



**GLENDALE ELEMENTARY SCHOOL DISTRICT #40**

**SOLICITATION AMENDMENT #2**

**IFB #20.03.20 Sunset Vista Weatherization**

**Amendment Date:** July 3, 2019

**IFB Due Date:** July 10, 2019 Time: 12:00 PM MST

This solicitation is amended as listed below. All other provisions of the solicitation shall remain in their entirety. A signed copy of this single page Amendment shall be received by the District on the Solicitation due date and time – July 10, 2019 at 12:00 PM. Vendors must also acknowledge receipt of this Amendment by signing page 30, Amendment #2 of the Solicitation.

Please note the following changes regarding the above solicitation:

1. Refer to attached SPS+ Architects Addendum No. 2
2. Sign-in sheet attached from meeting held on Monday, July 1, 2019.

**Vendor hereby acknowledges receipt and understanding of the above amendment:**

\_\_\_\_\_  
Authorized Representative Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name and Title

\_\_\_\_\_  
Name of Company

PRE-BID MEETING ATTENDANCE SHEET  
 GLENDALE ELEMENTARY SCHOOL DISTRICT #40 - SUNSET VISTA WEATHERIZATION  
 SPS + ARCHITECTS PROJECT NO. Project #1875

7-01-2019 8:30am  
 DATE: ~~06/25/19 8:00am~~



SUNSET VISTA ELEMENTARY SCHOOL, 7775 W ORANGEWOOD AVE, GLENDALE, AZ 85303

NAME	COMPANY	PHONE	EMAIL	INITIAL
Michael Kost	SPST	623-238-1119	michael.re.spsplusarchitects.com	MK
<del>Greg Stullman</del>	<del>GESD</del>	<del>623-237-6201</del>	<del>gquilliam@gesd40.org</del>	<del>MS</del>
Justin Suisler	DEKINS	602-733-4184	jsuisler1974@gmail.com	JS
Mark Dickinson	DEKINS	602-214-1138	mark.dickinson@cox.net	MD
Richard Luby	Vete King	602-818-9145	richard@pkca2.com	RL
Aaron Alderink	EDGE	602-910-0248	estimating@edgeconstruct	AA
FREDY ROMERO	AK&T	602-722-1827	FREDY.R@AKTSealants.com	FR
Jimmy Delgado	MEGD	<del>602-835-357-638</del>	delgado@gesd40.org	JD



July 03, 2019

From: SPS+ Architects, LLP  
8681 East Via de Negocio  
Scottsdale, AZ 85258-3330

PARTNERS  
Robert L. Pian, AIA, NCARB  
William R. Pittenger, RA, CSI  
Mark A. Davenport, AIA, LEED AP BD+C

To: All Bidders, Suppliers and Other Interested Parties

ASSOCIATES  
Richard K. Begay Jr., AIA  
Neil L. Pieratt, RA, LEED AP BD+C

Subject: **ADDENDUM NO. 2**

Project: GLENDALE ELEMENTARY SCHOOL DISTRICT #40  
SUNSET VISTA ELEMENTARY WEATHERIZATION  
SPS+ ARCHITECTS PROJECT No. 1875

**Bid Date: Wednesday July 10<sup>th</sup>, 2019 12:00 P.M. Local Time**

With reference to the Plans and Specifications for the above-designated project, which are in your possession for the purpose of preparing a Fixed Contract Amount, please note the following information, all of which is hereby made a part of the Contract Documents. This addendum supersedes all previous information.

**GENERAL:**

Item 1. Existing pre-finished metal parapet cap and metal roof

- A. Existing pre-finished metal parapet cap and metal roofs are to remain. No paint.

Item 2. Asbestos containing material inspection report

- A. Refer to the attached asbestos containing material inspection report dated June 13, 2019.

Item 3. Lead containing material inspection report

- A. Refer to the attached lead containing material inspection report dated June 12, 2019.

Item 4. Paint colors

- A. Current dark color areas/doors & window frames (if painted) are to be color DET695 Grange Hall.
- B. Current tan and blue areas, soffit areas and any wrought iron fencing are to be color DEC760 Desert Gray.

**DRAWINGS:**

Item 1. SHEET G100 COVER SHEET

- B. Revise Bid Alternate No. 4 as follows:  
"Base Bid to include painting of all exterior door frames and sealing perimeter of frames. Paint to door jamb stop, all exposed exterior surfaces. Provide

alternate bid for painting of all exterior doors, including overhead coiling doors. Paint exterior faces only.”

Item 2. SHEET A301 BUILDINGS C, D, & E – EXTERIOR ELEVATIONS

A. Revise Key Note 9 as follows:

9. Remove downspout. Prep, prime, and paint column. Raise splashblock and extend downspout. See photo #'s 46 & 47. Prep, prime and paint downspout. Color to match column.

**SPECIFICATIONS**

Item 1. Section 01 2300 Alternates

A. Revise Part 3.1, D, Bid Alternate No. 4 as follows:

“Base Bid to include painting of all exterior door frames and sealing perimeter of frames. Paint to door jamb stop, all exposed exterior surfaces. Provide alternate bid for painting of all exterior doors, including overhead coiling doors. Paint exterior faces only.”

Item 2. Section 07 9200 Joint Sealants

A. Replace Section 07 9200 Joint Sealants in its entirety.

**ATTACHMENTS**

1. Specification Section 07 9200 Joint Sealants.
2. Asbestos containing material inspection report June 13, 2019.
3. Lead containing material inspection report June 12, 2019

**ACKNOWLEDGE RECEIPT OF THIS ADDENDUM No. 2 IN THE SPACE PROVIDED ON THE AMENDMENT ACKNOWLEDGEMENT FORM, PAGE 30 OF 47 IN DISTRICT SPECIFICATION DOCUMENTS.**

- END -



**SECTION 07 9200  
JOINT SEALANTS**

**PART 1 - GENERAL**

- 1.1 SECTION INCLUDES
  - A. Sealants and joint backing.
  - B. Pre-compressed foam sealers.
- 1.2 REFERENCE STANDARDS
  - A. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2011.
  - B. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2011a.
- 1.3 FIELD CONDITIONS
  - A. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

**PART 2 - PRODUCTS**

- 2.1 MANUFACTURERS
  - A. Gunnable and Pourable Sealants:
    - 1. Commercial grade sealants with 10 year manufacturer's warranty.
  - B. Approved Alternate Manufacturers:
    - 1. Tremco
    - 2. Sika
- 2.2 SEALANTS
  - A. Sealants and Primers - General: Provide products having volatile organic compound (VOC) content as specified in Section 01 6116.
  - B. General Purpose Exterior Sealant: Urethane; ASTM C920, Grade NS, Class 25, Uses M, G, and A; single component.
    - 1. Color: To be selected by Architect from manufacturer's standard range.
    - 2. Product: Stampede manufactured by Sherwin-Williams Company.
    - 3. Applications: Use for:
      - a. Control, expansion, and soft joints in masonry.
      - b. Joints between concrete and other materials.
      - c. Joints between metal frames and other materials.
      - d. Other exterior joints for which no other sealant is indicated.
    - 4. Urethane Products:
      - a. Commercial grade sealants with 10 year manufacturer's warranty.
  - C. Exterior Expansion Joint Sealer: Pre-compressed foam sealer; urethane with water-repellent;
    - 1. Face color: Match adjacent finished surfaces..
    - 2. Size as required to provide weathertight seal when installed.
    - 4. Applications: Use for:
      - a. Exterior wall expansion joints.
    - 5. Products:
      - a. Commercial grade sealants with 10 year manufacturer's warranty.

- 2.3 ACCESSORIES
- A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
  - B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
  - C. Joint Backing: Round foam rod compatible with sealant; ASTM D 1667, closed cell PVC; oversized 30 to 50 percent larger than joint width; manufactured by Tremco, Inc..
  - D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

### **PART 3 - EXECUTION**

- 3.1 EXAMINATION
- A. Verify that substrate surfaces are ready to receive work.
  - B. Verify that joint backing and release tapes are compatible with sealant.
- 3.2 PREPARATION
- A. Remove loose materials and foreign matter that could impair adhesion of sealant.
  - B. Clean and prime joints in accordance with manufacturer's instructions.
  - C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
  - D. Protect elements surrounding the work of this section from damage or disfigurement.
- 3.3 INSTALLATION
- A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
  - B. Perform installation in accordance with ASTM C1193.
  - C. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where specific dimensions are indicated.
  - D. Install bond breaker where joint backing is not used.
  - E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
  - F. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
  - G. Tool joints concave.
- 3.4 CLEANING
- A. Clean adjacent soiled surfaces.
- 3.5 PROTECTION
- A. Protect sealants until cured.

**END OF SECTION**



## Polarized Light Microscope (PLM) Analysis for Asbestos in Bulk Sample

**JobNumber:** 201905447

**Client:**

HUTZEL AND ASSOCIATES

1626 E ALICIA DRIVE

PHOENIX, AZ

85042-0000

Office Phone: (602) 323-0222

FAX:

**# Samples:** 54 PLM **Rec:** 6/10/2019 **Method:** EPA 600/R-93/116

The "New" Method; see below

**Client Job:** 19-12119 GESD

**PO Number:**

**Report Date:** 6/13/2019

**Date Analyzed:** 6/13/2019

**Routing Number:** -

**Method and Analysis Information:** Fiberquant Internal SOP: PLMn

Each bulk sample is first dissected under a 7-30x magnification stereo-microscope. This examination is used to determine the general type of sample, how many and what type of layers it has, and initial estimates of fiber types and quantities. Second, liquid media mounts are made of each layer - such mounts may be of selected fibers (used solely for identification purposes) or may be representative of the layer as a whole (used for quantitation purposes). The mounts may be made in a synthetic Canadian balsam, one of several solvents, or in refractive index oils (media of known refractive index). Generally, a variety of different mounts are made: some optimized for fiber visibility, some optimized for fiber identification, and some optimized for fiber quantitation. The mounted slides are then examined at 50-400x magnification on a Nikon Labphot-pol microscope. Optical characteristics are used to identify each observed fiber type; the optical data are contained for each sample on its detail analysis sheet, attached.

