



Facilities Management

707 826-3646	PHONE
707 826-5888	FAX
FacilityMgmt@humboldt.edu	EMAIL
707 826-4475	ALT

## Technical Memorandum

May 5, 2023

### Student Health & Counseling Roof Restoration Project (XPL257) – Asbestos Data Summary

The California State Polytechnic University, Humboldt (Humboldt) Facilities Management (FM) Planning, Construction & Design (PDC) division collected bulk samples of suspect Asbestos Containing Material (ACM) at the Student Health & Counseling (SHC) building located at the following street address:

- Student Health & Counseling (Building 042)
- 280 Plaza Mall, Arcata, CA 95521

Bulk sampling was conducted at the SHC exterior roof on April 27, 2023, in association with the SHC Roof Restoration Project (the project). The project is designated as Humboldt project XPL257. This memorandum summarizes the sample analytical findings and provides conclusions based on these data.

#### Project Site

The project consists of the SHC exterior flat roof, including the south and east flat awnings (project site). The roof consists of a bituminous rolled roofing system overlaid on a wooden roof deck. The flat central roof is surrounded by a parapet wall which transitions to a pitched roof. The parapet ridgeline and pitched sections of the roof are overlaid with cementitious tile. The pitched roofs are excluded from the project site, as these areas are not included in the project scope. There is a hot water shed, a boiler, and HVAC equipment/ductwork located on the flat roof. Roof penetrations throughout are sealed with mastic and/or caulking. Photographs of the project site are attached (Attachment A).

#### Survey Description

A total 13 suspect ACM samples were collected throughout the project site, some samples consisting of multiple layers of unique materials. The samples collected at the project site are listed in Table 1 (page 2). The sample locations are shown on Figure 1 (Attachment B). The ACM sampling was conducted in general conformance with the United States Environmental Protection Agency (USEPA) National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations governing facility renovation.

The general locations of bulk samples collected at the project site are depicted on Figure 1 (Attachment B). Sampling was conducted by Scott Harris, a FM PDC California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) Certified Asbestos Consultant (11-4713).

#### Laboratory Data

Bulk samples collected from the project site were sent to SGS Forensic Laboratories located in Hayward, California. Samples were analyzed for asbestos content via Polarized Light Microscopy (PLM) using USEPA Method 600/R-93-Roof. The PLM data are summarized in Table 1. The PLM analytical reports are attached (Attachment C).

## Asbestos Findings

Table 1 includes the sample location, material type, laboratory result, and applicable regulatory designations for each sampled suspect ACM. Samples reported to contain asbestos are identified in Table 1 by the asbestos content (percent asbestos) and highlighted using bold text. Materials that were not reported by the laboratory to contain asbestos, i.e., non-detect (ND) materials, are listed as “ND”.

<b>Table 1 – Asbestos Data Summary</b>						
<b>Sample Number</b>	<b>Location</b>	<b>Material</b>	<b>Laboratory Result</b>	<b>USEPA Category</b>	<b>Cal/OSHA Work Class</b>	<b>Waste Designation</b>
SHC-Roof-1	SHC Roof - Main plane at CTR-S	Rolled bituminous roofing (black)	ND	NA	NA	Not ACM or RACM
SHC-Roof-2	SHC Roof - Main plane at NW at HVAC	Rolled bituminous roofing (black)	ND	NA	NA	Not ACM or RACM
SHC-Roof-3	SHC Roof - W parapet at CTR	Rolled bituminous roofing (black)	ND	NA	NA	Not ACM or RACM
<b>SHC-Roof-4</b>	<b>SHC Roof - NE at water heater shed</b>	<b>Bituminous walk pad (black) + mastic (black)</b>	<b>5% Asbestos (mastic only)</b>	<b>Category I Nonfriable</b>	<b>Class II</b>	<b>Nonhaz Asbestos Waste</b>
SHC-Roof-5	SHC Roof - SE at generator flashing	Flashing sealant (tar, black)	ND	NA	NA	Not ACM or RACM
SHC-Roof-6	SHC Roof - SE at main plane flashing cap	Flashing mastic (black)	ND	NA	NA	Not ACM or RACM
SHC-Roof-7	SHC Roof - CTR-NE at plumb. support	Penetration mastic (black)	ND	NA	NA	Not ACM or RACM
SHC-Roof-8	SHC Roof - NE roof at HVAC curb	Seam mastic (black)	ND	NA	NA	Not ACM or RACM
SHC-Roof-9	SHC Roof - W parapet at SW fastener	Penetration caulk (grey)	ND	NA	NA	Not ACM or RACM
SHC-Roof-10	SHC Roof - CTR-NW at HVAC curb fastener	Penetration caulk (grey)	ND	NA	NA	Not ACM or RACM
SHC-Roof-11	SHC Roof - W parapet CTR conduit fastener	Penetration caulk (white)	ND	NA	NA	Not ACM or RACM
<b>SHC-Roof-12</b>	<b>SHC Roof - SE parapet at ridge tile</b>	<b>Seam mastic (black)</b>	<b>5% Asbestos</b>	<b>Category I Nonfriable</b>	<b>Class II</b>	<b>Nonhaz Asbestos Waste</b>
SHC-Roof-13	SHC Roof - SE parapet at ridge tile	Cementitious patch (grey)	ND	NA	NA	Not ACM or RACM
Notes: <ul style="list-style-type: none"> <li>• ACM = Asbestos Containing Material (greater than 1% asbestos)</li> <li>• NA = Not applicable</li> <li>• ND = Nondetect (i.e., no asbestos fibers reported above the laboratory detection limit)</li> <li>• Nonhaz = Nonhazardous</li> <li>• RACM = Regulated Asbestos Containing Material (friable and greater than 1% asbestos)</li> <li>• Individual materials comprising multi-layered samples are separated by a “+” sign</li> </ul>						

## Conclusions for Asbestos

As listed in Table 1, two (2) of the sampled materials were reported to contain greater than 1% asbestos, thus are classified as ACM. All other sampled materials analyzed via PLM were reported to be ND. See attached PLM laboratory analytical reports (Attachment C).

