

## **Notification of Demolition**

Amendment: 0

11815 NE 99th Street, Suite 1294 Vancouver, WA 98662 Voice: 360-574-3058 Fax: 360-576-0925 Web: https://www.swcleanair.gov Email: Tina@swcleanair.gov

Date Received: 4/25/2024

Date Paid: 4/25/2024

**Previous Use: Industrial** 

SWCAA Fee: \$74.00

Receipt #: 155156169

### 1. Type of Notification: Original

2. Type of Operation: Demolition

#### 3. Facility Description: 125 E Mill Rd

Commercial Name or Description: Drax Pellet Plant Address: 125 E Mill Rd City/State/Zip/County: Longview, WA 98632 COWLITZ COUNTY Present Use: Vacant

10 day waiting period from date submitted

## 4. Facility Information

Property Owner:

Property Owner: Pinnacle Renewable Holdings Inc.

#### 5. Name and AHERA Certification Number of Asbestos Inspector:

Name: Kyle Lewis

#### 6. Asbestos Removal Contractor (if applicable):

Certification #: 7157

Asbestos Case No.: -

### 7. Dates Asbestos Removal Occurred:

Start: Complete:

## 8. Dates Demolition Will Occur:

Start: 5/5/2024 Con	nplete: 5/5/2024
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#### 9. Demolition Contractor:

Name:	Ascendent LLC		
Mailing Address:	219 12th St SE, Puyallup, WA, 98372		
Contact	Rick Estes	Phone:	253-939-4375

#### 10. Asbestos Disposal Site: N/A

#### 11. Description of planned demolition work, method(s) to be used:

Wood structure demo. Excavator. Water for fugitive dust emissions.

#### 12. Fugitive Emssions/dust from Demolition Activites MUST BE Controlled/Prevented during all phases of the project

Application of water in a spray or mist to knock down fugitive dust emissions as needed. Water will be applied in such a manner to minimize potential for pooling or runoff.

# 13. If unexpected Asbestos containing Material (ACM) is found during demolition, Stop Work, Notify SWCAA and Consult/Hire a Certified Asbestos Abatement Contractor

All hazardous/universal waste materials present will be characterized, quantified, and removed prior to the start of demo by a licensed and insured abatement company.

### 14. If demolition is ordered by a Government Agent:

15. For Emergency Demolitions (Contact SWCAA prior to work): Emergency Demolition

## Date and Time of Emergency:

**Description of Sudden, Unexpected Event:** 

Explanation of how the event caused unsafe conditions or would cause equipment damage or an unreasonable burden:

### 16. I Certify that the above information is correct:

Submitter Name:Jordan StewartSubmitter Title:Project EngineerEmail Address:jordan.stewart@drax.com

**Representing:** Drax **Date Submitted:** 4/25/2024

Approved

Reviewed by SWCAA: Mihai Voivod

The Washington State Dangerous Waste Regulations (WAC 173-303) require that demolition debris be evaluated to determine if it is dangerous. The evaluation should be completed before demolition to ensure that hazardous constituents are not released to the environment and do not present a risk to human health during or after demolition. These requirements apply to all buildings being demolished and are the responsibility of the property owner. The Washington Department of Ecology's website, https://ecology.was.gov/Regulations-Permits/Guidance-technical-assistance/Dangerous-waste-guidance/Common-dangerous-waste/Construction-and-demolition, provides more information about the requirements and about sampling and testing construction materials to detemine if they present a risk. For more information please contact a Hazardous Waste Inspector at the Washington Department of Ecology Southwest Regional Office: (360) 407-6300.



# **REGULATED BUILDING MATERIALS SURVEY**

## Green Buildings 1, 2, 3 East Mill Road Longview, WA 98632



Performed for: Ascendent, LLC 219 12<sup>th</sup> St SE Puyallup, WA 98372

Prepared By:

Lindsey Lewis Project Administrator PacRim

Sr. Review By: INT

Tricia Lewis AHERA Accredited BI PacRim

Report Date: 04/23/2024 PacRim#: 17899

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QAQC Review By: Munfeust Date Reviewed: 4/23/2024

Introduction: On April 10th, 2024, Kyle Lewis, an AHERA Accredited Building Inspector and DOC certified Lead Risk Assessor for Pacific Rim Environmental, Inc. (PacRim), performed a regulated building materials survey at the subject property described below.

Site: East Mill Road, Longview, WA 98632

Limitations: No field or report limitations were noted.

Field inspection, data collection, and report generation were performed according to the following **Scope of Work**:

## Asbestos-Containing Materials (ACM)

- 1. Bulk sampling and analysis of suspect asbestos-containing materials (ACM).
- 2. Analysis of suspect ACM by a NVLAP accredited laboratory.
- 3. Quantity estimates of ACM.
- 4. Written report based on the technician's observations, sample descriptions, and sample location.
- 5. Statement of Compliance with W.A.C. 296-62-07721 Sign-off form.

## Lead-Based Paints (LBP)

- 6. Perform limited screening of suspect lead-based paints.
- 7. Written report including: Sample descriptions, conditions, locations, analytical results, and recommendations.

### Universal Waste Inventory

- 8. Inspect and inventory lights and other equipment to identify and quantify fixture and lamp type to determine presence of PCB and/or mercury.
- 9. Written report including quantity of Exit signs, HID Lights, and any other universal waste present onsite.

## Section 2.0

### **Survey Definitions and Purpose**

#### **DEFINITIONS:**

Surfacing: Materials, which are either spray-applied or troweled-on for acoustical, decorative, or fireproofing purposes.

Thermal System Insulation (TSI): Insulating materials used to inhibit heat transfer or to prevent condensation on pipes, boilers, tanks, ducts, and various other components.

**Miscellaneous (Misc.):** All other materials not included in the above categories such as floor tile, ceiling tile, roofing felt, cementitious materials, wallboard systems and products such as caulking, mastics and putties.

**Homogeneous Material:** For the purposes of this report; *Homogeneous Material* is defined as an area of surfacing material, thermal system insulation, or miscellaneous material that is uniform in color, texture, and application. When materials are determined to be Homogeneous by the on-site AHERA Accredited Building Inspector; although laboratory results may vary, in accordance with AHERA regulations, if any of the samples in a Homogeneous Material Sample Set are found to contain asbestos, then all materials in the Sample Set must be considered to contain asbestos.

**HM#:** Homogeneous Material Number indicates which Homogeneous Material Sample Set that the collected sample belongs to.

**Homogeneous Area:** For the purposes of this report, *Homogeneous Area* is defined as a summary of all areas where a Homogeneous Material was identified within the Project Scope.

**PACM:** Presumed Asbestos-Containing Material indicates suspect building material for asbestos is treated as Asbestos-Containing Material (ACM) until destructive testing can be completed to determine otherwise.

#### PURPOSE:

The survey was intended to identify possible asbestos-containing materials, lead-based paint, and universal waste on the interior and exterior of the building and two associated sheds. This inspection covered only those areas which were exposed and/or physically accessible to the inspector.

#### Materials uncovered during the course of demolition, renovation, or maintenance activities that are not identified in this inspection report must be presumed to contain asbestos until PLM analysis proves that this material is not asbestos-containing.

#### This survey is not intended for, nor should be used as a design specification.

The Asbestos in Schools Hazard Amendment and Reauthorization Act (ASHARA), effective November 20, 1990, expanded accreditation requirements to apply to persons who work with asbestos in public and commercial buildings as well as schools. Specifically, ASHARA expanded the Toxic Substances Control Act (TSCA) Section 206 (a) (1) and (3) to require accreditation for any person who designs or conducts a response action with respect to friable ACM in a building. TSCA Section 207 provides for civil penalties of \$5,000 for each day of a violation for not employing accredited individuals to design and conduct response actions.

Sampling of suspect asbestos-containing materials was conducted as prescribed in 40 CFR 763.86.

In accordance with <u>29 CFR 1910.1001</u>, <u>W.A.C. 296-62-07721</u>, and <u>SWCAA 476</u>, Pacific Rim Environmental, Inc. performed a regulated building materials survey of the Green building and two associated sheds located at East Mill Road in Longview, Washington 98632. Should employees or contract personnel encounter any suspect asbestos-containing materials (ACM) it is their responsibility to:

- 1. Contact a representative of the owner.
- 2. Consult the inspection report to determine whether or not the suspect material contains asbestos.
- 3. If the suspect material does not appear in the inspection report, then that material was not sampled and must be presumed to contain asbestos until proven otherwise by sampling and PLM analysis.
- 4. Ensure that all employees and contractors, who may disturb suspect materials, are informed and advised of the location and type of materials that contain asbestos.

### Limitations:

No field or report limitations were noted.

### **Survey Findings:**

The following suspect hazardous and regulated materials were sampled and analyzed at the subject property:

### Asbestos (See Section 4.0 for details):

None of the suspect materials sampled were found to contain asbestos by PLM laboratory analysis.

## Lead-Based Paint (See Section 5.0 for details):

No LBP was identified during the screening.

