

# ASBESTOS BUILDING INSPECTION

LOCATION:

**EAST HALL  
632 SW HALL  
PORTLAND, OREGON 97201**

JUNE 30, 2008

FORENSIC ANALYTICAL PROJECT NO. PJ5551

PREPARED FOR:

PORTLAND STATE UNIVERSITY  
PO BOX 13175  
PORTLAND, OREGON 97403

PREPARED BY:



Forensic Analytical Consulting Services, Inc.  
Portland Office  
17400 SW Upper Boones Ferry Road, Suite 245  
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503/595.1001

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## 1.0 INTRODUCTION

Forensic Analytical Specialties, Inc. performed an inspection to identify asbestos-containing building materials at the property located at 632 SW Hall, Portland, Oregon. Dan Rouse, Noal Kraft, and Robin Sharpe conducted the field investigation on May 6, 2008 at the direction of Kate Vance of Portland State University.

The purpose of the inspection is to determine whether ACM is present in the structures onsite. The subject property consists of a three-story building.

This report presents the results of the asbestos inspection conducted by Forensic Analytical Consulting Services, Inc. for the above referenced project. Results of the inspection are summarized in Appendix A.

Drawings depicting ACM and sample locations are presented in Appendix B. A detailed laboratory report and chain of custody forms are contained in Appendix C.

## 2.0 FINDINGS

The results of the samples indicate that asbestos was detected at the site. A complete table of the samples taken and materials assumed to contain asbestos can be found in Appendix A.

## 3.0 RECOMMENDATIONS

Materials for which sample analysis by PLM results in greater than one percent asbestos (for any one sample collected from a homogeneous material) are classified as ACM under regulations promulgated by, but not limited to, the following agencies: federal EPA and federal OSHA.

The agencies use the following definitions:

Federal EPA (Oregon DEQ): materials containing greater than one percent asbestos are ACM  
Federal OSHA (OR-OSHA): materials containing greater than one percent asbestos are ACM

For detailed regulatory requirements in specific situations, Forensic Analytical should be consulted, or the applicable regulations should be examined.

All materials identified were classified by condition. Materials in "Good" condition should be maintained in place following the OR-OSHA operations and maintenance requirements. Materials in "Fair" condition should have patch and repair activities performed to address any damaged areas. Materials in "Poor" condition should be addressed through removal, repair and/or encapsulation.

## 4.0 METHODS

Materials suspected of containing asbestos were sampled in accordance with the federal EPA AHERA protocols. Materials determined by the inspector to be non-suspect, such as wood, metal, glass, and fiberglass insulation, were not sampled. Destructive sample techniques were not used during the

inspection. Additional suspect building materials may be present in areas that were inaccessible, unsafe to inspect, or obscured from view during the inspection process.

Suspect materials were grouped and classified as homogeneous materials based on their appearance, usage, and age of the building. Representative samples of each homogeneous material were collected for laboratory analysis. Where previous sample data exists, one confirming sample was collected of materials that previously tested positive. Additionally, where multiple samples of a given homogeneous material were collected, the set was analyzed to first positive.

The unique sample description ID was developed specifically for PSU. The sample ID includes; the PSU building ID; the homogeneous material number; followed by a unique material code (FT = Floor Tile); and lastly the sample number.

Samples were collected in such a manner as to minimize release of the material into the surroundings. Material type, sample number, sample location and other pertinent information were recorded at the time of sampling. Each sample was placed in a sample container labeled with a unique sample number and submitted to Forensic Analytical's NVLAP-accredited laboratory for analysis under chain of custody documentation. Samples were analyzed in accordance with EPA Method 600/R-93-116, using PLM with dispersion staining and using visual area estimation to determine percent asbestos content. This method allows for the identification of the primary types of asbestos used in building materials. The lower limit of detection for this method is one percent. Samples containing less than one percent asbestos by PLM with visual area estimation are reported as Trace.

## 5.0 LIMITATIONS

Forensic Analytical did not inspect subsurface areas for asbestos. ACM such as underground waterproofing coatings, asbestos-cement water pipe, electrical ducts, or other subsurface materials or equipment may be present beneath the site. Forensic Analytical did not disassemble building equipment; such as fans, ducts, elevator equipment, and electrical equipment. Consequently, equipment may contain untested gaskets, internal components, overspray of building materials and the like. If the aforementioned materials or any other untested suspect materials are encountered during construction or maintenance activities, they should be assumed to be asbestos-containing materials and not disturbed, unless sampling and analysis of the materials proves otherwise.

At PSU's request, the roofs were not sampled as part of this inspection.

Forensic Analytical has performed this asbestos sampling in accordance with generally accepted methods and practices of the profession, and consistent with that level of care and skill ordinarily exercised by reputable environmental consultants under similar conditions and circumstances. No other representation, guarantee or warranty, express or implied, is included or intended in this asbestos inspection report.

Respectfully submitted,



Dan Rouse

Reviewed by,



Noal Kraft

# **APPENDIX A**

## **COMPLETE SAMPLE INVENTORY**

SAMPLE ID #	MATERIAL DESCRIPTION	SAMPLE LOCATION	MATERIAL LOCATION	ASB. % AND TYPE	APPROX. QUANTITY	CONDITION
EH-01-CM-1	Carpet Mastic	EH - C101	-	ND	-	-
EH-02-PL-1	Plaster, Wall	EH - C102	-	ND	-	-
EH-02-PL-2	Plaster, Wall	EH - C103	-	ND	-	-
EH-02-PL-3	Plaster, Ceiling	EH - C201	-	ND	-	-
EH-02-PL-4	Plaster, Ceiling	EH - C204	-	ND	-	-
EH-02-PL-5	Plaster, Ceiling	EH - C301	-	ND	-	-
EH-02-PL-6	Plaster, Ceiling	EH - C304	-	ND	-	-
EH-02-PL-7	Plaster, Ceiling	EH - C302	-	ND	-	-
EH-03-CB-1	Cove Base, 4" Black, and Tan Adhesive	EH - C102	-	ND	-	-
EH-04-CT-1	Ceiling Tile, 2' x 4' Gouged w/ Pinholes	EH - 106A	-	ND	-	-
EH-05-WTX-1	Wall Texture	EH - 106A	-	ND	-	-
EH-05-WTX-2	Wall Texture	EH - 106A	-	ND	-	-
EH-05-WTX-3	Wall Texture	EH - 106A	-	ND	-	-

ND – Non-Detected

\* - This sample is part of a set in which one of the samples tested positive for asbestos.