The samples reported to contain asbestos represent nonfriable mastic designated by the USEPA as Category I nonfriable ACM. Work impacting these materials is regulated by Cal/OSHA as Class II asbestos work. These asbestos mastics were used for different sealant/adhesion applications at two locations on the roof. As it is not possible to visually determine homogeneity among the various mastics, black roofing mastic throughout the project site shall be presumed to be ACM.

Any suspect ACM not identified in this memorandum that is discovered during site work should be presumed to contain asbestos until sampled and proven otherwise. If suspect ACM is identified at the project site for which there is no existing data, then work in that area shall stop, the material wetted, and access to the area restricted until the suspect ACM can be appropriately sampled and characterized.

Asbestos materials, if any, that may be disturbed by the project shall be removed by a licensed abatement contractor prior to other site work. Nonfriable ACM is classified as nonhazardous asbestos waste, so long as the material is not rendered friable. Nonfriable ACM shall be reclassified as Regulated ACM (RACM), if removed using mechanical means. Friable material containing greater than one percent asbestos (e.g., RACM) is classified as a California hazardous waste. If other constituents of concern are presumed to be present onsite, then the demolition waste stream must be representatively sampled to determine the concentration of such constituents in that waste. Transportation and disposal requirements shall be determined based on the waste characterization data.

Please contact FM PDC with any questions regarding the information contained in this memorandum.

Thank you,  
**Facilities Management - Planning, Design & Construction**



**Scott Harris, CAC, CDPH**  
(707) 826-5904  
[scott.harris@humboldt.edu](mailto:scott.harris@humboldt.edu)

### Attachments:

1. Attachment A – Site Photographs
2. Attachment B – Sample Location Figure
3. Attachment C – Laboratory Data

# Attachment A

## Site Photographs



Photograph 1 – SHC Roof – Mastic associated with underside of walking pads reported to be ACM (note: walk pad is nondetect)



Photograph 2 – SHC Roof – Roof mastic (typical) at parapet tile reported to be ACM (note: cement patch material is nondetect)



Photograph 3 – SHC Roof – Roof mastic (typical) homogeneous with material reported to be ACM



Photograph 4 – SHC Roof – HVAC support curb (typical)



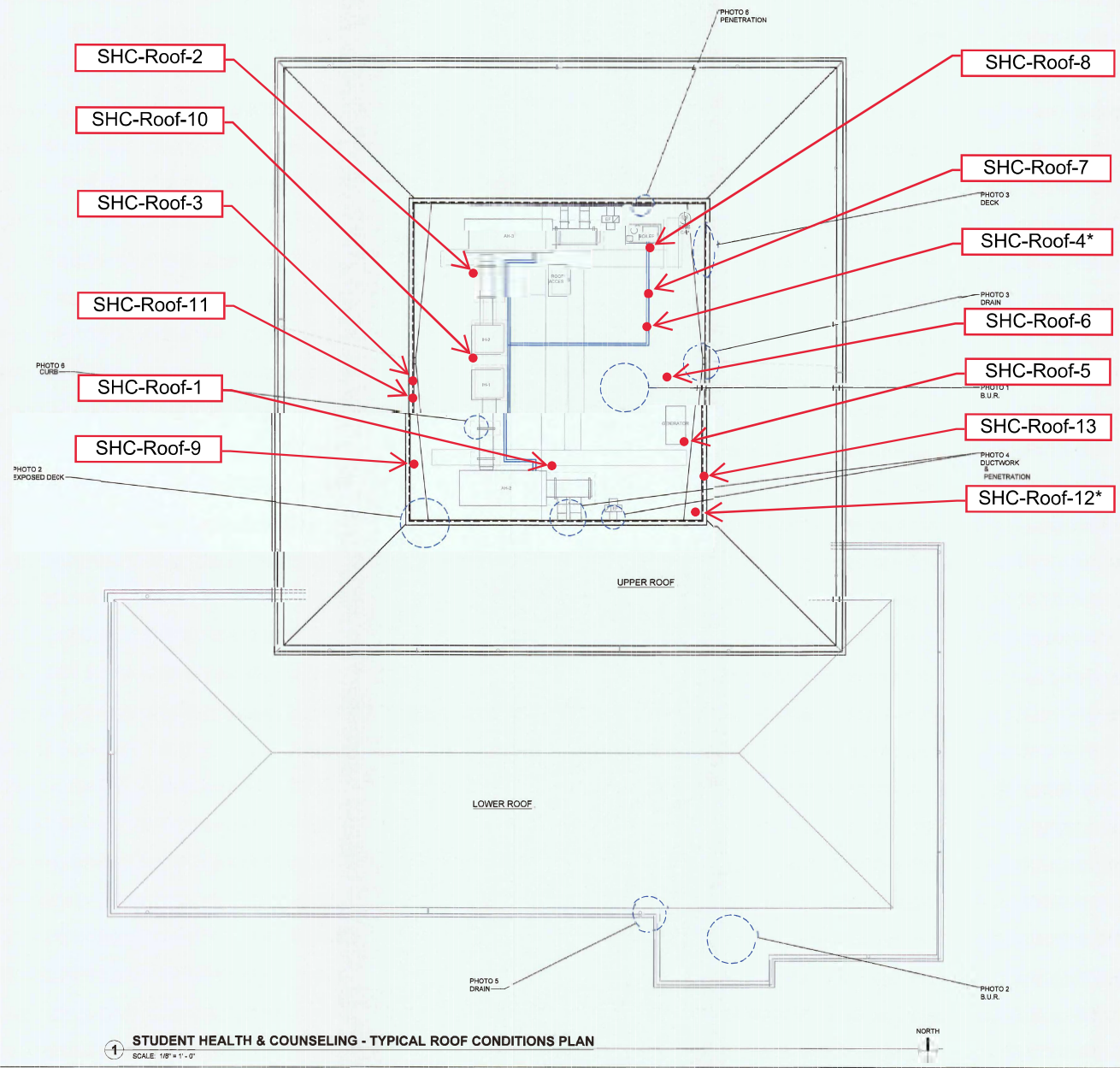
Photograph 5 – SHC Roof – Roof mastic (typical) homogeneous with material reported to be ACM



Photograph 6 – SHC Roof – Rolled roof detail (typical)

## Attachment B

Sample Location Figure



**STUDENT HEALTH & COUNSELING - TYPICAL ROOF CONDITIONS PLAN**  
 SCALE: 1/8" = 1'-0"

- NOTES:**
- \* = Sample contains asbestos.
  - Plan not to scale.
  - All locations approximate.
  - Sheet transmits sample locations only, NOT for construction.