### Universal Waste (See Section 6.0 for details):

- Light Ballast Approximately 13 Each
- 4' Fluorescent Tubes Approximately 43 Each

I Hereby Attest:

The inspection report has been made available to me. I will inform all subcontractors of the location and types of materials containing asbestos. I am authorized to sign on behalf of my company.

Contractor:	Owner's Rep:
Signature:	Signature:
Print Name:	Print Name:
Title:	Title:
Date:	Date:

## Section 4.0 Asbestos Sampling Summary by Homogeneous Materials

Bulk samples collected were submitted for sample analysis in accordance with method EPA-600/R-93/116: "Method for the Determination of Asbestos in Bulk Building Materials". Analyses were performed at Pacific Rim Environmental, Inc., a NVLAP Accredited Laboratory (Lab Code 101631-0). Materials are positive for asbestos if they are found to contain greater than one percent (1%) or 1% asbestos. Materials that are less than one percent (<1%) asbestos, although not considered positive for asbestos, when removed must follow applicable Washington State regulations.

A total of eighteen (18) bulk samples were collected by PacRim and submitted for PLM laboratory analysis.

Limitations: No field or report limitations were noted.

None of the suspect materials sampled were found to contain asbestos by PLM laboratory analysis.

HM #	AHERA Category	Material Description	HM Locations	Estimated Quantity	Sample Location	Asbestos Type / %	Sample Number
			Rooms 1 and 2		Room 1 wall	None Detected (Both Layers)	A410-01
					Room 1 ceiling	None Detected (Both Layers)	A410-02
1	Surfacing	Texture on GWB	walls and ceilings, rooms 3 and 4	N/A	Room 2 wall	None Detected (Both Layers)	A410-03
			ceilings		Room 3 ceiling	None Detected (Both Layers)	A410-04
			Centings		Room 4 ceiling	None Detected (Both Layers)	A410-05
2	Miscellaneous	4 inch grey cove base and mastic	Room 3, room 4, and bathroom	N/A	Room 3 wall	None Detected (Both Layers)	A410-06
3	Missellaneous	Sheet Vinyl	Rooms 2, 3, 4,	N/A	Room 2	None Detected (All Layers)	A410-08
5	Miscellaneous	Flooring	and bathroom		Room 4	None Detected (All Layers)	A410-09
4	Miscellaneous	2 inch cove base and mastic	Room 1 and room 2	N/A	Room 2	None Detected (All Layers)	A410-07
5	Miscellaneous	Exterior caulk	On original lk aluminum framed N/A windows only	N/A	Building exterior window of room 3	None Detected	A410-10
6	Miscellaneous	3 tab roofing	N/A	N/A	Building roof	None Detected (All Layers)	A410-11
7	Missellanosus	Polled reafing	NI/A	NI / A	Shed 1 roof	None Detected	A410-14
/	Miscellaneous	aneous Rolled roofing N/A	N/A	Shed 2 roof	None Detected	A410-17	

## Asbestos Sample Summary Table by Homogenous Number:

PacRim #17899

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## Section 4.0 Asbestos Sampling Summary by Homogeneous Materials - Continued

HM #	AHERA Category	Material Description	HM Locations	Estimated Quantity	Sample Location	Asbestos Type / %	Sample Number
8	Miscellaneous	Electrical backer board	N/A	N/A	EC shed	None Detected	A410-13
9	Miscellaneous	Roofing tar paper	N/A	N/A	Building roof	None Detected	A410-12
10	Miscellaneous	Rolled roofing tar paper	N/A	N/A	Shed 1 roof Shed 2 roof	None Detected None Detected	A410-15 A410-18
11	Miscellaneous	Exterior caulk	N/A	N/A	Shed 1 opposite side from door on roof	None Detected	A410-16

Materials uncovered during the course of demolition, renovation, or maintenance activities that are not identified in this inspection report must be presumed to contain asbestos until PLM analysis proves that this material is not asbestos-containing.

## Section 5.0 Lead-Based Paint Screening Summary

The inspection and testing performed on the interior and exterior of the subject structure's painted surfaces *did not identify* lead-based paint concentrations at or above the **EPA/HUD standard of 1.0 mg/cm2** on the tested components.

## The XRF sample results are provided in Appendix D.

# The Performance Characteristic Sheet for the SciAps X-Ray Fluorescence Spectrometer (XRF) model SciAps X550, February 1, 2022, is provided in Appendix E.

### General Information:

It is important to keep in mind that although the EPA/HUD standard uses a criterion of 5,000 parts per million dry weight or 1.00 milligrams per square centimeter (1.00 mg/cm<sup>2</sup>) for lead-based paint, there still may be lead present in those results reported as negative. In the event that lead is present, Federal OSHA and Washington State Department of Labor & Industries regulations will still apply since neither agency has established a concentration of lead in paint below which the lead-in construction standards do not apply. Workers wearing respiratory protection and who have received proper training in handling lead-contaminated materials must be used for any construction activities (including manual scraping, manual/power sanding, heat gun applications, general cleanup, and demolition) that affect a paint film containing lead.

If the building is to be renovated or remodeled, there are procedures regarding the disturbance or removal of the lead-based paints that <u>can</u> be followed (i.e., initial air monitoring, clearance sampling, etc.). These procedures can be found in *HUD-0006700 Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*. It is not required that these regulations/procedures be utilized on this project; however, because these are the only available guidelines for the removal of lead-based paints, PacRim feels it necessary to inform you of these guidelines.

The current state rules or regulations that currently apply to lead-based paints are <u>WAC 296-155-17603</u> Scope and <u>WAC 296-155-17607</u> Permissible Exposure Limit. The WAC code states that if lead is detectable in the workplace in any quantity, initial air monitoring must be performed on employees doing demolition, renovation, or remodeling work in areas found to have materials containing lead. Also, workers performing lead removal must be trained in accordance with <u>WAC 296-155-17625</u>.

## **Universal Waste Rules**

The Universal Waste Rule (UWR) establishes alternative, streamlined waste management standards in place of most of the Dangerous Waste Regulations, Chapter 173-303 WAC, except for, WAC 173-303-050, 173-303-145 and 173-303-960.

The following lamp types may be characterized as universal waste: fluorescent tubes, high intensity discharge (HID) lamps (mercury vapor, metal halide, high pressure sodium) and compact fluorescent lights.

- Approximately 13 Light Ballast
- Approximately 43 4' fluorescent tubes

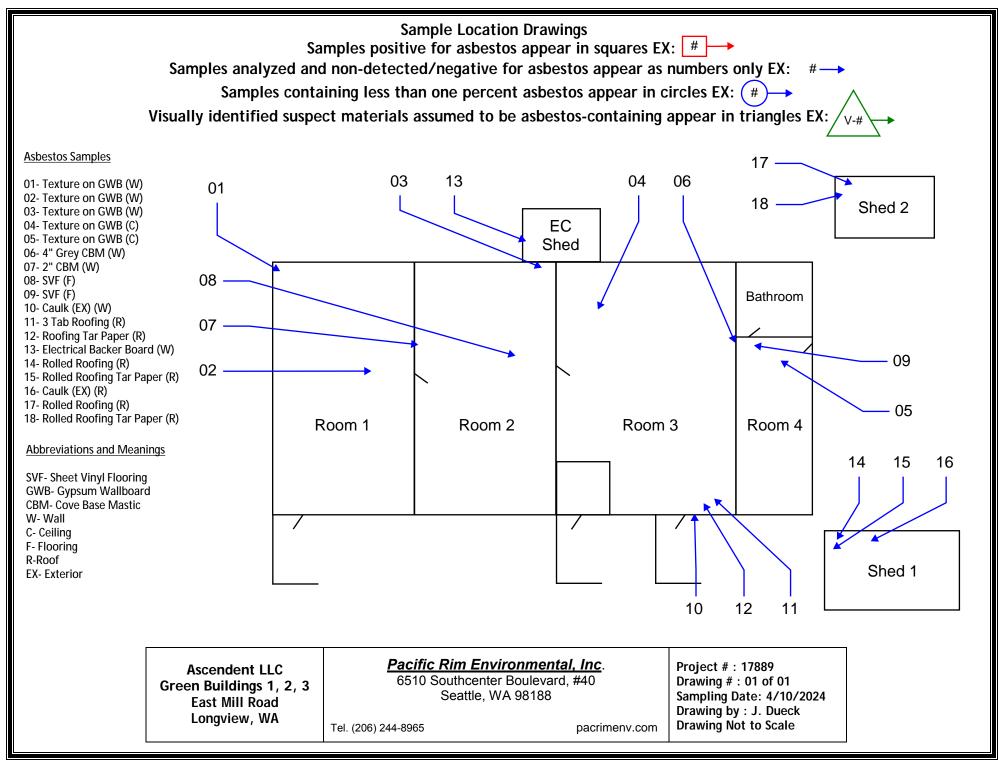
## Universal waste must be removed and properly disposed of or recycled prior to building demolition.

Disposal of individual lamps is not regulated. However, disposal of large quantities of lamps is subject to dangerous waste regulations (WAC 173-303) and the waste stream must be subjected to TCLP (Toxicity Characteristic Leaching Procedure) analysis to determine the amount of mercury that could leach out of the waste. The TCLP limit for mercury is 0.2 mg/L.

