004

NVLAP Lab Code: 101032-0

Dept. Code: PLM

Rev. #: 0
Batch#: N/A
COC#: N/A

CERTIFICATE OF PLM ANALYSIS

Test Method: EPA/600/R-93/116 in conjunction with Batta SOP

Report Date: 07/23/20

Sampling Data

BLI Project #: R100815
Project Name: ORION ENV-O20-0277 Osborne Elementary- 225 Central Ave, Leavenworth, WA

Date Sampled: 07/16/20
Sampled By: CLIENT
Date Analyzed: 07/23/20

Sample ID		Client-supplied Data			Analytical Data		Reported Results	
Lab Sample#	Client Sample#	Sample Description	Material Type	Friable?	Texture/ Gross	Color	Non-asbestiform Components	Asbestiform Components
1147548	05	Principal	Ceiling Tile	n/a	Fibrous Homogeneous	White	45% Mineral Wool 30% Cellulose 25% Non-fibrous Material	No Asbestos Found
1147549	06	Admin	Vinyl Paper	n/a	Fibrous Homogeneous	White	20% Fiber Glass 20% Synthetic Fiber 10% Cellulose 50% Non-fibrous Material	No Asbestos Found
1147550	06 (Layer 1)	Admin	Mastic	n/a	Firm Homogeneous	Tan	100% Non-fibrous Material	No Asbestos Found
1147551	06 (Layer 2)	Admin	Wallboard	n/a	Firm Homogeneous	White	5% Fiber Glass 95% Non-fibrous Material	No Asbestos Found
1147552	07	Admin	2" Cove Base	n/a	Firm Homogeneous	Black	100% Non-fibrous Material	No Asbestos Found

Note 1 *Due to limitations of the EPA PLM method, floor tiles may yield false negative (<1%) results by this method. As such, the EPA recommends further analysis by electron microscopy. Batta recommends the NY 198.4 over the Chatfield method.*

Note 2 Unless otherwise specified, Tr=Trace and correlates to <0.25% (based on a 400-point EPA point count).

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ANALYST: REP

REVIEWED BY: RJO

QA/QC Officer/Signatory

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NY ELAP LAB# 11993 for PCM, PLM, TEM & Lead

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EPA Lab ID #DE004

NVLAP Lab Code: 101032-0

Dept. Code: PLM

Rev. #: 0
Batch#: N/A
COC#: N/A

CERTIFICATE OF PLM ANALYSIS

Test Method: EPA/600/R-93/116 in conjunction with Batta SOP

Report Date: 07/23/20

Sampling Data

Date Sampled: 07/16/20
BLI Project #: R100815
Sampled By: CLIENT
Project Name: ORION ENV-O20-0277 Osborne Elementary- 225 Central Ave, Leavenworth, WA
Date Analyzed: 07/23/20

Sample ID		Client-supplied Data			Analytical Data		Reported Results	
Lab Sample#	Client Sample#	Sample Description	Material Type	Friable?	Texture/ Gross	Color	Non-asbestiform Components	Asbestiform Components
1147553	07 (Layer 1)	Admin	Mastic	n/a	Firm Homogeneous	Tan	100% Non-fibrous Material	No Asbestos Found
1147554	08	Admin Bathroom Wall	Ceramic Tile	n/a	Firm Homogeneous	White	100% Non-fibrous Material	No Asbestos Found
1147555	08 (Layer 1)	Admin Bathroom Wall	Backing	n/a	Fibrous Homogeneous	White	80% Cellulose 20% Non-fibrous Material	No Asbestos Found
1147556	08 (Layer 2)	Admin Bathroom Wall	Grout	n/a	Cementitious Homogeneous	Gray	100% Non-fibrous Material	No Asbestos Found
1147557	09	Admin Floor	Ceramic Tile	n/a	Firm Homogeneous	Tan	100% Non-fibrous Material	No Asbestos Found

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1147558	09 (Layer 1)	Admin Floor	Grout	n/a	Cementitious Homogeneous	Gray	100% Non-fibrous Material	No Asbestos Found
1148191	09 (Layer 2)	Admin Floor	Backing	n/a	Fibrous Homogeneous	White	80% Cellulose 20% Non-fibrous Material	No Asbestos Found
1147559	10	Nurse	Sink Undercoat	n/a	Firm Homogeneous	Black	2% Cellulose 98% Non-fibrous Material	No Asbestos Found
1147560	11	Admin	Joint Compound	n/a	Firm Homogeneous	White	100% Non-fibrous Material	No Asbestos Found
1147561	11 (Layer 1)	Admin	Wallboard	n/a	Firm Homogeneous	White Tan	10% Cellulose 5% Fiber Glass 85% Non-fibrous Material	No Asbestos Found

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*The test data pertain only to the items tested. No assumptions or conclusions should be made to materials or samples not analyzed. Furthermore, Batta Laboratories, LLC assumes no responsibility for the accuracy of results influenced by the use of improper collection techniques or equipment.

*Organically-bound, nonfriable material may interfere with the accurate and reproducible quantification of asbestos. In these cases, the EPA recommends further analysis by a matrix-reduction method. Batta recommends the NY ELAP Item 198.6/198.4 over the Chatfield method. When point count techniques are utilized on organically-bound, nonfriable materials without the EPA-recommended matrix reduction steps, Batta Laboratories assumes no responsibility regarding the accuracy or precision associated with these results. In these cases, Batta employs a modified version of the EPA point count method.

*WRTA refers to a group of fibrous Amphiboles typically associated with 'Libby Amphibole'. Within this classification are: winchite, richterite, tremolite, and actinolite.

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1147562	12	Entry Hall Wall	Brick	n/a	Firm Homogeneous	Red	100% Non-fibrous Material	No Asbestos Found
1147563	12 (Layer 1)	Entry Hall Wall	Grout	n/a	Cementitious Homogeneous	Gray	100% Non-fibrous Material	No Asbestos Found
1147564	13	Bathrooms	Ceramic Tile	n/a	Firm Homogeneous	White	100% Non-fibrous Material	No Asbestos Found
1147565	13 (Layer 1)	Bathrooms	Grout	n/a	Cementitious Homogeneous	Gray	100% Non-fibrous Material	No Asbestos Found
1148192	13 (Layer 2)	Bathrooms	Backing	n/a	Fibrous Homogeneous	Tan	80% Cellulose 20% Non-fibrous Material	No Asbestos Found

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Lab Sample#	Client Sample#	Sample Description	Material Type	Friable?	Texture/ Gross	Color	Non-asbestiform Components	Asbestiform Components
1147566	14	Bathrooms	Joint Compound	n/a	Firm Homogeneous	White	100% Non-fibrous Material	No Asbestos Found
1147567	14 (Layer 1)	Bathrooms	Wallboard	n/a	Firm Homogeneous	Tan	10% Cellulose 5% Fiber Glass 85% Non-fibrous Material	No Asbestos Found
1147568	15	Special Ed.	Panel Board	n/a	Fibrous Homogeneous	Tan	90% Cellulose 10% Non-fibrous Material	No Asbestos Found
1147569	15 (Layer 1)	Special Ed.	Mastic	n/a	Firm Homogeneous	Brown	100% Non-fibrous Material	No Asbestos Found
1147570	16	Special Ed.	2" Cove Base	n/a	Firm Homogeneous	Tan	100% Non-fibrous Material	No Asbestos Found

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REVIEWED BY: RV

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Lab Sample#	Client Sample#	Sample Description	Material Type	Friable?	Texture/ Gross	Color	Non-asbestiform Components	Asbestiform Components
1147571	16 (Layer 1)	Special Ed.	Mastic	n/a	Firm Homogeneous	Tan	100% Non-fibrous Material	No Asbestos Found
1147572	16 (Layer 2)	Special Ed.	Mastic	n/a	Firm Homogeneous	Brown	100% Non-fibrous Material	No Asbestos Found
1147573	16 (Layer 3)	Special Ed.	Mastic	n/a	Firm Homogeneous	Black	100% Non-fibrous Material	No Asbestos Found
1147574	17	Special Ed.	Wainscoting	n/a	Firm Homogeneous	White Brown	90% Cellulose 10% Non-fibrous Material	No Asbestos Found
1147575	17 (Layer 1)	Special Ed.	Mastic	n/a	Firm Homogeneous	Tan	100% Non-fibrous Material	No Asbestos Found