Current EPA and NESHAP regulations designate a result of  $\leq 1\%$  asbestos as "negative" and  $> 1\%$  asbestos as "positive". Samples containing layers that have been determined to be "positive" may have to be handled differently during a renovation or demolition than samples whose layers have been determined to be "negative."

The method of fiber identification and quantitation is the "Standard Operating Procedures for the Analysis of Asbestos in Bulk Samples using Polarized Light Microscopy", Chapter 7 of the Quality Assurance and Management Manual. This SOP and its associated reporting have been designed to satisfy all requirements in both EPA Method 600/M4-82-020 (The Interim Method) and EPA Method 600/R-93/116 (The New Method). The Interim Method is the required method for AHERA (US EPA 40 CFR Pt. 763), but this method calls for the reporting of composited results of multi-layered samples that is no longer an acceptable reporting practice in most circumstances. Current EPA rules, such as NESHAP (US EPA 40 CFR Pt. 61), as well as NVLAP accreditation policies, call for separate reporting for each layer of multi-layered samples. The New Method contains the same procedures for identification and quantification of asbestos as does the Interim Method, except that multi-layered samples are reported to comply with the latest US EPA rule. Fiberquant not only reports the asbestos content of each layer of multi-layered samples separately (satisfying current EPA and NVLAP reporting requirements), but Fiberquant also reports what percentage of the sample each layer comprises. Therefore, the results may be arithmetically composited to satisfy the reporting requirements of the Interim Method. The method of fiber quantitation is an estimation technique in which the analysts quantitation is routinely calibrated by reference quantitation standards, and which has been shown to be equivalent in precision and accuracy to point counting. Friability is estimated for the purposes of deciding when to point count. Friabilities determined in the field take precedence over those determined in the laboratory. Those sample layers which are friable and estimated by the analyst to contain  $\leq 1\%$  asbestos are point counted using 400 points. Such point counting is required by NESHAP (National Emission Standards for Hazardous Air Pollutants, Nov. 1990) in order to rely on analytical results that are  $\leq 1\%$ . The coefficient of variation for the estimation quantitation technique is 100% in the range 0-5%. This means that PLM analysis is not capable of conclusively determining whether a layer containing close to 1% asbestos is actually "positive" or "negative". For this reason, Fiberquant refers to results where asbestos was detected but  $\leq 1\%$  as "borderline negative", and results where asbestos was  $> 1\%$  but  $\leq 2\%$  as "borderline positive" to indicate the uncertainty in assigning a "positive" or "negative" label. In the sample summary, "ND" means that no asbestos was detected during the analysis. A "Tr" or "Trace" of asbestos reported is defined for our purposes as the detection of several asbestos fibers during the analysis; this level would be right at the limit of detection for the method. Trace is only reported on the analysis detail - in the summary a trace would be reported as  $\leq 1\%$ . The limit of detection (the smallest % of asbestos that can be detected) varies greatly depending on the matrix in which the asbestos is found. As little as 0.001% asbestos can be detected in favorable samples, while detection in unfavorable samples may approach the detection limit of 1% stated in the method. During the analysis, the analyst, for Fiberquant identification purposes only, determines the "apparent sample type" and "apparent layer types." It must be emphasized that these types are only what is apparent. Often, different materials appear similar or identical after sampling, so the analyst may assign a type other than what was sampled.

Floor tiles present a special problem for PLM asbestos analysis. Floor tile can contain chrysotile fibers so thin that they cannot be resolved by optical methods. In such a case, we may observe a percentage of asbestos which is lower than the actual percentage, or not observe asbestos at all when some is present. For this reason, floor tiles reported as negative should be confirmed to be negative using transmission electron microscope (TEM) analysis. Likewise, vermiculite insulation materials containing traces of asbestiform asbestos present a problem for routine PLM analysis - the amphiboles are sometimes present in trace amounts inhomogeneously distributed. For this reason, loose vermiculite samples reported as negative should be confirmed to contain no amphibole using hydroseparation techniques.

The samples were analyzed under the following ongoing quality assurance program: Blank samples are routinely analyzed to maintain contamination-free materials. Each analyst has at least a bachelor's degree in physical science, and has also completed extensive training specific to asbestos analysis for 1-3 months before being allowed to analyze client samples. Qualitative reference samples are routinely analyzed to assure that analysts can identify asbestos and asbestos-look-alike fibers. Quantitative reference samples are routinely analyzed to calibrate and characterize the

estimation procedure. Microscope alignment is checked each day. Refractive index oils are calibrated at least quarterly. At least 10% of client samples are re-analyzed from scratch by a different analyst than the original, and any discrepancies are resolved for the sample and similar sample types before the results are reported. All quality checks performed for these samples were in control except as detailed in the "Analytical Notes" below. All analysts participate in interlab round robins and proficiency testing to assure competence. Fiberquant is accredited by NVLAP (Lab code #101031) for the analysis of bulk samples for asbestos using PLM. Accreditation does not imply endorsement by the EPA, any other United States governmental agency or any private agency or association. Each lab analysis refers only to the sample tested, and may not, due to the sampling process, be representative of the material sampled. This report may not be reproduced except in full, without the approval of Fiberquant Analytical Services.

Some results may have been calculated using client supplied data, such as volume or area sampled, for which Fiberquant assumes no liability for accuracy.

**Job Analysis Notes:**

**PLM Analysis Summary:**

**Job Number: 201905447 19-12119 GESD**

Sample Number	Lab Number	Apparent Sample Type *	Positive Layer Yes or No
Layer Color Apparent Layer Type *	Asbestos Results		
Sample # <b>HA-GESD-0610-1</b>	2019-05447- 1	Adhesive/caulk	Positive Layer? No
Layer # 1 gray sealant	<i>no asbestos detected</i>		
Sample # <b>HA-GESD-0610-2</b>	2019-05447- 2	Adhesive/caulk	Positive Layer? No
Layer # 1 gray sealant	<i>no asbestos detected</i>		
Sample # <b>HA-GESD-0610-3</b>	2019-05447- 3	Adhesive/caulk	Positive Layer? No
Layer # 1 gray sealant	<i>no asbestos detected</i>		
Sample # <b>HA-GESD-0610-4</b>	2019-05447- 4	Adhesive/caulk	Positive Layer? No
Layer # 1 various paint	<i>no asbestos detected</i>		
Layer # 2 gray sealant	<i>no asbestos detected</i>		
Sample # <b>HA-GESD-0610-5</b>	2019-05447- 5	Adhesive/caulk	Positive Layer? No
Layer # 1 various paint	<i>no asbestos detected</i>		
Layer # 2 white sealant	<i>no asbestos detected</i>		
Layer # 3 gray sealant	<i>no asbestos detected</i>		
Sample # <b>HA-GESD-0610-6</b>	2019-05447- 6	Adhesive/caulk	Positive Layer? No
Layer # 1 tan paint	<i>no asbestos detected</i>		
Layer # 2 white sealant	<i>no asbestos detected</i>		
Layer # 3 gray sealant	<i>no asbestos detected</i>		
Sample # <b>HA-GESD-0610-7</b>	2019-05447- 7	Adhesive/caulk	Positive Layer? No
Layer # 1 brown sealant	<i>no asbestos detected</i>		
Layer # 2 gray foam	<i>no asbestos detected</i>		
Sample # <b>HA-GESD-0610-8</b>	2019-05447- 8	Adhesive/caulk	Positive Layer? No
Layer # 1 brown sealant	<i>no asbestos detected</i>		
Layer # 2 green paint	<i>no asbestos detected</i>		
Sample # <b>HA-GESD-0610-9</b>	2019-05447- 9	Adhesive/caulk	Positive Layer? No
Layer # 1 brown sealant	<i>no asbestos detected</i>		
Layer # 2 green paint	<i>no asbestos detected</i>		
Sample # <b>HA-GESD-0610-10</b>	2019-05447- 10	Adhesive/caulk	Positive Layer? No
Layer # 1 green paint	<i>no asbestos detected</i>		
Layer # 2 off-white sealant	<i>no asbestos detected</i>		
Sample # <b>HA-GESD-0610-11</b>	2019-05447- 11	Adhesive/caulk	Positive Layer? No
Layer # 1 brown paint	<i>no asbestos detected</i>		
Layer # 2 off-white sealant	<i>no asbestos detected</i>		
Sample # <b>HA-GESD-0610-12</b>	2019-05447- 12	Adhesive/caulk	Positive Layer? No
Layer # 1 various paint	<i>no asbestos detected</i>		
Layer # 2 off-white sealant	<i>no asbestos detected</i>		
Sample # <b>HA-GESD-0610-13</b>	2019-05447- 13	Miscellaneous	Positive Layer? No
Layer # 1 green paint	<i>no asbestos detected</i>		
Layer # 2 white sealant	<i>no asbestos detected</i>		
Layer # 3 gray block	<i>no asbestos detected</i>		
Sample # <b>HA-GESD-0610-14</b>	2019-05447- 14	Miscellaneous	Positive Layer? No
Layer # 1 green paint	<i>no asbestos detected</i>		
Layer # 2 white sealant	<i>no asbestos detected</i>		
Layer # 3 gray block	<i>no asbestos detected</i>		
Sample # <b>HA-GESD-0610-15</b>	2019-05447- 15	Miscellaneous	Positive Layer? No
Layer # 1 green paint	<i>no asbestos detected</i>		
Layer # 2 white sealant	<i>no asbestos detected</i>		
Layer # 3 gray block	<i>no asbestos detected</i>		
Sample # <b>HA-GESD-0610-16</b>	2019-05447- 16	Miscellaneous	Positive Layer? No
Layer # 1 brown paint	<i>no asbestos detected</i>		
Layer # 2 white sealant	<i>no asbestos detected</i>		
Layer # 3 gray block	<i>no asbestos detected</i>		
Sample # <b>HA-GESD-0610-17</b>	2019-05447- 17	Miscellaneous	Positive Layer? No
Layer # 1 brown paint	<i>no asbestos detected</i>		
Layer # 2 white sealant	<i>no asbestos detected</i>		
Layer # 3 gray block	<i>no asbestos detected</i>		