PCBs belong to a broad family of organic chemicals known as chlorinated hydrocarbons. PCBs are produced by the combination of one or more chlorine atoms and a biphenyl molecule. PCBs range in consistency from heavy oily liquids to waxy solids. Prior to 1979, PCBs were widely used in electrical equipment such as transformers, capacitors, switches, and voltage regulators.

A copy of the Washington State Department of Ecology *Universal Waste Rule for Dangerous Waste Lamps WAC 173-303-573*, Publication # 00-04-020, June 2000, is provided in Appendix G.

Appendix A: Sample Location Drawings



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Appendix B: Asbestos Inspection Summary



## Asbestos Inspection Summary

	Project Information
Job Number	17899
Project Name	Green Buildings 1, 2, 3
Project Address:	East Mill Road, Longview, WA
Client:	Ascendent LLC
Date of Survey:	10-Apr-2024
PacRim Technician:	Kyle Lewis
Limitations:	No limitations noted.
Technician Broject Description:	Devide need 4 and 4 bad
Technician Project Description:	Building, shed 1 and shed 2. Approximately built in 1967 Electrical panel in EC shed states installed in 1967.
Turnaround Requested:	3-5 Days



Asbes	stos Sample	Sample Da	ate: 10-Apr-2024
Project Name	Green Buildings 1, 2, 3		
Sample Type	Physical Sample	AHERA Category	Surfacing
Sample Number	A410-01	Homogenous Material Number	1
<b>Material Description</b>	Texture on GWB		
<b>Building Component</b>	Wall	Substrate	Drywall
Homogenous Mtl Area	Rooms 1 and 2 walls a	nd ceilings, rooms 3 and 4 ceilings	
Sample Location	Room 1 wall		
Quantity	1300	Unit of Measure	Square Feet
Asbestos Type/%	None Detected (Both	Layers)	
		•	
Sample Location Photo			



Asbes	tos Sample	Sample Da	ate: 10-Apr-2024
Project Name	Green Buildings 1, 2, 3		
Sample Type	Physical Sample	AHERA Category	Surfacing
Sample Number	A410-02	Homogenous Material Number	1
<b>Material Description</b>	Texture on GWB		
Building Component	Ceiling	Substrate	Drywall
Homogenous Mtl Area	Rooms 1 and 2 walls ar	nd ceilings, rooms 3 and 4 ceilings	
Sample Location	Room 1 ceiling		
Quantity	1300	Unit of Measure	Square Feet
Asbestos Type/%	None Detected (Both I	Layers)	
Sample Location Photo			

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Asbes	stos Sample	Sample Da	ate: 10-Apr-2024
Project Name	Green Buildings 1, 2, 3		
Sample Type	Physical Sample	AHERA Category	Surfacing
Sample Number	A410-03	Homogenous Material Number	1
<b>Material Description</b>	Texture on GWB		
<b>Building Component</b>	Wall	Substrate	Drywall
Homogenous Mtl Area	N/A		
Sample Location	Room 2 wall		
Quantity	1300	Unit of Measure	Square Feet
Asbestos Type/%	None Detected (Both	Layers)	
Sample Photo		a literative	
Sample Location Photo			



Asbes	stos Sample	Sample Da	ate: 10-Apr-2024
Project Name	Green Buildings 1, 2, 3		
Sample Type	Physical Sample	AHERA Category	Surfacing
Sample Number	A410-04	Homogenous Material Number	1
Material Description	Texture on GWB		
Building Component	Ceiling	Substrate	Drywall
Homogenous Mtl Area	N/A		
Sample Location	Room 3 ceiling		
Quantity	1300	Unit of Measure	Square Feet
Asbestos Type/%	None Detected (Both	Layers)	
Sample Location Photo			



Asbes	stos Sample	Sample Da	ate: 10-Apr-2024
Project Name	Green Buildings 1, 2, 3		
Sample Type	Physical Sample	AHERA Category	Surfacing
Sample Number	A410-05	Homogenous Material Number	1
<b>Material Description</b>	Texture on GWB		
Building Component	Ceiling	Substrate	Drywall
Homogenous Mtl Area	N/A		
Sample Location	Room 4 ceiling		
Quantity	1300	Unit of Measure	Square Feet
Asbestos Type/%	None Detected (Both	Layers)	
Sample Location Photo			

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Asbes	stos Sample	Sample Da	ate: 10-Apr-2024
Project Name	Green Buildings 1, 2, 3		
Sample Type	Physical Sample	AHERA Category	Miscellaneous
Sample Number	A410-06	Homogenous Material Number	2
Material Description	4 inch grey cove base a	and mastic	
<b>Building Component</b>	Wall	Substrate	Wood
Homogenous Mtl Area	Room 3, room 4, and b	athroom	
Sample Location	Room 3 wall		
Quantity	130	Unit of Measure	Lineal Feet
Asbestos Type/%	None Detected (Both	Layers)	
Sample Photo			
Sample Location Photo			

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Asbes	stos Sample	Sample Da	ate: 10-Apr-2024
Project Name	Green Buildings 1, 2, 3		
Sample Type	Physical Sample	AHERA Category	Miscellaneous
Sample Number	A410-07	Homogenous Material Number	4
Material Description	2 inch cove base and m	nastic	
<b>Building Component</b>	Wall	Substrate	Drywall
Homogenous Mtl Area	Room 1 and room 2		
Sample Location	Room 2		
Quantity	80	Unit of Measure	Lineal Feet
Asbestos Type/%	None Detected (All La	yers)	
Sample Photo			
Sample Location Photo			



Asbes	stos Sample	Sample Da	ate: 10-Apr-2024
Project Name	Green Buildings 1, 2, 3		
Sample Type	Physical Sample	AHERA Category	Miscellaneous
Sample Number	A410-08	Homogenous Material Number	3
Material Description	Sheet Vinyl Flooring		
Building Component	Floor	Substrate	Concrete
Homogenous Mtl Area	Rooms 2, 3, 4, and bat	hroom	
Sample Location	Room 2		
Quantity	630	Unit of Measure	Square Feet
Asbestos Type/%	None Detected (All La	yers)	
Sample Location Photo			



Asbes	stos Sample	Sample Da	ate: 10-Apr-2024
Project Name	Green Buildings 1, 2, 3		
Sample Type	Physical Sample	AHERA Category	Miscellaneous
Sample Number	A410-09	Homogenous Material Number	3
<b>Material Description</b>	Sheet Vinyl Flooring		
<b>Building Component</b>	Floor	Substrate	Wood
Homogenous Mtl Area	N/A		
Sample Location	Room 4		
Quantity	630	Unit of Measure	Square Feet
Asbestos Type/%	None Detected (All La	yers)	
Sample Location Photo			



Asbes	stos Sample	Sample Da	ate: 10-Apr-2024
Project Name	Green Buildings 1, 2, 3		
Sample Type	Physical Sample	AHERA Category	Miscellaneous
Sample Number	A410-10	Homogenous Material Number	5
<b>Material Description</b>	Exterior caulk		
<b>Building Component</b>	Wall	Substrate	Wood
Homogenous Mtl Area	On original aluminum	framed windows only	
Sample Location	Building exterior winde	ow of room 3	
Quantity	90	Unit of Measure	Lineal Feet
Asbestos Type/%	None Detected		
Sample Photo			
Sample Location Photo	LDG SCALE	5	



Asbes	stos Sample	Sample Da	ate: 10-Apr-2024
Project Name	Green Buildings 1, 2, 3		
Sample Type	Physical Sample	AHERA Category	Miscellaneous
Sample Number	A410-11	Homogenous Material Number	6
Material Description	3 tab roofing		
Building Component	Roof	Substrate	Wood
Homogenous Mtl Area	N/A		
Sample Location	Building roof		
Quantity	1100	Unit of Measure	Square Feet
Asbestos Type/%	None Detected (All La	yers)	
Sample Location Photo			



Asbes	stos Sample	Sample Da	ate: 10-Apr-2024
Project Name	Green Buildings 1, 2, 3		
Sample Type	Physical Sample	AHERA Category	Miscellaneous
Sample Number	A410-12	Homogenous Material Number	9
Material Description	Roofing tar paper		
<b>Building Component</b>	Roof	Substrate	Wood
Homogenous Mtl Area	N/A		
Sample Location	Building roof		
Quantity	1100	Unit of Measure	Square Feet
Asbestos Type/% Sample Photo	None Detected		
Sample Location Photo			



Asbes	stos Sample	Sample Da	ate: 10-Apr-2024
Project Name	Green Buildings 1, 2, 3		
Sample Type	Physical Sample	AHERA Category	Miscellaneous
Sample Number	A410-13		8
Material Description	Electrical backer board		
<b>Building Component</b>	Wall	Substrate	Metal
Homogenous Mtl Area	N/A	^	
Sample Location	EC shed		
Quantity	2	Unit of Measure	Square Feet
Asbestos Type/%	None Detected		
Sample Photo			
Sample Location Photo			