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Lab Sample#	Client Sample#	Sample Description	Material Type	Friable?	Texture/ Gross	Color	Non-asbestiform Components	Asbestiform Components
1147576	18	Kitchen	Mastic	n/a	Firm Homogeneous	Yellow	100% Non-fibrous Material	No Asbestos Found
1147577	18 (Layer 1)	Kitchen	Floor Leveler	n/a	Granular Homogeneous	Tan	100% Non-fibrous Material	No Asbestos Found
1147578	19	Kitchen	Skim Coat	n/a	Firm Homogeneous	White	100% Non-fibrous Material	No Asbestos Found
1147579	19 (Layer 1)	Kitchen	Green Board	n/a	Fibrous Homogeneous	Green Tan	95% Cellulose 5% Non-fibrous Material	No Asbestos Found
1147580	19 (Layer 2)	Kitchen	Vapor Barrier	n/a	Fibrous Homogeneous	Tan Black	95% Cellulose 5% Non-fibrous Material	No Asbestos Found

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1147581	20	Kitchen	Skim Coat	n/a	Firm Homogeneous	White	100% Non-fibrous Material	No Asbestos Found
1147582	21	Kitchen	Skim Coat	n/a	Firm Homogeneous	White	100% Non-fibrous Material	No Asbestos Found
1147583	22	Gym	Vinyl Flooring/Pad	n/a	Firm Homogeneous	Blue Gray	100% Non-fibrous Material	No Asbestos Found
1147584	22 (Layer 1)	Gym	Concrete	n/a	Firm Homogeneous	Gray	100% Non-fibrous Material	No Asbestos Found
1147585	23	Gym	2" Cove Base	n/a	Firm Homogeneous	Tan	100% Non-fibrous Material	No Asbestos Found

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1147586	23 (Layer 1)	Gym	Mastic	n/a	Firm Homogeneous	Yellow	100% Non-fibrous Material	No Asbestos Found
1147587	24	Gym	Joint Compound	n/a	Firm Homogeneous	White	100% Non-fibrous Material	No Asbestos Found
1147588	24 (Layer 1)	Gym	Wallboard	n/a	Firm Homogeneous	White Tan	10% Cellulose 5% Fiber Glass 85% Non-fibrous Material	No Asbestos Found
1147589	24 (Layer 2)	Gym	Mastic	n/a	Firm Homogeneous	Black	100% Non-fibrous Material	No Asbestos Found
1147590	25	2 Fittings	2" Pipe Wrap Mudded Fitting	n/a	Firm Fibrous Homogeneous	White	25% Cellulose 75% Non-fibrous Material	No Asbestos Found

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1147591	26	2 Fittings	2" Pipe Wrap Mudded Fitting	n/a	Firm Fibrous Homogeneous	White	25% Cellulose 75% Non-fibrous Material	No Asbestos Found
1147592	27	2 Fittings	2" Pipe Wrap Mudded Fitting	n/a	Firm Fibrous Homogeneous	White	25% Cellulose 75% Non-fibrous Material	No Asbestos Found
1147593	28	1 Fitting Directly Outside Kitchen	4" Pipe Wrap Mudded Fitting	n/a	Firm Fibrous Homogeneous	White	25% Cellulose 75% Non-fibrous Material	No Asbestos Found
1147594	29	1 Fitting Directly Outside Kitchen	4" Pipe Wrap Mudded Fitting	n/a	Firm Fibrous Homogeneous	White	25% Cellulose 75% Non-fibrous Material	No Asbestos Found
1147595	30	1 Fitting Directly Outside Kitchen	4" Pipe Wrap Mudded Fitting	n/a	Firm Fibrous Homogeneous	White	25% Cellulose 75% Non-fibrous Material	No Asbestos Found

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BLI Project #: R100815
Sampled By: CLIENT
Project Name: ORION ENV-O20-0277 Osborne Elementary- 225 Central Ave, Leavenworth, WA
Date Analyzed: 07/23/20

Sample ID		Client-supplied Data			Analytical Data		Reported Results	
Lab Sample#	Client Sample#	Sample Description	Material Type	Friable?	Texture/ Gross	Color	Non-asbestiform Components	Asbestiform Components
1147596	31	Custodian Closet across from Room 6	Vinyl Sheeting	n/a	Firm Homogeneous	Gray	100% Non-fibrous Material	No Asbestos Found
1147597	31 (Layer 1)	Custodian Closet across from Room 6	Mastic	n/a	Firm Homogeneous	Yellow	100% Non-fibrous Material	No Asbestos Found
1147598	32	Room 4	Vinyl Sheeting	n/a	Firm Homogeneous	Tan	10% Cellulose 5% Fiber Glass 85% Non-fibrous Material	No Asbestos Found
1147599	32 (Layer 1)	Room 4	Mastic	n/a	Firm Homogeneous	Black	100% Non-fibrous Material	No Asbestos Found
1147601	33	Room 1	Window Caulk	n/a	Soft Homogeneous	Black	100% Non-fibrous Material	No Asbestos Found

Note 1 *Due to limitations of the EPA PLM method, floor tiles may yield false negative (<1%) results by this method. As such, the EPA recommends further analysis by electron microscopy. Batta recommends the NY 198.4 over the Chatfield method.*

Note 2 Unless otherwise specified, Tr=Trace and correlates to <0.25% (based on a 400-point EPA point count).

Note 3 Materials containing vermiculite are not good candidates for analysis using standard EPA 600 PLM protocol. Results may be low-biased due to inherent limitations caused by the material. The EPA recommends that vermiculite attic insulation (VAI) be prepped and analyzed using EPA 600/R-04/004, known as "The Cincinnati Method".

ANALYST: REP

REVIEWED BY: RM

QA/QC Officer/Signatory

Dedicated to a Cleaner Environment Since 1982

NY ELAP LAB# 11993 for PCM, PLM, TEM & Lead

batta LABORATORIES

BATTA LABORATORIES, LLC

A Certified MBE Company

Delaware Industrial Park, 6 Garfield Way
Newark, DE19713-5817
Tel. (302)737-3376 Fax (302) 737-5764

Web: http://www.battaenv.com E-mail: battaenv@battaenv.com

EPA Lab ID #DE004

NVLAP Lab Code: 101032-0

Dept. Code: PLM

Rev. #: 0
Batch#: N/A
COC#: N/A

CERTIFICATE OF PLM ANALYSIS

Test Method: EPA/600/R-93/116 in conjunction with Batta SOP

Report Date: 07/23/20
Date Sampled: 07/16/20
Sampled By: CLIENT
Date Analyzed: 07/23/20

Sampling Data

BLI Project #: R100815
Project Name: ORION ENV-O20-0277 Osborne Elementary- 225 Central Ave, Leavenworth, WA

Sample ID		Client-supplied Data			Analytical Data		Reported Results	
Lab Sample#	Client Sample#	Sample Description	Material Type	Friable?	Texture/ Gross	Color	Non-asbestiform Components	Asbestiform Components
1147602	34	Mech Room	Fiberglass Pipe Wrap	n/a	Fibrous Homogeneous	Yellow White	95% Fiber Glass 3% Cellulose 2% Non-fibrous Material	No Asbestos Found
1147603	34 (Layer 1)	Mech Room	Caulk End	n/a	Firm Homogeneous	Tan	100% Non-fibrous Material	No Asbestos Found
1147604	35	Admin	Window Caulk	n/a	Firm Homogeneous	Clear	100% Non-fibrous Material	No Asbestos Found
1147605	36	Exterior Ceiling Soffet & Wall	Skim Coat	n/a	Firm Layered	White Red	100% Non-fibrous Material	No Asbestos Found
1147606	36 (Layer 1)	Exterior Ceiling Soffet & Wall	Styroboard	n/a	Firm Layered	White Gray	5% Fiber Glass 95% Non-fibrous Material	No Asbestos Found

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CERTIFICATE OF PLM ANALYSIS

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Report Date: 07/23/20

Sampling Data

BLI Project #: R100815
Project Name: ORION ENV-O20-0277 Osborne Elementary- 225 Central Ave, Leavenworth, WA

Date Sampled: 07/16/20
Sampled By: CLIENT
Date Analyzed: 07/23/20

Sample ID		Client-supplied Data			Analytical Data		Reported Results	
Lab Sample#	Client Sample#	Sample Description	Material Type	Friable?	Texture/ Gross	Color	Non-asbestiform Components	Asbestiform Components
1147607	36 (Layer 2)	Exterior Ceiling Soffet & Wall	Mastic	n/a	Firm Homogeneous	Gray	100% Non-fibrous Material	No Asbestos Found
1147608	36 (Layer 3)	Exterior Ceiling Soffet & Wall	Vapor Barrier	n/a	Fibrous Homogeneous	Brown	75% Cellulose 25% Non-fibrous Material	No Asbestos Found
1147609	36 (Layer 4)	Exterior Ceiling Soffet & Wall	Wallboard	n/a	Firm Homogeneous	Tan	100% Non-fibrous Material	No Asbestos Found
1147610	37	Exterior Wall & Soffet	Skim Coat	n/a	Firm Layered	Red White	100% Non-fibrous Material	No Asbestos Found
1147612	38	Exterior Wall & Soffet	Skim Coat	n/a	Firm Layered	Red White	100% Non-fibrous Material	No Asbestos Found

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Note 2 Unless otherwise specified, Tr=Trace and correlates to <0.25% (based on a 400-point EPA point count).