SAMPLE ID #	MATERIAL DESCRIPTION	SAMPLE LOCATION	MATERIAL LOCATION	ASB. % AND TYPE	APPROX. QUANTITY	CONDITION
EH-06-FT-1	Floor Tile, under Carpet, and Black Mastic	EH - 106A	Inaccessible, Unknown	2% Chrysotile Tile  ND Mastic	Unknown	Unknown
EH-07-SV-1	Sheet Vinyl, Beige Pebble Pattern	EH - 105	EH - 105	70% Chrysotile	85 sq. ft.	Good
EH-08-CT-1	Ceiling Tile, 2' x 4' Gouged w/ Pinholes (2" x 2" Pattern)	EH - 109	-	ND	-	-
EH-09-SU-1	Sink Undercoating, Purple	EH - 111	EH - 111	3% Chrysotile	One Sink	Good
EH-10-TSI-1	Aircell	EH - 111	Throughout	50% Chrysotile	Not Quantified	Good
EH-10-TSI-2	Aircell	EH - 108	Throughout	*	Not Quantified	Good
EH-10-TSI-3	Aircell	EH - 108	Throughout	*	Not Quantified	Good
EH-11-TSI-1	Pipe Fittings	EH - 111	Throughout	15% Chrysotile	Not Quantified	Good
EH-11-TSI-2	Pipe Fittings	EH - 111	Throughout	*	Not Quantified	Good
EH-11-TSI-3	Pipe Fittings	EH - 111	Throughout	*	Not Quantified	Good
EH-12-FT-1	Floor Tile, 9" x 9" Tan Marbled, and Black Mastic	EH - 111	EH - 111, C103, C204, 232, C304, C301, 336, 329A	5% Chrysotile Mastic  3% Chrysotile Tile	595 sq. ft.	Good
EH-13-DWJC-1	Drywall & Joint Compound	EH - 109A	-	ND	-	-
EH-13-DWJC-2	Drywall & Joint Compound	EH - 113	-	ND	-	-
EH-13-DWJC-3	Drywall & Joint Compound	EH - 203	-	ND	-	-

ND – Non-Detected

\* - This sample is part of a set in which one of the samples tested positive for asbestos.

SAMPLE ID #	MATERIAL DESCRIPTION	SAMPLE LOCATION	MATERIAL LOCATION	ASB. % AND TYPE	APPROX. QUANTITY	CONDITION
EH-14-FM-1	Floor Material, Grey Marbled Marmoleum	EH - 116	-	ND	-	-
EH-15-CB-1	Cove Base, 4" Tan, and Brown Adhesive	EH - 116	-	ND	-	-
EH-16-WP-1	Window Putty	EH - Outside, 101E	-	ND	-	-
EH-17-SV-1	Sheet Vinyl, Red Pebble Pattern	EH - 203A	EH - 203A, 204A, T315A	70% Chrysotile	115 sq. ft.	Good
EH-18-CT-1	Ceiling Tile, 12" x 12" Cross-Hatched	EH - 219	-	ND	-	-
EH-19-SV-1	Sheet Vinyl, Grey Pebble Pattern	EH - V206	-	ND	-	-
EH-20-CT-1	Ceiling Tile, 12" x 12" Fissured	EH - 225A	-	ND	-	-
EH-21-CTX-1	Ceiling Texture, Heavy	EH - 301	EH - 301, 307	ND *	350 sq. ft.	Good
EH-21-CTX-2	Ceiling Texture, Heavy	EH - 301	EH - 301, 307	ND*	350 sq. ft.	Good
EH-21-CTX-3	Ceiling Texture, Heavy	EH - 301	EH - 301, 307	Trace Chrysotile	350 sq. ft.	Good
EH-22-CTX-1	Ceiling Texture, Knock-Down	EH - 308	EH - 306, 308	Trace Chrysotile	350 sq. ft.	Good
EH-22-CTX-2	Ceiling Texture, Knock-Down	EH - 308	EH - 306, 308	Trace Chrysotile	350 sq. ft.	Good
EH-22-CTX-3	Ceiling Texture, Knock-Down	EH - 308	EH - 306, 308	Trace Chrysotile	350 sq. ft.	Good

ND – Non-Detected

\* - This sample is part of a set in which one of the samples tested positive for asbestos.



SAMPLE ID #	MATERIAL DESCRIPTION	SAMPLE LOCATION	MATERIAL LOCATION	ASB. % AND TYPE	APPROX. QUANTITY	CONDITION
EH-23-FT-1	Floor Tile, 9" x 9" Off-White w/ Grey Streaks, and Black Mastic	EH - 315	EH - 243, 315	3% Chrysotile Mastic  2% Chrysotile Tile	55 sq. ft.	Good
EH-24-CT-1	Ceiling Tile, 2' x 4' Fissured w/ Pinholes	EH - 341	-	ND	-	-
EH-25-WP-1	Window Putty	EH - Roof Skylight	-	ND	-	-
EH-26-RP-1	Roof Patch & Repair	EH - Roof	-	ND	-	-
EH-27-FS-1	Firestop, Red	EH - C105	-	ND	-	-
EH-28-PL-1	Exterior Plaster	EH - Main Entry, Ground Floor	-	ND	-	-
EH-28-PL-2	Exterior Plaster	EH - Main Entry, Ground Floor	-	ND	-	-
EH-28-PL-3	Exterior Plaster	EH - Main Entry, Ground Floor	-	ND	-	-

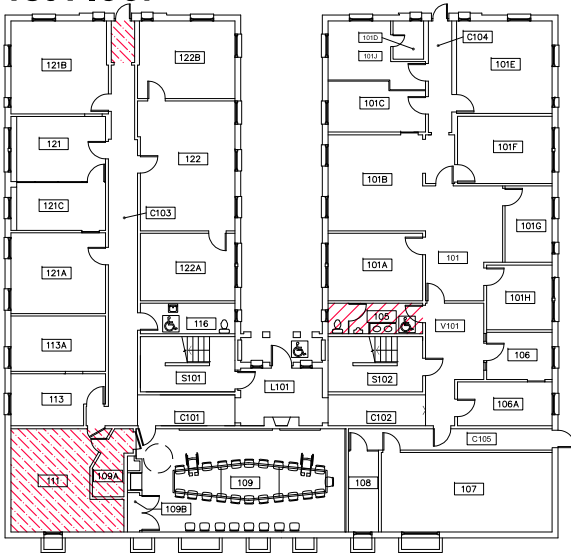
ND – Non-Detected

\* - This sample is part of a set in which one of the samples tested positive for asbestos.