· · ·	dentifizitivieoitti		
Asbes	stos Sample	Sample Da	ate: 10-Apr-2024
Project Name	Green Buildings 1, 2, 3		
Sample Type	Physical Sample	AHERA Category	Miscellaneous
Sample Number	A410-14	Homogenous Material Number	7
Material Description	Rolled roofing		
<b>Building Component</b>	Roof	Substrate	Wood
Homogenous Mtl Area	N/A		
Sample Location	Shed 1 roof		
Quantity	80	Unit of Measure	Square Feet
Asbestos Type/%	None Detected		
Sample Location Photo			



Asbes	stos Sample	Sample Da	ate: 10-Apr-2024
Project Name	Green Buildings 1, 2, 3		
Sample Type	Physical Sample	AHERA Category	Miscellaneous
Sample Number	A410-15	Homogenous Material Number	10
Material Description	Rolled roofing tar pape	er	
Building Component	Roof	Substrate	Wood
Homogenous Mtl Area	N/A		
Sample Location	Shed 1 roof		
Quantity	80	Unit of Measure	Square Feet
Asbestos Type/%	None Detected		
Sample Location Photo			

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Asbes	stos Sample	Sample Da	ate: 10-Apr-2024
Project Name	Green Buildings 1, 2, 3		
Sample Type	Physical Sample	AHERA Category	Miscellaneous
Sample Number	A410-16	Homogenous Material Number	11
<b>Material Description</b>	Exterior caulk		
Building Component	Roof	Substrate	Wood
Homogenous Mtl Area	N/A		
Sample Location	Shed 1 opposite side fr	rom door on roof	
Quantity	11	Unit of Measure	Lineal Feet
Asbestos Type/%	None Detected		
Sample Location Photo			



Asbes	stos Sample	Sample Da	ate: 10-Apr-2024
Project Name	Green Buildings 1, 2, 3		
Sample Type	Physical Sample	AHERA Category	Miscellaneous
Sample Number	A410-17	Homogenous Material Number	7
Material Description	Rolled roofing		
Building Component	Roof	Substrate	Wood
Homogenous Mtl Area	N/A		
Sample Location	Shed 2 roof		
Quantity	85	Unit of Measure	Square Feet
Asbestos Type/% Sample Photo	None Detected		
Sample Location Photo			



Asbes	stos Sample	Sample Da	ate: 10-Apr-2024
Project Name	Green Buildings 1, 2, 3		
Sample Type	Physical Sample	AHERA Category	Miscellaneous
Sample Number	A410-18	Homogenous Material Number	10
Material Description	Rolled roofing tar paper		
<b>Building Component</b>	Roof	Substrate	Wood
Homogenous Mtl Area	N/A		
Sample Location	Shed 2 roof		
Quantity	85	Unit of Measure	Square Feet
Asbestos Type/%	None Detected		
Sample Photo			
Sample Location Photo			

Appendix C: Asbestos Bulk Sample Lab Analysis Reports



## Pacific Rim Environmental Inc. Bulk Sample Analysis Report



Dage: 1 of 6

					rage. 1010
Customer Name:	Ascendent LLC 219 12th Street SE			PacRim Number:	17899
	Puyallup			Report Number:	2024-04-0064
	WA 98372			Date Received:	4/11/2024
				Analysis Start Date:	4/11/2024
Customer Project Number:	None Given			Analysis End Date:	4/11/2024
Project Name:	Green Buildings 1,	2, 3		Turnaround Time:	3-5 Days
Project Address:	East Mill Road			Report Date:	4/11/2024
	Longview			Report By:	Shannon Clegg
PO Number:	WA 98632 None Given	Samples Analyzed for thi	s report	Analyst(s):	Shannon Clegg
Sample Date:	10-Apr-2024	Beginning Laboratory ID Number	r: 2024-04-00	54	Sample Set Number
Total Samples:	10-дрг-2024 18	Ending Laboratory ID Number:	2024-04-008		2024-3670

The bulk samples submitted were analyzed for asbestos content using Polarized Light Microscopy (PLM). Analysis was performed in accordance with Appendix E to Subpart E of 40 CFR Part 763 and EPA/600/R93/116.

The test results pertain only to the samples submitted for analysis. Unless otherwise noted, the samples were inhomogeneous; subsamples of components were analyzed to achieve representative analysis. Separate layers of layered samples were analyzed and reported separately. Unless otherwise stated, asbestos content was quantified by calibrated visual estimation (CVES). CVES concentrations are reported in two to three percent ranges for fiber concentrations ranging from one to ten percent, and usually five percent ranges for concentrations greater than ten percent. Samples in which asbestos was not observed are reported as "None Detected".

#### Limitations and Uncertainty:

Factors such as sample quality, sample size, interfering matrix material, fiber size, and fiber concentration contribute to the uncertainty in asbestos concentration estimates in bulk materials. Relative errors exceeding 100% may occur in samples containing less than ten percent asbestos. Relative errors are typically below thirty percent in samples having greater than ten percent asbestos, and approach zero as asbestos concentrations approach 100%.

Asbestos fibers with diameters less than approximately 0.25 microns are not detectable by PLM. Fibers with larger diameters may not be visible if obscured by interfering matrix materials. These extremely fine fibers may occur in floor tiles, adhesives, products with cement binders, and other non-friable or semi-friable materials. This limitation can be overcome using alternative analytical methods, such as Transmission Electron Microscopy (TEM).

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NVLAP Accredited Lab #: 101631-0 Samples Submitted by: PacRim

Report	Q		
Reviewed by:	SXX	04/11/2024	
	Approved S	ignatory '	



## Pacific Rim Environmental Inc. Bulk Sample Analysis Report



Binder, Mineral Aggregate,

Paint

Page: 2 of 6

Customer Project Number:NonProject Name:GreeSample Date:10-AReport Date:4/11	en Buildings 1, 2, 3 .pr-2024 ./2024 Sample	PacRim Number: Report Number: Date Received: Analysis Start Da Set Number 24-3670 Analyst(s):	2024-04-0064 4/11/2024 te: 4/11/2024	
Field Sample Number: <u>A410-01</u> Lab ID: 2024-04-0064 Lab Sample Descript	Field Sample Descript Texture on GWB tion Asbestos Type/%	tion: Field Sample Location: Room 1 wall Non-Asbestos Fibers	Analyst: SLC Analysis Date: 4/11/2024 Non-Fibrous Materials	
Layer: 1 White, chalky gypsum attached brown paper	with None Detected	Cellulose 5-7%	Binder, Mineral Aggregate, Gypsum	
Layer: 2 White, fine-grained me material with embedd paper and attached br	ed white	Cellulose 10-15%	Binder, Mineral Aggregate, Paint	
Field Sample Number: <u>A410-02</u> Lab ID: <b>2024-04-0065</b>	Field Sample Descript Texture on GWB	tion: Field Sample Location: Room 1 ceiling	Analyst: SLC Analysis Date: 4/11/2024	
Lab Sample Descript	tion Asbestos Type/%	Non-Asbestos Fibers	Non-Fibrous Materials	
Layer: 1 White, chalky gypsum attached brown paper		Cellulose 5-7%	Binder, Mineral Aggregate, Gypsum	
Layer: 2 White, fine-grained me material with attached paint		Cellulose <1%	Binder, Mineral Aggregate, Paint	
Field Sample Number: <u>A410-03</u> Lab ID: <b>2024-04-0066</b>	Field Sample Descript	Room 2 wall	Analyst: SLC Analysis Date: 4/11/2024	
Lab Sample Descript Layer: 1 White, chalky gypsum attached brown paper embedded fibrous glas	with None Detected and	Cellulose 5-7% Fibrous Glass <1%	Non-Fibrous Materials Binder, Mineral Aggregate, Gypsum	
Layer: 2 White, fine-grained material with embedd paper and attached br	ed white	Cellulose 10-15%	Binder, Mineral Aggregate, Paint	
Field Sample Number: <u>A410-04</u>	Field Sample Descript		Analyst: SLC	
Lab ID: 2024-04-0067	Texture on GWB	Room 3 ceiling	Analysis Date: 4/11/2024	
Lab Sample Descript	tion Asbestos Type/%	Non-Asbestos Fibers	Non-Fibrous Materials	
Layer: 1 White, chalky gypsum attached brown paper		Cellulose 5-7% Fibrous Glass <1%	Binder, Mineral Aggregate, Gypsum	