# Attachment C

## Laboratory Data



# Bulk Asbestos Analysis

(EPA Method 40CFR, Part 763, Appendix E to Subpart E and EPA 600/R-93-116, Visual Area Estimation)  
 NVLAP Lab Code: 101459-0

Humboldt State University  
 Project Manager  
 1 Harpst Street  
 Plan Operations  
 Arcata, CA 95521

**Client ID:** 2087  
**Report Number:** B347170  
**Date Received:** 05/04/23  
**Date Analyzed:** 05/04/23  
**Date Printed:** 05/04/23  
**First Reported:** 05/04/23

**Job ID/Site:** PO1127193 / XPL257, 280 Plaza Mall, Arcata, 95521

**SGSFL Job ID:** 2087  
**Total Samples Submitted:** 13  
**Total Samples Analyzed:** 13

**Date(s) Collected:** 04/27/2023

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
<b>SHC-ROOF-1</b>	12662230						
Layer: Black Roof Shingle							ND
Layer: Black Tar							ND
Layer: Black Felt							ND
Layer: Black Tar							ND
Layer: Black Felt							ND
Layer: Black Tar							ND
Layer: Black Felt							ND
Layer: Black Tar							ND
Layer: Black Felt							ND
Layer: Black Tar							ND
Layer: Black Felt							ND

Total Composite Values of Fibrous Components: **Asbestos (ND)**  
 Cellulose (55 %) Fibrous Glass (10 %)  
 Comment: Bulk complex sample.

<b>SHC-ROOF-2</b>	12662231						
Layer: Black Roof Shingle							ND
Layer: Black Tar							ND
Layer: Black Felt							ND
Layer: Black Tar							ND
Layer: Black Felt							ND
Layer: Black Tar							ND
Layer: Black Felt							ND
Layer: Black Tar							ND
Layer: Black Felt							ND
Layer: Black Tar							ND
Layer: Black Felt							ND

Total Composite Values of Fibrous Components: **Asbestos (ND)**  
 Cellulose (55 %) Fibrous Glass (10 %)  
 Comment: Bulk complex sample.

<b>SHC-ROOF-3</b>	12662232						
Layer: Stones							ND
Layer: Black Tar							ND
Layer: Black Felt							ND

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

Client Name: Humboldt State University

Report Number: B347170

Date Printed: 05/04/23

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
<b>SHC-ROOF-4</b>	12662233						
Layer: Stones			<b>ND</b>				
Layer: Black Tar			<b>ND</b>				
Layer: Black Felt			<b>ND</b>				
Layer: Black Mastic		Chrysotile	<b>5 %</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (Trace)</b>					
Fibrous Glass (45 %)							
<b>SHC-ROOF-5</b>	12662234						
Layer: Black Tar			<b>ND</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (Trace)							
<b>SHC-ROOF-6</b>	12662235						
Layer: Black Mastic			<b>ND</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (10 %)							
<b>SHC-ROOF-7</b>	12662236						
Layer: Black Mastic			<b>ND</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (10 %)							
<b>SHC-ROOF-8</b>	12662237						
Layer: Black Mastic			<b>ND</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (10 %)							
<b>SHC-ROOF-9</b>	12662238						
Layer: Black Tar			<b>ND</b>				
Layer: Grey Mastic			<b>ND</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (10 %)							
<b>SHC-ROOF-10</b>	12662239						
Layer: Silver Mastic			<b>ND</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (Trace)							
<b>SHC-ROOF-11</b>	12662240						
Layer: White Mastic			<b>ND</b>				
Layer: Black Stones			<b>ND</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (Trace)							
<b>SHC-ROOF-12</b>	12662241						
Layer: Black Mastic		Chrysotile	<b>5 %</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (5%)</b>					
Cellulose (3 %)	Synthetic (Trace)						

Client Name: Humboldt State University

Report Number: B347170

Date Printed: 05/04/23

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
<b>SHC-ROOF-13</b>	12662242						
Layer: Grey Cementitious Material					<b>ND</b>		
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (Trace)							



Tad Thrower, 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 SGS Forensic Laboratories (SGSFL) 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 SGSFL 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 SGSFL. The client is solely responsible for the use and interpretation of test results and reports requested from SGSFL. SGSFL is not able to assess the degree of hazard resulting from materials analyzed. SGS Forensic Laboratories 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.



Analysis Request Form (COC)

Client Name & Address: Cal Poly Humboldt (Humboldt State University) Facilities Management 1 Harpst Street, Arcata, CA 95521-8299		Client No.: 2087	PO / Job#: PO1127193 / XPL257	Date: 05/02/2023
Contact: Scott Harris		Phone: (707) 826-5904	Turn Around Time: <u>Same Day / 1 Day</u> / 2Day / 3Day / 4Day / 5Day	
E-mail: ssh11@humboldt.edu, jrb20@humboldt.edu		<input type="checkbox"/> PCM: <input type="checkbox"/> NIOSH 7400A / <input type="checkbox"/> NIOSH 7400B <input type="checkbox"/> Rotometer <input checked="" type="checkbox"/> PLM: <input checked="" type="checkbox"/> Standard / <input type="checkbox"/> Point Count 400-1000 / <input type="checkbox"/> CARB 435		
Site Name: Student Health & Counseling (SHC) 042		<input type="checkbox"/> TEM Air: <input type="checkbox"/> AHERA / <input type="checkbox"/> Yamate2 / <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> TEM Bulk: <input type="checkbox"/> Quantitative / <input type="checkbox"/> Qualitative / <input type="checkbox"/> Chatfield <input type="checkbox"/> TEM Water: <input type="checkbox"/> Potable / <input type="checkbox"/> Non-Potable / <input type="checkbox"/> Weight % <input type="checkbox"/> TEM Dust: <input type="checkbox"/> D5755 (microvac) / <input type="checkbox"/> D6480 (wipe)		
Site Location: 280 Plaza Mall, Arcata, 95521		<input type="checkbox"/> IAQ Particle Identification (PLM LAB) <input type="checkbox"/> PLM Opaques/Soot <input type="checkbox"/> Particle Identification (TEM LAB) <input type="checkbox"/> Special Project <input type="checkbox"/> Metals Analysis Matrix: Method:		
Comments: Project Numbers: XPL257 CF: 660061 TM003 D30037 0 0 XPL257		<input type="checkbox"/> Silica in Air <input type="checkbox"/> w/Gravimetry <input type="checkbox"/> Quartz Only		