Note 3 Materials containing vermiculite are not good candidates for analysis using standard EPA 600 PLM protocol. Results may be low-biased due to inherent limitations caused by the material. The EPA recommends that vermiculite attic insulation (VAI) be prepped and analyzed using EPA 600/R-04/004, known as "The Cincinnati Method".

ANALYST: REP

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EPA Lab ID #DE004

NVLAP Lab Code: 101032-0

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Rev. #: 0
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CERTIFICATE OF PLM ANALYSIS

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BLI Project #: R100815
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Project Name: ORION ENV-O20-0277 Osborne Elementary- 225 Central Ave, Leavenworth, WA
Date Analyzed: 07/23/20

Sample ID		Client-supplied Data			Analytical Data		Reported Results	
Lab Sample#	Client Sample#	Sample Description	Material Type	Friable?	Texture/ Gross	Color	Non-asbestiform Components	Asbestiform Components
1147614	39	Exterior Wall & Soffet	Skim Coat	n/a	Firm Layered	Red White	100% Non-fibrous Material	No Asbestos Found
1147616	40	Exterior Wall & Soffet	Skim Coat	n/a	Firm Layered	Red White	100% Non-fibrous Material	No Asbestos Found
1147618	41	Exterior Wall & Soffet	Skim Coat	n/a	Firm Layered	Red White	100% Non-fibrous Material	No Asbestos Found
1147620	42	Exterior Wall & Soffet	Skim Coat	n/a	Firm Layered	Red White	100% Non-fibrous Material	No Asbestos Found
1147621	42 (Layer 1)	Exterior Wall & Soffet	Layer	n/a	Firm Homogeneous	White	100% Non-fibrous Material	No Asbestos Found

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Note 2 Unless otherwise specified, Tr=Trace and correlates to <0.25% (based on a 400-point EPA point count).

Note 3 Materials containing vermiculite are not good candidates for analysis using standard EPA 600 PLM protocol. Results may be low-biased due to inherent limitations caused by the material. The EPA recommends that vermiculite attic insulation (VAI) be prepped and analyzed using EPA 600/R-04/004, known as "The Cincinnati Method".

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BLI Project #: R100815
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Project Name: ORION ENV-O20-0277 Osborne Elementary- 225 Central Ave, Leavenworth, WA
Date Analyzed: 07/23/20

Sample ID		Client-supplied Data			Analytical Data		Reported Results	
Lab Sample#	Client Sample#	Sample Description	Material Type	Friable?	Texture/ Gross	Color	Non-asbestiform Components	Asbestiform Components
1147622	43	Exterior Wall	Skim Coat	n/a	Firm Layered	Red White	100% Non-fibrous Material	No Asbestos Found
1147623	44	Exterior	Window Caulk	n/a	Firm Homogeneous	Brown	100% Non-fibrous Material	No Asbestos Found

Note 1 *Due to limitations of the EPA PLM method, floor tiles may yield false negative (<1%) results by this method. As such, the EPA recommends further analysis by electron microscopy. Batta recommends the NY 198.4 over the Chatfield method.*

Note 2 Unless otherwise specified, Tr=Trace and correlates to <0.25% (based on a 400-point EPA point count).

Note 3 Materials containing vermiculite are not good candidates for analysis using standard EPA 600 PLM protocol. Results may be low-biased due to inherent limitations caused by the material. The EPA recommends that vermiculite attic insulation (VAI) be prepped and analyzed using EPA 600/R-04/004, known as "The Cincinnati Method".

ANALYST: REP

REVIEWED BY: RM

QA/QC Officer/Signatory

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*This report does not constitute endorsement by NVLAP and/or any other US government agencies.

*The test data pertain only to the items tested. No assumptions or conclusions should be made to materials or samples not analyzed. Furthermore, Batta Laboratories, LLC assumes no responsibility for the accuracy of results influenced by the use of improper collection techniques or equipment.

*Organically-bound, nonfriable material may interfere with the accurate and reproducible quantification of asbestos. In these cases, the EPA recommends further analysis by a matrix-reduction method. Batta recommends the NY ELAP Item 198.6/198.4 over the Chatfield method. When point count techniques are utilized on organically-bound, nonfriable materials without the EPA-recommended matrix reduction steps, Batta Laboratories assumes no responsibility regarding the accuracy or precision associated with these results. In these cases, Batta employs a modified version of the EPA point count method.

*WRTA refers to a group of fibrous Amphiboles typically associated with 'Libby Amphibole'. Within this classification are: winchite, richterite, tremolite, and actinolite.

batta LABORATORIES

NVLAP® Lab Code: 101032-0

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Web: https://battaenv.com

AIHA LAP, LLC: 100448
NY ELAP: 11993
EPA Lab: DE004
MD Lab ID: 263

CHAIN OF CUSTODY

BL Project #: R10915

Customer Billing Information:	Shipping Information	Turnaround Times (check one, refer to notes*)	Method of Payment
Name: ORION ENVIRONMENTAL	☐ Picked up by BATTA ☐ Delivered by customer ☑ Shipped by customer	☐ 3 Hours / Rush (Note 1) ☐ 24 Hours (Note 2) ☐ 48 Hours (Note 3) ☑ 72 Hours (Note 4) ☐ 5-10 Days (Note 5) ☐ 5 Days (For Wholesale Clients Only)	☐ Cash ☐ Visa/MasterCard/Discover ☐ Money Order ☐ Purchase Order # ☐ Check # ☐ Other ☐ Unit Price/Quote ☐ Total Payment ☐ Reference #:
Billing Address 1: 34004 9TH AVE S, SUITE A-5			
Billing Address 2: FEDERAL WAY, WA 98003			
Phone: 253-927-5233			
Email: RMCPEAK@ORIONES.NET; NMILES@ORIONES.NET			
Results To: RACHAEL MCPEAK			

* Notes Regarding Turnaround Times (TATs)

1 Specific TATs depend on the test requested. TATs may not be available for all types of analysis. Client must make arrangements with lab to guarantee TAT. Premium rate will apply.
2 Unless a specific time is requested, results are guaranteed by 5 p.m. on the following business day. The turnaround time of 24 hours may not be available with all analysis.
3 Unless a specific time is requested, results are guaranteed by 5p.m. on the 2nd business day.
4 Unless a specific time is requested, results are guaranteed by 5 p.m. on the 3rd business day.
5 Unless a specific time is requested, results are guaranteed before 5 p.m. of the 10th business day.

Client Project Information

Project Name:	Project Location:	New Jersey Solid Waste ? Will results be used for disposal in NJ?	Project #:	Sampled By:
OSBORNE ELEMENTARY	225 CENTRAL AVE LEAVENWORTH, WA	Yes ☐ No ☑	O20-0277	CAROLE SENG

Sample Information

Lab Use Only	Field Sample ID#	Sample Location & Description	Sampling Date & Time	Sampling Info for Air /Surface Samples: Start Time	Stop Time	Flow Rate	Volume/Area	Sample Type	Test Method	Laboratory Use Only: Results	Date of Analysis	Analyst
1147543		SEE ATTACHED COC's	7/16/20					BULK	PLM			
↓												
623												

Special Instructions From Client:

Sample Relinquished By: X Carole Seng	**Date:** 7/20/20	**Time:**	
Sample Received By: JES	**Date:** 7/21/20	**Time:** 800	