Sample # <b><u>HA-GESD-0610-18</u></b>	2019-05447- 18	Miscellaneous	Positive Layer? No
Layer # 1 various paint		<i>no asbestos detected</i>	
Layer # 2 gray block		<i>no asbestos detected</i>	
Sample # <b><u>HA-GESD-0610-19</u></b>	2019-05447- 19	Wall System	Positive Layer? No
Layer # 1 tan paint		<i>no asbestos detected</i>	
Layer # 2 gray plaster		<i>no asbestos detected</i>	
Sample # <b><u>HA-GESD-0610-20</u></b>	2019-05447- 20	Wall System	Positive Layer? No
Layer # 1 tan paint		<i>no asbestos detected</i>	
Layer # 2 gray plaster		<i>no asbestos detected</i>	
Sample # <b><u>HA-GESD-0610-21</u></b>	2019-05447- 21	Wall System	Positive Layer? No
Layer # 1 tan paint		<i>no asbestos detected</i>	
Layer # 2 gray plaster		<i>no asbestos detected</i>	
Sample # <b><u>HA-GESD-0610-22</u></b>	2019-05447- 22	Adhesive/caulk	Positive Layer? No
Layer # 1 white sealant		<i>no asbestos detected</i>	
Sample # <b><u>HA-GESD-0610-23</u></b>	2019-05447- 23	Adhesive/caulk	Positive Layer? No
Layer # 1 white sealant		<i>no asbestos detected</i>	
Sample # <b><u>HA-GESD-0610-24</u></b>	2019-05447- 24	Adhesive/caulk	Positive Layer? No
Layer # 1 tan paint		<i>no asbestos detected</i>	
Layer # 2 white sealant		<i>no asbestos detected</i>	
Sample # <b><u>HA-GESD-0610-25</u></b>	2019-05447- 25	Ceiling System	Positive Layer? No
Layer # 1 tan paint		<i>no asbestos detected</i>	
Layer # 2 gray plaster		<i>no asbestos detected</i>	
Sample # <b><u>HA-GESD-0610-26</u></b>	2019-05447- 26	Ceiling System	Positive Layer? No
Layer # 1 tan paint		<i>no asbestos detected</i>	
Layer # 2 gray plaster		<i>no asbestos detected</i>	
Sample # <b><u>HA-GESD-0610-27</u></b>	2019-05447- 27	Ceiling System	Positive Layer? No
Layer # 1 tan paint		<i>no asbestos detected</i>	
Layer # 2 gray plaster		<i>no asbestos detected</i>	
Sample # <b><u>HA-GESD-0610-28</u></b>	2019-05447- 28	Miscellaneous	Positive Layer? No
Layer # 1 blue paint		<i>no asbestos detected</i>	
Layer # 2 white sealant		<i>no asbestos detected</i>	
Layer # 3 gray block		<i>no asbestos detected</i>	
Sample # <b><u>HA-GESD-0610-29</u></b>	2019-05447- 29	Miscellaneous	Positive Layer? No
Layer # 1 brown paint		<i>no asbestos detected</i>	
Layer # 2 white sealant		<i>no asbestos detected</i>	
Layer # 3 gray block		<i>no asbestos detected</i>	
Sample # <b><u>HA-GESD-0610-30</u></b>	2019-05447- 30	Miscellaneous	Positive Layer? No
Layer # 1 green paint		<i>no asbestos detected</i>	
Layer # 2 white texture/joint compound		<i>no asbestos detected</i>	
Layer # 3 gray block		<i>no asbestos detected</i>	
Sample # <b><u>HA-GESD-0610-31</u></b>	2019-05447- 31	Miscellaneous	Positive Layer? No
Layer # 1 tan paint		<i>no asbestos detected</i>	
Layer # 2 white texture/joint compound		<i>no asbestos detected</i>	
Layer # 3 gray block		<i>no asbestos detected</i>	
Sample # <b><u>HA-GESD-0610-32</u></b>	2019-05447- 32	Miscellaneous	Positive Layer? No
Layer # 1 tan paint		<i>no asbestos detected</i>	
Layer # 2 white texture/joint compound		<i>no asbestos detected</i>	
Layer # 3 gray block		<i>no asbestos detected</i>	
Sample # <b><u>HA-GESD-0610-33</u></b>	2019-05447- 33	Miscellaneous	Positive Layer? No
Layer # 1 tan paint		<i>no asbestos detected</i>	
Layer # 2 white texture/joint compound		<i>no asbestos detected</i>	
Layer # 3 gray block		<i>no asbestos detected</i>	
Sample # <b><u>HA-GESD-0610-34</u></b>	2019-05447- 34	Adhesive/caulk	Positive Layer? No
Layer # 1 brown paint		<i>no asbestos detected</i>	
Layer # 2 brown sealant		<i>no asbestos detected</i>	
Sample # <b><u>HA-GESD-0610-35</u></b>	2019-05447- 35	Adhesive/caulk	Positive Layer? No
Layer # 1 brown paint		<i>no asbestos detected</i>	
Layer # 2 brown sealant		<i>no asbestos detected</i>	
Sample # <b><u>HA-GESD-0610-36</u></b>	2019-05447- 36	Adhesive/caulk	Positive Layer? No
Layer # 1 brown sealant		<i>no asbestos detected</i>	
Layer # 2 gray foam		<i>no asbestos detected</i>	
Sample # <b><u>HA-GESD-0610-37</u></b>	2019-05447- 37	Adhesive/caulk	Positive Layer? No
Layer # 1 tan paint		<i>no asbestos detected</i>	
Layer # 2 white sealant		<i>no asbestos detected</i>	
Layer # 3 gray sealant		<i>no asbestos detected</i>	
Sample # <b><u>HA-GESD-0610-38</u></b>	2019-05447- 38	Adhesive/caulk	Positive Layer? No
Layer # 1 tan paint		<i>no asbestos detected</i>	
Layer # 2 white sealant		<i>no asbestos detected</i>	
Layer # 3 gray sealant		<i>no asbestos detected</i>	
Sample # <b><u>HA-GESD-0610-39</u></b>	2019-05447- 39	Adhesive/caulk	Positive Layer? No
Layer # 1 tan paint		<i>no asbestos detected</i>	
Layer # 2 white sealant		<i>no asbestos detected</i>	
Layer # 3 gray sealant		<i>no asbestos detected</i>	

Sample #	<b><u>HA-GESD-0610-40</u></b>	2019-05447- 40	Miscellaneous	Positive Layer?	No
	Layer # 1	green	paint		
	Layer # 2	white	sealant		
	Layer # 3	gray	block		
Sample #	<b><u>HA-GESD-0610-41</u></b>	2019-05447- 41	Miscellaneous	Positive Layer?	No
	Layer # 1	blue	paint		
	Layer # 2	white	sealant		
	Layer # 3	gray	block		
	Layer # 4	gray	mortar		
Sample #	<b><u>HA-GESD-0610-42</u></b>	2019-05447- 42	Miscellaneous	Positive Layer?	No
	Layer # 1	blue	paint		
	Layer # 2	white	sealant		
	Layer # 3	gray	block		
Sample #	<b><u>HA-GESD-0610-43</u></b>	2019-05447- 43	Miscellaneous	Positive Layer?	No
	Layer # 1	brown	paint		
	Layer # 2	white	sealant		
	Layer # 3	gray	block		
Sample #	<b><u>HA-GESD-0610-44</u></b>	2019-05447- 44	Miscellaneous	Positive Layer?	No
	Layer # 1	brown	paint		
	Layer # 2	white	sealant		
	Layer # 3	gray	block		
Sample #	<b><u>HA-GESD-0610-45</u></b>	2019-05447- 45	Miscellaneous	Positive Layer?	No
	Layer # 1	brown	paint		
	Layer # 2	white	sealant		
	Layer # 3	gray	block		
Sample #	<b><u>HA-GESD-0610-46</u></b>	2019-05447- 46	Adhesive/caulk	Positive Layer?	No
	Layer # 1	brown	paint		
	Layer # 2	gray	sealant		
Sample #	<b><u>HA-GESD-0610-47</u></b>	2019-05447- 47	Adhesive/caulk	Positive Layer?	No
	Layer # 1	brown	paint		
	Layer # 2	gray	sealant		
Sample #	<b><u>HA-GESD-0610-48</u></b>	2019-05447- 48	Adhesive/caulk	Positive Layer?	No
	Layer # 1	brown	paint		
	Layer # 2	gray	sealant		
Sample #	<b><u>HA-GESD-0610-49</u></b>	2019-05447- 49	Wall System	Positive Layer?	No
	Layer # 1	pink	paint		
	Layer # 2	off-white	plaster (top coat)		
	Layer # 3	gray	plaster (scratch coat)		
Sample #	<b><u>HA-GESD-0610-50</u></b>	2019-05447- 50	Wall System	Positive Layer?	No
	Layer # 1	pink	paint		
	Layer # 2	off-white	plaster (top coat)		
	Layer # 3	gray	plaster (scratch coat)		
Sample #	<b><u>HA-GESD-0610-51</u></b>	2019-05447- 51	Wall System	Positive Layer?	No
	Layer # 1	pink	paint		
	Layer # 2	off-white	plaster (top coat)		
	Layer # 3	gray	plaster (scratch coat)		
Sample #	<b><u>HA-GESD-0610-52</u></b>	2019-05447- 52	Adhesive/caulk	Positive Layer?	No
	Layer # 1	gray	sealant		
Sample #	<b><u>HA-GESD-0610-53</u></b>	2019-05447- 53	Adhesive/caulk	Positive Layer?	No
	Layer # 1	off-white	paint		
	Layer # 2	gray	sealant		
Sample #	<b><u>HA-GESD-0610-54</u></b>	2019-05447- 54	Adhesive/caulk	Positive Layer?	No
	Layer # 1	gray	sealant		

\* Apparent Sample Types and Apparent Layer Types are as they appeared to the analyst. Since many types of materials appear similar after sampling damage, the apparent type of material may not be the actual type of material.