# **APPENDIX B**

**SITE DRAWING(S)**

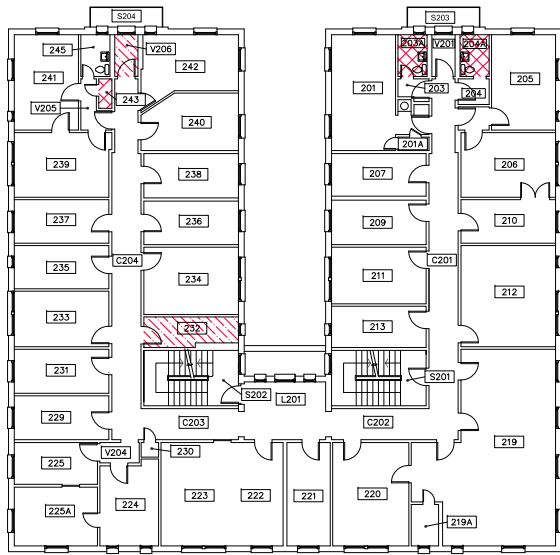
# 1st Floor



- Sheet Vinyl, Beige Pebble Pattern
- Floor Tile, 9" x 9" Tan Marbled, and Black mastic
- Sheet Vinyl, Red Pebble Pattern
- Ceiling Texture (Heavy and Knock-down)\*\*
- Floor Tile, 9" x 9" Off White w/ Grey Streaks, and Black mastic

ACM not shown:  
 Floor Tile under Carpet  
 Sink Undercoating, White  
 Aircell Pipe Insulation  
 Pipe Fitting Insulation

# 2nd Floor



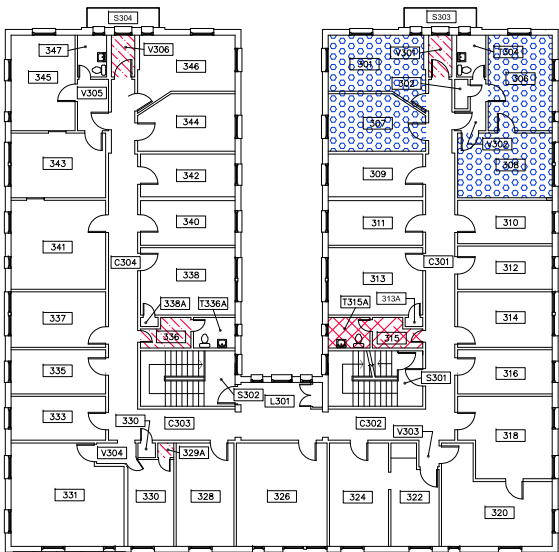
## East Hall 1st Floor & 2nd Floor ACM Locations



No Scale

\*\* - This material contains a trace amount of asbestos

### 3rd Floor

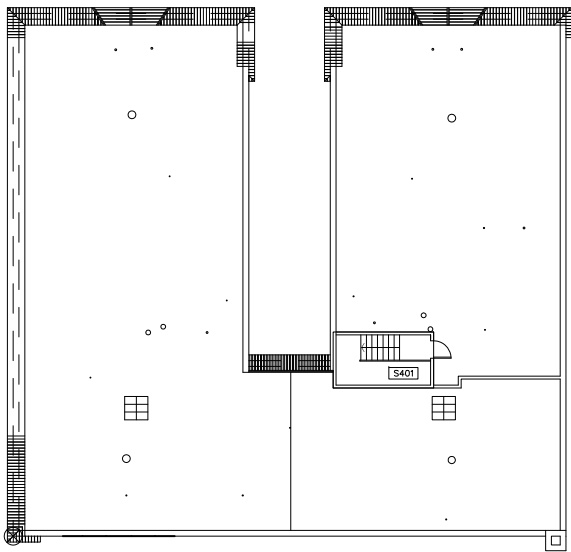


- Sheet Vinyl, Beige Pebble Pattern
- Floor Tile, 9" x 9" Tan Marbled, and Black mastic
- Sheet Vinyl, Red Pebble Pattern
- Ceiling Texture (Heavy and Knock-down)\*\*
- Floor Tile, 9" x 9" Off White w/ Grey Streaks, and Black mastic

ACM not shown:  
 Floor Tile under Carpet  
 Sink Undercoating, White  
 Aircell Pipe Insulation  
 Pipe Fitting Insulation

Roof Core samples of the roof were not collected at the request of PSU.

### Roof Plan



DATE: 6-30-08	CLIENT: PSU
DRAWN BY: DKR	PROJECT: East Hall
PROJECT #: ACM - 212	LOCATION: East Hall, Street Portland, Oregon 97201
	PROJECT #: PJ5551

REVISIONS

East Hall  
 3rd Floor & Roof Plan  
 ACM Locations




No Scale

**Forensic Analytical**  
 17400 SW Upper Boones Ferry Road, Suite 245  
 Portland, Oregon 97224  
 503-995-1001 Fax  
 www.forensicca.com