 Layer:
 2
 White, fine-grained mud
 None Detected
 Cellulose <1%</th>

 material with attached white
 paint
 Cellulose <1%</td>

embedded fibrous glass



# Pacific Rim Environmental Inc. Bulk Sample Analysis Report



#### Page: 3 of 6

Customer Customer Project N Sample D Report D Report B	Project Number: ame: ate: ate:	Ascendent LLC None Given Green Buildings 1, 10-Apr-2024 4/11/2024 Shannon Clegg	, 2, 3 <b>Sample Set Num</b> 2024-3670	PacRim Number: Report Number: Date Received: Analysis Start Date: Analysis End Date: Analyst(s):	17899 2024-04-0064 4/11/2024 4/11/2024 4/11/2024 Shannon Clegg
•	Number: <u>A410-</u> 24-04-0068		Field Sample Description: Texture on GWB	Field Sample Location: Room 4 ceiling	Analyst: SLC Analysis Date: 4/11/2024
Layer: 1	Lab Sample De White, chalky gyp attached brown p embedded fibrou	osum with paper and	Asbestos Type/% None Detected	Non-Asbestos Fibers Cellulose 5-7% Fibrous Glass <1%	Non-Fibrous Materials Binder, Mineral Aggregate
Layer: 2	White, fine-graine material with atta paint		None Detected	Cellulose <1%	Binder, Mineral Aggregate, Paint
	Number: <u>A410-</u> 24-04-0069	<u>06</u>	Field Sample Description: 4 inch grey cove base and mastic	Field Sample Location: Room 3 wall	Analyst: SLC Analysis Date: 4/11/2024
	Lab Sample De	scription	Asbestos Type/%	Non-Asbestos Fibers	Non-Fibrous Materials
Layer: 1	Grey flexible cove	e base	None Detected	Cellulose <1%	Binder, Mineral Aggregate, Vinyl
Layer: 2	Yellow flexible ma	astic	None Detected	Cellulose <1% Spider Silk <1%	Binder, Mineral Aggregate, Adhesive
	Number: <u>A410-</u> 24-04-0070 Lab Sample De		Field Sample Description: 2 inch cove base and mastic Asbestos Type/%	Field Sample Location: Room 2 Non-Asbestos Fibers	Analyst: SLC Analysis Date: 4/11/2024 Non-Fibrous Materials
Layer: 1	Grey flexible cove		None Detected		
Layer: 2	Yellow flexible ma	astic	None Detected	None Detected Cellulose <1% Binder, Minera Adhesive	
Layer: 3	White, fine-graine compound	ed mud	None Detected	Cellulose <1%	Binder, Mineral Aggregate, Paint
Layer: 4	White, chalky gyp attached brown p		None Detected	Cellulose 5-7% Fibrous Glass <1%	Binder, Mineral Aggregate, Gypsum



# Pacific Rim Environmental Inc. Bulk Sample Analysis Report



#### Page: 4 of 6

Custome Custome Project N Sample D Report D Report B	er Project Number: Name: Date: Date:	Ascendent LLC None Given Green Buildings 1, 10-Apr-2024 4/11/2024 Shannon Clegg	, 2, 3 <b>Sample Set Num</b> 2024-3670	PacRim Number: Report Number: Date Received: Analysis Start Date: ber Analysis End Date: Analyst(s):	17899 2024-04-0064 4/11/2024 4/11/2024 4/11/2024 Shannon Clegg
	e Number: <u>A410-(</u>	<u>08</u>	Field Sample Description:	Field Sample Location:	Analyst: SLC
Lab ID: 20	024-04-0071		Sheet Vinyl Flooring	Room 2	<b>Analysis Date:</b> 4/11/2024
	Lab Sample Des	scription	Asbestos Type/%	Non-Asbestos Fibers	Non-Fibrous Materials
Layer: 1	Grey, flexible viny	I sheet flooring	None Detected	Cellulose <1%	Binder, Mineral Aggregate, Vinyl
Layer: 2	Grey fibrous pape attached clear ma	-	None Detected	Cellulose 5-7% Fibrous Glass <1%	Binder, Mineral Aggregate, Adhesive
Layer: 3	Grey, coarse-grair cementitious leve		None Detected	Cellulose <1%	Binder, Mineral Aggregate
Field Sample	e Number: <u>A410-(</u>	<u>09</u>	Field Sample Description:	Field Sample Location:	Analyst: SLC
	)24-04-0072		Sheet Vinyl Flooring	Room 4	Analysis Date: 4/11/2024
	Lab Sample Des	scription	Asbestos Type/%	Non-Asbestos Fibers	Non-Fibrous Materials
Layer: 1	Grey, flexible viny	I sheet flooring	None Detected	Cellulose <1%	Binder, Mineral Aggregate, Vinyl
Layer: 2	Grey fibrous pape attached yellow n	-	None Detected	Cellulose 50-55% Fibrous Glass 1-3%	Binder, Mineral Aggregate, Adhesive
Layer: 3	Brown, fiberboard	d backing	None Detected	Cellulose 90-95%	Binder, Mineral Aggregate

Field Sample Number: <u>A410-10</u> Lab ID: <b>2024-04-0073</b>	Field Sample Description: Exterior caulk	Field Sample Location: Building exterior window of room 3	Analyst:SLCAnalysis Date:4/11/2024	
Lab Sample Description	Asbestos Type/%	Non-Asbestos Fibers	Non-Fibrous Materials	
Grey flexible caulk with attached green paint and wood fragments	None Detected	Cellulose <1%	Binder, Mineral Aggregate, Paint	



# Pacific Rim Environmental Inc. Bulk Sample Analysis Report



Page: 5 of 6

Sample Date:10-Apr-20Report Date:4/11/202Report By:Shannon	en ildings 1, 2, 3 )24 4 <b>Sample Set N</b> 2024-367 Clegg	Amalust/s).	17899 2024-04-0064 4/11/2024 4/11/2024 4/11/2024 Shannon Clegg
Field Sample Number: <u>A410-11</u> Lab ID: <b>2024-04-0074</b>	Field Sample Description: 3 tab roofing	Field Sample Location: Building roof	Analyst: SLC Analysis Date: 4/11/2024
Lab Sample Description	Asbestos Type/%	Non-Asbestos Fibers	Non-Fibrous Materials
Layer: 1 Black shingle with embedde tar, clear fibers, and black a grey mineral aggregate on t	nd	Fibrous Glass 7-10% Cellulose 1-3%	Binder, Mineral Aggregate, Tar
Layer: 2 Black tacky roofing tar	None Detected	Cellulose 1-3%	Binder, Mineral Aggregate, Tar
Layer: 3 Black shingle with embedde tar, clear fibers, and black, g and tan mineral aggregate o top	grey,	Fibrous Glass 7-10% Cellulose 1-3%	Binder, Mineral Aggregate, Tar
Field Sample Number: <u>A410-12</u>	Field Sample Description:	Field Sample Location:	Analyst: SLC
Lab ID: 2024-04-0075	Roofing tar paper	Building roof	Analysis Date: 4/11/2024
Lab Sample Description	Asbestos Type/%	Non-Asbestos Fibers	Non-Fibrous Materials
Black fibrous paper with embedded tar	None Detected	Cellulose 60-65%	Binder, Mineral Aggregate, Tar
Field Sample Number: <u>A410-13</u> Lab ID: <b>2024-04-0076</b>	Field Sample Description: Electrical backer board	Field Sample Location: EC shed	Analyst: SLC Analysis Date: 4/11/2024
Lab Sample Description	Asbestos Type/%	Non-Asbestos Fibers	Non-Fibrous Materials
Brown fibrous panel	None Detected	Cellulose 80-85%	Binder, Mineral Aggregate
Field Sample Number: <u>A410-14</u> Lab ID: <b>2024-04-0077</b>	Field Sample Description: Rolled roofing	Field Sample Location: Shed 1 roof Non-Asbestos Fibers	Analyst: SLC Analysis Date: 4/11/2024 Non-Fibrous Materials
Lab Sample Description Black shingle with embedde tar, clear fibers, and grey mineral aggregate on top	Asbestos Type/% None Detected	Fibrous Glass 7-10% Cellulose 1-3%	Binder, Mineral Aggregate, Tar
Field Sample Number: <u>A410-15</u> Lab ID: <b>2024-04-0078</b>	Field Sample Description: Rolled roofing tar paper	Field Sample Location: Shed 1 roof	Analyst: SLC Analysis Date: 4/11/2024
Lab Sample Description	Asbestos Type/%	Non-Asbestos Fibers	Non-Fibrous Materials
Black fibrous paper with embedded tar	None Detected	Cellulose 60-65%	Binder, Mineral Aggregate, Tar



# Pacific Rim Environmental Inc. Bulk Sample Analysis Report



#### Page: 6 of 6

Customer Name: Customer Project Number: Project Name: Sample Date: Report Date: Report By:	Ascendent LLC None Given Green Buildings 1 10-Apr-2024 4/11/2024 Shannon Clegg	., 2, 3 Sample Set Nur 2024-3670	PacRim Number: Report Number: Date Received: Analysis Start Date: Analysis End Date: Analyst(s):	17899 2024-04-0064 4/11/2024 4/11/2024 4/11/2024 Shannon Clegg
Field Sample Number: <u>A410</u> Lab ID: <b>2024-04-0079</b>	<u>-16</u>	Field Sample Description: Exterior caulk	Field Sample Location: Shed 1 opposite side from door on roof	Analyst: SLC Analysis Date: 4/11/2024
Lab Sample De	escription	Asbestos Type/%	Non-Asbestos Fibers	Non-Fibrous Materials
White flexible ca	ulk	None Detected	Cellulose <1%	Binder, Mineral Aggregate
Etablica mala Number A 410	17		Field Comple Leastion:	
-		Field Sample Description: Rolled roofing Asbestos Type/%	Field Sample Location: Shed 2 roof Non-Asbestos Fibers	Analyst: SLC Analysis Date: 4/11/2024 Non-Fibrous Materials
Lab ID: 2024-04-0080	escription h embedded and black	Rolled roofing	Shed 2 roof	Analysis Date: 4/11/2024
Lab Sample De Black shingle wit tar, clear fibers, t	escription h embedded and black te on top - <u>18</u>	Rolled roofing Asbestos Type/%	Shed 2 roof Non-Asbestos Fibers Fibrous Glass 5-7%	Analysis Date: 4/11/2024 Non-Fibrous Materials Binder, Mineral Aggregate,

