

# ASBESTOS BUILDING INSPECTION

LOCATION:

**GRADUATE SCHOOL OF EDUCATION  
615 SW HARRISON STREET  
PORTLAND, OREGON 97201**

JULY 11, 2008

FORENSIC ANALYTICAL PROJECT NO. PJ5552

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  
Portland, OR 97224  
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 615 SW Harrison Street, Portland, Oregon. Dan Rouse, Noal Kraft and Robin Sharpe conducted the field investigation on May 7, 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 was built in two phases between 1979 and 1989. The building consists of six-stories, which includes 53,420 sq. ft. of labs, offices and classrooms.

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. In addition, the following areas were inaccessible at the time of the survey: 101

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
ED-01-FT-1	Floor Tile, 12" x 12" Brown Granite Pattern, and Yellow Mastic	ED - C601	-	ND	-	-
ED-01-FT-2	Floor Tile, 12" x 12" Brown Granite Pattern, and Yellow Mastic	ED - C401	-	ND	-	-
ED-02-CT-1	Ceiling Tile, 2' x 6', (2' x 2' Pattern) Gouged w/ Pinholes	ED - C601	-	ND	-	-
ED-02-CT-2	Ceiling Tile, 2' x 6', (2' x 2' Pattern) Gouged w/ Pinholes	ED - L402	-	ND	-	-
ED-03-CB-1	Cove Base, 4" Off-White, and Grey Adhesive	ED - C601	-	ND	-	-
ED-05-CM-1	Carpet Mastic, Tan	ED - 604	-	ND	-	-
ED-06-CT-1	Ceiling Tile, 36" x 60" Gouged w/ Pinholes	ED - 603	-	ND	-	-
ED-07-FT-1	Floor Tile, 12" x 12" Brown w/ Dark Brown and White Specks, and Black Mastic	ED - C605	ED - 204A, 204B, 204C, 204D, 204E, 204F, 210, 222, 302A, V301, V302, 314A, 310E, 310F, 408, 408A, 412, 412A, 414A, 414, 506F, 506G, C505, C503, 504F, 504B, C504, 504C, 506Q, C506, C509, C507, 506K, 506L, 602G, C605, 602E, 602D, C603, V601, 604A, V603, 602J, 608, 602, C607	Trace Chrysotile Tile  5% Chrysotile Mastic	8,420 sq. ft.	Good
ED-08-SU-1	Sink Undercoating, Black	ED - 604A	Throughout Building	2% Chrysotile Mastic	~14 Sinks	Good

ND – Non-Detected

SAMPLE ID #	MATERIAL DESCRIPTION	SAMPLE LOCATION	MATERIAL LOCATION	ASB. % AND TYPE	APPROX. QUANTITY	CONDITION
ED-09-CB-1	Cove Base, 4" Dark Beige, and Brown Adhesive	ED - 602	-	ND	-	-
ED-10-PL-1	Plaster, Wall	ED - 602	-	ND	-	-
ED-10-PL-2	Plaster, Wall	ED - C501	-	ND	-	-
ED-10-PL-3	Plaster, Wall	ED - L402	-	ND	-	-
ED-10-PL-4	Plaster, Wall	ED - C301	-	ND	-	-
ED-10-PL-5	Plaster, Wall	ED - C201	-	ND	-	-
ED-10-PL-6	Plaster, Wall	ED - 701	-	ND	-	-
ED-10-PL-7	Plaster, Wall	ED - S701	-	ND	-	-
ED-11-FT-1	Floor Tile, 12" x 12" Beige Specked, and Black Mastic	ED - 502	-	ND	-	-
ED-12-CB-1	Cove Base, 4" Grey-Brown, and Tan Adhesive	ED - 502	-	ND	-	-
ED-13-FT-1	Floor Tile, 12" x 12" Light Brown w/ Cream Specks, and Black Mastic	ED - 402	-	ND	-	-
ED-14-SV-1	Sheet Vinyl, Brown Pebble Pattern	ED - 414B	ED - 414B, 416 & 104A	70% Chrysotile	480 sq. ft.	Good
ED-15-DST-1	Duct Seam Tape, White	ED - 104A	-	ND	-	-

ND – Non-Detected



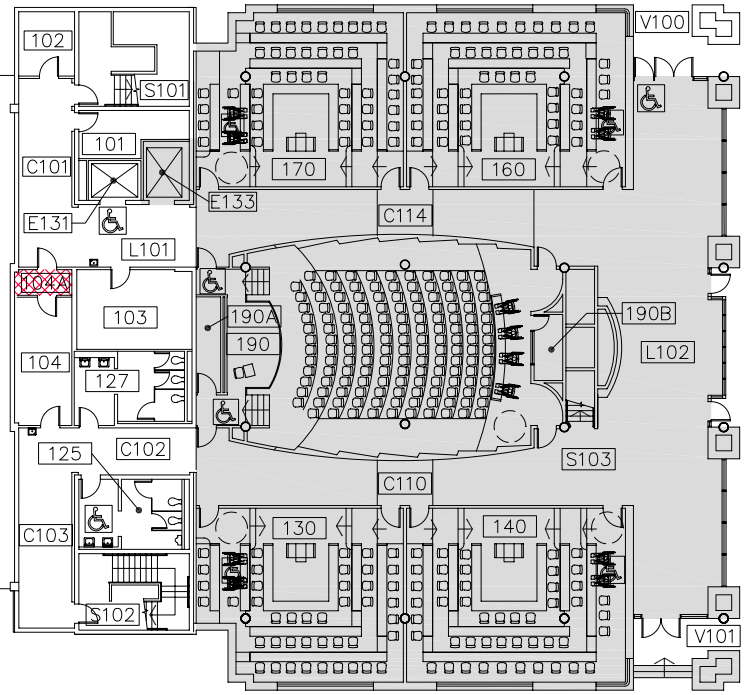
SAMPLE ID #	MATERIAL DESCRIPTION	SAMPLE LOCATION	MATERIAL LOCATION	ASB. % AND TYPE	APPROX. QUANTITY	CONDITION
ED-16-TSI-1	Rigid Pipe Insulation	ED - 104A	-	ND	-	-
ED-16-TSI-2	Rigid Pipe Insulation	ED - 104A	-	ND	-	-
ED-16-TSI-3	Rigid Pipe Insulation	ED - 104A	-	ND	-	-
ED-17-TSI-1	Pipe Fitting Insulation	ED - 104	-	ND	-	-
ED-17-TSI-2	Pipe Fitting Insulation	ED - 104	-	ND	-	-
ED-17-TSI-3	Pipe Fitting Insulation	ED - 104	-	ND	-	-
ED-21-CT-1	Ceiling Tile, 2' x 2' Gouged w/ Pinholes	ED - L601	-	ND	-	-
ED-SBA-18-DSC-1	Duct Seam Compound, Grey	ED/SBA - Roof	-	ND	-	-
ED-SBA-19-TSI-1	Pipe Insulation Encapsulant on Fibrous Insulated Pipe	ED/SBA - Roof, Interior of SE Fan Unit	-	ND	-	-
ED-SBA-19-TSI-2	Pipe Insulation Encapsulant on Fibrous Insulated Pipe	ED/SBA - Roof, Interior of SE Fan Unit	-	ND	-	-
ED-SBA-19-TSI-3	Pipe Insulation Encapsulant on Fibrous Insulated Pipe	ED/SBA - Roof, Interior of SE Fan Unit	-	ND	-	-
ED-SBA-20-DSC-1	HVAC Compound, Grey	ED/SBA - Roof, Center	ED/SBA - Roof	3% Chrysotile	Partially Inaccessible Not Quantified	Good