Sample ID	Date / Time	Sample Location / Description	FOR AIR SAMPLES ONLY				Sample Area / Air Volume
			Type	Time On/Off	Avg LPM	Total Time	
See Attachment A	4/27/23	See Attachment A	A P C	NA	NA	NA	NA
			A P C				
			A P C				
			A P C				
			A P C				
			A P C				
			A P C				
			A P C				
			A P C				
			A P C				

Sampled By: SH		Date/Time: As above	Shipped Via: <input type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> US Mail <input type="checkbox"/> Courier <input type="checkbox"/> Drop Off <input type="checkbox"/> Other:	
Relinquished By: Scott Harris	Relinquished By:	Relinquished By:		
Date / Time: 05/02/2023	Date / Time:	Date / Time:		
Received By: <i>WJM</i>	Received By:	Received By:		
Date / Time: MAY 04 2023	Date / Time:	Date / Time:		
Condition Acceptable? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Condition Acceptable? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Condition Acceptable? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

SGS Forensic Laboratories may subcontract client samples to other SGSFL locations to meet client requests.  
 San Francisco Office: 3777 Depot Road, Suite 409, Hayward, CA 94545-2761 • Phone: 510/887-8828 • 800/827-3274  
 Los Angeles Office: 20535 South Belshaw Ave., Carson, CA 90746 • Phone: 310/763-2374 • 888/813-9417  
 Las Vegas Office: 6765 S. Eastern Avenue, Suite 3, Las Vegas, NV 89119 • Phone: 702/784-0040  
 Chicago Office: 3020 Woodcreek Drive, Suite C, Downers Grove, IL 60515 • Phone: 341/465-2464

Project: XPL257	Site: SHC	Sample Date: 04/27/2023
<b>Bulk Sample Matrix</b>		
<b>Sample Number</b>	<b>Location</b>	<b>Material Description</b>
SHC-Roof-1	SHC Roof - Main plane at CTR-S	Rolled bituminous roofing (black)
SHC-Roof-2	SHC Roof - Main plane at NW at HVAC	Rolled bituminous roofing (black)
SHC-Roof-3	SHC Roof - W parapet at CTR	Rolled bituminous roofing (black)
SHC-Roof-4	SHC Roof - NE at water heater shed	Bituminous walk pad (black) + mastic (black)
SHC-Roof-5	SHC Roof - SE at generator flashing	Flashing sealant (tar, black)
SHC-Roof-6	SHC Roof - SE at main plane flashing cap	Flashing mastic (black)
SHC-Roof-7	SHC Roof - CTR-NE at plumb. support	Penetration mastic (black)
SHC-Roof-8	SHC Roof - NE roof at HVAC curb	Seam mastic (black)
SHC-Roof-9	SHC Roof - W parapet at SW fastener	Penetration caulk (grey)
SHC-Roof-10	SHC Roof - CTR-NW at HVAC curb fasten.	Penetration caulk (grey)
SHC-Roof-11	SHC Roof - W parapet CTR conduit fasten.	Penetration caulk (white)
SHC-Roof-12	SHC Roof - SE parapet at ridge tile	Seam mastic (black)
SHC-Roof-13	SHC Roof - SE parapet at ridge tile	Cementitious patch (grey)

**Notes:**

Please provide a result for each unique material comprising multilayered samples.

CTR                      Center  
 JC                        Joint compound  
 N, S, E, W, NW, etc.    Azimuth directions  
 TSI                       Thermal System Insulation  
 VFT                      Vinyl floor tile  
 VSF                       Vinyl sheet flooring

MAY 04 2023  
 WRS  
 cym 9:27



Facilities Management

707 826-3646	PHONE
707 826-5888	FAX
FacilityMgmt@humboldt.edu	EMAIL
707 826-4475	ALT

## Technical Memorandum

May 5, 2023

### Gutswurrak Student Activities Center Roof Restoration Project (XUC009) – Asbestos Data Summary

The California State Polytechnic University, Humboldt (Humboldt) Facilities Management (FM) Planning, Construction & Design (PDC) division collected bulk samples of suspect Asbestos Containing Material (ACM) at the Gutswurrak Student Activities Center (GSAC) building located at the following street address:

- Gutswurrak Student Activities Center (Building 045)
- 200 Plaza Mall, Arcata, CA 95521

Bulk sampling was conducted at the GSAC exterior roof on April 27, 2023, in association with the GSAC Roof Restoration Project (the project). The project is designated as Humboldt project XUC009. This memorandum summarizes the sample analytical findings and provides conclusions based on these data.

#### Project Site

The project consists of the GSAC exterior low-slope roofs (project site), including the ballasted main roof, the north flat rolled roofing, and northeast low-slope rolled roofing. The roof consists of a bituminous built-up tar roofing overlaid with ballast rock, and two different rolled roofing systems. All roofing is overlaid on a wooden roof deck. The flat and low-sloped roofs are surrounded by pitched roof sections. The pitched sections of the roof are overlaid with cementitious tile. The pitched roofs are excluded from the project site, as these areas are not included in the project scope. Roof penetrations throughout are sealed with mastic and/or caulking. Photographs of the project site are attached (Attachment A).