Laboratory Use Only

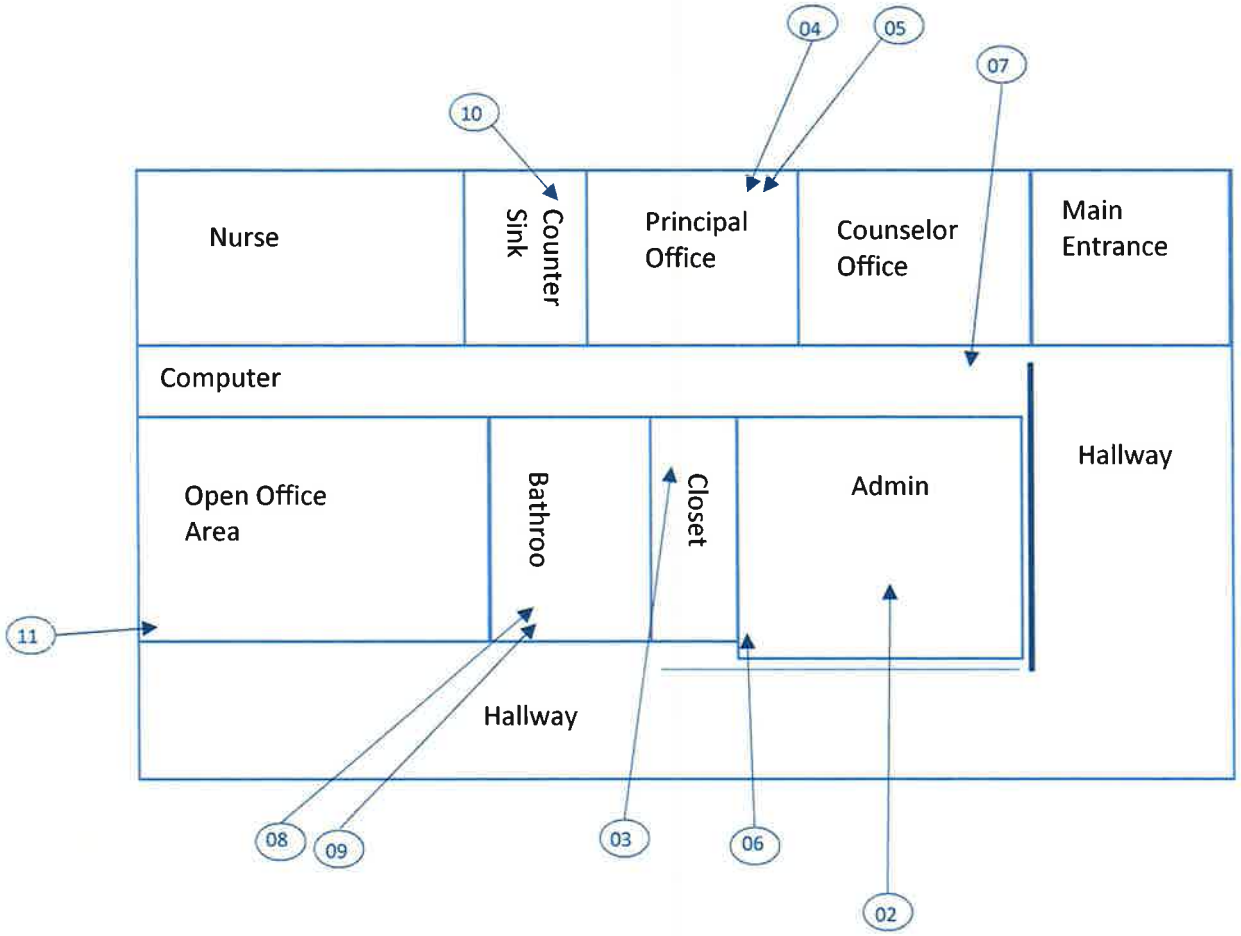
Logged-in by:	Log-in Date:	Date:	
JES	7/21/20	1550	Field Samples Acceptable ☑ Yes ☐ No ☐ On Ice Sample #: Sample Condition:

For drinking water samples: for results to be valid, lab must receive samples on ice and within 48 hours of collection. For air samples collected by NIOSH 7400 and 7402: in accordance with these NIOSH methods, two field blanks, (or 10% of the number of field samples submitted, whichever is greater) must be submitted and be analyzed with field samples.

For solid waste samples: Before solid waste materials such as soil, ash, sludge, dredge spoils, etc. are disposed in New Jersey, they must undergo analysis following TCLP protocol. BATTA Labs is not responsible for waste disposal misrepresentations on this document. Document Control Item AM5

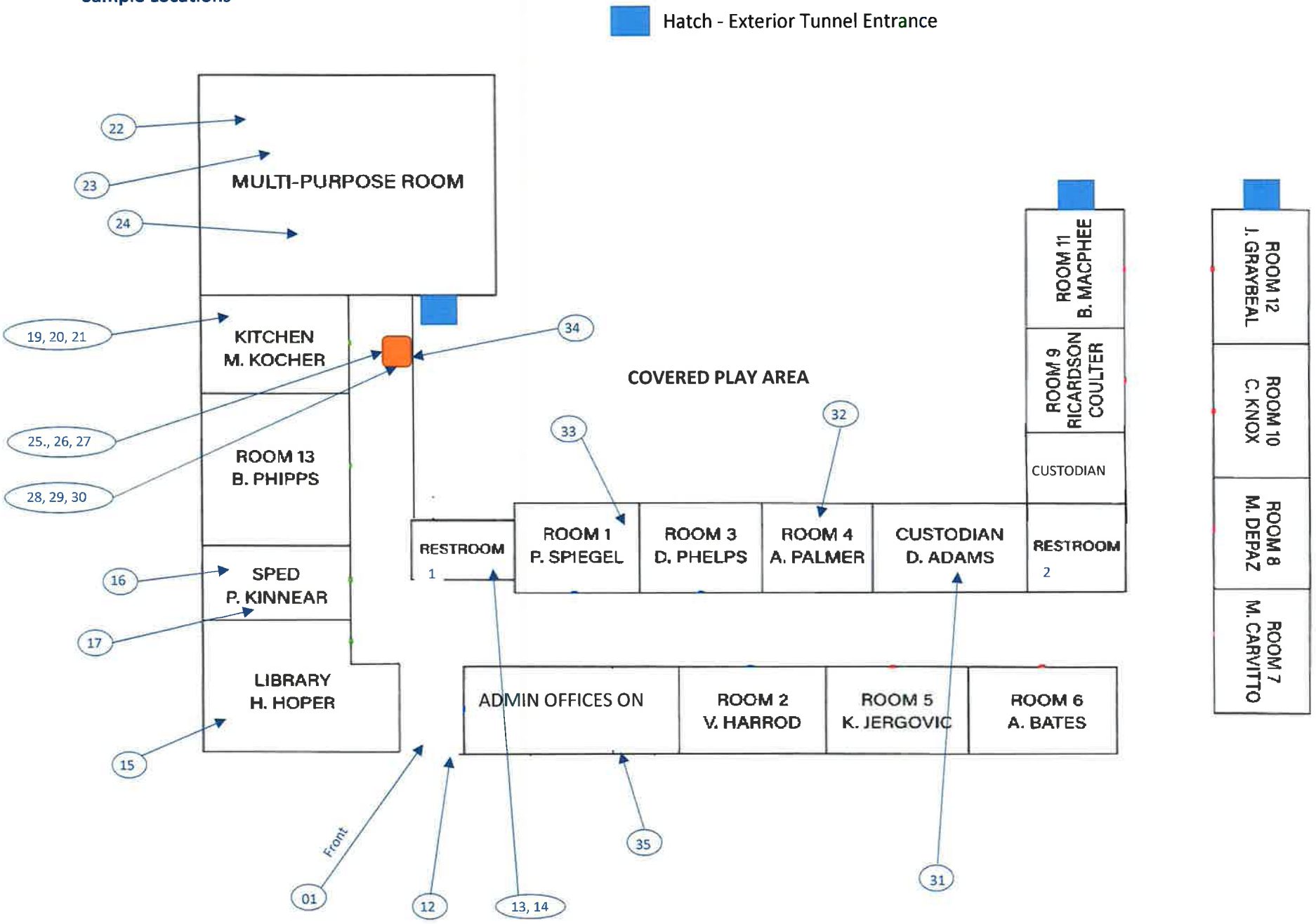
ADMINISTRATION OFFICES

Sample Locations



OSBORNE ELEMENTARY

Sample Locations



ADMIN	MAS1		CT1	VS1/VS2 (300 sf)
	SNK1 X1	MISC1	WS1	
	CRT1 (160 sf)	CRT2 (25 sf)	INS1	
	CLK1	CLK2	CBM1	MISC1
ENTRANCE	WS2	MISC1		
	MAS2			
	CBM1			
RESTROOM 1	CRT2	WS3		
GIRLS & BOYS	CRT3	WS1		
OUTSIDE ADMIN				
400 sf-total				
RESTROOM 2	CRT2	WS3		
ACROSS FROM ROOM 6	CRT3	WS1		
OUTSIDE ADMIN				
400 sf-total				
LIBRARY	MAS1	SNK1 X1	CBM1	
	CT1	WS1	MAS3	
ROOM 1	MAS1	SNK1 X1		
	MAS3	MISC1		
	CT1	WS1		
	CBM1	VS1/VS2 (300 sf)		
ROOM 2	MAS1	SNK1 X1		
	MAS3	MISC1		
	CT1	WS1		
	CBM1	VS1/VS2 (300 sf)		
ROOM 3	MAS1	SNK1 X1		
	MAS3	MISC1		
	CT1	WS1		
	CBM1	VS1/VS2 (300 sf)		
ROOM 4	MAS1	SNK1 X1		
	MAS3	MISC1		
	CT1	WS1		
	CBM1	VS2 (300 sf) - UNDER CARPET		
ROOM 5	MAS1	SNK1		
	MAS3	MISC1		
	CT1	WS1		
	CBM1	VS1/VS2 (300 sf)		