ND – Non-Detected

# **APPENDIX B**

**SITE DRAWING(S)**

# 1st Floor



- Floor Tile, 12" x 12" Brown w/ Dark Brown and White Specks\*\* and Black Mastic
  - Sheet Vinyl, Brown Pebble Pattern
- ACM not shown:  
 Slink Undercoating, Black  
 HVAC Compound, Grey

DATE: 7-11-08  
 DRAWN BY: DKR  
 PROJECT #: P-J552  
 PAGE #: ACM - 1/8

REVISIONS

Graduate School of Education  
 1st Floor  
 ACM Locations

Report North

No Scale

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

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





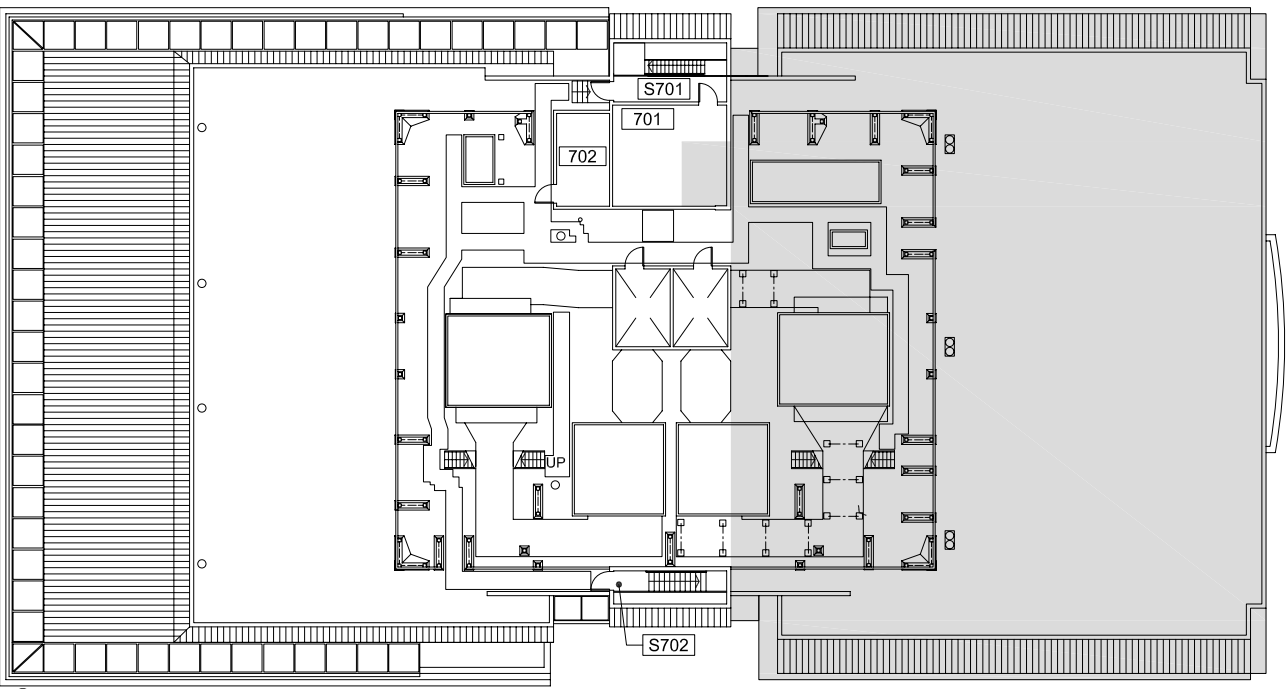








# 7th Floor



-  Floor Tile, 12" x 12" Brown w/ Dark Brown and White Specks\*\* and Black Mastic
-  Sheet Vinyl, Brown Pebble Pattern

ACM not shown:  
Sink Undercoating, Black  
HVAC Compound, Grey

DATE: 7-11-08	CLIENT: PSU Graduate School of Education Portland, Oregon 97201	PROJECT #: PJ5552
DRAWN BY: DKR	LOCATION: Portland, Oregon 97201	PROJECT #: PJ5552
PAGE #: ACM - 7/8		

REVISIONS

Graduate School of Education  
7th Floor  
ACM Locations

Report North



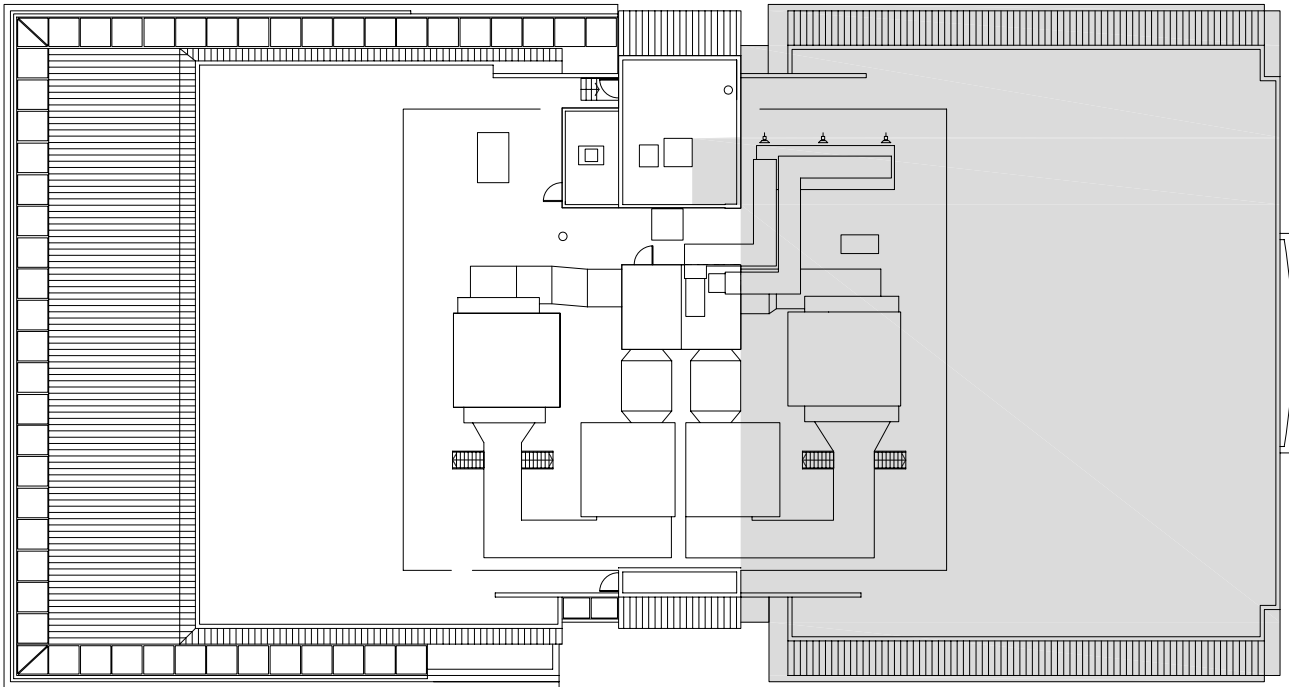
No Scale



**Forensic Analytical**  
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Portland, Oregon 97224  
503/995-1001 Fax  
www.forensica.com



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

# Roof Plan



-  Floor Tile, 12" x 12" Brown w/ Dark Brown and White Specks\*\* and Black Mastic
  -  Sheet Vinyl, Brown Pebble Pattern
- ACM not shown:  
Sink Undercoating, Black  
HVAC Compound, Grey

DATE: 7-11-08	CLIENT: PSU Graduate School of Education Portland, Oregon 97201	PROJECT #: PJ5552
DRAWN BY: DKR	LOCATION: Portland, Oregon 97201	PROJECT #: PJ5552
PAGE #: ACM - 8/8		

Read to comply with the provisions of Oregon Administrative Rules, Chapter 8100, Division 01, Section 010000. The contractor shall be responsible for obtaining all necessary permits and approvals for this work.