\*\* - This material contains a trace amount of asbestos

REVISIONS

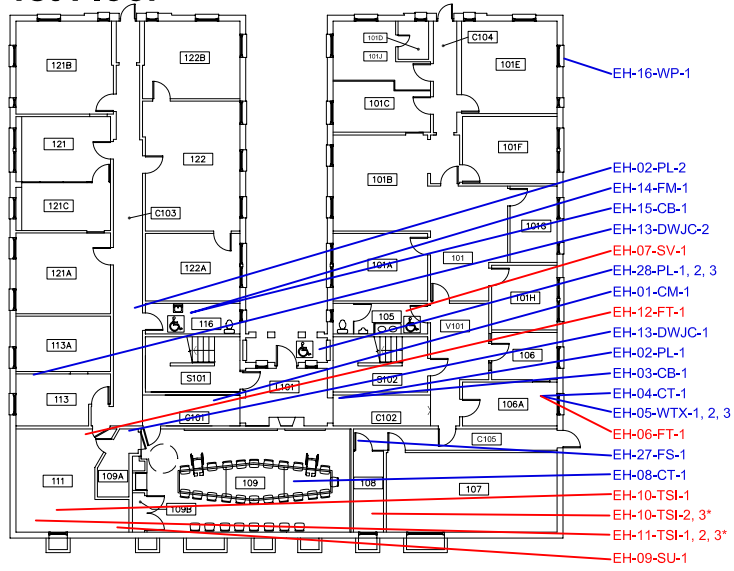
Report North



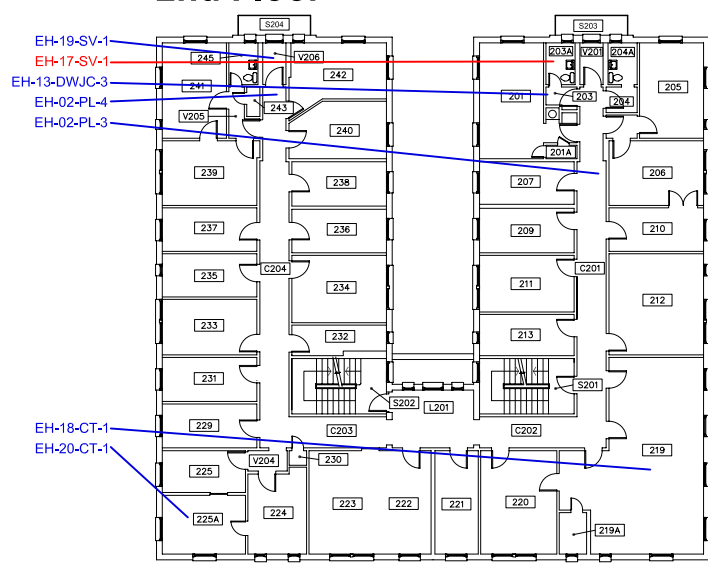
No Scale

Sample ID # Key  
 PSU Provided Building Code  
 Homogeneous Material # ABC-00-FT-1  
 Material Code - Click for Details  
 A/C/M Shows in Red  
 Non-A/C/M Shows in Blue

### 1st Floor

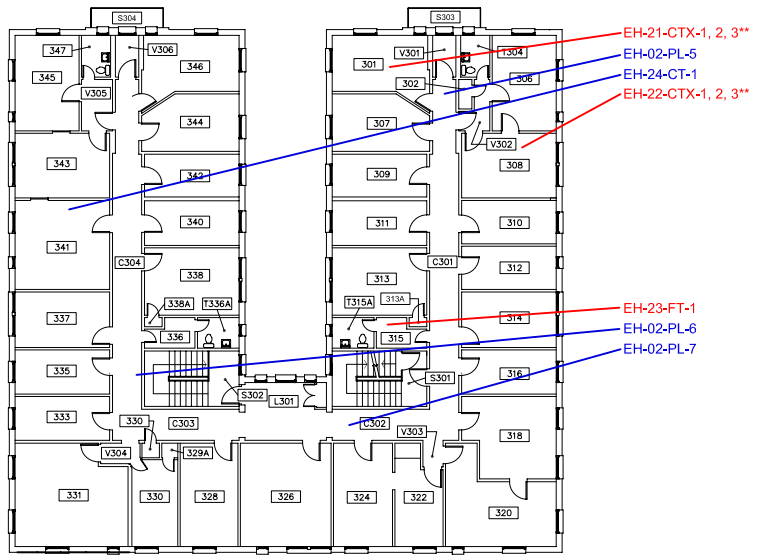


### 2nd Floor

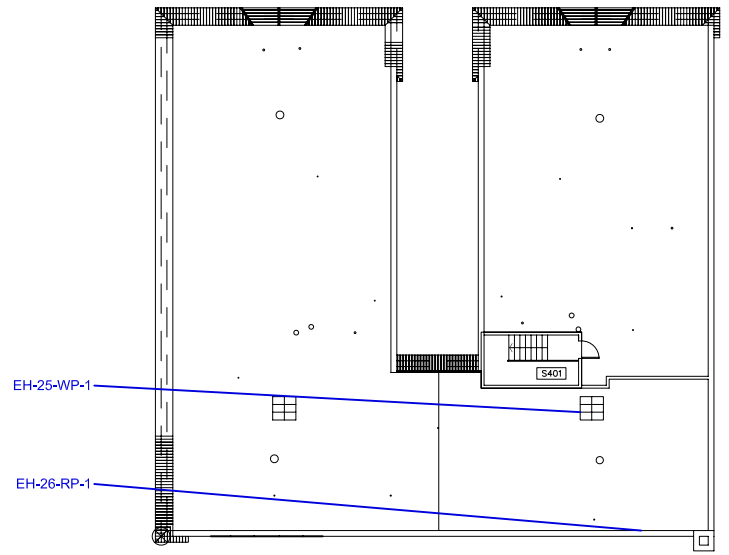


\* - This sample is part of a set in which one of the samples tested positive for asbestos.  
 \*\* - This sample contained a trace amount of asbestos.

### 3rd Floor



### Roof Plan



DATE: 6-30-08  
 DRN BY: CFG  
 PAGE #: SAM -212

CLIENT: PSU  
 PROJECT: East Hall  
 LOCATION: Portland, Oregon 97201

PROJECT #: PJE551

REVISIONS

East Hall  
 3rd Floor & Roof Plan  
 Samples Locations

Report North

No Scale

Sample ID # Key

PSU Provided Building Code  
 Homogeneous Material #  
 Material Code - Click for Details  
 ABC-00-FT-1  
 ACM Shown in Red  
 Non-ACM Shown in Blue

**Forensic Analytical**  
 17400 SW Upper Boones Ferry Road, Suite 245  
 Portland, Oregon 97224  
 503/952-1001  
 Fax: 503/952-1002  
 www.forensicca.com

\* - This sample is part of a set in which one of the samples tested positive for asbestos.  
 \*\* - This sample contained a trace amount of asbestos.

# **APPENDIX C**

**LABORATORY ANALYSIS REPORTS  
AND CHAIN OF CUSTODY RECORDS**



# Bulk Asbestos Analysis

(EPA Method 600/R-93-116, Visual Area Estimation)

Forensic Analytical Consulting Svcs  
Noal Kraft  
17400 SW Upper Boones Ferry Rd  
Suite 245  
Durham, OR 97224

**Client ID:** PE21  
**Report Number:** B112529  
**Date Received:** 05/08/08  
**Date Analyzed:** 05/12/08  
**Date Printed:** 05/12/08  
**First Reported:** 05/12/08

**Job ID/Site:** PJ5551; Kate Vance PSU - East Hall (EH) 632 SW Hall Three Floors Portland OR 97201

**FASI Job ID:** PE21  
**Total Samples Submitted:** 48  
**Total Samples Analyzed:** 44

**Date(s) Collected:**

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
-----------	------------	---------------	------------------	---------------	------------------	---------------	------------------

<b>EH-01-CM-1</b>	10752672						
Layer: Tan Mastic							<b>ND</b>

Total Composite Values of Fibrous Components:	<b>Asbestos (ND)</b>						
Cellulose (Trace)							