ROOM 6	MAS1	SNK1 X1
	MAS3	MISC1
	CT1	WS1
	CBM1	VS1/VS2 (300 sf)
ROOM 7	MAS1	SNK1 X1
	MAS3	MISC1
	CT1	WS1
	CBM1	VS1/VS2 (300 sf)
ROOM 8	MAS1	SNK1 X1
	MAS3	MISC1
	CT1	WS1
	CBM1	VS1/VS2 (300 sf)
ROOM 9	MAS1	SNK1 X1
	MAS3	MISC1
	CT1	WS1
	CBM1	VS1/VS2 (300 sf)
ROOM 10	MAS1	SNK1 X1
	MAS3	MISC1
	CT1	WS1
	CBM1	VS1/VS2 (300 sf)
ROOM 11	MAS1	SNK1 X2
	MAS3	MISC1
	CT1	WS1
	CBM1	VS1/VS2 (300 sf)
ROOM 12	MAS1	SNK1 X1
	MAS3	MISC1
	CT1	WS1
	CBM1	VS1/VS2 (300 sf)
SPECED	MAS2	MISC1
	MAS3	WS1
	CT1	CBM2
	CBM1	
ROOM 13	MAS1	SNK1 X1
	MAS2	WS1
	CT1	VS1/VS2 (300 sf)
	CBM1	

KITCHEN	MAS5	SM1/WS4 (1200 sf)
	WS1	VS1 (MAS5 under VS- 800 sf)
ABOVE CEILING TILE OUTSIDE KITCHEN		
	TS1	
	TS2	
CUSTODIAN OFFICE		
ACROSS FROM	WS1	CBM1
ROOM 6	CT1	VS1 (300 sf)
TUNNELS - NOT ACCESSIBLE		

ORION ENVIRONMENTAL SERVICES R100815 *SAMPLE CUSTODY FORM* 205356 *PROJECT NUMBER* 020-0272

CLIENT: V ENVIRONMENTAL	**SITE:** OSBORNE ELEM DEMO	**RELINQUISHED BY:** ORI
ADDRESS: PO BOX 819	**ADDRESS:** 225 CENTRAL AVE	**DATE / TIME:**
HAYDEN, ID 83835	LEAVENWORTH WA	
		RECEIVED BY: 7/20/20
TELEPHONE: 253-439-4369	**INSPECTOR:** CASSIE SENG	**DATE / TIME:**
EMAIL:	**DATE SAMPLED:** JULY 16 & 17, 2020	

SAMPLE NO.	LAB NO.	MATERIAL DESCRIPTION	MATERIAL ID	LAYER AND SUBSTRATE	LOCATION OF MATERIAL	QTY.	TREAT	%	TYPE	OTHER FIBERS
C1	19	CARPET MASTIC 543	MAS1	CONCRETE	SCHOOL ENTRY					
02	20	CARPET MASTIC 544	MAS2	CONCRETE	ADMIN					
03	21	VINYL SHEETING GRAY 545 VINYL SHEETING YELLOW 546	VS1 VS2	CONCRETE	CLOSET ACROSS FROM PRINCIPAL		UNDER CARPET		6FT	
04	22	FOAM INSULATION 547	INS1		PRINCIPAL					
05	23	CEILING TILE 548	CT1		PRINCIPAL					
06	24	VINYL PAPER MASTIC WALLBOARD 549 550 551	MISC1		ADMIN					
07	25	2" COVE BASE YELLOW MASTIC 552 553	CBM1		↓					
08	26	CERAMIC TILE BACKING GROUT 554 555 556	CRT1		ADMIN BATHROOM WALL	160 SF				

ORION ENVIRONMENTAL SERVICES R100815 **SAMPLE CUSTODY FORM** 205356 **PROJECT NUMBER** 020-0272

CLIENT: V ENVIRONMENTAL	**SITE:** OSBORNE ELEM DEMO	**RELINQUISHED BY:** ORT
ADDRESS: PO BOX 819	**ADDRESS:** 325 CENTRAL AVE	**DATE / TIME:**
HAYDEN ID 83835	LEAVENWORTH WA	
		RECEIVED BY: 7/20/20
TELEPHONE: 253-939-4369	**INSPECTOR:** CONNIE SENG	**DATE / TIME:**
EMAIL:	**DATE SAMPLED:** JULY 16-17, 2020	

SAMPLE NO.	LAB NO.	MATERIAL DESCRIPTION	MATERIAL ID	LAYER AND SUBSTRATE	LOCATION OF MATERIAL	QTY.	TREAT	%	TYPE	OTHER FIBERS
09	20	CERAMIC TILE 1147 557 GROUT MASTIC 1X1 558	CRT2		ADMIN	FLOOR	25 sf			
10	28	BLACK 559 SINK UNDERCOATING	SNK1		NURSE					
11	29	JOINT COMPOUND 560 WALLBOARD (WHITE) 561	WS1		ADMIN					
12	30	BLACK 562 GROUT 563	WS2		ENTRY HALL WALL					
13	31	CERAMIC TILE 564 BROWN GROUT 565	CRT3		BOTH RESTROOMS	1	WALLS & CEILING			
14	32	JOINT COMPOUND 566 WALLBOARD (BROWN) 567	WS3		↓					
15	33	PANEL BOARD 568 DARK BROWN MASTIC 569	MS3		SPECED					
16	34	2" COVE BASE 570 YELLOW MASTIC 571	COM2		SPECED					
		BROWN MASTIC 572								
		BROWN MASTIC 573								

ORION ENVIRONMENTAL SERVICES R-WORKS **SAMPLE CUSTODY FORM** 205356 **PROJECT NUMBER** 020-0277

CLIENT: V ENVIRONMENTAL	**SITE:** OSBORNE HIGH DEMO	**RELINQUISHED BY:**
ADDRESS: PO BOX 819	**ADDRESS:** 225 CENTRAL AVE	**DATE / TIME:**
HAYDEN ID 83835	LEAVENWORTH WA	
		RECEIVED BY:
TELEPHONE: 253-939-9369	**INSPECTOR:** COOPER SENG	**DATE / TIME:** 7/20/20
EMAIL:	**DATE SAMPLED:** JULY 16 & 17, 2020	

SAMPLE NO.	LAB NO.	MATERIAL DESCRIPTION	MATERIAL ID	LAYER AND SUBSTRATE	LOCATION OF MATERIAL	QTY.	TREAT	%	TYPE	OTHER FIBERS
17	35	WOVEN COTTON 574 MASTIC 575	MAS4		SPACE					
18	36	MASTIC 576 FLOOR LEVELER 577	MAS5	VS1	KITCHEN	800 sf				
19	37	SKIM COAT 578 GREEN BOARD 579 VAPOR BARRIER 580	WS4	WOOD	KITCHEN	1200				
20	38	SKIM COAT 581	SM1		"					
21	39	SKIM COAT 582	SM1		"					
22	40	NON SEP VINYL FLOORING & PAD 583 ON CONCRETE 584	MISC2		GYM FLOOR					
23	41	2" GRAY CUE BASE 585 YELLOW MASTIC 586	CBM3		"	3600 sf				
24	42	JC 587 WALLBOARD 588	WS5	PANEL	GYM	HEIGHT 20'				
		MASTIC 589			WALLS	4800				

ORION ENVIRONMENTAL SERVICES floors **SAMPLE CUSTODY FORM** 205356 **PROJECT NUMBER** 020-0277

CLIENT: V ENVIRONMENTAL	**SITE:** OSBORNE ELEM DEMO	**RELINQUISHED BY:** ORJ
ADDRESS: PO BOX 819	**ADDRESS:** 225 CENTRAL AVE	**DATE / TIME:**
HAYDEN ID 83835	LEAVENWORTH WA	
		RECEIVED BY: 7/20/20
TELEPHONE: 253-939-4369	**INSPECTOR:** COOPER SENG	**DATE / TIME:**
EMAIL:	**DATE SAMPLED:** JULY 16-17, 2020	