REVISIONS

Graduate School of Education  
Roof  
ACM Locations

Report North



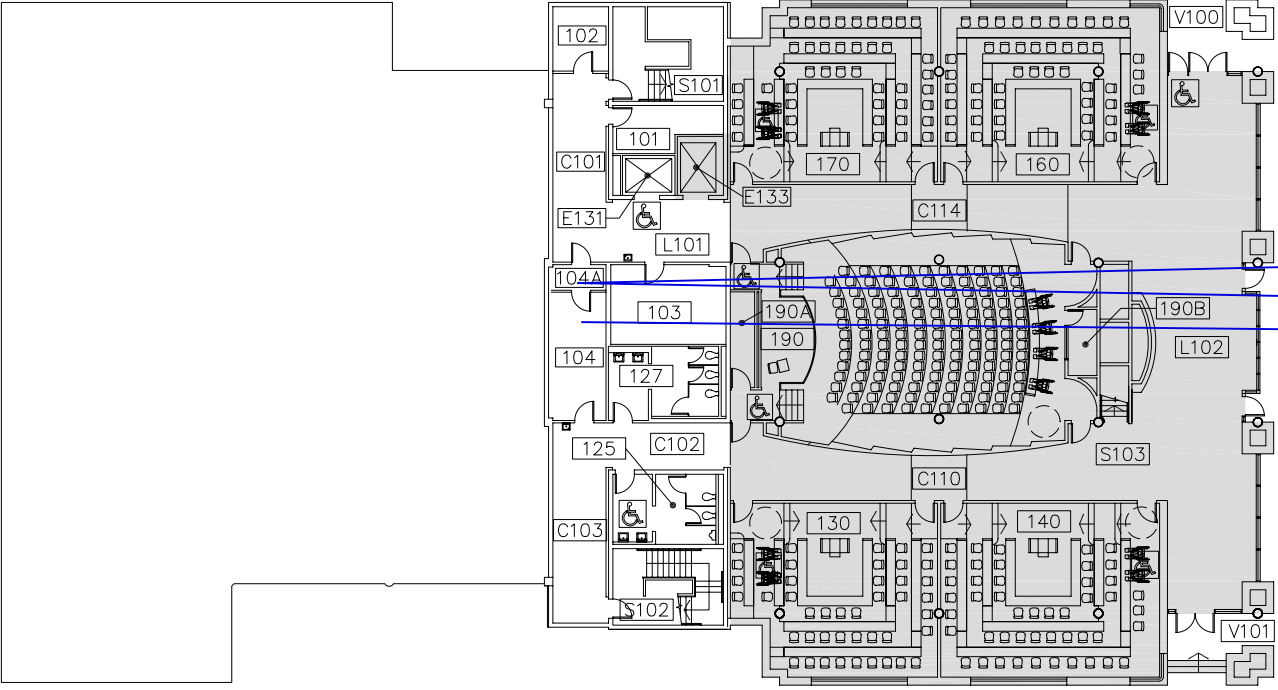
No Scale

**Forensic Analytical**  
17400 SW Upper Boones Ferry Road, Suite 245  
Portland, Oregon 97224  
503/995-1001 Fax: 503/995-1002  
www.forensica.com



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

# 1st Floor




ED-15-DST-1  
 ED-16-TSI-1, 2, 3  
 ED-17-TSI-1, 2, 3

DATE: 7-11-08	CLIENT: PSU Graduate School of Education
DRAWN BY: DKR	LOCATION: Portland, Oregon 97201
PAGE #: SAM - 1/8	PROJECT #: PJ5552

REVISIONS

Graduate School of Education  
 1st Floor  
 Sample Locations

Report North  
  
 No Scale

<b>Sample ID # Key</b> PSU (Insulated) Package Code Interference Material * Material Code - Click for Details Sample Location in Red N/A/CM Shown in Blue	AEC00-F-1
--	-----------

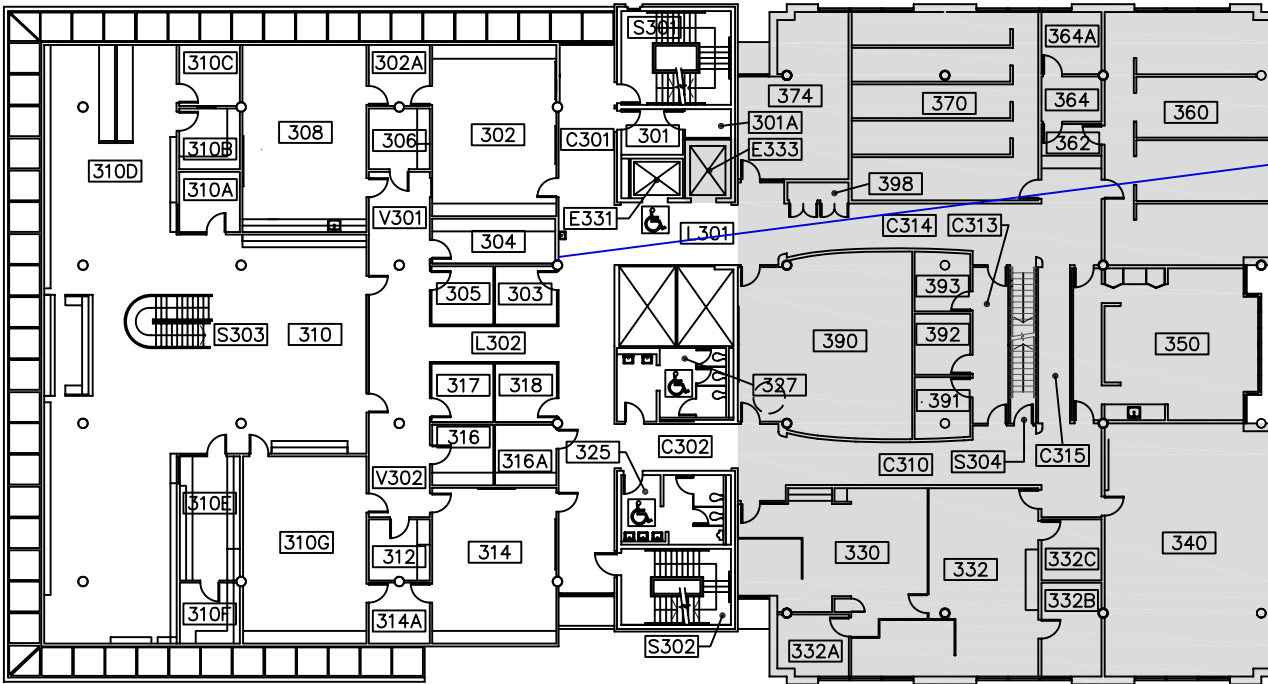
**Forensic Analytical**  
 17400 SW Upper Boones Ferry Road, Suite 245  
 Portland, Oregon 97224  
 503/995-1001  
 Fax: 503/995-1002  
 www.forensicanalytical.com



\* - 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.