<b>EH-02-PL-1</b>	10752673						
Layer: White Plaster							<b>ND</b>
Layer: Paint							<b>ND</b>

Total Composite Values of Fibrous Components:	<b>Asbestos (ND)</b>						
Cellulose (Trace)							

<b>EH-02-PL-2</b>	10752674						
Layer: White Plaster							<b>ND</b>
Layer: Paint							<b>ND</b>

Total Composite Values of Fibrous Components:	<b>Asbestos (ND)</b>						
Cellulose (Trace)							

<b>EH-02-PL-3</b>	10752675						
Layer: White Plasters							<b>ND</b>
Layer: Paint							<b>ND</b>

Total Composite Values of Fibrous Components:	<b>Asbestos (ND)</b>						
Cellulose (Trace)							

<b>EH-02-PL-4</b>	10752676						
Layer: White Plasters							<b>ND</b>
Layer: Paint							<b>ND</b>

Total Composite Values of Fibrous Components:	<b>Asbestos (ND)</b>						
Cellulose (Trace)							

<b>EH-02-PL-5</b>	10752677						
Layer: White Plaster							<b>ND</b>
Layer: Paint							<b>ND</b>

Total Composite Values of Fibrous Components:	<b>Asbestos (ND)</b>						
Cellulose (Trace)							



Client Name: Forensic Analytical Consulting Svcs

Report Number: B112529

Date Printed: 05/12/08

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
<b>EH-02-PL-6</b>	10752678						
Layer: White Plaster			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (Trace)							
<b>EH-02-PL-7</b>	10752679						
Layer: White Plaster			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (Trace)							
<b>EH-03-CB-1</b>	10752680						
Layer: Black Non-Fibrous Material			ND				
Layer: Off-White Mastic			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (Trace)							
<b>EH-04-CT-1</b>	10752681						
Layer: Beige Fibrous Material			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (35 %) Fibrous Glass (45 %)							
<b>EH-05-WTX-1</b>	10752682						
Layer: White Texture			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (Trace)							
<b>EH-05-WTX-2</b>	10752683						
Layer: White Texture			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (Trace)							
<b>EH-05-WTX-3</b>	10752684						
Layer: White Texture			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (Trace)							
<b>EH-06-FT-1</b>	10752685						
Layer: Beige Tile		Chrysotile	2 %				
Layer: Black Mastic			ND				
Total Composite Values of Fibrous Components:		Asbestos (2%)					
Cellulose (Trace)							

Client Name: Forensic Analytical Consulting Svcs

Report Number: B112529

Date Printed: 05/12/08

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
<b>EH-07-SV-1</b>	10752686						
Layer: Off-White Sheet Flooring			<b>ND</b>				
Layer: Fibrous Backing		Chrysotile	<b>70 %</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (25%)</b>					
Cellulose (5 %)							
<b>EH-08-CT-1</b>	10752687						
Layer: Beige Fibrous Material			<b>ND</b>				
Layer: Paint			<b>ND</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (35 %) Fibrous Glass (45 %)							
<b>EH-09-SU-1</b>	10752688						
Layer: Purple Semi-Fibrous Material		Chrysotile	<b>3 %</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (3%)</b>					
Cellulose (Trace)							
<b>EH-10-TSI-1</b>	10752689						
Layer: Beige Fibrous Material		Chrysotile	<b>50 %</b>				
Layer: Paint			<b>ND</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (45%)</b>					
Cellulose (5 %)							
<b>EH-10-TSI-2</b>	10752690						
Comment: Sample not analyzed due to prior positive result in series.							
<b>EH-10-TSI-3</b>	10752691						
Comment: Sample not analyzed due to prior positive result in series.							
<b>EH-11-TSI-1</b>	10752692						
Layer: Beige Semi-Fibrous Material		Chrysotile	<b>15 %</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (15%)</b>					
Cellulose (Trace)							
<b>EH-11-TSI-2</b>	10752693						
Comment: Sample not analyzed due to prior positive result in series.							
<b>EH-11-TSI-3</b>	10752694						
Comment: Sample not analyzed due to prior positive result in series.							
<b>EH-12-FT-1</b>	10752695						
Layer: Beige Tile		Chrysotile	<b>3 %</b>				
Layer: Black Mastic		Chrysotile	<b>5 %</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (3%)</b>					
Cellulose (Trace)							
<b>EH-13-DWJC-1</b>	10752696						
Layer: White Drywall			<b>ND</b>				
Layer: White Joint Compound			<b>ND</b>				
Layer: White Fibrous Material			<b>ND</b>				
Layer: White Joint Compound			<b>ND</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (30 %)							

Client Name: Forensic Analytical Consulting Svcs

Report Number: B112529

Date Printed: 05/12/08

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
<b>EH-13-DWJC-2</b>	10752697						
Layer: White Drywall			ND				
Layer: White Joint Compound			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (20 %)							
<b>EH-13-DWJC-3</b>	10752698						
Layer: White Drywall			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (20 %)							
<b>EH-14-FM-1</b>	10752699						
Layer: Green Sheet Flooring			ND				
Layer: Fibrous Backing			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (80 %) Synthetic (5 %)							
<b>EH-15-CB-1</b>	10752700						
Layer: Grey Non-Fibrous Material			ND				
Layer: Tan Mastic			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (Trace)							
<b>EH-16-WP-1</b>	10752701						
Layer: Tan Putty			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (Trace)							
<b>EH-17-SV-1</b>	10752702						
Layer: Red-Brown Sheet Flooring			ND				
Layer: Fibrous Backing		Chrysotile	70 %				
Total Composite Values of Fibrous Components:		Asbestos (25%)					
Cellulose (5 %)							
<b>EH-18-CT-1</b>	10752703						
Layer: Beige Fibrous Material			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (35 %) Fibrous Glass (45 %)							
<b>EH-19-SV-1</b>	10752704						
Layer: Grey Sheet Flooring			ND				
Layer: Fibrous Backing			ND				
Layer: Tan Mastic			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (20 %) Fibrous Glass (5 %) Synthetic (10 %)							