SAMPLE NO.	LAB NO.	MATERIAL DESCRIPTION		MATERIAL ID	LAYER AND SUBSTRATE	LOCATION OF MATERIAL	QTY.	TREAT	%	TYPE	OTHER FIBERS
		1147									
25	43	2" PIPE WRAP MUDDED FITTING	590	TS1,		2 FITTINGS					
26	44	↓	591	↓		↓					
27	45	↓	592	↓		↓					
28	46	4" PIPE WRAP MUDDED FITTING	593	TS1.2		1 FITTING		DIRECTLY OUTSIDE KITCHEN			
29	47	↓	594	↓		↓					
30	48	↓	595	↓		↓					
31	49	VS1 DUCT MASTIC	596 597	VS1.2	CONCRETE	CUSTODIAN CLOSET ACROSS FROM RM 6					
32	50	VS2 GFB TAN MASTIC BROWN MASTIC	598 599 600	VS2.2		ROOM 300 SF					

ORION ENVIRONMENTAL SERVICES Kloonis **SAMPLE CUSTODY FORM** 205356 **PROJECT NUMBER** 020-0277

CLIENT: V ENVIRONMENTAL	**SITE:** OSBORNE ELEM DEMO	**RELINQUISHED BY:** ORT
ADDRESS: PO BOX 819	**ADDRESS:** 225 CENTRAL AVE	**DATE / TIME:**
HAYDEN ID 83835	LEAVENWORTH WA	
		RECEIVED BY:
TELEPHONE: 253-939-9369	**INSPECTOR:** CONNIE SENA	**DATE / TIME:** 7/20/20
EMAIL:	**DATE SAMPLED:** JULY 16-17, 2020	

SAMPLE NO.	LAB NO.	MATERIAL DESCRIPTION	MATERIAL ID	LAYER AND SUBSTRATE	LOCATION OF MATERIAL	QTY.	TREAT	%	TYPE	OTHER FIBERS
33	51	WINDOW CAULK 601 INTERIOR WINDOWS CLASSROOM SIDE	CLK1		ROOM1	BLOCK				
34	52	FIBERGLASS PIPE WRAP 602 CAULK END 603	MISC		MECH ROOM					
35	53	WINDOW CAULK 604	CLK2		ADMIN					

ORION ENVIRONMENTAL SERVICES R100815 **SAMPLE CUSTODY FORM** 205356 **PROJECT NUMBER** 020-0277

CLIENT: V ENVIRONMENTAL	**SITE:** OSBORNE ELEM DEMO	**RELINQUISHED BY:** ORI
ADDRESS: PO BOX 819	**ADDRESS:** 225 CENTRAL AVE	**DATE / TIME:**
HAYDEN ID 83835	CLEVELAND WA	
		RECEIVED BY: 7/20/20
TELEPHONE: 253-939-9369	**INSPECTOR:** CODIE SENG	**DATE / TIME:**
EMAIL:	**DATE SAMPLED:** JULY 16-17, 2020	

SAMPLE NO.	LAB NO.	MATERIAL DESCRIPTION	MATERIAL ID	LAYER AND SUBSTRATE	LOCATION OF MATERIAL	QTY.	TREAT	%	TYPE	OTHER FIBERS
		EXTERIOR 1147								
36	54	SKIM COAT 605 STRYOBOARD 606 BRAY MASTIC 607	WS6		EXTERIOR CEILING SOFFET					
	\	VAPOR BARRIER 608 WALLBOARD 609			WALL					
37	55	SKIM COAT 610/611 SOFFIT & WALLS	SM2		EXTERIOR WALL & SOFFET					
38	56	612 613								
39	57	614 615								
40	58	616 617								
41	59	618 619								
42	60	620 621	✓		✓					

ORION ENVIRONMENTAL SERVICES R Woods **SAMPLE CUSTODY FORM** 205356 **PROJECT NUMBER** 020-0277

CLIENT: V ENVIRONMENTAL	**SITE:** OSBORNE ELEM DEMO	**RELINQUISHED BY:** CRS
ADDRESS: PO BOX 819	**ADDRESS:** 325 CENTRAL AVE	**DATE / TIME:**
HAYDEN ID 83835	LEAVENWORTH WA	
		RECEIVED BY:
TELEPHONE: 253-939-4369	**INSPECTOR:** CARRIE SENA	**DATE / TIME:** 7/20/20
EMAIL:	**DATE SAMPLED:** JULY 16-17, 2020	

SAMPLE NO.	LAB NO.	MATERIAL DESCRIPTION 1147	MATERIAL ID	LAYER AND SUBSTRATE	LOCATION OF MATERIAL	QTY.	TREAT	%	TYPE	OTHER FIBERS
43	61	EXTERIOR WALL STUCCO 622	SM2		EXT WALL					
44	62	EXTERIOR WINDOW CAULK 623	CLK3							

ATTACHMENT 2
Lead Paint Findings and Recommendations

Component Table
Calibration Sheet
Performance Characterization Sheet (PCS)

LEAD PAINT COMPONENT TABLE

A total of forty-six (46) samples consisting of various suspect materials were processed regarding main them construction components for lead in construction. Various painted cabinets contained measurable concentrations of lead paint. See attached Table.

Osborne Elementary

Lead Based Paint Limited Assessment Report

Index	Room	Substrate	Component	Color	PbC	Result
1630			CALIBRATION	White	0.00	Pass
1631			CALIBRATION	White	0.00	Pass
1632			CALIBRATION	White	0.00	Pass
1633			CALIBRATION	Red	1.00	Pass
1634			CALIBRATION	Red	1.00	Pass
1635			CALIBRATION	Red	1.00	Pass
1636	Front Entrance	Metal	Door	Red	0.00	Negative
1637	Front Entrance	Wood	Bench	Tan	0.00	Negative
1638	Admin Offices	Wood	Window Frame	White	0.00	Negative
1639	Admin Offices	Wallboard	Wall	Beige	0.00	Negative
1640	Admin Offices	Panelboard	Wall	Blue	0.00	Negative
1641	Restroom 1 / Girls	Wallboard	Wall	Beige	0.00	Negative
1642	Front Door Interior	Metal	Frame	Red	0.00	Negative
1643	Nurses Office	MDF	Cabinets	Red	0.00	Negative
1644	Health Room	Wood	Door	Brown Stain	0.00	Negative
1645	Health Room	Metal	Window Frame	Black	0.00	Negative
1646	Health Room	Wood	Bed	Blue	0.00	Negative
1647	Room 1	Wood	Door	Blue	0.00	Negative
1648	Room 1	Metal	Wndow Frame	Blue	0.00	Negative
1649	Room 2	Wood	Door Frame	Maroon	0.00	Negative
1650	Room 5	MDF	Cabinets	Orange	0.80	Positive
1651	Room 5	MDF	Cabinets	Dark Red	0.60	Positive
1652	Room 5	MDF	Cabinets	Light Red	0.40	Positive
1653	Room 5	MDF	Cabinets	Maroon	0.00	Negative
1654	Room 6	MDF	Cabinets	Lime Green	0.00	Negative
1655	Room 6	MDF	Cabinets	Blue	0.00	Negative
1656	Room 6	MDF	Cabinets	Teal	0.10	Positive
1657	Room 6	MDF	Cabinets	Purple	0.00	Negative

Osborne Elementary

Lead Based Paint Limited Assessment Report

Index	Room	Substrate	Component	Color	PbC	Result
1658	Room 7	MDF	Cabinets	Dark Red	0.50	Positive
1659	Room 7	MDF	Cabinets	Maroon	0.00	Negative
1660	Room 7	MDF	Cabinets	Orange	0.90	Positive
1661	Room 7	MDF	Cabinets	Light Red	0.50	Positive
1662	Room 10	MDF	Cabinets	Lime Green	0.00	Negative
1663	Room 11	Metal	Fire Door - Exterior	Off White	0.00	Negative
1664	Multi Purpose Room	Walls	Wood	Brown	0.00	Negative
1665	Multi Purpose Room	Metal	Door Jam	Off White	0.00	Negative
1666	Multi Purpose Room	Wood	Door	Off White	0.00	Negative
1667	Multi Purpose Room	Metal	Exterior Door	Red	0.00	Negative
1668	Custodian Closet	Wallboard	Wall	Beige	0.00	Negative
1669	Exterior	Stucco	Wall	White	0.00	Negative
1670	Exterior	Stucco	Wall	Green	0.00	Negative
1671	Exterior	Stucco	Wall	Blue	0.00	Negative
1672	Exterior - Front Entry	Stucco	Wall	White	0.00	Negative
1673	Exterior - Front Entry	Stucco	Wall	Blue	0.00	Negative
1674	Exterior - Front Entry	Metal	Beam	White	0.00	Negative
1675	Exterior - Front Entry	Metal	Door	Blue	0.00	Negative
1676	Exterior - Front Entry	Metal	Window Frame	Black	0.00	Negative
1677	Covered Play Area	Metal	Beam	Red	0.00	Negative
1678	Roof	Metal	Siding	Red	0.00	Negative
1679	Roof	Metal	Roof	Red	0.00	Negative
1680	Roof	Metal	Roof	Orange	0.00	Negative
1681	Roof	Metal	Roof	White	0.00	Negative
1682			CALIBRATION	White	0.00	Negative
1683			CALIBRATION	White	0.00	Negative
1684			CALIBRATION	White	0.00	Negative
1685			CALIBRATION	Red	1.00	Pass
1686			CALIBRATION	Red	1.00	Pass
1687			CALIBRATION	Red	1.00	Pass