# 3rd Floor



ED-10-PL-4

DATE:	7-11-08
DRN BY:	DKR
PROJECT:	PSU Graduate School of Education
LOCATION:	Portland, Oregon 97201
PROJECT #:	PJ552
PAGE #:	SAM - 3/8

REVISIONS

Graduate School of Education  
3rd Floor  
Sample Locations

Report North



No Scale

**Sample ID # Key**

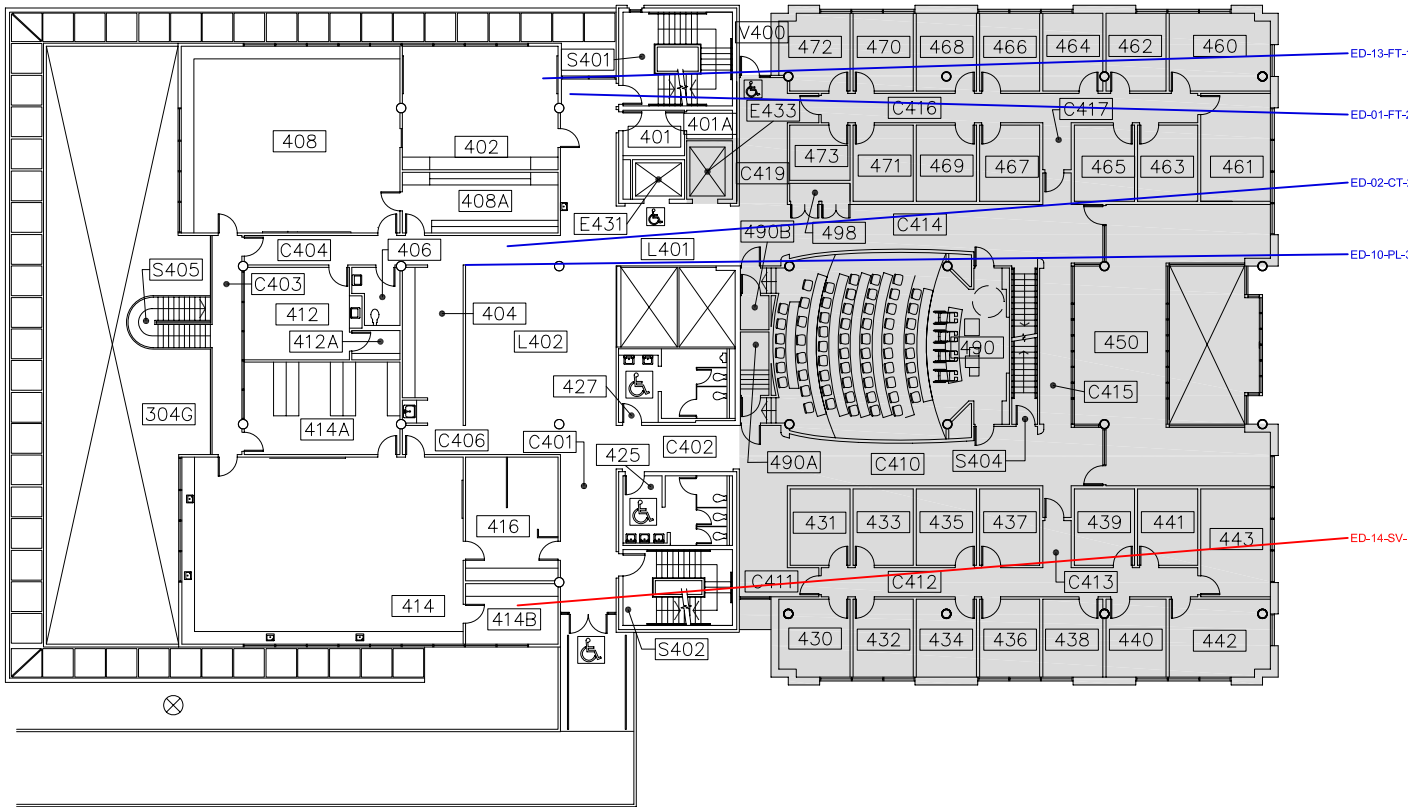
PSU (Residential Building) Code  
 Administrative Material \*  
 ABC-0-F-1  
 Sample Location in Red  
 N/A-C/M Shown in Blue

**Forensic Analytical**  
 17400 SW Upper Boones Ferry Road, Suite 245  
 Portland, Oregon 97224  
 503.995.1001 Fax  
 www.forensicanalytical.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.

# 4th Floor




DATE: 7-11-08	CLIENT: PSU Graduate School of Education
DRAWN BY: DKR	PROJECT: LOCATION: Portland, Oregon 97201
PAGE #: SAM -418	PROJECT #: PJ5552

REVISIONS

Graduate School of Education  
4th Floor  
Sample Locations

Report North



No Scale

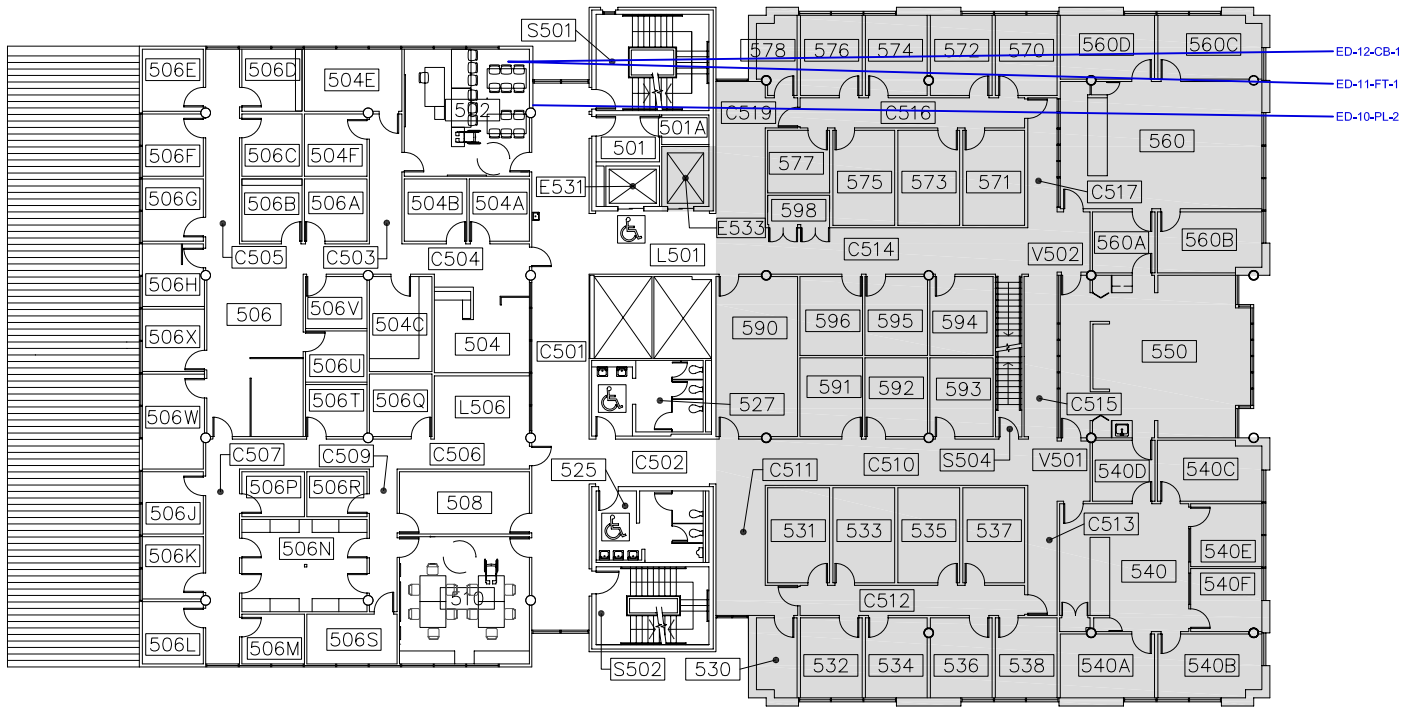
<p><b>Sample ID # Key</b></p> <p>PSU Provided Package Code Management Material # Material Code - Click for Details Sample ID Sample ID in Red Nutra-AM Shown in Blue</p>	<p>AE00-FT-1</p>
--	------------------