#### Survey Description

A total 14 suspect ACM samples were collected throughout the project site, some samples consisting of multiple layers of unique materials. The samples collected at the project site are listed in Table 1 (page 2). The sample locations are shown on Figure 1 (Attachment B). The ACM sampling was conducted in general conformance with the United States Environmental Protection Agency (USEPA) National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations governing facility renovation.

The general locations of bulk samples collected at the project site are depicted on Figure 1 (Attachment B). Sampling was conducted by Scott Harris, a FM PDC California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) Certified Asbestos Consultant (11-4713).

#### Laboratory Data

Bulk samples collected from the project site were sent to SGS Forensic Laboratories located in Hayward, California. Samples were analyzed for asbestos content via Polarized Light Microscopy (PLM) using USEPA Method 600/R-93-Roof. The PLM data are summarized in Table 1. The PLM analytical reports are attached (Attachment C).

## Asbestos Findings

Table 1 includes the sample location, material type, laboratory result, and applicable regulatory designations for each sampled suspect ACM. Samples reported to contain asbestos are identified in Table 1 by the asbestos content (percent asbestos) and highlighted using bold text. Materials that were not reported by the laboratory to contain asbestos, i.e., non-detect (ND) materials, are listed as “ND”.

<b>Table 1 – Asbestos Data Summary</b>						
<b>Sample Number</b>	<b>Location</b>	<b>Material</b>	<b>Laboratory Result</b>	<b>USEPA Category</b>	<b>Cal/OSHA Work Class</b>	<b>Waste Designation</b>
GSAC-Roof-1	GSAC roof - E pitched shingle at CTR	Comp shingle roofing (black/red)	ND	NA	NA	Not ACM or RACM
GSAC-Roof-2	GSAC roof - N flat rolled at NE	Rolled bituminous roofing (black/red) + rigid insulation (yellow)	ND	NA	NA	Not ACM or RACM
GSAC-Roof-3	GSAC roof - NW low-pitch rolled at NW-CTR	Rolled bituminous roofing (black)	ND	NA	NA	Not ACM or RACM
GSAC-Roof-4	GSAC roof - Main plane at CTR-W edge	Ballasted tar built-up roofing (black)	ND	NA	NA	Not ACM or RACM
GSAC-Roof-5	GSAC roof - Main plane at E-CTR	Ballasted tar built-up roofing (black)	ND	NA	NA	Not ACM or RACM
GSAC-Roof-6	GSAC roof - E pitched at CTR	Ballasted tar built-up roofing (black)	ND	NA	NA	Not ACM or RACM
GSAC-Roof-7	GSAC - N roof at CTR at conduit support	Composite support block (black)	ND	NA	NA	Not ACM or RACM
GSAC-Roof-8	GSAC - E-NE at flat/pitch transition	Seam mastic (black)	ND	NA	NA	Not ACM or RACM
<b>GSAC-Roof-9</b>	<b>GSAC roof - Parapet at SE corner</b>	<b>Seam mastic (black)</b>	<b>5% Asbestos</b>	<b>Category I Nonfriable ACM</b>	<b>Class II</b>	<b>Nonhaz Asbestos Waste</b>
<b>GSAC-Roof-10</b>	<b>GSAC roof - CTR-N at vent</b>	<b>Penetration mastic (black)</b>	<b>5% Asbestos</b>	<b>Category I Nonfriable ACM</b>	<b>Class II</b>	<b>Nonhaz Asbestos Waste</b>
<b>GSAC-Roof-11</b>	<b>GSAC roof - E-CTR at HVAC vent flash</b>	<b>Flashing mastic (black)</b>	<b>5% Asbestos</b>	<b>Category I Nonfriable ACM</b>	<b>Class II</b>	<b>Nonhaz Asbestos Waste</b>
GSAC-Roof-12	GSAC roof - E roof transition	Flashing mastic (black)	ND	NA	NA	Not ACM or RACM
GSAC-Roof-13	GSAC roof - E-NE at plumb. penetration	Penetration mastic (black)	ND	NA	NA	Not ACM or RACM



<b>Table 1 – Asbestos Data Summary</b>						
<b>Sample Number</b>	<b>Location</b>	<b>Material</b>	<b>Laboratory Result</b>	<b>USEPA Category</b>	<b>Cal/OSHA Work Class</b>	<b>Waste Designation</b>
<b>GSAC-Roof-14</b>	<b>GSAC roof - CTR-W edge flash</b>	<b>Flashing mastic (black)</b>	<b>5% Asbestos</b>	<b>Category I Nonfriable ACM</b>	<b>Class II</b>	<b>Nonhaz Asbestos Waste</b>
Notes: <ul style="list-style-type: none"> <li>• ACM = Asbestos Containing Material (greater than 1% asbestos)</li> <li>• NA = Not applicable</li> <li>• ND = Nondetect (i.e., no asbestos fibers reported above the laboratory detection limit)</li> <li>• Nonhaz = Nonhazardous</li> <li>• Individual materials comprising multi-layered samples are separated by a “+” sign</li> </ul>						

### **Conclusions**

As listed in Table 1, four (4) of the sampled materials were reported to contain greater than 1% asbestos, thus are classified as ACM. These samples represent nonfriable mastic designated by the USEPA as a Category I nonfriable ACM, thus work impacting such materials must be performed in accordance with Cal/OSHA Class II asbestos work protocols.

These asbestos mastics were used for different sealant/adhesion applications at various locations on the roof. As it is not possible to visually determine homogeneity among the various mastics, black roofing mastic throughout the project site shall be presumed to be ACM. All other sampled materials analyzed via PLM were reported to be ND. See attached PLM laboratory analytical reports (Attachment C).

Any suspect ACM not identified in this memorandum that is discovered during site work should be presumed to contain asbestos until sampled and proven otherwise. If suspect ACM is identified at the project site for which there is no existing data, then work in that area shall stop, the material wetted, and access to the area restricted until the suspect ACM can be appropriately sampled and characterized.