Performance Characteristic Sheet

EFFECTIVE DATE: **September 24, 2004** **EDITION NO.: 1**

MANUFACTURER AND MODEL:

Make: *Niton LLC*
Tested Model: *XLp 300*
Source: ^{109}Cd
Note: This PCS is also applicable to the equivalent model variations indicated below, for the Lead-in-Paint K+L variable reading time mode, in the XLi and XLp series:

XLi 300A, XLi 301A, XLi 302A and XLi 303A.
XLp 300A, XLp 301A, XLp 302A and XLp 303A.
XLi 700A, XLi 701A, XLi 702A and XLi 703A.
XLp 700A, XLp 701A, XLp 702A, and XLp 703A.

Note: The XLi and XLp versions refer to the shape of the handle part of the instrument. The differences in the model numbers reflect other modes available, in addition to Lead-in-Paint modes. The manufacturer states that specifications for these instruments are identical for the source, detector, and detector electronics relative to the Lead-in-Paint mode.

FIELD OPERATION GUIDANCE

OPERATING PARAMETERS:

Lead-in-Paint K+L variable reading time mode.

XRF CALIBRATION CHECK LIMITS:

0.8 to 1.2 mg/cm^2 (inclusive)

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 readings are outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instruments into control before XRF testing proceeds.

SUBSTRATE CORRECTION:

For XRF results using Lead-in-Paint K+L variable reading time mode, substrate correction is <u>not</u> needed for:

Brick, Concrete, Drywall, Metal, Plaster, and Wood

INCONCLUSIVE RANGE OR THRESHOLD:

K+L MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm^2)
Results not corrected for substrate bias on any substrate	Brick	1.0
	Concrete	1.0
	Drywall	1.0
	Metal	1.0
	Plaster	1.0
	Wood	1.0

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 in August 2004 on 133 testing combinations. The instruments that were used to perform the testing had new sources; one instrument's was installed in November 2003 with 40 mCi initial strength, and the other's was installed June 2004 with 40 mCi initial strength.

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.

SUBSTRATE CORRECTION VALUE COMPUTATION:

Substrate correction is not needed for brick, concrete, drywall, metal, plaster or wood when using Lead-in-Paint K+L variable reading time mode, the normal operating mode for these instruments. If substrate correction is desired, refer to Chapter 7 of the HUD Guidelines for guidance on correcting XRF results for substrate bias.

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. Use the K+L variable time mode readings.

Conduct XRF retesting at 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:

Determine XRF results for the original and retest XRF readings. Do not correct the original or retest results for substrate bias. In single-family housing a result is defined as the average of three readings. In multifamily housing, a result is a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and retest XRF result 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 results.

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

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 Lead-in-Paint K+L variable reading time mode, the instrument continues to read until it is moved away from the testing surface, terminated by the user, or the instrument software indicates the reading is complete. The following table provides testing time information for this testing mode. The times have been adjusted for source decay, normalized to the initial source strengths as noted above. Source strength and type of substrate will affect actual testing times. At the time of testing, the instruments had source strengths of 26.6 and 36.6 mCi.

Testing Times Using K+L Reading 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	4	11	19	11	15	11
Metal	4	12	18	9	12	14
Brick Concrete Plaster	8	16	22	15	18	16

CLASSIFICATION RESULTS:

XRF results are classified as positive if they are greater than or equal to the threshold, and negative if they are less than the threshold.

DOCUMENTATION:

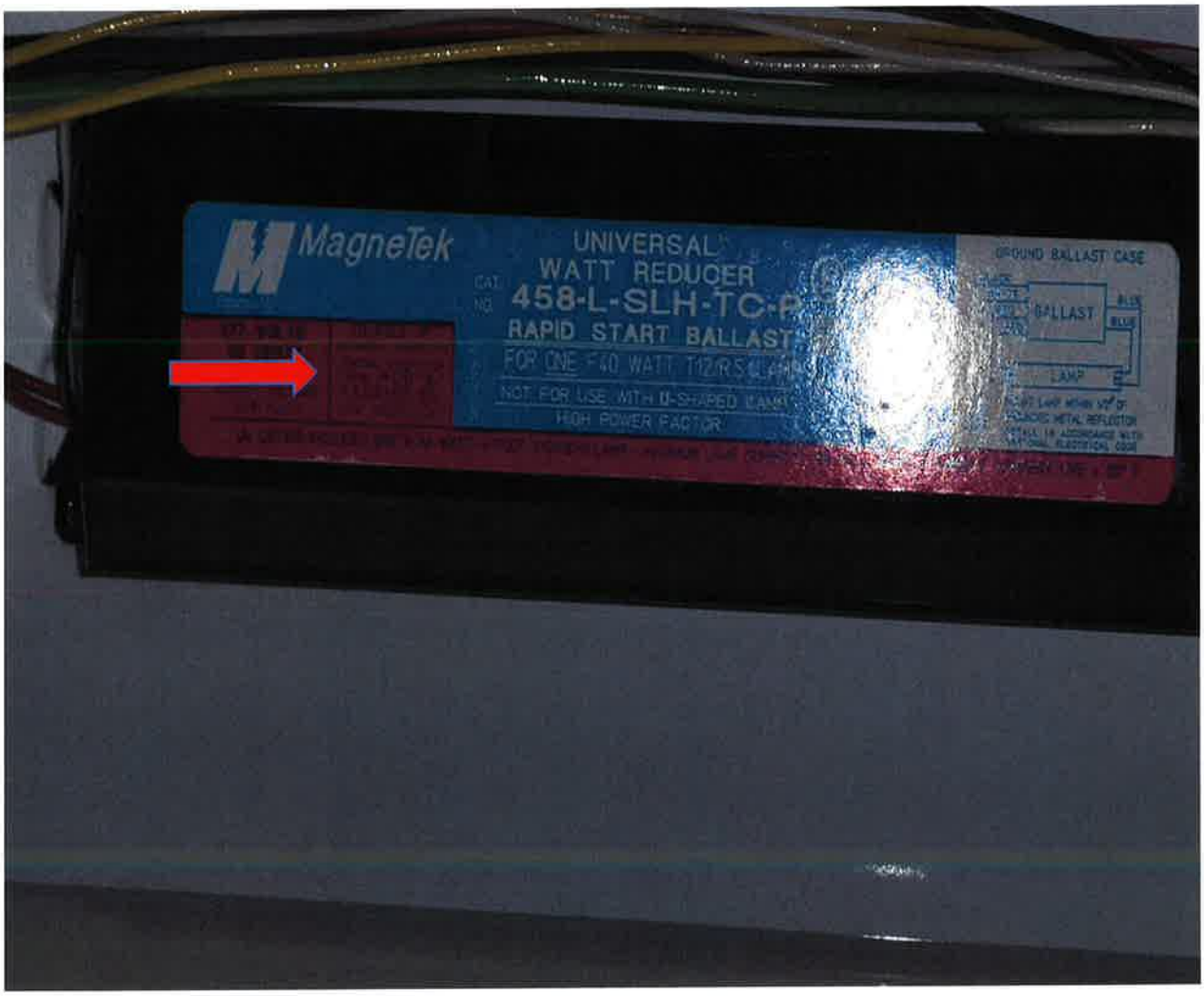
A document titled *Methodology for XRF Performance Characteristic Sheets* provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. For a copy 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. 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.*