**Forensic Analytical**  
17400 SW Upper Boones Ferry Road, Suite 245  
Portland, Oregon 97224  
503.952.1001 Fax  
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.

# 5th Floor



DATE: 7-11-08  
 DRL BY: DKR  
 PROJECT #: P-J552  
 PAGE #: SAM-518

CLIENT: PSU  
 PROJECT: Graduate School of Education  
 LOCATION: Portland, Oregon 97201

REVISIONS

NO.	DESCRIPTION

Graduate School of Education  
 5th Floor  
 Sample Locations

Report North

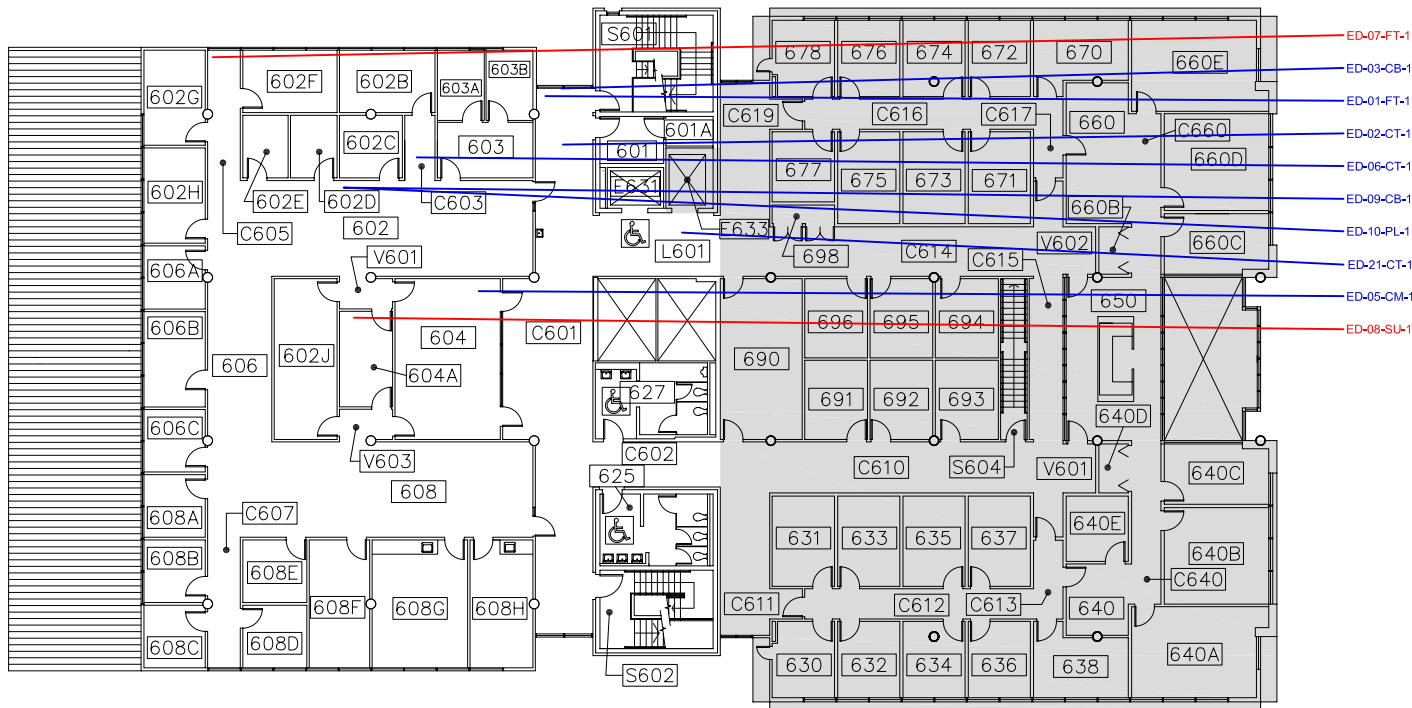
No Scale

**Forensic Analytical**  
 17400 SW Upper Boones Ferry Road, Suite 245  
 Portland, Oregon 97224  
 503.952.1001 Fax  
 www.forensicca.com

PSU (Included) Project Code: AEC00-F-1  
 Management Material #: AEC00-F-1  
 Sample Location: in Red  
 Notes: ACM Shown in Blue

\* - 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.

# 6th Floor




- ED-07-FT-1
- ED-03-CB-1
- ED-01-FT-1
- ED-02-CT-1
- ED-06-CT-1
- ED-09-CB-1
- ED-10-PL-1
- ED-21-CT-1
- ED-05-CM-1
- ED-08-SU-1

DATE: 7-11-08
DRN BY: DKR
PROJECT #: SAM-618
CLIENT: PSU Graduate School of Education LOCATION: Portland, Oregon 97201
PROJECT #: PJ552

REVISIONS

Graduate School of Education  
6th Floor  
Sample Locations

Report North



No Scale

<p><b>Sample ID # Key</b></p> <p>PSU (Residential Building) Code  <span style="color: red;">#</span> - This sample is part of a set in which one of the samples tested positive for asbestos.  <span style="color: blue;">#</span> - This sample contained a trace amount of asbestos.</p> <p>Material Code - Click for Details  <span style="color: red;">#</span> - This sample is in Bed  <span style="color: blue;">#</span> - This sample is in Bed  <span style="color: blue;">#</span> - This sample is in Bed</p>
---