# Appendix D: Lead-Based Paint (XRF) Data Sheets



Pacific Rim Environmental Inc. 6510 Southcenter Blvd. Suite 40 Seattle, WA 98188 (206)244-8965 <u>www.PacRimEnv.com</u>

## Lead-Based Paint (XRF) Data Sheet

Client:	Ascendent LLC	XRF Serial #:	02221
Project:	Green Buildings 1, 2, 3	Inspection Date:	10-Apr-2024
Project Address:	East Mill Road, Longview, WA	Inspection By:	Kyle Lewis
Lewis	Lindsey Lewis	PacRim Job#	17899

Sample#	Calibration	Substrate	Component	Location	Color	Result*	Pb mg/cm <sup>2</sup>
410-1	Yes					Pass	1.00
410-2	Yes					Pass	1.03
410-3	Yes					Pass	0.96
410-4	Yes					Pass	0.99
410-5	No	Wood	Siding	Shed 1	Green	Negative	0.00
410-6	No	Wood	Trim	Shed 1	White	Negative	0.00
410-7	No	Wood	Door Frame	Shed 1 Door	White	Negative	0.00
410-8	No	Metal	Door	Shed 1 Door	White	Negative	0.00
410-9	No	Wood	Soffit	Shed 1	Green	Negative	0.00
410-10	No	Wood	Soffit	Shed 1 Side Opposite Door	Green	Negative	0.00
410-11	No	Wood	Fascia	Shed 1	White	Negative	0.00
410-12	No	Metal	Gutter	Shed 1	White	Negative	0.00
410-13	No	Wood	Siding	Shed 2	Green	Negative	0.00
410-14	No	Wood	Trim	Shed 2	White	Negative	0.00
410-15	No	Wood	Door Frame	Shed 2	White	Negative	0.00

PacRim **# 17899** Page 1/4

\* HUD standard is 1.0 mg/cm<sup>2</sup> WISHA standard is any amount of lead is considered lead containing material



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Sample#	Calibration	Substrate	Component	Location	Color	Result*	Pb mg/cm <sup>2</sup>
410-16	No	Metal	Door	Shed 2 Door	White	Negative	0.00
410-17	No	Wood	Soffit	Shed 2	White	Negative	0.00
410-18	No	Wood	Wall	Shed 2 Interior	White	Negative	0.00
410-19	No	Wood	Floor	Shed 2 Interior	Grey	Negative	0.00
410-20	No	Wood	Sill	Shed 2 Interior	White	Negative	0.00
410-21	No	Wood	Ceiling	Shed 2 Interior	White	Negative	0.00
410-22	No	Metal	Door Kick Plate	Shed 2 Interior	Yellow	Negative	0.00
410-23	No	Wood	Window Trim	Shed 2 Exterior	White	Negative	0.00
410-24	No	Wood	Siding	Shed 2 Opposite Wall from Door	Red	Negative	0.00
410-25	No	Wood	Siding	Shed 2 Opposite Wall from Door	Purple	Negative	0.00
410-26	No	Wood	Soffit	Shed 2 Opposite Wall from Door	Red	Negative	0.00
410-27	No	Metal	Electrical Box	Shed 2	Grey	Negative	0.00
410-28	No	Wood	Fascia	Shed 2	White	Negative	0.00
410-29	No	Metal	Electrical Transformer	EC Shed	Grey	Negative	0.00
410-30	No	Metal	Electrical Box	EC Shed	Grey	Negative	0.01
410-31	No	Metal	Door	EC Shed	Tan	Negative	0.00
410-32	No	Wood	Door Frame	EC Shed	White	Negative	0.00
410-33	No	Concrete	Step Tread	Building North Entrance to Room 4	Yellow	Negative	0.00
410-34	No	Metal	Door	Building Exterior Door to Room 4	White	Negative	0.00
410-35	No	Wood	Door Frame	Building Exterior Door to Room 4	White	Negative	0.00

PacRim **# 17899** Page 2/4

\* HUD standard is 1.0 mg/cm<sup>2</sup> WISHA standard is any amount of lead is considered lead containing material



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Sample#	Calibration	Substrate	Component	Location	Color	Result*	Pb mg/cm <sup>2</sup>
410-36	No	Wood	Siding	Building North Wall at Exterior Door to Room 4	Green	Negative	0.00
410-37	No	Wood	Trim	Building North Wall Trim	White	Negative	0.00
410-38	No	Wood	Soffit	Building at Exterior Door to Room 3	White	Negative	0.00
410-39	No	Wood	Siding	Building at Exterior Door to Room 1	Green	Negative	0.00
410-40	No	Wood	Window Trim	Building Window at Exterior Door to Room 1	White	Negative	0.00
410-41	No	Wood	Fascia	Building Exterior at Door to Room 1	White	Negative	0.00
410-42	No	Concrete	Floor	Building Room 1	Grey	Negative	0.00
410-43	No	Drywall	Wall	Building Room 1	Brown	Negative	0.00
410-44	No	Drywall	Ceiling	Building Room 1	White	Negative	0.00
410-45	No	Wood	Baseboard	Building Room 1	Brown	Negative	0.00
410-46	No	Metal	Door	Building Room 1	Brown	Negative	0.00
410-47	No	Metal	Door Frame	Building Room 1 to Room 2 Frame	Brown	Negative	0.00
410-48	No	Metal	Door	Building Room 2 to Room 3 Door	Brown	Negative	0.00
410-49	No	Wood	Wall	Building Room 3	White	Negative	0.00
410-50	No	Wood	Cabinets	Building Room 3	White	Negative	0.00
410-51	No	Wood	Wall	Building Room 4	White	Negative	0.00
410-52	No	Wood	Window Sill	Building Room 4	White	Negative	0.00
410-53	No	Wood	Wall	Building Bathroom	White	Negative	0.00
410-54	No	Wood	Door	Building Bathroom	White	Negative	0.00
410-55	No	Wood	Cabinets	Building Bathroom	White	Negative	0.00

PacRim **# 17899** Page 3/4

\* HUD standard is 1.0 mg/cm<sup>2</sup> WISHA standard is any amount of lead is considered lead containing material



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Sample#	Calibration	Substrate	Component	Location	Color	Result*	Pb mg/cm <sup>2</sup>
410-56	No					Negative	Null
410-57	Yes					Pass	1.06
410-58	Yes					Pass	1.02
410-59	Yes					Pass	1.01
410-60	Yes					Pass	1.03

PacRim **# 17899** Page 4/4

\* HUD standard is 1.0 mg/cm<sup>2</sup> WISHA standard is any amount of lead is considered lead containing material This report shall not be reproduced, except in full, without written permission from Pacific Rim Environmental, Inc.

# Appendix E: XRF Performance Characteristic Sheet

#### Performance Characteristic Sheet

EFFECTIVE DATE: February 1, 2022

MANUFACTURER AND MODEL:

Make:SciApsModels:Model X-550X-Ray Source:Rhodium (Rh) or Gold (Au) Anode

#### FIELD OPERATION GUIDANCE

#### ACTION LEVEL SETTING IN THE INSTRUMENT: 1.0 mg/cm<sup>2</sup>

NOTE: This PCS is not applicable at other Action Level settings; the Action Level setting of the instrument must be 1.0 mg/cm<sup>2</sup> to use this PCS.

#### **OPERATING PARAMETERS:**

Timed mode: fixed 10-second reading.

Quick mode: variable-time reading (approximately 2-6 seconds).

#### **XRF CALIBRATION CHECK LIMITS:**

0.8 to 1.2 mg/cm<sup>2</sup> (inclusive) on NIST SRM 2579 (1.02 mg/cm<sup>2</sup>)/NIST SRM 2573, or equivalent

#### SUBSTRATE CORRECTION:

Not applicable

#### INCONCLUSIVE RANGE OR THRESHOLD:

Rh Anode (Timed or Quick) READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm <sup>2</sup> )
Results not corrected for substrate bias on any substrate	Brick Concrete Drywall Metal Plaster Wood	0.5 0.5 0.5 0.5 0.5 0.5 0.5
Au Anode (Timed or Quick) READING DESCRIPTION	SUBSTRATE	INCONCLUSIVE RANGE (mg/cm <sup>2</sup> )
Results not corrected for substrate bias on any substrate	Brick Concrete Drywall Metal Plaster Wood	$\begin{array}{c} (0.4-0.6) \\ (0.4-0.6) \\ (0.4-0.6) \\ (0.4-0.6) \\ (0.4-0.6) \\ (0.4-0.6) \\ (0.4-0.6) \end{array}$

#### 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*, 2012 Edition ("HUD Guidelines"). Performance parameters shown on this sheet are calculated using test results on building components in the HUD archive. Testing was conducted on 146 test samples in February 2022, with two separate instruments of each Anode type, operated in both Timed and Quick modes.