Client Name: Forensic Analytical Consulting Svcs

Report Number: B112529

Date Printed: 05/12/08

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
<b>EH-20-CT-1</b>	10752705						
Layer: Off-White Fibrous Tile			<b>ND</b>				
Layer: Paint			<b>ND</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (2 %)	Fibrous Glass (90 %)						
<b>EH-21-CTX-1</b>	10752706						
Layer: White Texture			<b>ND</b>				
Layer: Paint			<b>ND</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (Trace)							
<b>EH-21-CTX-2</b>	10752707						
Layer: White Texture			<b>ND</b>				
Layer: Paint			<b>ND</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (Trace)							
<b>EH-21-CTX-3</b>	10752708						
Layer: Tan Texture		Chrysotile	<b>Trace</b>				
Layer: Paint			<b>ND</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (Trace)</b>					
Cellulose (Trace)							
<b>EH-22-CTX-1</b>	10752709						
Layer: Tan Texture		Chrysotile	<b>Trace</b>				
Layer: Paint			<b>ND</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (Trace)</b>					
Cellulose (Trace)							
<b>EH-22-CTX-2</b>	10752710						
Layer: Tan Texture		Chrysotile	<b>Trace</b>				
Layer: Paint			<b>ND</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (Trace)</b>					
Cellulose (Trace)							
<b>EH-22-CTX-3</b>	10752711						
Layer: Tan Texture		Chrysotile	<b>Trace</b>				
Layer: Paint			<b>ND</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (Trace)</b>					
Cellulose (Trace)							
<b>EH-23-FT-1</b>	10752712						
Layer: Tan Tile		Chrysotile	<b>2 %</b>				
Layer: Black Mastic		Chrysotile	<b>3 %</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (2%)</b>					
Cellulose (Trace)							

Client Name: Forensic Analytical Consulting Svcs

Report Number: B112529

Date Printed: 05/12/08

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
<b>EH-24-CT-1</b>	10752713						
Layer: Beige Fibrous Material			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (35 %)	Fibrous Glass (45 %)						
<b>EH-25-WP-1</b>	10752714						
Layer: White Putty			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (Trace)							
<b>EH-26-RP-1</b>	10752715						
Layer: Black Non-Fibrous Material			ND				
Layer: Silver Paint			ND				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (Trace)							
<b>EH-27-FS-1</b>	10752716						
Layer: Red-Brown Semi-Fibrous Material			ND				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (Trace)	Fibrous Glass (5 %)						
<b>EH-28-PL-1</b>	10752717						
Layer: White Plaster			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (Trace)							
<b>EH-28-PL-2</b>	10752718						
Layer: White Plaster			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (Trace)							
<b>EH-28-PL-3</b>	10752719						
Layer: White Plaster			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (Trace)							



James Flores, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification ('LOQ') = 1%. 'Trace' denotes the presence of asbestos below the LOQ. 'ND' = 'None Detected'.

Analytical results and reports are generated by Forensic Analytical at the request of and for the exclusive use of the person or entity (client) named on such report. Results, reports or copies of same will not be released by Forensic Analytical to any third party without prior written request from client. This report applies only to the sample(s) tested. Supporting laboratory documentation is available upon request. This report must not be reproduced except in full, unless approved by Forensic Analytical. The client is solely responsible for the use and interpretation of test results and reports requested from Forensic Analytical. This report must not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. Government. Forensic Analytical is not able to assess the degree of hazard resulting from materials analyzed. Forensic Analytical reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified. All samples were received in acceptable condition unless otherwise noted.



Client: <b>PE21 FACS Portland Portland State University</b>	Sampled by: <b>DKR</b>	PM: <b>Noal Kraft</b>	Date:				
Contact: <b>Noal Kraft</b> Phone: <b>(503) 595-1001</b>	Special Instructions: E-mail results to <b>NKraft@forensica.com</b> and <b>rtracy@forensica.com</b>						
Site: <b>PJ5551</b> <b>Kate Vance PSU - East Hall (EH)</b>	Turnaround Time:	1-Day	2-Day	3-Day <input checked="" type="checkbox"/>	5-Day	Other	Due Date & Time:
Client No.: <b>C6013:6008</b> FACS Job#: <b>PJ5551</b>	Analysis: <u>PLM Standard</u> / Point Count / Flame AA (Pb) / Other: <i>Analyze bracketed sets to 1st positive</i>						

Sample Number	Material Description	Sample Location	Friable	Cond.	Quantity
EH-01-CM-0	Carpet mastic, yellow	EH - C101			
EH-02-PL-1	Plaster, wall	C102			
EH-02-PL-2	wall	C103			
EH-02-PL-3	wall ceiling	C201			
EH-02-PL-4	ceiling	C204			
EH-02-PL-5	ceiling	C201			
EH-02-PL-6	ceiling	C304			
EH-02-PL-7	ceiling	C302			
EH-03-CB-1	CB, 4", black (tan)	C102			
EH-04-CT-1	CT, 2x4, G/P	106A			

WB - Wallboard JC - Joint Compound FT - Floor Tile FTM - Floor Tile Mastic BBM - Baseboard Mastic  
 RSF - Resilient Sheet Flooring CT - Ceiling Tile SAAM - Spray-Applied Acoustical Material WT - Wall Texture

Friable Good /  
 Yes / No Fair / Poor

Shipped via: Fed Ex Airborne DBS US Mail Courier XXX Drop Off Other:

Relinquished by:	Received by:
Date & Time: 5-6-08	Date & Time: 5/7/08 1030LF
Condition Acceptable <input checked="" type="checkbox"/> No <input type="checkbox"/>	




Client: <b>PE21 FACS Portland Portland State University</b>	Sampled by: <b>DKR</b>	PM: <b>Noal Kraft</b> Date: <b>5-6-08</b>
Contact: <b>Noal Kraft</b> Phone: <b>(503) 595-1001</b>	Special Instructions: E-mail results to <b>NKraft@forensica.com</b> and <b>rtracy@forensica.com</b>	
Site: <b>PJ5551</b> <b>Kate Vance PSU - East Hall (EH)</b>	Turnaround Time:	<input type="checkbox"/> 1-Day <input type="checkbox"/> 2-Day <input checked="" type="checkbox"/> 3-Day <input type="checkbox"/> 5-Day <input type="checkbox"/> Other            Due Date & Time:
Client No.: <b>C6013:6008</b> FACS Job#: <b>PJ5551</b>	Analysis: <u>PLM Standard</u> / Point Count / Flame AA (Pb) / Other:	


Sample Number	Material Description	Sample Location	Friable	Cond.	Quantity
EH-05-WTX-1	Wall texture	106A			
EH-05-WTX-2	↓	106A			
EH-05-WTX-3	↓	106A			
EH-06-FIT-1	FT under carpet (black)	106A			
EH-07-SV-1	SV, beige pebble pattern	105			
EH-08CT-1	CT, 2x4, 2x2 pattern <del>6x8</del>	109			
EH-09-SU-1	SU, <del>1/2</del> purple	111			
EH-10-TSI-1	Aircell	111			
EH-10-TSI-2	<del>TSI-2</del>	108			
EH-10-TSI-3	↓	108			