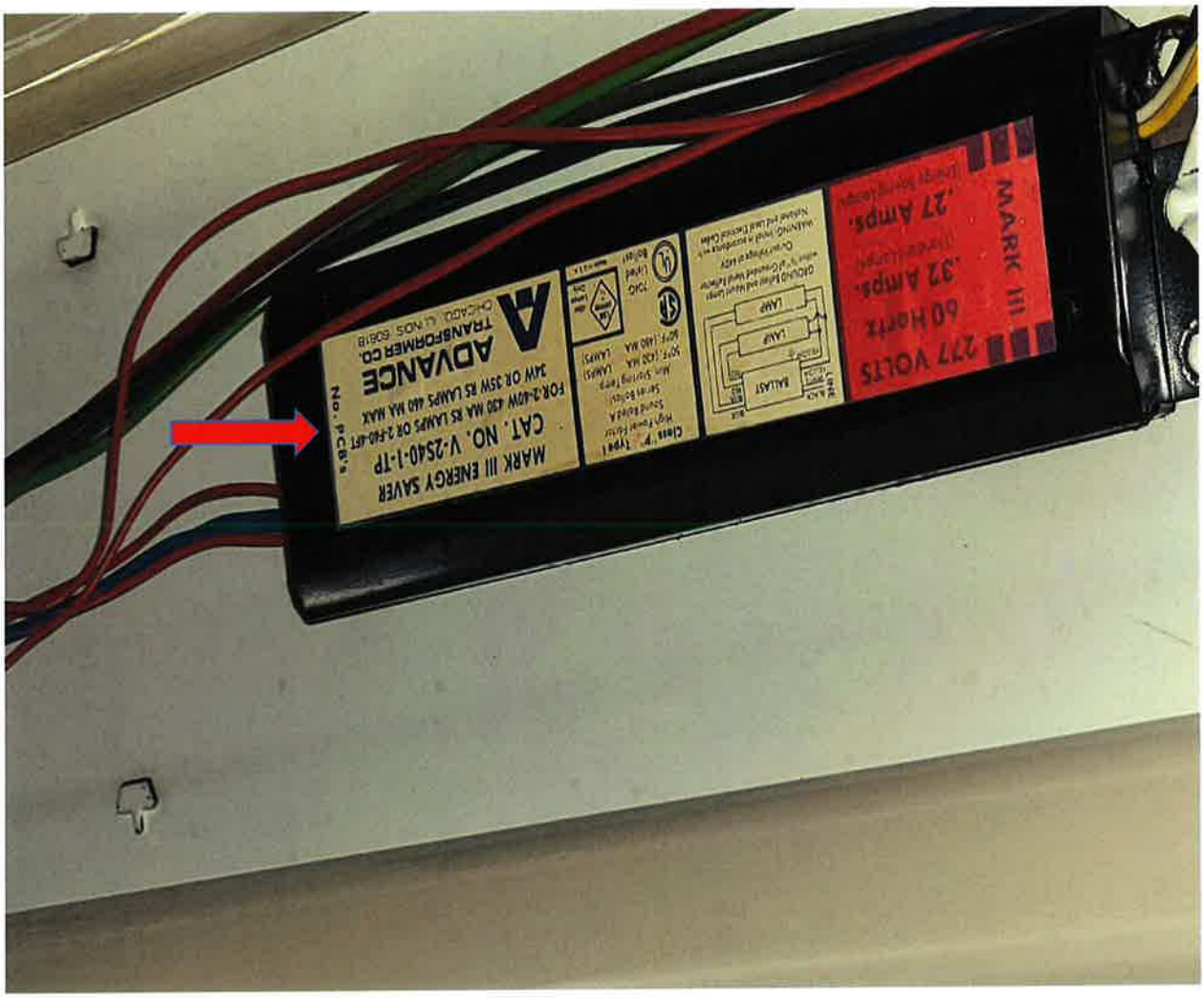
ATTACHMENT 3
PCB and Fluorescent Fixtures Findings and Recommendations

Fluorescent Light Ballasts

Fluorescent light ballasts were randomly examined throughout the buildings The ballasts of these fixtures we identified were either electronic or ballasts were marked as "No PCB"



Ballast marked as "No PCB"



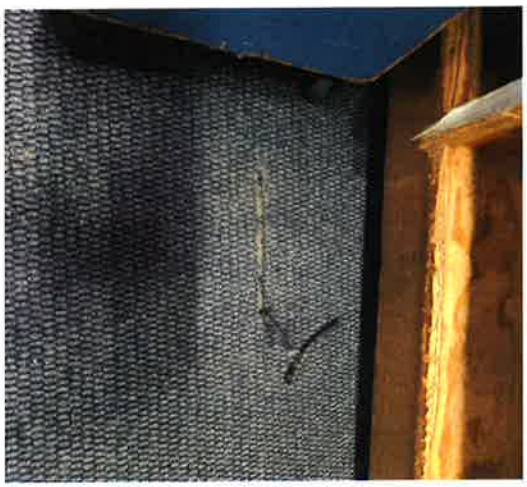
Ballast marked as "No PCB"

Fluorescent Light Tubes

Unless identified as "Truefit LED Tube, we estimated 637 fluorescent bulbs as mercury containing.

ATTACHMENT 4
Photographs

SAMPLE #1
MAS1



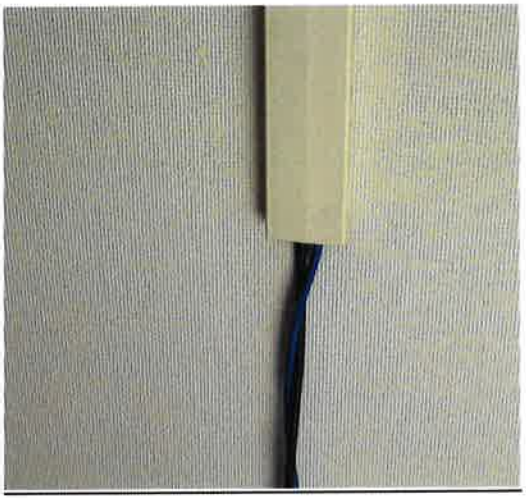
SAMPLE #2
MAS2

SAMPLE #3
VS1/VS2

SAMPLE #4
INS1

SAMPLE #5
CT1

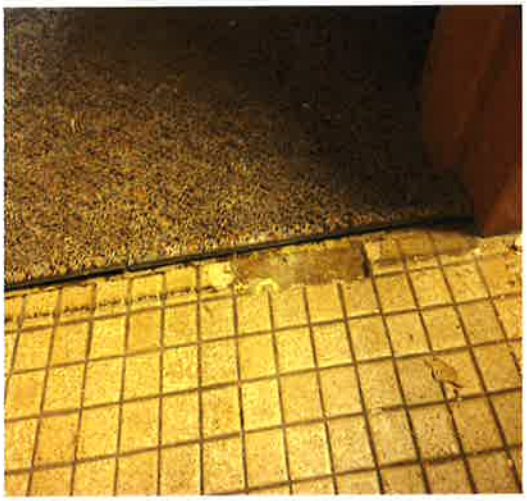
SAMPLE #6
MISC1



SAMPLE #7
CBM1

SAMPLE #8
CRT1

SAMPLE #9
CRT2



SAMPLE #10
SNK1

SAMPLE #11
WS1

SAMPLE #12
WS2

SAMPLE #13
CRT3

SAMPLE #14
WS3

SAMPLE #15
MAS3

SAMPLE #16
CBM2

SAMPLE #17
MAS4

SAMPLE #18
MAS5

SAMPLE #19
WS4

SAMPLE #20, 21
SM1

SAMPLE #22
MISC2

SAMPLE #23
CBM3

SAMPLE #24
WS5

SAMPLE #25, 26, 27
TSI1

SAMPLE #28, 29, 30
TSI2

SAMPLE #31
VS1

SAMPLE #32
VS2

SAMPLE #33, 35
CLK1, CLK2

SAMPLE #35
CLK2

SAMPLE #36
WS6

SAMPLE #37, 38, 39, 40, 41, 42, 43
SM2

SAMPLE #44
CLK3

ATTACHMENT 5
Certifications

AHERA

BUILDING INSPECTOR REFRESHER CERTIFICATE

This is to certify that

Nate Reynolds

has attended and satisfactorily completed all requirements to maintain accreditation as an AHERA Building Inspector in accordance with the Toxic Substance Control Act Title (Section 206) and 40 CFR 763.

Accreditation No. BI/R-NES-090319-08

Course Date: Sept. 3rd , 2019
Valid through: Sept. 3rd , 2020

Patricia "PJ" Journey

NOW Environmental Services, Inc.
34004 – 9th Avenue South, Suite # 12
Federal Way, Washington 98003
(253) 927-5233

AHERA

BUILDING INSPECTOR REFRESHER CERTIFICATE

This is to certify that

Carole A. Seng

has attended and satisfactorily completed all requirements to maintain accreditation as an AHERA Building Inspector in accordance with the Toxic Substance Control Act Title (Section 206) and 40 CFR 763.

Accreditation No. BI/R-NES-040120-01

Course Date: April 1, 2020
Valid through: March 31, 2021

Nelson Miles

NOW Environmental Services, Inc. (EPA Provider 944)
34004 – 9th Avenue South, Suite # 12
Federal Way, Washington 98003
(253) 927-5233