**PLM Analysis Details**

**Job Number: 201905447 19-12119 GESD**

**Sample** HA-GESD-0610-1      **Lab Number** 2019-05447- 1      **Sampled:** 6/10/2019      **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019      **An?** OK      **Apparent Smp Type** Adhesive/caulk      Rubbery  
**Homogeneous** Yes      **# Layers** 1      **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sealant	100	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b>					none					

Fibers								Refractive Index Determinations				
#	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	none											
2												
3												
4												
5												
6												

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

**Sample** HA-GESD-0610-2      **Lab Number** 2019-05447- 2      **Sampled:** 6/10/2019      **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019      **An?** OK      **Apparent Smp Type** Adhesive/caulk      Rubbery  
**Homogeneous** Yes      **# Layers** 1      **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sealant	100	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b>					none					

Fibers								Refractive Index Determinations				
#	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	none											
2												
3												
4												
5												
6												

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

**Sample** HA-GESD-0610-3      **Lab Number** 2019-05447- 3      **Sampled:** 6/10/2019      **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019      **An?** OK      **Apparent Smp Type** Adhesive/caulk      Rubbery  
**Homogeneous** Yes      **# Layers** 1      **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sealant	100	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b>					none					

Fibers								Refractive Index Determinations				
#	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	none											
2												
3												
4												
5												
6												

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

**PLM Analysis Details**

**Job Number: 201905447** 19-12119 GESD

**Sample** HA-GESD-0610-4 **Lab Number** 2019-05447- 4 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Adhesive/caulk **Condition:** Rubbery  
**Homogeneous** No **# Layers** 2 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	5	various	1	n.d.	-	-	-	-	-
2	sealant	95	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers								Refractive Index Determinations				
#	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	none											
2												
3												
4												
5												
6												

**Sample Analytical Note**  
 Procedure: teased apart using forceps. Procedure: dissolution of matrix using solvent.

**Sample** HA-GESD-0610-5 **Lab Number** 2019-05447- 5 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Adhesive/caulk **Condition:** Rubbery  
**Homogeneous** No **# Layers** 3 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	3	various	1	n.d.	-	-	-	-	-
2	sealant	2	white	1	n.d.	-	-	-	-	-
3	sealant	95	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers								Refractive Index Determinations				
#	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	none											
2												
3												
4												
5												
6												

**Sample Analytical Note**  
 Procedure: teased apart using forceps. Procedure: dissolution of matrix using solvent.

**PLM Analysis Details**

**Job Number: 201905447** 19-12119 GESD

**Sample** HA-GESD-0610-6      **Lab Number** 2019-05447- 6      **Sampled:** 6/10/2019      **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019      **An?** OK      **Apparent Smp Type** Adhesive/caulk      Rubbery  
**Homogeneous** No      **# Layers** 3      **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	1	tan	1	n.d.	-	-	-	-	-
2	sealant	4	white	1	n.d.	-	-	-	-	-
3	sealant	95	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

**Sample** HA-GESD-0610-7      **Lab Number** 2019-05447- 7      **Sampled:** 6/10/2019      **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019      **An?** OK      **Apparent Smp Type** Adhesive/caulk      Rubbery  
**Homogeneous** No      **# Layers** 2      **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** polymer, filler, polymer foam

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sealant	95	brown	1	n.d.	-	-	-	-	-
2	foam	5	gray	3	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

**PLM Analysis Details**

**Job Number: 201905447** 19-12119 GESD

**Sample** HA-GESD-0610-8      **Lab Number** 2019-05447- 8      **Sampled:** 6/10/2019      **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019      **An?** OK      **Apparent Smp Type** Adhesive/caulk      Rubbery  
**Homogeneous** No      **# Layers** 2      **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** polymer, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sealant	99	brown	1	n.d.	-	-	-	-	-
2	paint	1	green	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers									Refractive Index Determinations				
#	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per	
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

**Sample** HA-GESD-0610-9      **Lab Number** 2019-05447- 9      **Sampled:** 6/10/2019      **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019      **An?** OK      **Apparent Smp Type** Adhesive/caulk      Rubbery  
**Homogeneous** No      **# Layers** 2      **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** polymer, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sealant	99	brown	1	n.d.	-	-	-	-	-
2	paint	1	green	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers									Refractive Index Determinations				
#	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per	
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

**Sample** HA-GESD-0610-10      **Lab Number** 2019-05447- 10      **Sampled:** 6/10/2019      **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019      **An?** OK      **Apparent Smp Type** Adhesive/caulk      Rubbery  
**Homogeneous** No      **# Layers** 2      **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** polymer, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	green	1	n.d.	-	-	-	-	-
2	sealant	98	off-white	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers									Refractive Index Determinations				
#	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per	
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

**PLM Analysis Details**

**Job Number: 201905447** 19-12119 GESD

**Sample** HA-GESD-0610-11      **Lab Number** 2019-05447- 11      **Sampled:** 6/10/2019      **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019      **An?** OK      **Apparent Smp Type** Adhesive/caulk      Rubbery  
**Homogeneous** No      **# Layers** 2      **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** polymer, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	5	brown	1	n.d.	-	-	-	-	-
2	sealant	95	off-white	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers								Refractive Index Determinations				
#	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	none											
2												
3												
4												
5												
6												

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

**Sample** HA-GESD-0610-12      **Lab Number** 2019-05447- 12      **Sampled:** 6/10/2019      **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019      **An?** OK      **Apparent Smp Type** Adhesive/caulk      Rubbery  
**Homogeneous** No      **# Layers** 2      **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** polymer, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	3	various	1	n.d.	-	-	-	-	-
2	sealant	97	off-white	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers								Refractive Index Determinations				
#	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	none											
2												
3												
4												
5												
6												

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

**PLM Analysis Details**

**Job Number: 201905447** 19-12119 GESD

**Sample** HA-GESD-0610-13 **Lab Number** 2019-05447- 13 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Miscellaneous **Non-fibrous Solid**  
**Homogeneous** No **# Layers** 3 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	green	1	n.d.	-	-	-	-	-
2	sealant	2	white	1	n.d.	-	-	-	-	-
3	block	96	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of cementitious components using acid. Procedure: dissolution of matrix using solvent.

**Sample** HA-GESD-0610-14 **Lab Number** 2019-05447- 14 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Miscellaneous **Non-fibrous Solid**  
**Homogeneous** No **# Layers** 3 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	green	1	n.d.	-	-	-	-	-
2	sealant	2	white	1	n.d.	-	-	-	-	-
3	block	96	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of cementitious components using acid. Procedure: dissolution of matrix using solvent.



**PLM Analysis Details**

**Job Number: 201905447** 19-12119 GESD

**Sample** HA-GESD-0610-15 **Lab Number** 2019-05447- 15 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Miscellaneous **Non-fibrous Solid**  
**Homogeneous** No **# Layers** 3 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	1	green	1	n.d.	-	-	-	-	-
2	sealant	3	white	1	n.d.	-	-	-	-	-
3	block	96	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of cementitious components using acid. Procedure: dissolution of matrix using solvent.

**Sample** HA-GESD-0610-16 **Lab Number** 2019-05447- 16 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Miscellaneous **Non-fibrous Solid**  
**Homogeneous** No **# Layers** 3 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	brown	1	n.d.	-	-	-	-	-
2	sealant	3	white	1	n.d.	-	-	-	-	-
3	block	95	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of cementitious components using acid. Procedure: dissolution of matrix using solvent.

**PLM Analysis Details**

**Job Number: 201905447** 19-12119 GESD

**Sample** HA-GESD-0610-17 **Lab Number** 2019-05447- 17 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Miscellaneous **Non-fibrous Solid**  
**Homogeneous** No **# Layers** 3 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	brown	1	n.d.	-	-	-	-	-
2	sealant	3	white	1	n.d.	-	-	-	-	-
3	block	95	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of cementitious components using acid. Procedure: dissolution of matrix using solvent.

**Sample** HA-GESD-0610-18 **Lab Number** 2019-05447- 18 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Miscellaneous **Non-fibrous Solid**  
**Homogeneous** No **# Layers** 2 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	5	various	1	n.d.	-	-	-	-	-
2	block	95	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of cementitious components using acid. Procedure: dissolution of matrix using solvent.

**PLM Analysis Details**

**Job Number: 201905447** 19-12119 GESD

**Sample** HA-GESD-0610-19 **Lab Number** 2019-05447- 19 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**  
**Homogeneous** No **# Layers** 2 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, polymer

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	tan	1	n.d.	-	-	-	-	-
2	plaster	98	gray	2	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers								Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	none											
2												
3												
4												
5												
6												

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of paint matrix using solvent. Procedure: dissolution of plaster matrix using acid.

**Sample** HA-GESD-0610-20 **Lab Number** 2019-05447- 20 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**  
**Homogeneous** No **# Layers** 2 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, polymer

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	tan	1	n.d.	-	-	-	-	-
2	plaster	98	gray	2	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers								Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	none											
2												
3												
4												
5												
6												

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of paint matrix using solvent. Procedure: dissolution of plaster matrix using acid.

**Sample** HA-GESD-0610-21 **Lab Number** 2019-05447- 21 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**  
**Homogeneous** No **# Layers** 2 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, polymer

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	tan	1	n.d.	-	-	-	-	-
2	plaster	98	gray	2	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers								Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	none											
2												
3												
4												
5												
6												

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of paint matrix using solvent. Procedure: dissolution of plaster matrix using acid.