Asbestos materials, if any, that may be disturbed by the project shall be removed by a licensed abatement contractor prior to other site work. Nonfriable ACM is classified as nonhazardous asbestos waste, so long as the material is not rendered friable. Nonfriable ACM shall be reclassified as Regulated ACM (RACM), if removed using mechanical means. Friable material containing greater than one percent asbestos (e.g., RACM) is classified as a California hazardous waste.

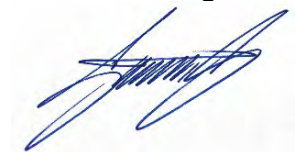
Metal flashing at vent pipe throughout the roof are presumed to contain lead. Work impacting material known or presumed to contain lead must be performed in accordance with applicable lead-safe work practices and regulations.

If other constituents of concern are presumed to be present onsite, then the demolition waste stream must be representatively sampled to determine the concentration of such constituents in that waste. Transportation and disposal requirements shall be determined based on the waste characterization data.

Please contact FM PDC with any questions regarding the information contained in this memorandum.

Thank you,

**Facilities Management - Planning, Design & Construction**

A handwritten signature in blue ink, appearing to read "Scott Harris", is positioned above the typed name.

**Scott Harris, CAC, CDPH**

(707) 826-5904

[scott.harris@humboldt.edu](mailto:scott.harris@humboldt.edu)

**Attachments:**

1. Attachment A – Site Photographs
2. Attachment B – Sample Location Figure
3. Attachment C – Laboratory Data

# Attachment A

## Site Photographs



Photograph 1 – GSAC Roof – View looking southeast



Photograph 2 – GSAC Roof – Roof mastic (typical) at seams and penetrations reported to be ACM



Photograph 3 – GSAC Roof – Roof mastic (typical) at seams and penetrations reported to be ACM



Photograph 4 – GSAC Roof – Roof mastic (typical) at seams and penetrations reported to be ACM



Photograph 5 – GSAC Roof – Vent cap (typical) presumed to be lead.

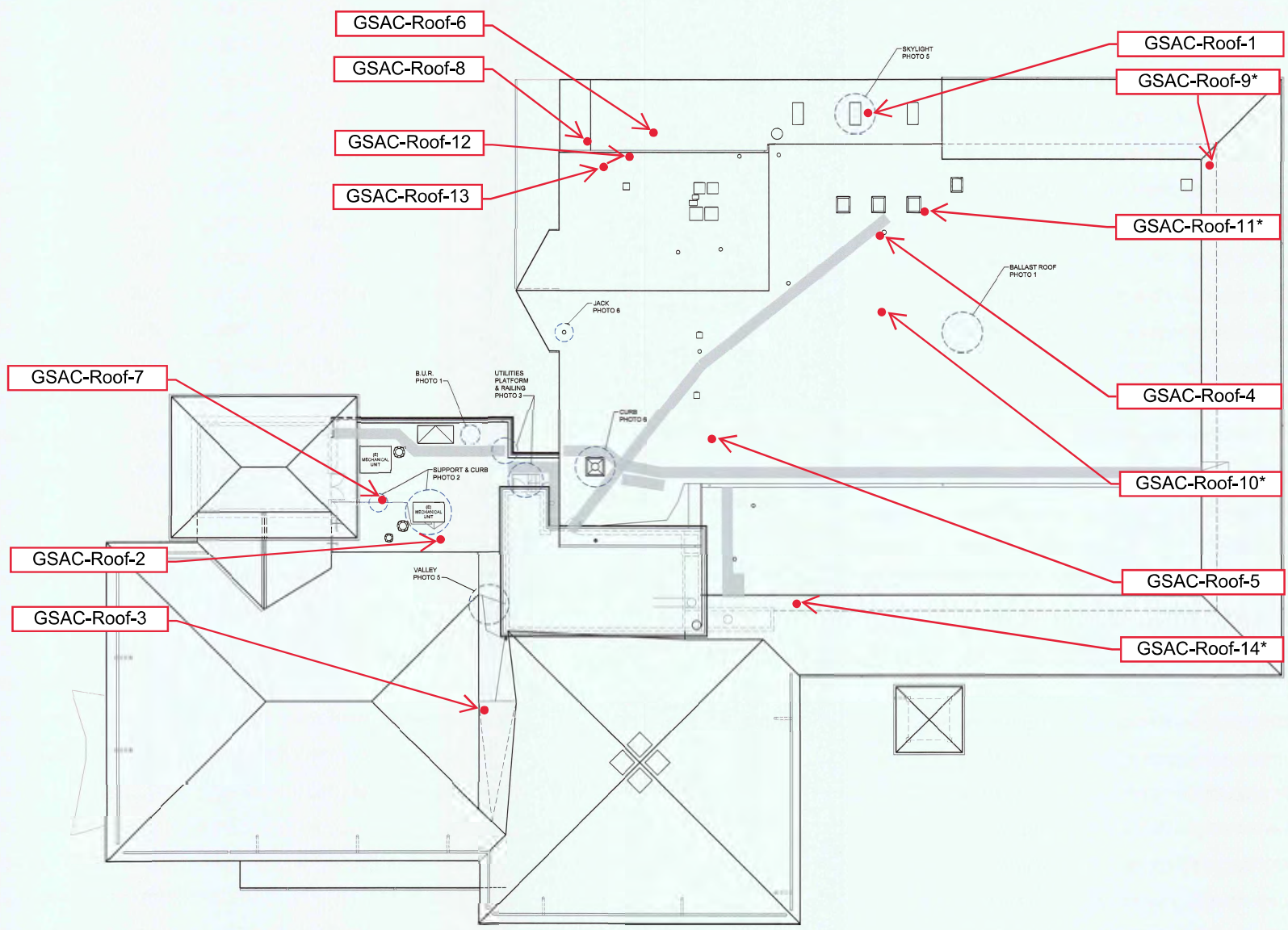


Photograph 6 – GSAC Roof – Built-up tar/ballast roof detail (typical)


## Attachment B

Sample Location Figure

ROOF PLAN NOTES  
1. SEE PROJECT SPECIFICATIONS FOR MORE INFORMATION.