WB - Wallboard    JC - Joint Compound    FT - Floor Tile    FTM - Floor Tile Mastic    BBM - Baseboard Mastic  
 RSF - Resilient Sheet Flooring    CT - Ceiling Tile    SAAM - Spray-Applied Acoustical Material    WT - Wall Texture

Friable    Good /  
 Yes / No    Fair / Poor

Shipped via:  Fed Ex     Airborne     UPS     US Mail     Courier     XXX Drop Off    Other:

Relinquished by:   
 Date & Time: **5-6-08**

Received by:   
 Date & Time: **5/7/08 1030A F**    Condition Acceptable  No



Client: <b>PE21 FACS Portland Portland State University</b>	Sampled by: <b>DKR</b>	PM: <b>Noal Kraft</b>	Date: <b>5-6-08</b>				
Contact: <b>Noal Kraft</b> Phone: <b>(503) 595-1001</b>	Special Instructions: E-mail results to <b>NKraft@forensica.com</b> and <b>rtracy@forensica.com</b>						
Site: <b>PJ5551</b> <b>Kate Vance PSU - East Hall (EH)</b>	Turnaround Time:	1-Day	2-Day	3-Day <input checked="" type="checkbox"/>	5-Day	Other	Due Date & Time:
Client No.: <b>C6013:6008</b> FACS Job#: <b>PJ5551</b>	Analysis: <b>PLM Standard</b> / Point Count / Flame AA (Pb) / Other:						

Sample Number	Material Description	Sample Location	Friable	Cond.	Quantity
EH-11-TSI-1	Pipe fittings	EH - 111			
EH-11-TSI-2	↓	<del>EH</del> 111			
EH-11-TSI-3	↓	<del>EH</del> 111			
EH-12-FT-1	FT, 9x9, tan marbled (black)	<del>EH</del> 111			
EH-13-DWJC-1	DWJC	<del>EH</del> 109A			
EH-13-DWJC-2	↓	113			
EH-13-DWJC-3	↓	203			
EH-14-FM-1	<del>F</del> Floor material, gray marbled marmolux	116			
EH-15-CB-1	CB, 4", tan (brown)	116			
EH-16-WP-1	Window putty,	outside 101E			

WB - Wallboard IC - Joint Compound FT - Floor Tile FTM - Floor Tile Mastic BHM - Baseboard Mastic  
 RSP - Resilient Sheet Flooring CT - Ceiling Tile SAM - Spray-Applied Acoustical Material WT - Wall Texture

Shipped via: Fed Ex Airborne UPS US Mail Courier  Drop Off Other:

Relinquished by: *[Signature]*  
 Date & Time: **5-6-08**

Received by: *[Signature]*  
 Date & Time: **5/7/08 10:30 AM**  
 Condition Acceptable  Yes  No





Forensic Analytical


# BULK SAMPLE REQUEST FORM

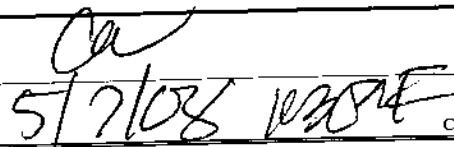
Client: <b>PE21 FACS Portland Portland State University</b>	Sampled by: <b>DKR</b>	PM: <b>Noal Kraft</b>	Date: <b>5-6-08</b>				
Contact: <b>Noal Kraft</b> Phone: <b>(503) 595-1001</b>	Special Instructions: E-mail results to <b>NKraft@forensica.com</b> and <b>rtracy@forensica.com</b>						
Site: <b>PJ5551</b> Kate Vance PSU - East Hall (EH)	Turnaround Time:	1-Day	2-Day	3-Day <input checked="" type="checkbox"/>	5-Day	Other	Due Date & Time:
Client No.: <b>C6013:6008</b> FACS Job#: <b>PJ5551</b>	Analysis: <b>PLM Standard</b> / Point Count / Flame AA (Pb) / Other:						

Sample Number	Material Description	Sample Location	Friable	Cond.	Quantity
EH-17-SV-1	SV, red pebble pattern	EH-203A			
EH-18-CT-1	CT, 12x12, cross-hatched	219			
EH-19-SV-1	SV, grey pebble pattern	Y206			
EH-20-CT-1	CT, 12x12, fissured	225A			
EH-21-CTX-1	CTX, heavy	301			
EH-21-CTX-2	↓	301			
EH-21-CTX-3	↓	301			
EH-22-CTX-1	CTX, knock-down	308			
EH-22-CTX-2	↓	308			
EH-22-CTX-3	↓	308			

WB Wallboard IC Joint Compound FT Floor Tile FTM Floor Tile Mastic BRM Baseboard Mastic  
 RSF Resilient Sheet Flooring CT Ceiling Tile SAAM Spray-Applied Acoustical Material WT Wall Texture

Shipped via: Fed Ex  Airborne  UPS  US Mail  Courier  Drop Off  Other:

Relinquished by:   
 Date & Time: **5-6-08**

Received by:   
 Date & Time: **5/7/08**  
 Condition Acceptable  Yes  No




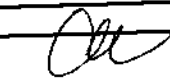

Forensic Analytical

# BULK SAMPLE REQUEST FORM

Client: <b>PE21 FACS Portland</b> <b>Portland State University</b>	Sampled by: <b>DKR</b>	PM: <b>Noal Kraft</b>	Date: <b>5-6-08</b>				
Contact: <b>Noal Kraft</b> Phone: <b>(503) 595-1001</b>	Special Instructions: E-mail results to <b>NKraft@forensica.com</b> and <b>rtracy@forensica.com</b>						
Site: <b>PJ5551</b> <b>Kate Vance</b> <b>PSU - East Hall (EH)</b>	Turnaround Time:	1-Day	2-Day	3-Day <input checked="" type="checkbox"/>	5-Day	Other	Due Date & Time:
Client No.: <b>C6013:6008</b> FACS Job#: <b>PJ5551</b>	Analysis: <u>PLM Standard</u> / Point Count / Flame AA (Pb) / Other:						