**PLM Analysis Details**

**Job Number: 201905447** 19-12119 GESD

**Sample** HA-GESD-0610-22      **Lab Number** 2019-05447- 22      **Sampled:** 6/10/2019      **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019      **An?** OK      **Apparent Smp Type** Adhesive/caulk      Rubbery  
**Homogeneous** Yes      **# Layers** 1      **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** polymer, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sealant	100	white	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b>					none					

Fibers									Refractive Index Determinations				
#	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per	
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

**Sample** HA-GESD-0610-23      **Lab Number** 2019-05447- 23      **Sampled:** 6/10/2019      **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019      **An?** OK      **Apparent Smp Type** Adhesive/caulk      Rubbery  
**Homogeneous** Yes      **# Layers** 1      **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** polymer, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sealant	100	white	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b>					none					

Fibers									Refractive Index Determinations				
#	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per	
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

**Sample** HA-GESD-0610-24      **Lab Number** 2019-05447- 24      **Sampled:** 6/10/2019      **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019      **An?** OK      **Apparent Smp Type** Adhesive/caulk      Rubbery  
**Homogeneous** No      **# Layers** 2      **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** polymer, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	tan	1	n.d.	-	-	-	-	-
2	sealant	98	white	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b>					none					

Fibers									Refractive Index Determinations				
#	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per	
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of polymer matrix using solvent.

**PLM Analysis Details**

**Job Number: 201905447** 19-12119 GESD

**Sample** HA-GESD-0610-25 **Lab Number** 2019-05447- 25 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Ceiling System **Non-fibrous Solid**  
**Homogeneous** No **# Layers** 2 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, polymer

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	5	tan	1	n.d.	-	-	-	-	-
2	plaster	95	gray	2	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of paint matrix using solvent. Procedure: dissolution of plaster matrix using acid.

**Sample** HA-GESD-0610-26 **Lab Number** 2019-05447- 26 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Ceiling System **Non-fibrous Solid**  
**Homogeneous** No **# Layers** 2 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, polymer

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	5	tan	1	n.d.	-	-	-	-	-
2	plaster	95	gray	2	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of paint matrix using solvent. Procedure: dissolution of plaster matrix using acid.

**Sample** HA-GESD-0610-27 **Lab Number** 2019-05447- 27 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Ceiling System **Non-fibrous Solid**  
**Homogeneous** No **# Layers** 2 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, polymer

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	5	tan	1	n.d.	-	-	-	-	-
2	plaster	95	gray	2	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of paint matrix using solvent. Procedure: dissolution of plaster matrix using acid.

**PLM Analysis Details**

**Job Number: 201905447** 19-12119 GESD

**Sample** HA-GESD-0610-28 **Lab Number** 2019-05447- 28 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Miscellaneous **Non-fibrous Solid**  
**Homogeneous** No **# Layers** 3 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	blue	1	n.d.	-	-	-	-	-
2	sealant	3	white	1	n.d.	-	-	-	-	-
3	block	95	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of cementitious components using acid. Procedure: dissolution of matrix using solvent.

**Sample** HA-GESD-0610-29 **Lab Number** 2019-05447- 29 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Miscellaneous **Non-fibrous Solid**  
**Homogeneous** No **# Layers** 3 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	brown	1	n.d.	-	-	-	-	-
2	sealant	3	white	1	n.d.	-	-	-	-	-
3	block	95	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of cementitious components using acid. Procedure: dissolution of matrix using solvent.

**PLM Analysis Details**

**Job Number: 201905447** 19-12119 GESD

**Sample** HA-GESD-0610-30 **Lab Number** 2019-05447- 30 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Miscellaneous **Non-fibrous Solid**  
**Homogeneous** No **# Layers** 3 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	1	green	1	n.d.	-	-	-	-	-
2	texture/joint compound	4	white	3	n.d.	-	-	-	-	-
3	block	95	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of cementitious components using acid. Procedure: dissolution of matrix using solvent.

**Sample** HA-GESD-0610-31 **Lab Number** 2019-05447- 31 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Miscellaneous **Non-fibrous Solid**  
**Homogeneous** No **# Layers** 3 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	tan	1	n.d.	-	-	-	-	-
2	texture/joint compound	3	white	3	n.d.	-	-	-	-	-
3	block	95	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of cementitious components using acid. Procedure: dissolution of matrix using solvent.

**PLM Analysis Details**

**Job Number: 201905447** 19-12119 GESD

**Sample** HA-GESD-0610-32 **Lab Number** 2019-05447- 32 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Miscellaneous **Non-fibrous Solid**  
**Homogeneous** No **# Layers** 3 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	tan	1	n.d.	-	-	-	-	-
2	texture/joint compound	3	white	3	n.d.	-	-	-	-	-
3	block	95	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of cementitious components using acid. Procedure: dissolution of matrix using solvent.

**Sample** HA-GESD-0610-33 **Lab Number** 2019-05447- 33 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Miscellaneous **Non-fibrous Solid**  
**Homogeneous** No **# Layers** 3 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	tan	1	n.d.	-	-	-	-	-
2	texture/joint compound	3	white	3	n.d.	-	-	-	-	-
3	block	95	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of cementitious components using acid. Procedure: dissolution of matrix using solvent.



**PLM Analysis Details**

**Job Number: 201905447** 19-12119 GESD

**Sample** HA-GESD-0610-34 **Lab Number** 2019-05447- 34 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery  
**Homogeneous** No **# Layers** 2 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** polymer, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	brown	1	n.d.	-	-	-	-	-
2	sealant	98	brown	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers									Refractive Index Determinations				
#	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per	
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of polymer matrix using solvent.

**Sample** HA-GESD-0610-35 **Lab Number** 2019-05447- 35 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery  
**Homogeneous** No **# Layers** 2 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** polymer, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	brown	1	n.d.	-	-	-	-	-
2	sealant	98	brown	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers									Refractive Index Determinations				
#	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per	
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of polymer matrix using solvent.

**Sample** HA-GESD-0610-36 **Lab Number** 2019-05447- 36 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery  
**Homogeneous** No **# Layers** 2 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** polymer, filler, polymer foam

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sealant	98	brown	1	n.d.	-	-	-	-	-
2	foam	2	gray	3	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers									Refractive Index Determinations				
#	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per	
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of polymer matrix using solvent.

**PLM Analysis Details**

**Job Number: 201905447** 19-12119 GESD

**Sample** HA-GESD-0610-37 **Lab Number** 2019-05447- 37 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Adhesive/caulk **Condition:** Rubbery  
**Homogeneous** No **# Layers** 3 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** polymer, filler, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	tan	1	n.d.	-	-	-	-	-
2	sealant	3	white	1	n.d.	-	-	-	-	-
3	sealant	95	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of polymer matrix using solvent.

**Sample** HA-GESD-0610-38 **Lab Number** 2019-05447- 38 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Adhesive/caulk **Condition:** Rubbery  
**Homogeneous** No **# Layers** 3 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** polymer, filler, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	tan	1	n.d.	-	-	-	-	-
2	sealant	3	white	1	n.d.	-	-	-	-	-
3	sealant	95	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of polymer matrix using solvent.

**PLM Analysis Details**

**Job Number: 201905447** 19-12119 GESD

**Sample** HA-GESD-0610-39 **Lab Number** 2019-05447- 39 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery  
**Homogeneous** No **# Layers** 3 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** polymer, filler, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	1	tan	1	n.d.	-	-	-	-	-
2	sealant	4	white	1	n.d.	-	-	-	-	-
3	sealant	95	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of polymer matrix using solvent.

**Sample** HA-GESD-0610-40 **Lab Number** 2019-05447- 40 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Miscellaneous Non-fibrous Solid  
**Homogeneous** No **# Layers** 3 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	green	1	n.d.	-	-	-	-	-
2	sealant	3	white	1	n.d.	-	-	-	-	-
3	block	95	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of cementitious components using acid. Procedure: dissolution of matrix using solvent.

**PLM Analysis Details**

**Job Number: 201905447** 19-12119 GESD

**Sample** HA-GESD-0610-41 **Lab Number** 2019-05447- 41 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Miscellaneous **Non-fibrous Solid**  
**Homogeneous** No **# Layers** 4 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	1	blue	1	n.d.	-	-	-	-	-
2	sealant	3	white	1	n.d.	-	-	-	-	-
3	block	71	gray	1	n.d.	-	-	-	-	-
4	mortar	25	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-

**Fiber Identification:** none

Fibers								Refractive Index Determinations				
#	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	none											
2												
3												
4												
5												
6												

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of cementitious components using acid. Procedure: dissolution of matrix using solvent.

**Sample** HA-GESD-0610-42 **Lab Number** 2019-05447- 42 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Miscellaneous **Non-fibrous Solid**  
**Homogeneous** No **# Layers** 3 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	1	blue	1	n.d.	-	-	-	-	-
2	sealant	2	white	1	n.d.	-	-	-	-	-
3	block	97	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-

**Fiber Identification:** none

Fibers								Refractive Index Determinations				
#	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	none											
2												
3												
4												
5												
6												

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of cementitious components using acid. Procedure: dissolution of matrix using solvent.

**PLM Analysis Details**

**Job Number: 201905447** 19-12119 GESD

**Sample** HA-GESD-0610-43 **Lab Number** 2019-05447- 43 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Miscellaneous **Non-fibrous Solid**  
**Homogeneous** No **# Layers** 3 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	brown	1	n.d.	-	-	-	-	-
2	sealant	2	white	1	n.d.	-	-	-	-	-
3	block	96	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of cementitious components using acid. Procedure: dissolution of matrix using solvent.

**Sample** HA-GESD-0610-44 **Lab Number** 2019-05447- 44 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Miscellaneous **Non-fibrous Solid**  
**Homogeneous** No **# Layers** 3 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	brown	1	n.d.	-	-	-	-	-
2	sealant	2	white	1	n.d.	-	-	-	-	-
3	block	96	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of cementitious components using acid. Procedure: dissolution of matrix using solvent.