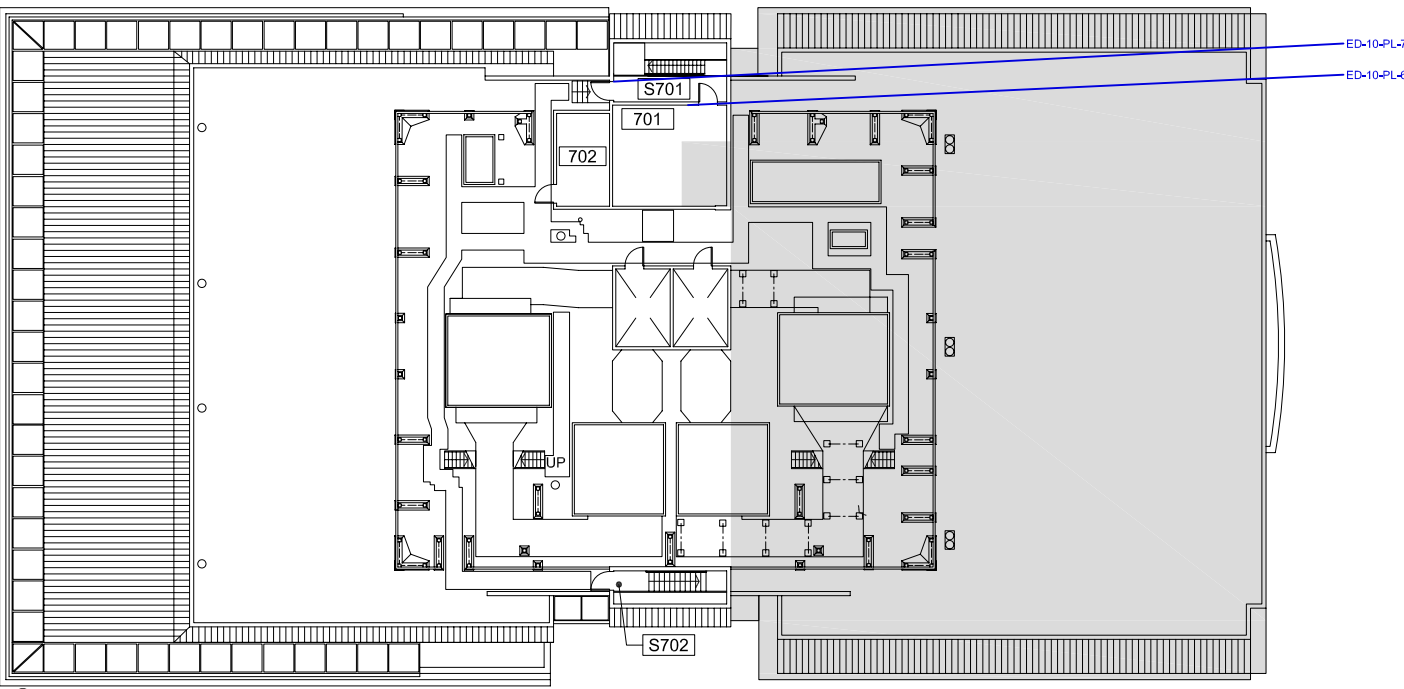
**Forensic Analytical**  
 17400 SW Upper Boones Ferry Road, Suite 245  
 Portland, Oregon 97224  
 503.995.1001  
 Fax: 503.995.1002  
[www.forensicanalytical.com](http://www.forensicanalytical.com)



\* - 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.



# 7th Floor



ED-10-PL-7  
ED-10-PL-6

DATE: 7-11-08	CLIENT: PSU Graduate School of Education Portland, Oregon 97201
DRAWN BY: DKR	PROJECT #: PJ5552
PAGE #: SAM - 7/8	

REVISIONS

Graduate School of Education  
7th Floor  
Sample Locations

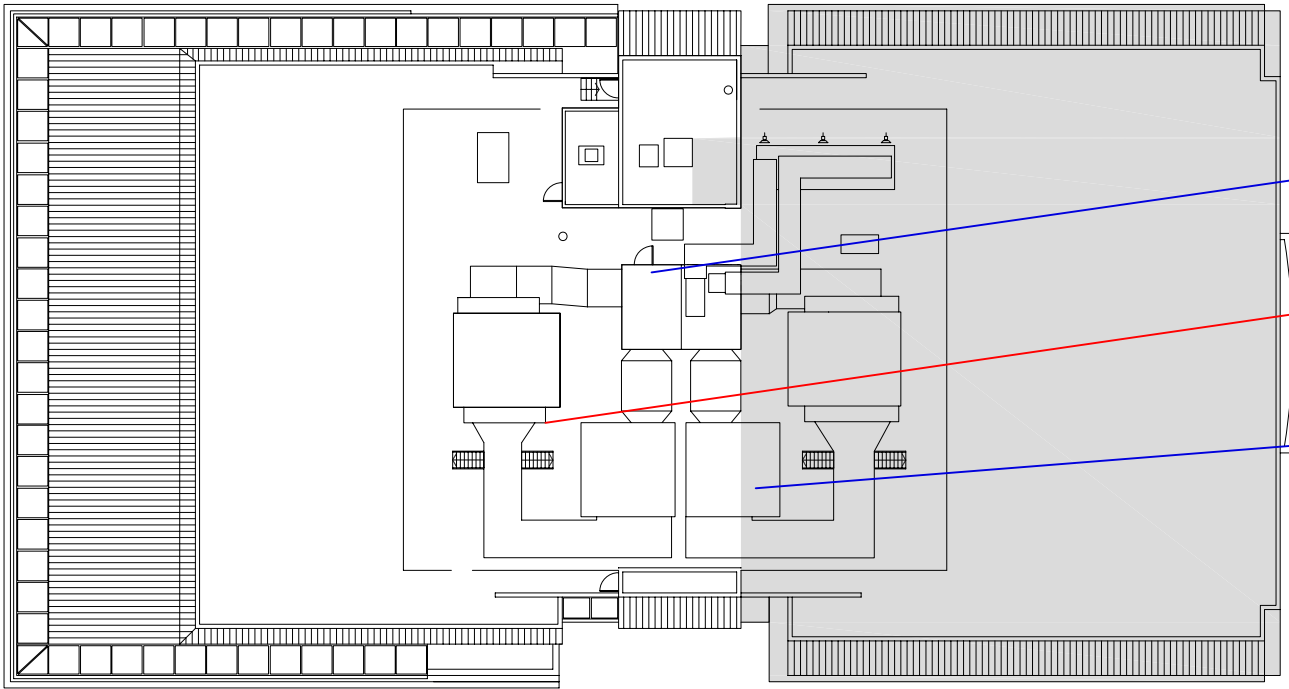
Report North  
No Scale

Sample ID # Key
PSU (Residential Building Code) Inhomogeneous Material *
ABC-07-F-1
Sample shown in Red
Nurse-CAM shown in Blue

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

# Roof Plan



ED-SBA-18-DSC-1

ED-SBA-20-DSC-1


ED-SBA-19-TSI-1, 2, 3

DATE: 7-11-08	CLIENT: PSU Graduate School of Education Portland, Oregon 97201	PROJECT #: PJ5552
DRN BY: DKR		PAGE #: SAM - 8/8

REVISIONS

Graduate School of Education  
Roof  
Sample Locations

Report North



No Scale

**Sample ID # Key**  
 PSU (Insulated) Material Code  
 Heterogeneous Material #  
 Material Code - Click for Details  
 AEC-07-F-1  
 Sample Location  
 Sample Name in Red  
 Name/CM Shown in Blue

**Forensic Analytical**  
 17400 SW Upper Boones Ferry Road, Suite 245  
 Portland, Oregon 97224  
 503/995-1001  
 Fax: 503/995-1002  
 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:** B113997  
**Date Received:** 06/17/08  
**Date Analyzed:** 06/20/08  
**Date Printed:** 06/20/08  
**First Reported:** 06/20/08