Sample Number	Material Description	Sample Location	Friable	Cond.	Quantity
EH-23-FT-1	FT, 9x9, off-white w/ gray streaks (black)	EH 315			
EH-24-CT-1	CT, 2x4, FRP	341			
EH-25-WP-1	Window putty (skylight)	roof skylight			
EH-26-RP-1	RP + R	roof			
EH-27-FS-1	Firestop, red	C105			
EH-28-PL-1	Exterior Putty	MAIN ENTRY - Ground Floor			
EH-28-PL-2	"				
EH-28-PL-3	"				

WB - Wallboard IC - Joint Compound FT - Floor Tile FTM - Floor Tile Mastic BBM - Baseboard Mastic  
 RSF - Resilient Sheet Flooring CT - Ceiling Tile SAAM - Spray-Applied Acoustical Material WT - Wall Texture  
 Shipped via: Fed Ex  Airborne  UPS  US Mail  Courier  XXX Drop Off  Other:

Relinquished by: 	Received by: 
Date & Time: <b>5-6-08</b>	Date & Time: <b>5/7/08</b> 
Condition Acceptable <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

# **APPENDIX D**

## **GLOSSARY OF TERMS**

## GLOSSARY OF TERMS

**ACM - Asbestos-containing material:** Any material containing more than one percent asbestos. This includes suspect and/or presumed ACM.

**AHERA:** Asbestos Hazard Emergency Response Act of 1986.

**AHERA Building Inspector:** A person who has successfully completed the training requirements for a building inspector established by EPA Asbestos Model Accreditation Plan; Interim Final Rule (40 CFR Part 763, Appendix C to Subpart E, I.B.3) and whose certification is current.

**AHERA Project Designer:** A person who has successfully completed the training requirements for an asbestos abatement project designer established by EPA regulations (40 CFR 763.90(g)) and whose certification is current.

**Asbestos:** Chrysotile, amosite, crocidolite, tremolite, anthophyllite, actinolite and any of these minerals that have been chemically treated and/or altered.

**Asbestos Building Inspection:** A written report describing an inspection using the procedures contained in EPA regulations (40 CFR 763,86) to determine whether materials or structures to be worked on, renovated, removed, or demolished (including materials on the outside of structures) contain asbestos.

**Authorized Person:** Any person authorized by the employer and required by work duties to be present in regulated areas.

**Chain of Custody Record:** Legal documentation that follows samples from collection to the laboratory indicating who has been in possession of the samples.

**Competent Person:** A person capable of identifying asbestos hazards, selecting appropriate control strategies and having the authority to take prompt corrective measures. Additionally, for Class I and Class II work, one who is specially trained in a training course meeting the criteria of EPA's Model Accreditation Plan (40 CFR 763) for project designer or supervisor, or its equivalent and, for Class II work, who is trained in an operations and Maintenance O & M Course developed by EPA (40 CFR 76392 (a) (2)).

**Contractor:** The asbestos abatement contractor.

**EPA:** United States Environmental Protection Agency

**Friable:** Asbestos-containing material that can be crumbled, pulverized or reduced to powder when dry, by hand pressure.

**HEPA - High-Efficiency Particulate Air (Filter):** A filter capable of trapping and retaining at least 99.97 percent of all mono-dispersed particles of 0.3 micrometers in diameter.

**Intact:** ACM that has not crumbled, been pulverized, or otherwise deteriorated so that its no longer likely to be bound within its matrix.

**LF:** Linear feet

**NESHAPs:** National Emission Standard for Hazardous Air Pollutants, 40 CFR part 61.

**NVLAP:** National Voluntary Laboratory Accreditation Program

**OSHA:** United States Department of Labor - Occupational Safety and Health Administration.

**Owner:** The legal entity, including a lessee, which exercises control over management and record keeping functions relating to a building and/or facility in which the abatement activities described in this document take place.

**Owners Representative:** A person authorized by the Owner to act on the Owners behalf.

**PLM:** Polarized Light Microscopy

**PACM - Presumed Asbestos Containing Material:** Thermal system insulation and surfacing material found in buildings constructed no later than 1980. The designation of a material as PACM may be rebutted through PLM analysis of samples obtained by certified inspectors.

**Removal:** All operations where ACM and/or PACM is taken out or stripped from structures or substrate, and includes demolition operations.

**Sq. Ft.:** Square feet

**Surfacing Material:** Material that is sprayed, troweled-on or otherwise applied to surfaces.

**Suspect ACBM:** Material that is suspected of containing asbestos that has not been sampled and analyzed for asbestos content.

**TSI - Thermal System Insulation:** ACM applied to pipes, fittings, boilers, breaching, tanks, ducts or other structural components to prevent heat loss or gain.

# **APPENDIX E**

## **ACCREDITATION**

# Certificate of Completion

This is to certify that

**Noal C. Kraft**

has satisfactorily completed  
4 hours of refresher training as an  
**Asbestos Building Inspector**

to comply with the training requirements of  
TSCA Title III / 40 CFR 763 (AHERA)

Certificate Number: 10267132



Instructor

EPA Provider Cert. Number: 1085



Jul 18, 2007

Date(s) of Training

Exam Score: NA

Expiration Date: Jul 17, 2008

Argus Pacific, Inc. • 1900 W. Nickerson, Suite 315 • Seattle, Washington • 98119 • (206) 285.3373 • fax (206) 285.3927

# Certificate of Completion

This is to certify that

**Dan K. Rouse**

has satisfactorily completed  
4 hours of refresher training as an  
**Asbestos Building Inspector**

to comply with the training requirements of  
TSCA Title II / 40 CFR 763 (AHERA)

Certificate Number: 1029792



Instructor

EPA Provider Cert. Number: 1085



Jun 18, 2008

Date(s) of Training

Exam Score: NA

Expiration Date: Jun 18, 2009

Argus Pacific, Inc. • 1900 W. Nickerson, Suite 315 • Seattle, Washington • 98119 • (206) 285.3373 • fax (206) 285.3927



# *Certificate of Completion*

This is to certify that

***Robin Sharpe***

has attended and successfully completed the requisite training for  
accreditation under TSCA Title II, Part 763, Subpart E, Appendix C of 40 CFR  
EPA AHERA (Asbestos Hazard Emergency Response Act),  
and ASHARA Model Accreditation Program requirements for  
**AHERA INSPECTOR REFRESHER**

as presented by  
**Bureau Veritas North America, Inc.**

*Allen George*

Allen George  
INSTRUCTOR

Course Date: 04/29/08  
Certification # 08-1061  
Certificate Expiration Date: 04/29/09



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VERITAS**

3800 NE Sandy Boulevard, Suite 101, Portland, Oregon 97232 • (971) 244-1200 • fax (971) 244-1209