**PLM Analysis Details**

**Job Number: 201905447** 19-12119 GESD

**Sample** HA-GESD-0610-45 **Lab Number** 2019-05447- 45 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Miscellaneous **Non-fibrous Solid**  
**Homogeneous** No **# Layers** 3 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	brown	1	n.d.	-	-	-	-	-
2	sealant	2	white	1	n.d.	-	-	-	-	-
3	block	96	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of cementitious components using acid. Procedure: dissolution of matrix using solvent.

**Sample** HA-GESD-0610-46 **Lab Number** 2019-05447- 46 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Adhesive/caulk **Rubbery**  
**Homogeneous** No **# Layers** 2 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** polymer, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	brown	1	n.d.	-	-	-	-	-
2	sealant	98	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of polymer matrix using solvent.

**PLM Analysis Details**

**Job Number: 201905447** 19-12119 GESD

**Sample** HA-GESD-0610-47 **Lab Number** 2019-05447- 47 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery  
**Homogeneous** No **# Layers** 2 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** polymer, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	brown	1	n.d.	-	-	-	-	-
2	sealant	98	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers								Refractive Index Determinations				
#	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	none											
2												
3												
4												
5												
6												

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of polymer matrix using solvent.

**Sample** HA-GESD-0610-48 **Lab Number** 2019-05447- 48 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery  
**Homogeneous** No **# Layers** 2 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** polymer, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	brown	1	n.d.	-	-	-	-	-
2	sealant	98	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b> none										

Fibers								Refractive Index Determinations				
#	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	none											
2												
3												
4												
5												
6												

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of polymer matrix using solvent.

**PLM Analysis Details**

**Job Number: 201905447** 19-12119 GESD

**Sample** HA-GESD-0610-49      **Lab Number** 2019-05447- 49      **Sampled:** 6/10/2019      **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019      **An?** OK      **Apparent Smp Type** Wall System      **Fibrous Solid**  
**Homogeneous** No      **# Layers** 3      **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	5	pink	1	n.d.	-	-	-	-	-
2	plaster (top coat)	20	off-white	2	n.d.	-	-	-	-	-
3	plaster (scratch coat)	75	gray	2	>1-2%	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		>1-2%	-	-	-	-	-
<b>Fiber Identification:</b>					synthetic fiber (extr)					

Fibers								Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	synthetic fiber (extruded)	W	E	N	N	H	+	P				
2												
3												
4												
5												
6												

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of paint matrix using solvent. Procedure: dissolution of plaster matrix using acid.

**Sample** HA-GESD-0610-50      **Lab Number** 2019-05447- 50      **Sampled:** 6/10/2019      **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019      **An?** OK      **Apparent Smp Type** Wall System      **Fibrous Solid**  
**Homogeneous** No      **# Layers** 3      **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	5	pink	1	n.d.	-	-	-	-	-
2	plaster (top coat)	15	off-white	2	n.d.	-	-	-	-	-
3	plaster (scratch coat)	80	gray	2	>1-2%	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		>1-2%	-	-	-	-	-
<b>Fiber Identification:</b>					synthetic fiber (extr)					

Fibers								Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	synthetic fiber (extruded)	W	E	N	N	H	+	P				
2												
3												
4												
5												
6												

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of paint matrix using solvent. Procedure: dissolution of plaster matrix using acid.



**PLM Analysis Details**

**Job Number: 201905447** 19-12119 GESD

**Sample** HA-GESD-0610-51 **Lab Number** 2019-05447- 51 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Wall System **Fibrous Solid**  
**Homogeneous** No **# Layers** 3 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** powder, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	5	pink	1	n.d.	-	-	-	-	-
2	plaster (top coat)	15	off-white	2	n.d.	-	-	-	-	-
3	plaster (scratch coat)	80	gray	2	>1-2%	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		>1-2%	-	-	-	-	-
<b>Fiber Identification:</b>					synthetic fiber (extr)					

Fibers								Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	synthetic fiber (extruded)	W	E	N	N	H	+	P				
2												
3												
4												
5												
6												

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of paint matrix using solvent. Procedure: dissolution of plaster matrix using acid.

**Sample** HA-GESD-0610-52 **Lab Number** 2019-05447- 52 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Adhesive/caulk **Non-fibrous Solid**  
**Homogeneous** Yes **# Layers** 1 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** filler, polymer,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sealant	100	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b>					none					

Fibers								Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	none											
2												
3												
4												
5												
6												

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

**Sample** HA-GESD-0610-53 **Lab Number** 2019-05447- 53 **Sampled:** 6/10/2019 **Condition:** acceptable  
**Analyzed By** RAM 6/13/2019 **An?** OK **Apparent Smp Type** Adhesive/caulk **Non-fibrous Solid**  
**Homogeneous** No **# Layers** 2 **Pos Layer?** No  
**Non-Fibrous Components (in approx. decreasing order):** filler, polymer, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	2	off-white	1	n.d.	-	-	-	-	-
2	sealant	98	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
<b>Fiber Identification:</b>					none					

Fibers								Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	none											
2												
3												
4												
5												
6												

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

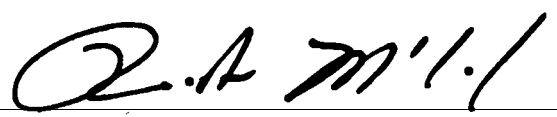
Sample HA-GESD-0610-54 Lab Number 2019-05447- 54 Sampled: 6/10/2019 Condition: acceptable  
 Analyzed By RAM 6/13/2019 An? OK Apparent Smp Type Adhesive/caulk Non-fibrous Solid  
 Homogeneous Yes # Layers 1 Pos Layer? No  
 Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sealant	100	gray	1	n.d.	-	-	-	-	-
<b>Total %</b>		100	<b>Overall %</b>		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

**Sample Analytical Note**  
 Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Fr=Friability: 1=very non-friable; 2= non-friable; 3=friable; 4=highly friable  
 Colors: B=black;BL=blue;BR=brown;CL=clear;G=Green;GY=gray;OR=orange;OW=off-white;PN=pink;PU=purple;R=red;TN=tan;W=white;Y=yellow;V=various  
 Fiber Morphology: A=fine fibers/bundles, white, sinewy, flexible; B=fine fibers/bundles, w-br, straight, broomed ends; C=fine fibers/bundles, blue, straight, broomed ends;  
 D=fine to coarse fibers, CL-B, brittle; E=coarse fibers,CL or dyed, striated; F=coarse fibers or splinters, W-BR, ribbon-like; G=lath-like or shards, low aspect ratio, may taper  
 Iso=isotropism - may be yes or no; Pleo=pleochroism - may be yes or no; Bi=birefringence - may be None, Low, Medium or High  
 Elg=sign of elongation - may be +, - or B (both); Ext=extinction - may be Parallel, Oblique, None or Undulating; Oil=medium used to for dispersion staining  
 Col Par=dispersion staining colors parallel to the fiber (fiber/halo): b/w=black/white; dg/py=dark gray/pale yellow; vg/y=violet gray/yellow; db/ly=dark blue/lemon yellow;  
 vb/g= vivid blue/gold; sb/o=sky blue/orange; pb/r=pale blue/red; gb/dr=gray blue/dark red; w/b=white/black. Col Perp=same only perpendicular to fiber.  
 RI Par=refractive index parallel to fiber; RI Perp=refractive index perpendicular to fiber



Analyst: ROBERT A. McCORMICK

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Larry S. Pierce, Approved Accreditation Signatory

# FIBERQUANT

## ANALYTICAL SERVICES

**Fiberquant Analytical Services** 5025 S. 33<sup>rd</sup> St.  
Phoenix, AZ 85040; Phone: 602-276-6139; FAX: 602-276-4558;  
info@fiberquant.com

### Analysis Request/Chain-of-Custody Form

Submitted by (Company) <b>HUTZEL AND ASSOCIATES</b>	
Address <b>1626 E ALICIA DRIVE</b>	
City, State, Zip Code <b>PHOENIX, AZ 85042</b>	
Phone <b>(602) 323-0222</b>	FAX
Email <b>C.Hollars@Hutzel.net</b>	
Invoice to (Company) <b>ERM / ERAP</b>	
Address	
City, State, Zip Code	
Phone	FAX
Contact (print) <b>Colby Hollars</b>	
Sampled by (signature) <i>[Signature]</i>	
Job Number or Project Name <b>19-12119 GESD</b>	
PO Number	

<Analysis Method Requested> <b>ONLY ONE METHOD per COC</b>			Turn-around-time (circle one)		
			Rush	Norm	Ext.
Asbestos by PLM	Method > Improved Interim	Urgent Rush <3 hrs	<6 hrs	3 days	15-30 days
	Analyze > All ATPF				
	If ATPF then > by Layer by Sample				
Single Layer Protocol > Yes No					
Fibers by PCM	Method > 7400 (Area) ORM (Personal)	<4 hrs	24 hrs	-	
Asbestos by TEM	in Air > AHERA Mod. AHERA	<6 hrs	24 hrs	3-5 days	
	in Water* > Water Sludge	1-2 days	3-5 days	N/A	
	in Bulk (Annex2) > Chatfield Full Quant.				
	in Dust > ASTM D5755	3-5 days	5-10 days	N/A	
Pb by FLAA	Analyte > Pb Other	<6 hrs	2-3 days	N/A	
	Filter > MCE FG				
	Matrix > Paint > by Area (mg/cm <sup>2</sup> ) by Weight (ppm)				
	Soil >				
	Wipe >				
Initial here certifying wipes used are ASTM E1792 compliant.					
Fungi	Air Sample > Zelon Aler Other	<6 hrs	1-2 days	N/A	
	Bulk > Sample Swab				
	Tape Lift > Qualitative (% & type) Quantitative (type/cm <sup>2</sup> )				
Soot	ASTM D6802-03b	Optical	<6 hrs	1-2 days	N/A
		Optical & TEM	1-2 days	3-5 days	N/A
Other		Call	Call		

Sample # (1 per line)	Description/Location	Sample Date	Sample Time	Vol. or Area
1) HAGESD - 060-1	Calking / Floor to wall / Bldg A	6-19-19		
2)	2			
3)	3			
4)	4 wall seam calking / Bldg A			
5)	5			
6)	6			
7)	7 window calking / Bldg A			
8)	8			
9)	9			
10)	10 Door Frame calking / Bldg A			
11)	11			
12)	12			
13)	13 smooth CMU / Bldg A.			
14)	14			
15)	15			
16)	16 Textured CMU / Bldg. A			
17)	17			
18)	18			
19)	19 Overhang plaster / Bldg A			
20)	20			

1) Relinquished by: <i>[Signature]</i>	Date: 6-10-19	Time: 12:06	3) Relinquished by:	Date:	Time:
2) Received by: <i>[Signature]</i>	Date: 6-10-19	Time: 12:05	4) Received by:	Date:	Time:
* TEM Water Sampler's name Required by State of Arizona			Print Name	Fiberquant assigned Job Number >	201905447
Review of Analysis Request (Initials): <i>[Signature]</i>			Page of		

Important: By signing above you as Fiberquant's customer are agreeing to payment within 30 days unless other arrangements are made in writing. Note: Data completed by client (including number and identity of samples) is assumed to be correct until it is verified at time of sample preparation.