- NOTES:**
- \* = Sample reported to contain asbestos.
  - Plan not to scale.
  - All locations approximate.
  - Sheet transmits sample locations only, NOT for construction.

 **STUDENT ACTIVITIES CENTER - TYPICAL ROOF CONDITIONS PLAN**  
SCALE: 3/32" = 1'-0"



# Attachment C

## Laboratory Data





# Bulk Asbestos Analysis

(EPA Method 40CFR, Part 763, Appendix E to Subpart E and EPA 600/R-93-116, Visual Area Estimation)  
NVLAP Lab Code: 101459-0

Humboldt State University  
Project Manager  
1 Harpst Street  
Plan Operations  
Arcata, CA 95521

**Client ID:** 2087  
**Report Number:** B347169  
**Date Received:** 05/04/23  
**Date Analyzed:** 05/04/23  
**Date Printed:** 05/04/23  
**First Reported:** 05/04/23

**Job ID/Site:** PO1127193 / XPL257, 200 Plaza Mall, Arcata, 95521

**SGSFL Job ID:** 2087  
**Total Samples Submitted:** 14  
**Total Samples Analyzed:** 14

**Date(s) Collected:** 04/27/2023

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
<b>GSAC-ROOF-1</b>	12662216						
Layer: Red Roof Shingle			<b>ND</b>				
Layer: Black Felt			<b>ND</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (25 %)	Fibrous Glass (30 %)						
<b>GSAC-ROOF-2</b>	12662217						
Layer: Stones			<b>ND</b>				
Layer: Black Tar			<b>ND</b>				
Layer: Black Felt			<b>ND</b>				
Layer: Black Tar			<b>ND</b>				
Layer: Black Felt			<b>ND</b>				
Layer: Black Tar			<b>ND</b>				
Layer: Black Felt			<b>ND</b>				
Layer: Tan Fibrous Material			<b>ND</b>				
Layer: Yellow Foam			<b>ND</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (20 %)	Fibrous Glass (30 %)						
Comment: Bulk complex sample.							
<b>GSAC-ROOF-3</b>	12662218						
Layer: Stones			<b>ND</b>				
Layer: Black Tar			<b>ND</b>				
Layer: Black Felt			<b>ND</b>				
Layer: Black Tar			<b>ND</b>				
Layer: Black Felt			<b>ND</b>				
Layer: Black Tar			<b>ND</b>				
Layer: Black Felt			<b>ND</b>				
Layer: Black Tar			<b>ND</b>				
Layer: Black Felt			<b>ND</b>				
Layer: Black Tar			<b>ND</b>				
Layer: Black Felt			<b>ND</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (Trace)	Fibrous Glass (40 %)						
Comment: Bulk complex sample.							

**Client Name:** Humboldt State University

**Report Number:** B347169

**Date Printed:** 05/04/23

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
<b>GSAC-ROOF-4</b>	12662219						
Layer: Stones			ND				
Layer: Black Tar			ND				
Layer: Black Felt			ND				
Layer: Black Tar			ND				
Layer: Black Felt			ND				
Layer: Black Tar			ND				
Layer: Black Felt			ND				
Layer: Black Tar			ND				
Layer: Black Felt			ND				
Layer: Black Tar			ND				
Layer: Black Felt			ND				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (Trace)	Fibrous Glass (40 %)						
Comment: Bulk complex sample.							
<b>GSAC-ROOF-5</b>	12662220						
Layer: Black Tar			ND				
Layer: Black Felt			ND				
Layer: Black Tar			ND				
Layer: Black Felt			ND				
Layer: Black Tar			ND				
Layer: Black Felt			ND				
Layer: Black Tar			ND				
Layer: Black Felt			ND				
Layer: Black Tar			ND				
Layer: Black Felt			ND				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (Trace)	Fibrous Glass (40 %)						
Comment: Bulk complex sample.							
<b>GSAC-ROOF-6</b>	12662221						
Layer: Black Tar			ND				
Layer: Black Felt			ND				
Layer: Black Tar			ND				
Layer: Black Felt			ND				
Layer: Black Tar			ND				
Layer: Black Felt			ND				
Layer: Black Tar			ND				
Layer: Black Felt			ND				
Layer: Black Tar			ND				
Layer: Black Felt			ND				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (Trace)	Fibrous Glass (40 %)						
Comment: Bulk complex sample.							

**Client Name:** Humboldt State University

**Report Number:** B347169

**Date Printed:** 05/04/23

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
<b>GSAC-ROOF-7</b>	12662222						
Layer: Black Mastic							<b>ND</b>
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (15 %)							
<b>GSAC-ROOF-8</b>	12662223						
Layer: Black Mastic							<b>ND</b>
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (15 %)							
<b>GSAC-ROOF-9</b>	12662224						
Layer: Black Mastic		Chrysotile	<b>5 %</b>				
Layer: White Coating			<b>ND</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (5%)</b>					
Cellulose (15 %)							
<b>GSAC-ROOF-10</b>	12662225						
Layer: Black Mastic		Chrysotile	<b>5 %</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (5%)</b>					
Cellulose (15 %)							
<b>GSAC-ROOF-11</b>	12662226						
Layer: Black Mastic		Chrysotile	<b>5 %</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (5%)</b>					
Cellulose (15 %)							
<b>GSAC-ROOF-12</b>	12662227						
Layer: Black Mastic							<b>ND</b>
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (15 %)							
<b>GSAC-ROOF-13</b>	12662228						
Layer: Black Mastic							<b>ND</b>
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (15 %)							
<b>GSAC-ROOF-14</b>	12662229						
Layer: Black Mastic		Chrysotile	<b>5 %</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (5%)</b>					
Cellulose (15 %)							



Tad Thrower, 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 SGS Forensic Laboratories (SGSFL) 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 SGSFL 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 SGSFL. The client is solely responsible for the use and interpretation of test results and reports requested from SGSFL. SGSFL is not able to assess the degree of hazard resulting from materials analyzed. SGS Forensic Laboratories 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.