#### **OPERATING PARAMETERS**

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

#### **XRF CALIBRATION CHECK:**

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm<sup>2</sup> in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm<sup>2</sup> film; for NIST SRM 2579a, use film 2573 (1.04 mg/cm<sup>2</sup>).

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

#### 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.

Conduct XRF re-testing 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. In single-family and multifamily housing, a result is defined as 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 the 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 readings.

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

Find the absolute difference of the two averages.

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

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

#### **TESTING TIMES:**

The reading time in Archive tests was 10 seconds in Timed mode and from 2-6 seconds in Quick mode, for both the Rh Anode and Au Anode.

#### CLASSIFICATION OF RESULTS:

XRF results for the Rh Anode in Timed or Quick mode are classified as **positive** if they are **greater than or equal** to 0.5 mg/cm<sup>2</sup> and **negative** if they are **less than** 0.5 mg/cm<sup>2</sup>.

XRF results for the Au Anode in Timed or Quick mode are classified as **positive** if they are **greater than or equal** to 0.6 mg/cm<sup>2</sup>, *negative* if they are *less than or equal* to 0.4 mg/cm<sup>2</sup> and *inconclusive* if they are *greater* than 0.4 mg/cm<sup>2</sup> <u>AND</u> *less than* 0.6 mg/cm<sup>2</sup>.

#### DOCUMENTATION:

A report titled *Methodology for XRF Performance Characteristic Sheets* (EPA 747-R-95-008) provides an explanation of the statistical methodology used to develop Performance Characteristic Sheets at the Federal standard (Action Level) of 1.0 mg/cm<sup>2</sup> and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. The report may be downloaded at <a href="http://www2.epa.gov/lead/methodology-xrf-performance-characteristic-sheets-epa-747-r-95-008-september-1997">http://www2.epa.gov/lead/methodology-xrf-performance-characteristic-sheets-epa-747-r-95-008-september-1997</a>. The methodology was subsequently generalized by QuanTech for application to other Action Levels.

Appendix F: Universal Waste Identification Summary



# Universal Waste Inspection Summary

	Project Information			
Job Number	17899			
Project Name	Green Buildings 1, 2, 3			
Project Address:	East Mill Road, Longview, WA			
Client:	Ascendent LLC			
Date of Survey:	10-Apr-2024			
PacRim Technician:	Kyle Lewis			
Limitations:	No Limitations noted.			
Technician Broject Description	bitite ded ded de			
Technician Project Description:	Building, shed 1 and shed 2. Approximately built in 1967 Electrical panel in EC shed states installed in 1967.			
Turnaround Requested:	3-5 Days			



Universal Waste Sample		Sample Date: 10-Apr-2024			
Project Name	Green Buildings 1, 2, 3				
Sample Type	Universal Waste				
Sample Number	UW-A410-01				
<b>Material Description</b>	Light Ballast				
Quantity	13		Unit of Measure	Each	
Sample Photo					

Universal	Waste Sample		Sample Da	te: 10-Apr-2024
Project Name	Green Buildings 1, 2, 3			
Sample Type	Universal Waste			
Sample Number	UW-A410-02			
<b>Material Description</b>	4' Fluorescent tubes			
Quantity	43	U	nit of Measure	Each
Sample Photo			5	

Appendix G: Regulatory Documents WA State - Universal Waste Rule WAC 173-303-573

# Focus on The Universal Waste Rule



**Hazardous Waste and Toxics Reduction Program** 

**Revised February 2010** 

# Mercury-containing Equipment

(WAC 173-303-573(3-4))

This publication focuses on the Universal Waste (UW) requirements for mercury-containing equipment. Publication number 98-407, *The Universal Waste Rule* provides more details on these requirements and the advantages of UW management.

#### How is "mercury-containing equipment" defined?

Mercury-containing equipment is a broad category of UW including any device or part of a device that contains elemental mercury necessary for its operation. Mercury has been used in hundreds of devices at levels ranging from less than a gram up to several pounds. A few examples include:

- ► Thermometers ►
  - ThermostatsTilt switches
  - Barometers Ti Manometers FI
    - Flame sensors

Mercury-containing equipment does not include:

- Mercury waste generated as a by-product of manufacturing or waste treatment.
- Elemental mercury such as in vials or jewelry containing drops of mercury.
- Dental amalgam.

►

- Rubber flooring made with mercury.
- Chemical compounds containing mercury (e.g., pharmaceuticals, pesticides, paints, or lab chemicals).
- Intact devices or toys with removable mercury-containing batteries or lamps (batteries and lamps can be removed and handled according to their UW category).

A mercury-containing thermostat is defined as a temperature control device that contains metallic mercury in an ampule attached to a bi-metal sensing element. Thermostats are a type of mercury-containing equipment and are managed in the same way, although alternative labeling is permissible.

#### Accumulation start date

Both used and unused MCE become wastes on the date the handler decides to discard them.

#### WHY IT MATTERS

Any business that generates dangerous waste must follow the dangerous waste rules, Chapter 173-303 WAC. In Washington State, the Universal Waste Rule allows less burdensome management of these wastes:

- Batteries, (98-407a)
- Mercury-containing equipment (98-407c)
- Lamps (98-407c)

Businesses have the choice of managing these wastes as universal waste or dangerous waste. Universal waste requirements for storage, transportation, and collection are less stringent.

#### Visit our website:

http://www.ecy.wa.gov/programs/ hwtr/dangermat/universal\_waste.h tml

#### **Contact information**

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#### **Special accommodations**

To ask about the availability of this document in a version for the visually impaired, call the Hazardous Waste and Toxics Reduction Program at 360-407-6700. Persons with hearing loss, call 711 for Washington Relay Service. Persons with a speech disability, call 877-833-6341.

#### Labeling and marking MCE

Label or mark each device or container of devices with one of the following phrases:

- Universal Waste Mercury-containing equipment
- Waste Mercury-containing equipment
- Used Mercury-containing equipment

#### Labeling and marking thermostats

As one option, you may label or mark single thermostats or a container of thermostats with one of the following phrases:

- Universal Waste Mercury thermostat(s)
- Waste Mercury thermostat(s)
- Used Mercury thermostat(s)

## Accumulation and dating

You can accumulate MCE for one year from the date they are generated. To document this, the collection container or individual UW device is typically marked with the first date a device is placed in it. An extension to the one-year accumulation limit is allowed if the facility needs more time to collect enough items to facilitate proper recovery, treatment, or disposal.

#### Performance standards for ampules

Ampules removed from thermostats and other MCE can also be managed as UW. Use a containment system (e.g., plastic tub under the work area) to prevent spills during removal. Store and transport ampules in closed containers and in a manner that avoids breakage.

#### Leaks

Place leaking ampules or other MCE in an air-tight container.

## Mercury in open housing

MCE with mercury in an open housing (e.g., barometers) can be managed as UW following appropriate precautions. The open housing can be removed, sealed airtight and managed the same as ampules. If not removed, the housing should be sealed prior to transport and the whole device placed in a closed container.

# Large Quantity Handlers of Universal Waste (LQHUW)

When a handler exceeds 11,000 pounds (or 2,200 pounds for lamps), they become an LQHUW and are subject to extra requirements, including:

- Notification to Ecology of LQHUW status, and which specific types of UW they manage.
- Tracking type and quantity of universal wastes received and shipped.
- Obtaining a RCRA Site Identification Number.

# Transporting UW mercury-containing equipment

You may self-transport UW mercury-containing equipment, complying with applicable U.S. Department of Transportation regulations. Refer to Ecology publication number 98-407 *The Universal Waste Rule* for details.

A dangerous waste generator has the choice of managing MCE as UW or under the more stringent dangerous waste requirements. In most cases UW management is easier and a preferable alternative to dangerous waste management. Note that businesses who generate and manage both dangerous wastes and UWs are considered dangerous waste generators and UW handlers. Regardless if you are a generator or a handler, you are liable for ensuring your waste is managed properly once it leaves your site.

# Where do I send them?

Universal wastes may be sent to either another handler (acting as a collection point) or to a destination facility. Another handler could include any business that is already managing UW, government-sponsored collections, or hazardous waste management firms.

## Hazardous Waste and Toxics Reduction Program

Businesses that recycle or dispose of UW are called destination facilities. Ultimately, all UW must go to a destination facility. They are subject to dangerous waste regulations for recyclers and hazardous waste disposal facilities. A facility that only accumulates UW would not be a destination facility.

The major thermostat manufacturers set up the Thermostat Recycling Corporation (TRC) to provide recycling of thermostats at participating thermostat wholesale stores. Contractors are encouraged to return old thermostats to the store. Some stores will accept used thermostats from homeowners and other types of businesses. Participating stores can be located at http://www.thermostat-recycle.org.