# FIBERQUANT

## ANALYTICAL SERVICES

**Fiberquant Analytical Services** 5025 S. 33<sup>rd</sup> St.;  
 Phoenix, AZ 85040; Phone: 602-276-6139; FAX: 602-276-4558;  
 info@fiberquant.com

### Analysis Request/Chain-of-Custody Form

Submitted by (Company) <b>HUTZEL AND ASSOCIATES</b>	
Address <b>1626 E ALICIA DRIVE</b>	
City, State, Zip Code <b>PHOENIX, AZ 85042</b>	
Phone <b>(602) 323-0222</b>	FAX
Email <b>CHollars@Hutzel.Net</b>	
Invoice to (Company) <b>ERM / ERAP</b>	
Address	
City, State, Zip Code	
Phone	FAX
Contact (print) <b>Colby Hollars</b>	
Sampled by (signature)	
Job Number or Project Name <b>19-12119 GESD</b>	
PO Number	

<Analysis Method Requested> ONLY ONE METHOD per COC				Turn-around-time (circle one)			
				Rush	Norm	Ext.	
Asbestos by PLM	Method >	Approved	Interim	Urgent Rush <3 hrs	<6 hrs	1-3 days	
	Analyze >	AI	ATPF				
	If ATPF then >	by Layer	by Sample				
	Single Layer Protocol >	Yes	No				
Fibers by PCM	Method >	7400 (Area)	ORM (Persona)	<4 hrs	24 hrs	-	
Asbestos by TEM	in Air >	AHERA	Mod. AHERA	<6 hrs	24 hrs	3-5 days	
	in Water* >	Water	Sludge	1-2 days	3-5 days	N/A	
	in Bulk (Annex2) >	Chatfield	Full Quant.	3-5 days	5-10 days	N/A	
	in Dust >	ASTM D5755		3-5 days	5-10 days	N/A	
Pb by FLAA	Analyte >	Pb	Other	<6 hrs	2-3 days	N/A	
	Matrix >	Filter >	MCE				FG
		Paint >	by Area (mg/cm <sup>2</sup> ) by Weight (ppm)				
		Soil >					
		Wipe >					
Initial here certifying wipes used are ASTM E1792 compliant							
Fungi	Air Sample >	Zelon	Ailar	<6 hrs	1-2 days	N/A	
	Bulk >	Sample	Swab				
	Tape Lift >	Qualitative (% & type) Quantitative (type/cm <sup>2</sup> )					
Soot	ASTM D8802-03b	Optical		<6 hrs	1-2 days	N/A	
		Optical & TEM		1-2 days	3-5 days	N/A	
Other				Call	Call		

Sample # (1 per line)	Description/Location	Sample Date	Sample Time	Vol. or Area
1) HA-GESD-0610-21	Overhang plaster / Bldg #	6-10-19		
2)	22 Drain caulking			
3)	23			
4)	24			
5)	25 Ceiling plaster / Bldg L-E			
6)	26			
7)	27			
8)	28 Smooth CMU / Bldg L-E			
9)	29			
10)	30			
11)	31 Textured CMU / Bldg L-E			
12)	32			
13)	33			
14)	34 Window caulking / Bldg L-E			
15)	35			
16)	36			
17)	37 Bulking seam / Bldg L-E			
18)	38			
19)	39			
20)	40 Smooth CMU / Maint.			

1) Relinquished by:	Date: 6-10-19	Time: 12:10	3) Relinquished by:	Date:	Time:
2) Received by:	Date: 6-10-19	Time: 12:10	4) Received by:	Date:	Time:
* TEM Water: sampler's home Required by State of Arizona			Print Name	Fiberquant assigned Job Number >	<b>201905447</b>
Review of Analysis Request (Initials):					Page of

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 Phoenix, AZ 85040; Phone: 602-276-6139; FAX: 602-276-4558;  
 info@fiberquant.com

### Analysis Request/Chain-of-Custody Form

Submitted by (Company) <b>HUTZEL AND ASSOCIATES</b>	
Address <b>1626 E ALICIA DRIVE</b>	
City, State, Zip Code <b>PHOENIX, AZ 85042</b>	
Phone <b>(602) 323-0222</b>	FAX
Email <b>C.Hollars@Hutzel.net</b>	
Invoice to (Company) <b>ERM / ERAP</b>	
Address	
City, State, Zip Code	
Phone	FAX
Contact (print) <b>Coby Hollars</b>	
Sampled by (signature) <i>[Signature]</i>	
Job Number or Project Name <b>A-12119 GESD</b>	
PO Number	

<Analysis Method Requested> ONLY ONE METHOD per COC			Turn-around-time (circle one)		
			Rush	Norm	Ext.
Asbestos by PLM	Method > Approved Interim	Urgent Rush <3 hrs	<6 hrs	1-3 days	15- 30 days
	Analyze > All ATPF				
	If ATPF then > by Layer by Sample				
	Single Layer Protocol > Yes No				
Fibers by PCM	Method > 7400 (Area) ORM (Personal)	<4 hrs	24 hrs		
Asbestos by TEM	in Air > AHERA Mod. AHERA	<6 hrs	24 hrs	3-5 days	
	in Water* > Water Sludge	1-2 days	3-5 days	N/A	
	in Bulk (Annex2) > Chatfield Full Quant.				
	in Dust > ASTM D5755	3-5 days	5-10 days	N/A	
Pb by FLAA	Analyte > Pb Other	<6 hrs	2-3 days	N/A	
	Filter > MCE FG				
	Matrix > Paint > by Area (mg/cm <sup>2</sup> ) by Weight (ppm)				
	Soil >				
	Wipe >				
	Initial here certifying wipes used are ASTM E1792 compliant				
Fungi	Air Sample > Zelon Alter Other	<6 hrs	1-2 days	N/A	
	Bulk > Sample Swab				
	Tape Lift > Qualitative (% & type)				
	Quantitative (type/cm <sup>2</sup> )				
Soot	ASTM D6802-03b	Optical	<6 hrs	1-2 days	N/A
		Optical & TEM	1-2 days	3-5 days	N/A
Other		Call	Call		

Sample # (1 per line)	Description/Location	Sample Date	Sample Time	Vol. or Area
1) HA-GESD-0610-41	Smooth CMU / maint.	6-10-19		
2) 42				
3) 43	Texture CMU / maint.			
4) 44				
5) 45				
6) 46	Door Frame Calking / maint.			
7) 47				
8) 48				
9) 49	Parapet plaster / Roof			
10) 50				
11) 51				
12) 52	Parapet Calking / Roof			
13) 53				
14) 54				
15)				
16)				
17)				
18)				
19)				
20)				

1) Relinquished by: <i>[Signature]</i>	Date: 6-10-19	Time: 12:10	3) Relinquished by:	Date:	Time:
2) Received by: <i>[Signature]</i>	Date: 6-10-19	Time: 12:10	4) Received by:	Date:	Time:
* TEM Water Sampler Name Required by State of Arizona	Print Name	Fiberquant assigned Job Number >	201905447		
Review of Analysis Request (Initials): <i>EH</i>			Page of		

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**Atomic Absorption Spectrometer (AAS) Analysis of Paint**

**JobNumber:** 201905446

**Client:**

HUTZEL AND ASSOCIATES

1626 E ALICIA DRIVE

PHOENIX, AZ

85042-0000

Office Phone:

(602) 323-0222

FAX:

**# Samples:** 13 AA **Rec:** 6/10/2019 **Method:** Modified SW 846 3050b/7420 Pb in paint by weight AA Analysis

**Client Job:** 19-12119 GESD

**PO Number:**

**Report Date:** 6/12/2019

**Date Analyzed:** 6/12/2019

**Routing Number:** -

**Method and Analysis Information:**

**Fiberquant Internal SOP:** AAPw

The received samples were analyzed for Pb (total) using "Test Methods for Evaluating Solid Waste" (SW 846, December 1996 updates). The extraction/digestion method was SW 3050b. The analytical method is "flame atomic absorption, direct aspiration", SW 7420. Briefly the procedures are as follows. The incoming paint samples are first homogenized by mixing and crushing. A sub-sample is weighed to 0.0001 gm into a 50ml centrifuge tube. To the run stream are added the quality assurance samples described below. Six mls of concentrated HNO3 and one ml of 30% H2O2 are added to each container. The tubes are capped and heated for 1 hour at 95 deg. C. After cooling, the contents of the centrifuge tube are brought up to exactly 25 mls, completing the digestion/extraction.