**Job ID/Site:** PJ5552; Kate Vance PSU - School of Education (Graduate) (ED) 615 SW Harrison St. 6 Floors Portland OR 97201

**FASI Job ID:** PE21  
**Total Samples Submitted:** 30  
**Total Samples Analyzed:** 29

**Date(s) Collected:**

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

<b>ED-01-FT-1</b>	10767407						
Layer: Brown Tile			<b>ND</b>				
Layer: Yellow Mastic			<b>ND</b>				

Total Composite Values of Fibrous Components: **Asbestos (ND)**  
Cellulose (Trace)

<b>ED-07-FT-1</b>	10767408						
Layer: Brown Tile		Chrysotile	<b>Trace</b>				
Layer: Black Mastic		Chrysotile	<b>5 %</b>				

Total Composite Values of Fibrous Components: **Asbestos (Trace)**  
Cellulose (Trace)

<b>ED-11-FT-1</b>	10767409						
Layer: Beige Tile			<b>ND</b>				
Layer: Yellow Mastic			<b>ND</b>				
Layer: Grey Non-Fibrous Material			<b>ND</b>				

Total Composite Values of Fibrous Components: **Asbestos (ND)**  
Cellulose (Trace)

<b>ED-01-FT-2</b>	10767410						
Layer: Brown Tile			<b>ND</b>				
Layer: Yellow Mastic			<b>ND</b>				

Total Composite Values of Fibrous Components: **Asbestos (ND)**  
Cellulose (Trace)

<b>ED-13-FT-1</b>	10767411						
Layer: Light Brown Tile			<b>ND</b>				
Layer: Yellow Mastic			<b>ND</b>				

Total Composite Values of Fibrous Components: **Asbestos (ND)**  
Cellulose (Trace)

<b>ED-02-CT-1</b>	10767412						
Layer: Beige Fibrous Material			<b>ND</b>				
Layer: Paint			<b>ND</b>				

Total Composite Values of Fibrous Components: **Asbestos (ND)**  
Cellulose (35 %)      Fibrous Glass (45 %)

Client Name: Forensic Analytical Consulting Svcs

Report Number: B113997

Date Printed: 06/20/08

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
<b>ED-06-CT-1</b>	10767414						
Layer: Beige Fibrous Material			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (35 %)	Fibrous Glass (45 %)						
<b>ED-02-CT-2</b>	10767415						
Layer: Beige Fibrous Material			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (35 %)	Fibrous Glass (45 %)						
<b>ED-21-CT-1</b>	10767416						
Layer: Beige Fibrous Material			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (35 %)	Fibrous Glass (45 %)						
<b>ED-03-CB-1</b>	10767417						
Layer: Off-White Non-Fibrous Material			ND				
Layer: Brown Mastic			ND				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (Trace)							
<b>ED-09-CB-1</b>	10767418						
Layer: Grey Non-Fibrous Material			ND				
Layer: Brown Mastic			ND				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (Trace)							
<b>ED-12-CB-1</b>	10767419						
Layer: Dark Brown Non-Fibrous Material			ND				
Layer: Off-White Mastic			ND				
Layer: Brown Mastic			ND				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (Trace)							
<b>ED-05-CM-1</b>	10767420						
Layer: Yellow Mastic			ND				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (Trace)	Synthetic (Trace)						
<b>ED-10-PL-1</b>	10767421						
Layer: White Plaster			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (Trace)							

Client Name: Forensic Analytical Consulting Svcs

Report Number: B113997

Date Printed: 06/20/08

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
<b>ED-10-PL-2</b>	10767422						
Layer: White Plaster			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (Trace)							
<b>ED-10-PL-3</b>	10767423						
Layer: White Plaster			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (Trace)							
<b>ED-10-PL-4</b>	10767424						
Layer: White Plaster			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (Trace)							
<b>ED-10-PL-5</b>	10767425						
Layer: White Plaster			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (Trace)							
<b>ED-10-PL-6</b>	10767426						
Layer: White Plaster			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (Trace)							
<b>ED-10-PL-7</b>	10767427						
Layer: White Plaster			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (Trace)							
<b>ED-16-TSI-1</b>	10767428						
Layer: Off-White Semi-Fibrous Material			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (Trace)	Fibrous Glass (35 %)						
<b>ED-16-TSI-2</b>	10767429						
Layer: Off-White Semi-Fibrous Material			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (Trace)	Fibrous Glass (35 %)						
<b>ED-16-TSI-3</b>	10767430						
Layer: Off-White Semi-Fibrous Material			ND				
Layer: Off-White Woven Material			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (Trace)	Fibrous Glass (35 %)	Synthetic (5 %)					

Client Name: Forensic Analytical Consulting Svcs

Report Number: B113997

Date Printed: 06/20/08

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer		
<b>ED-17-TSI-1</b>	10767431								
Layer: Off-White Semi-Fibrous Material			ND						
Layer: Off-White Woven Material			ND						
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>							
Cellulose (Trace)	Fibrous Glass (35 %)	Synthetic (5 %)							
<b>ED-17-TSI-2</b>	10767432								
Layer: Off-White Semi-Fibrous Material			ND						
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>							
Cellulose (Trace)	Fibrous Glass (35 %)								
<b>ED-17-TSI-3</b>	10767433								
Layer: Off-White Semi-Fibrous Material			ND						
Layer: Off-White Woven Material			ND						
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>							
Cellulose (Trace)	Fibrous Glass (35 %)	Synthetic (5 %)							
<b>ED-08-SU-1</b>	10767434								
Layer: Black Mastic		Chrysotile	2 %						
Total Composite Values of Fibrous Components:		<b>Asbestos (2%)</b>							
<b>ED-14-SV-1</b>	10767435								
Layer: Brown Sheet Flooring			ND						
Layer: Fibrous Backing		Chrysotile	70 %						
Layer: Yellow Mastic			ND						
Total Composite Values of Fibrous Components:		<b>Asbestos (25%)</b>							
Cellulose (5 %)									
<b>ED-15-DST-1</b>	10767436								
Layer: Off-White Woven Material			ND						
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>							
Synthetic (95 %)									



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.



# 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:** B113987  
**Date Received:** 06/17/08  
**Date Analyzed:** 06/20/08  
**Date Printed:** 06/20/08  
**First Reported:** 06/20/08

**Job ID/Site:** PJ5552; Kate Vance PSU - School of Education (Graduate) (ED) 615 SW Harrison St. 6 Floors Portland OR 97201

**FASI Job ID:** PE21  
**Total Samples Submitted:** 5  
**Total Samples Analyzed:** 5

**Date(s) Collected:**

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
<b>ED-SBA-19-TSI-1</b>	10767169						
Layer: Yellow Fibrous Material			ND				
Layer: White Non-Fibrous Material			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (Trace)	Fibrous Glass (60 %)						
<b>ED-SBA-19-TSI-2</b>	10767170						
Layer: Beige Tape			ND				
Layer: Yellow Fibrous Material			ND				
Layer: White Non-Fibrous Material			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (5 %)	Fibrous Glass (60 %)						
<b>ED-SBA-19-TSI-3</b>	10767171						
Layer: Yellow Fibrous Material			ND				
Layer: White Non-Fibrous Material			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (Trace)	Fibrous Glass (60 %)						
<b>ED-SBA-18-DSC-1</b>	10767172						
Layer: Grey Non-Fibrous Material			ND				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (Trace)							
<b>ED-SBA-20-DSC-1</b>	10767173						
Layer: Grey Non-Fibrous Material		Chrysotile	3 %				
Total Composite Values of Fibrous Components:		<b>Asbestos (3%)</b>					
Cellulose (Trace)	Synthetic (10 %)						