#### How do I manage household MCE?

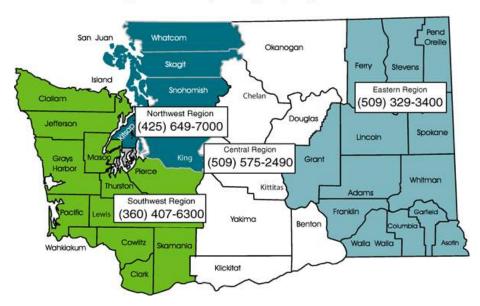
Homeowners are not required to manage their thermostats and MCE as UW, but are strongly encouraged to take them to a local household hazardous waste collection facility if available.

### Why is MCE hazardous?

Mercury-containing devices can contain high levels of mercury that makes them a dangerous waste when discarded. Thermostats and thermometers are one of the largest sources of mercury in landfills. When thrown into the garbage, the ampule or glass can break, spilling the mercury. Some MCE can break while in use, spreading mercury droplets and contaminating the area. Because mercury is very toxic to humans and wildlife, it is important to prevent releases to the environment. To avoid future liability, replace mercury-containing devices with non-mercury alternatives.

# **Department of Ecology Regions**

http://www.ecy.wa.gov/programs/hwtr







# The Universal Waste Rule for Lamps WAC 173-303-573(5)

Any business that generates dangerous waste must follow the dangerous waste rules, Chapter 173-303 WAC. In Washington State, the Universal Waste Rule allows less burdensome management of the following wastes:

- ▶ <u>Batteries</u> (#98-407a)
- Mercury-containing equipment (#98-407b)
- ► <u>Lamps</u> (#98-407c)

Businesses have the choice of managing these wastes as universal waste (UW) or dangerous waste. UW requirements for storage, transportation, and collection are less stringent.

This publication focuses on the UW requirements for lamps. Publication number 98-407, <u>*The Universal Waste Rule*</u> provides more details on these requirements and the advantages of UW management.

## What types of lamps are considered Universal Waste?

The types of lamps that may be Universal Waste include:

- ► Fluorescent
- High Intensity Discharge (HID) (e.g., mercury vapor, metal halide, high pressure sodium)
- ► Neon<sup>1</sup>
- Any other lamps that are dangerous waste

Compact fluorescent

## How can I tell if my lamps are dangerous waste?

The process of determining if a waste is hazardous is called designation. Through EPA test procedures, lamps have been shown to designate as dangerous waste because of their mercury and/or lead content. A generator has three choices when determining if their spent lamps are a dangerous waste:

- 1. Assume that their lamps are a dangerous waste;
- 2. Use manufacturer's information, MSDS and other available information to designate by knowledge;
- 3. Designate by sampling and testing.

<sup>&</sup>lt;sup>1</sup> "Neon" lamp manufacturers sometimes use gases other than neon, and lamps have been manufactured that contained up to 600 milligrams of mercury per tube.

Certain "green tip" lamps pass the EPA test and are not dangerous waste. Ask your lamp manufacturer or supplier for product testing information that shows these particular lamps are not a dangerous waste.

Some local governments may have landfill bans on disposal of mercury-containing lamps or other mercury-containing items. Check with your local health department, solid waste agency, or landfill for specific requirements, as well as recycling or disposal options.

# What are the requirements for Universal Waste management of lamps?

Manage Universal Waste lamps the same as the other Universal Wastes, except for a few specific handling requirements. Because glass bulbs are easily broken, Universal Waste rules require specific handling procedures. Universal waste management requirements for lamps include:

#### Accumulation start date:

Both used and unused lamps become waste on the date the handler decides to discard them.

## Accumulation and dating of Universal Waste lamps:

You can only accumulate lamps for one year from the date they are generated. To document this, the collection container or individual UW lamp is typically marked with the first date of accumulation. An extension to the one-year accumulation limit is allowed if the facility needs more time to collect enough items to facilitate proper recovery, treatment, or disposal.

## Labeling and Marking:

Clearly label or mark individual lamps or containers with one of the following phrases:

- Universal Waste Lamps
- Waste Lamps
- Used Lamps

# Packaging:

Contain lamps in structurally sound containers such as cardboard boxes or fiber drums. In addition, keep containers closed when not adding lamps.

# Clean up procedures:

Immediately clean up broken lamps and store debris in a closed container.

# Large Quantity Handlers<sup>2</sup> of Universal Waste (LQHUW)

When a handler exceeds 11,000 pounds (or 2,200 pounds for lamps), they become an LQHUW and are subject to extra requirements, including:

- Notification to Ecology of LQHUW status, and which specific types of UW they manage.
- Tracking type and quantity of universal wastes received and shipped.
- Obtaining a RCRA Site Identification Number.

<sup>&</sup>lt;sup>2</sup> Handlers are either the original generators of the UW or businesses that receive and consolidate UW from other handlers before shipping to another handler or to a destination facility.

## Lamp crushing prohibited:

Lamps cannot be crushed under Universal Waste regulations. Lamp crushing is allowed as a dangerous waste treatment-by-generator activity, but not as a Universal Waste option.

### Transporting Universal Waste lamps:

You may self-transport UW lamps, complying with applicable U.S. Department of Transportation regulations. Refer to Ecology publication number 98-407 "The Universal Waste Rule" for details.

## Does the rule apply to me?

The following types of businesses may generate dangerous waste lamps and can take advantage of the Universal Waste regulations:

- Regulated generators<sup>3</sup> of dangerous waste (Medium Quantity and Large Quantity Generators)
- Businesses that generate or accumulate dangerous waste lamps in regulated quantities (this category may include commercial building/property owners that maintain the lighting for tenants)
- Businesses that provide collection and management services (e.g., lighting contractors)

A dangerous waste generator has the choice of managing lamps as UW or under the more stringent dangerous waste requirements. In most cases UW management is much easier and the preferable alternative to dangerous waste management. Note that businesses that generate and manage dangerous wastes and UWs are considered both a dangerous waste generator and a UW handler. Regardless if you are a generator or a handler, you are liable for ensuring your waste is properly managed once it leaves your site.

# Where do I send them?

Universal wastes may be sent to either another handler (acting as a collection point) or to a destination facility. Another handler could include any business that is already managing UW, government-sponsored collections, or hazardous waste management firms. Businesses that recycle or dispose of UW are called destination facilities. Ultimately, all UW must go to a destination facility. They are subject to dangerous waste regulations for recyclers and hazardous waste disposal facilities. A facility that only accumulates UW would not be a destination facility.

# Why do we care about lamps?

Nationally, about 680 million lamps are disposed of annually, most to solid waste disposal facilities, including landfills and solid waste incinerators. Fluorescent lamps contain a small

<sup>&</sup>lt;sup>3</sup> Regulated generators of dangerous waste are those that generate over 220 pounds of dangerous waste per month or batch (or 2.2 pounds of extremely hazardous waste), or accumulate greater than 2,200 pounds of dangerous waste (or 2.2 pounds of extremely hazardous waste) at any time. As a point of reference, 4-four-foot long, linear fluorescent tubes weigh approximately 2.2 pounds. It would take about 400 of those tubes to equal 220 pounds and approximately 4,000 tubes to equal 2,200 pounds.

amount of mercury which is released when the lamp is broken. During waste handling and disposal, many lamps break, releasing mercury vapor and potentially exposing waste handlers to inhalation of those vapors. Waste incineration (not common in Washington State) of mercury-containing lamps also releases the mercury into the atmosphere. Mercury in the atmosphere is ultimately deposited back to the earth, rivers and lakes. From that point, mercury is then available to enter the food chain and eventually accumulates in fish.

The mercury content in newer fluorescent tubes ranges from 3.5 milligrams to 8 milligrams or more. Some older fluorescent tubes (pre-1999) contain up to 50 milligrams of mercury. HID lamps may contain up to 250 milligrams, depending on the lamp wattage.

Some lamps contain lead in the glass and lead solder in the base. Lead is a toxic metal that may leach from solid waste landfills into the ground water. Manufacturers are eliminating the lead by using non-leaded glass and solders in new lamps.

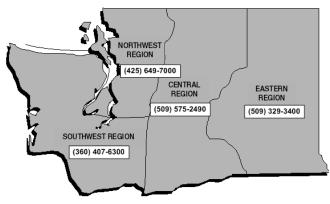
Although fluorescent and HID lamps contain toxic mercury and should be recycled, people are encouraged to continue using them because they use much less electricity and last much longer than other types of lighting. For this reason, fluorescents are a better long-term choice for the environment.

# How do I manage lamps at home?

Homeowners are not required to manage their lamps as Universal Waste. They are strongly encouraged to take them to a local household hazardous waste collection facility or other appropriate recycling alternative, if available.

# For More Information

Questions on this topic may be directed to your nearest regional office Dangerous Waste Specialist.



*If you need this information in an alternate format, please call the Hazardous Waste and Toxics Reduction Program at 360-407-6700. If you are a person with a speech or hearing impairment, call 711, or 800-833-6388 for TTY.* 

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Instructor: Tracy Bockla	Date(s) of Training
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