Analysis Request Form (COC)

Client Name & Address: Cal Poly Humboldt (Humboldt State University) Facilities Management 1 Harpst Street, Arcata, CA 95521-8299		Client No.: 2087	PO / Job#: PO1127193 / XPL257	Date: 05/02/2023
Contact: Scott Harris		Phone: (707) 826-5904	Turn Around Time: <u>Same Day</u> / 1Day / 2Day / 3Day / 4Day / 5Day	
E-mail: ssh11@humboldt.edu, jrb20@humboldt.edu		<input type="checkbox"/> PCM: <input type="checkbox"/> NIOSH 7400A / <input type="checkbox"/> NIOSH 7400B <input type="checkbox"/> Rotometer <input checked="" type="checkbox"/> PLM: <input checked="" type="checkbox"/> Standard / <input type="checkbox"/> Point Count 400-1000 / <input type="checkbox"/> CARB 435		
Site Name: Gutswurak Student Activities Center (GSAC) 045		<input type="checkbox"/> TEM Air: <input type="checkbox"/> AHERA / <input type="checkbox"/> Yamate2 / <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> TEM Bulk: <input type="checkbox"/> Quantitative / <input type="checkbox"/> Qualitative / <input type="checkbox"/> Chatfield <input type="checkbox"/> TEM Water: <input type="checkbox"/> Potable / <input type="checkbox"/> Non-Potable / <input type="checkbox"/> Weight % <input type="checkbox"/> TEM Dust: <input type="checkbox"/> D5755 (microvac) / <input type="checkbox"/> D6480 (wipe)		
Site Location: 200 Plaza Mall, Arcata, 95521		<input type="checkbox"/> IAQ Particle Identification (PLM LAB) <input type="checkbox"/> PLM Opaques/Soot <input type="checkbox"/> Particle Identification (TEM LAB) <input type="checkbox"/> Special Project <input type="checkbox"/> Metals Analysis Matrix: Method: Analytes:		

Comments: Project Numbers: XUC009 CF: 660061 SD001 D30037 0 0 XUC009  Silica in Air  w/Gravimetry  Quartz Only

Sample ID	Date / Time	Sample Location / Description	FOR AIR SAMPLES ONLY				Sample Area / Air Volume
			Type	Time On/Off	Avg LPM	Total Time	
See Attachment A	4/27/23	See Attachment A	A P C	NA	NA	NA	NA
			A P C				
			A P C				
			A P C				
			A P C				
			A P C				
			A P C				
			A P C				
			A P C				
			A P C				

Sampled By: SH Date/Time: As above Shipped Via:  Fed Ex  UPS  US Mail  Courier  Drop Off  Other:

Relinquished By: Scott Harris	Relinquished By:	Relinquished By:
Date / Time: 05/02/2023	Date / Time:	Date / Time:
Received By: <i>aym</i>	Received By:	Received By:
Date / Time: MAY 04 2023	Date / Time:	Date / Time:
Condition Acceptable? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Condition Acceptable? <input type="checkbox"/> Yes <input type="checkbox"/> No	Condition Acceptable? <input type="checkbox"/> Yes <input type="checkbox"/> No

SGS Forensic Laboratories may subcontract client samples to other SGSFI locations to meet client requests.  
 San Francisco Office: 3777 Depot Road, Suite 409, Hayward, CA 94545-2761 • Phone: 510/887-8828 • 800/827-3274  
 Los Angeles Office: 20535 South Belshaw Ave., Carson, CA 90746 • Phone: 310/763-2374 • 888/813-9417  
 Las Vegas Office: 6765 S. Eastern Avenue, Suite 3, Las Vegas, NV 89119 • Phone: 702/784-0040  
 Chicago Office: 3020 Woodcreek Drive, Suite C, Downers Grove, IL 60515 • Phone: 341/465-2464

Project: XUC009	Site: GSAC	Sample Date: 04/27/2023
<b>Bulk Sample Matrix</b>		
<b>Sample Number</b>	<b>Location</b>	<b>Material Description</b>
GSAC-Roof-1	GSAC roof - E pitched shingle at CTR	Comp shingle roofing (black/red)
GSAC-Roof-2	GSAC roof - N flat rolled at NE	Rolled bituminous roofing (black/red) + rigid insulation (yellow)
GSAC-Roof-3	GSAC roof - NW low-pitch rolled at NW-CTR	Rolled bituminous roofing (black)
GSAC-Roof-4	GSAC roof - Main plane at CTR-W edge	Ballasted tar built-up roofing (black)
GSAC-Roof-5	GSAC roof - Main plane at E-CTR	Ballasted tar built-up roofing (black)
GSAC-Roof-6	GSAC roof - E pitched at CTR	Ballasted tar built-up roofing (black)
GSAC-Roof-7	GSAC - N roof at CTR at conduit support	Composite support block (black)
GSAC-Roof-8	GSAC - E-NE at flat/pitch transition	Seam mastic (black)
GSAC-Roof-9	GSAC roof - Parapet at SE corner	Seam mastic (black)
GSAC-Roof-10	GSAC roof - CTR-N at vent	Penetration mastic (black)
GSAC-Roof-11	GSAC roof - E-CTR at HVAC vent flash	Flashing mastic (black)
GSAC-Roof-12	GSAC roof - E roof transition	Flashing mastic (black)
GSAC-Roof-13	GSAC roof - E-NE at plumb. penetration	Penetration mastic (black)
GSAC-Roof-14	GSAC roof - CTR-W edge flash	Flashing mastic (black)

**Notes:**

Please provide a result for each unique material comprising multilayered samples.

CTR                      Center  
 JC                        Joint compound  
 N, S, E, W, NW, etc.    Azimuth directions  
 TSI                      Thermal System Insulation  
 VFT                      Vinyl floor tile  
 VSF                      Vinyl sheet flooring

MAY 04 2023  
 WPS  
 BY: *cygm* 9:27