**Client Name:** Forensic Analytical Consulting Svcs

**Report Number:** B113987

**Date Printed:** 06/20/08

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Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
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James Flores, Laboratory Supervisor, Hayward Laboratory

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

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Client: <b>PE21 FACS Portland Portland State University</b>	Sampled by: <b>DKR</b>	PM: <b>Noal Kraft</b>	Date: <b>5-7-08</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>		
Sitc: <b>PJ5552</b> <small>Kate Vance PSU - School of Education (Graduate) (ED)</small>	Turnaround Time:	1-Day	2-Day
Client No.: <b>C6013:6008</b> FACS Job#: <b>PJ5552</b>	Analysis: <b>PLM Standard</b>	Point Count	Flame AA (Pb)
Other: <i>Analyzes bracketed sets to 1st positive</i>			

Sample Number	Material Description	Sample Location	Friable	Cond.	Quantity
ED-01-FT-1	FT, 12x12, <del>light</del> brown granite pattern (yellow)	<del>ELSI</del> C601			
ED-07-FF-1	FT, 12x12, brown w/ dark brown + white specks (black)	C605			
ED-11-FT-1	FT, 12x12, beige speckled (black)	502			
ED-01-FT-2	FT, 12x12, brown granite pattern (yellow)	C401			
ED-13-FT-1	FT, 12x12, light brown w/ cream specks (black)	402			

WB - Wallboard IC - Joint Compound FT - Floor Tile FTM - Floor Tile Mastic BBM - Baseboard Mastic Friable Good / Yes / No Fair / Poor

RSP - 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>5-7-08 6-16-08</b>	Date & Time: <b>6/17/08 10:30 AM</b>
Condition Acceptable <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	




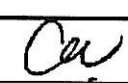
Client: <b>PE21 FACS Portland Portland State University</b>	Sampled by: <b>DKR</b>	PM: <b>Noal Kraft</b>	Date: <b>5-7-08</b>				
Contact: <b>Noal Kraft</b> Phone: <b>(503) 595-1001</b>	Special Instructions: E-mail results to <b>NKraft@forensica.com</b> and <b>rtracy@forensica.com</b>						
Site: <b>PJ5552</b> <b>Kate Vance PSU - School of Education (Graduate) (ED)</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>PJ5552</b>	Analysis: <u>PLM Standard</u> / Point Count / Flame AA (Pb) / Other:						

Sample Number	Material Description	Sample Location	Friable	Cond.	Quantity
ED-02-CT-1	CT, 2x2, 2x2 pattern G/P	<del>601</del> C601			
* ED-04-CT-1	<del>CT, 18x18 2.5x2.5, G/P</del>	<del>604</del>			
ED-06-CT-1	CT, 36x60, G/P	C603			
ED-02-CT-2	CT, 2x6, 2x2 pattern G/P	L402			
ED-21-CT-1	CT, 2x2, G/P				

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:   
 Date & Time: **5-7-08 6-16-08**

Received by:   
 Date & Time: **6/17/08 1030AM**

Condition Acceptable  Yes  No







Client: <b>PE21 FACS Portland</b> <b>Portland State University</b>		Sampled by: <b>DKR</b>		PM: <b>Noal Kraft</b> Date: <b>5-7-08</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>PJ5552</b> <b>Kate Vance</b> <b>PSU - School of Education (Graduate) (ED)</b>		Turnaround Time:		1-Day	2-Day	<input checked="" type="checkbox"/> 3-Day	5-Day	Other	Due Date & Time:
Client No.: <b>C6013:6008</b> FACS Job#: <b>PJ5552</b>		Analysis: <u>PLM Standard</u> / Point Count / Flame AA (Pb) / Other:							

Sample Number	Material Description	Sample Location	Friable	Cond.	Quantity
ED-10-PL-1	Plaster wall	ED 602			
ED-10-PL-2	wall	<del>ED</del> C501			
ED-10-PL-3	wall	L402			
ED-10-PL-4	wall	C301			
ED-10-PL-5	wall	C201			
ED-10-PL-6	wall	701			
ED-10-PL-7	wall	S701			

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>5-7-08 6-16-08</b>	Date & Time: <b>6/17/08 10:54 AM</b>

Condition Acceptable  No



Client: <b>PE21 FACS Portland Portland State University</b>	Sampled by: <b>DKR</b>	PM: <b>Noal Kraft</b>	Date: <b>5-7-08</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>PJ5552</b> <b>Kate Vance PSU - School of Education (Graduate) (ED)</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>PJ5552</b>	Analysis: <u>PLM Standard</u> / Point Count / Flame AA (Pb) / Other:						

Sample Number	Material Description	Sample Location	Friable	Cond.	Quantity
ED-16-TSI-1	Pipe insulation	ED- 104A			
ED-16-TSI-2	↓	104A			
ED-16-TSI-3	↓	104A			
ED-17-TSI-1	pipe fitting	104			
↓	↓	104			
↓	↓	104			
<del>ED-19-TSI-1</del>	<del>pipe ins. on ceiling</del>	<del>roof int. of east fan unit</del>			
↓	↓	↓			
2	↓	↓			
3	↓	↓			

VOID

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>5-7-08 6-16-08</b>	Date & Time: <b>6/17/08 10:00 AM</b>

Condition Acceptable Yes No



Client: <b>PE21 FACS Portland</b> <b>Portland State University</b>	Sampled by: <i>DKR</i>	PM: <b>Noal Kraft</b>	Date: <i>5-7-08</i>
Contact: <b>Noal Kraft</b> Phone: (503) 595-1001	Special Instructions: E-mail results to <b>NKraft@forensica.com</b> and <b>rtracy@forensica.com</b>		
Site: <b>PJ5552</b> <b>Kate Vance</b> <b>PSU - School of Education (Graduate) (ED)</b>	Turnaround Time:	1-Day	2-Day
		<input checked="" type="checkbox"/>	3-Day
			5-Day
			Other
			Due Date & Time:
Client No.: <b>C6013:6008</b> FACS Job#: <b>PJ5552</b>	Analysis: <u>PLM Standard</u> / Point Count / Flame AA (Pb) / Other:		

Sample Number	Material Description	Sample Location	Friable	Cond.	Quantity
ED-08-SU-1	Sink undercoating, black	604A			
ED-14-SV-1	SV, brown pebble pattern	414B			
ED-15-DST-1	Duct seam tape, white	104A			
<del>ED-18-DSC-1</del>	<del>Duct seam compound, grey</del>	<del>roof</del>			
<del>ED-20-DSC-1</del>	<del>HVAC compound, grey</del>	<del>VOID roof center</del>			

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

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

Relinquished by: <i>[Signature]</i>	Received by: <i>[Signature]</i>
Date & Time: <i>5-7-08 6-16-08</i>	Date & Time: <i>6/17/08 10:59 AM</i>

Condition Acceptable Yes 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

**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

**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

***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