The sample and quality assurance extractions are then analyzed on a Thermo M5 flame atomic absorption spectrometer or a Perkin Elmer Analyst 200. The wavelengths and other instrumental settings are set according to the manufacturer's recommendations, or as otherwise specified in the published method. Absorptions are recorded from sample and standard solutions. A calibration curve is fitted to at least three standard solutions, and the concentrations of the sample extracts are calculated from the curve. The ppm (ug/gm) and weight percent for each sample is calculated from the sub-sample weight, extract volume, and extract concentration.

The results from this analysis is generally compared to either the HUD guidelines, in which a sample is positive if it contains >0.5% (5000 ppm) Pb, or the Consumer Products Safety Commission (CPSC) limit, in which a paint or surface coating containing greater than 90 ppm is defined as lead-containing. The expected coefficient of variation for this method is approximately 20-30%. The results are reported to two significant figures. The Sample Reporting Limit (RL) listed below is twice the Sample Detection Limit, which is calculated for each sample from the experimentally determined Method Detection Limit. The limit of reliable quantitation is generally regarded as five to ten times the limit of detection. Therefore, samples smaller than 0.1 gm may give results too near the CPSC standard to be reliable. Problems in analysis or other information is provided in the "Analytical Notes" below. Blanks, if analyzed, are treated the same as samples and are not used for correcting non-blank results.

The following on-going quality assurance program was followed to ensure reproducible and dependable results: All analysts are degreed chemists trained extensively in-house for at least six months prior to un-supervised runs. Blank matrix samples are analyzed at a rate of 5% (at least one per run). Reference standards are analyzed at a rate of 5% (at least one per run), and compared to statistical records via control charts. Spiked matrix samples are analyzed at a rate of 5% (at least one per run), and compared to statistical records via control charts. Duplicate samples are analyzed at a rate of 5% (at least one per run), and compared to statistical records via control charts. For each instrumental run, the spectrometer is checked for sensitivity and stability. The calibration standards are made fresh weekly, and checked each run against a calibration verification standard from another source. All calculations are performed twice - once in a calibration spreadsheet, and once during the report generation, and also checked by hand. All quality checks performed for these samples were in control except as detailed in the "Analytical Notes" below. Fiberquant participates in the Environmental Lead Proficiency Analytical Testing (ELPAT) program, is accredited by AIHA-LAP, LLC for environmental lead in paint (Lab # 101593), and is recognized by the National Lead Laboratory Accreditation Program (NLLAP) for the analysis of Pb in paint. Accreditation does not imply endorsement by the EPA, any other United States governmental agency or any private agency or association. Each lab analysis refers only to the sample tested, and may not, due to the sampling process, be representative of the material sampled. This report may not be reproduced except in full, without the approval of Fiberquant Analytical Services.

Some results may have been calculated using client supplied data, such as volume or area sampled, for which Fiberquant assumes no liability for accuracy.

**Job Analysis Notes:**

**Calibration Curve:**

**Pb**

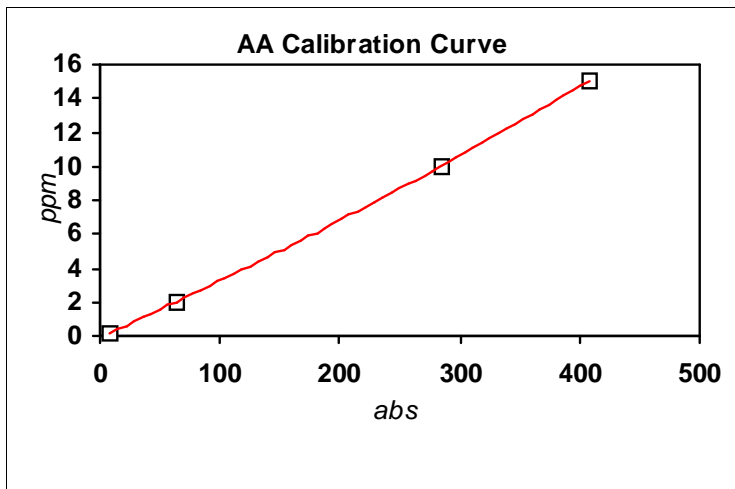
**Run # 13627**

**6/11/2019**

Instrument: AA200

Standards:	ppm	avg. mAbs.
1	0.2	8
2	2	64
3	10	284
4	15	408

ax2 0.00001237  
 bx 0.03190513  
 c -0.07090155  
 R2 0.99999396



**Analysis Results:**

Job Number: 201905446

AApw

Lab Number	Client Number	Date	Condition	Weight (gm)	ug/ml	ml	Dil	Analyte	wt %	ppm	RL(ppm)
2019-05446- 1	HA-GESD-0610-1 Pb	6/10/2019	acceptable	0.2376	0.0569	25	1	Pb	<0.0021	<21	21
2019-05446- 2	HA-GESD-0610-2 Pb	6/10/2019	acceptable	0.1944	0.121	25	1	Pb	<0.0026	<26	26
2019-05446- 3	HA-GESD-0610-3 Pb	6/10/2019	acceptable	0.2156	0.1530	25	1	Pb	<0.0023	<23	23
2019-05446- 4	HA-GESD-0610-4 Pb	6/10/2019	acceptable	0.0481	-0.007	25	1	Pb	<0.01	<100	100
2019-05446- 5	HA-GESD-0610-5 Pb	6/10/2019	acceptable	0.1571	-0.007	25	1	Pb	<0.0032	<32	32
2019-05446- 6	HA-GESD-0610-6 Pb	6/10/2019	acceptable	0.1866	-0.039	25	1	Pb	<0.0027	<27	27
2019-05446- 7	HA-GESD-0610-7 Pb	6/10/2019	acceptable	0.1211	-0.039	25	1	Pb	<0.0041	<41	41
2019-05446- 8	HA-GESD-0610-8 Pb	6/10/2019	acceptable	0.2057	-0.071	25	1	Pb	<0.0024	<24	24
2019-05446- 9	HA-GESD-0610-9 Pb	6/10/2019	acceptable	0.1994	0.0249	25	1	Pb	<0.0025	<25	25
2019-05446- 10	HA-GESD-0610-10 Pb	6/10/2019	acceptable	0.0462	-0.071	25	1	Pb	<0.011	<110	110
2019-05446- 11	HA-GESD-0610-11 Pb	6/10/2019	acceptable	0.1067	-0.071	25	1	Pb	<0.0047	<47	47
2019-05446- 12	HA-GESD-0610-12 Pb	6/10/2019	acceptable	0.1777	-0.071	25	1	Pb	<0.0028	<28	28
2019-05446- 13	HA-GESD-0610-13 Pb	6/10/2019	acceptable	0.1386	-0.071	25	1	Pb	<0.0036	<36	36

*Martin Esquer*

**Analyst:** MARTIN A. ESQUER

Printed: 12-Jun-19

Original Print Date: 12-Jun-19

*Larry S. Pierce*

Larry S. Pierce, Approved Accreditation Signatory

# FIBERQUANT

## ANALYTICAL SERVICES

**Fiberquant Analytical Services** 5025 S. 33rd St.  
Phoenix, AZ 85040; Phone: 602-276-6139; FAX: 602-276-4558;  
info@fiberquant.com

### Analysis Request/Chain-of-Custody Form

Submitted by (Company)	<b>HUTZEL AND ASSOCIATES</b>		
Address	1626 E ALICIA DRIVE		
City, State, Zip Code	PHOENIX, AZ 85042		
Phone	(602) 323-0222	FAX	
Email	C.Hollars@Hutzel.net		
Invoice to (Company)	ERM / ERAP		
Address			
City, State, Zip Code			
Phone		FAX	
Contact (print)	Colby Hollars		
Sampled by (signature)			
Job Number or Project Name	19-12119 GESD		
PO Number			

<Analysis Method Requested> ONLY ONE METHOD per COC				Turn-around-time (circle one)			
				Rush	Norm	Ext.	
				<3 hrs	<6 hrs	1-3 days	15-30 days
Asbestos by PLM	Method >	Improved	Interim				
	Analyze >	AI	ATPF				
	If ATPF then >	by Layer	by Sample				
		Single Layer Protocol >		Yes	No		
Fibers by PCM	Method >	7400 (Area)	ORM (Personal)	<4 hrs	24 hrs		
Asbestos by TEM	In Air >	AHERA	Mod. AHERA	<6 hrs	24 hrs	3-5 days	
	In Water* >	Water	Sludge	1-2 days	3-5 days	N/A	
	In Bulk (Annex2) >	Chalfield	Full Quant.				
	In Dust >	ASTM D5755		3-5 days	5-10 days	N/A	
Pb by FLAA	Analyte >	Pb	Other				
	Filter >	MCE	FG				
	Matrix >	Paint	by Area (mg/cm <sup>2</sup> ) by weight (ppm)	<6 hrs	2-3 days	N/A	
	Soil >						
	Wipe >						
	Initial here certifying wipes used are ASTM E1792 compliant						
Fungi	Air Sample >	Zefon	Aller	Other			
	Bulk >	Sample	Swab		<6 hrs	1-2 days	N/A
	Tape Lift >	Qualitative (% & type)		Quantitative (type/cm <sup>2</sup> )			
Soot	ASTM D6602-03b	Optical		<6 hrs	1-2 days	N/A	
		Optical & TEM		1-2 days	3-5 days	N/A	
Other				Call	Call		

Sample # (1 per line)	Description/Location	Sample Date	Sample Time	Vol. or Area
1) HA-6ESD-0610-1Pb	Red paint / cmu / Bldg. A	6-10-19		
2)	2Pb Green paint / cmu / Bldg. A.			
3)	3Pb Beige paint / Bldg. A			
4)	4Pb Green paint / metal wall / Bldg. A			
5)	5Pb Black paint / Door / Bldg. A			
6)	6Pb Black paint / Door Frame / Bldg. A			
7)	7Pb Tan paint / Railing / courtyard			
8)	8Pb Tan paint / stage door			
9)	9Pb Tan plaster / Bldg. E			
10)	10Pb Green paint / water drain / Bldg. E			
11)	11Pb Tan paint / metal posts / Bldg. E			
12)	12Pb Tan paint / railing / maint.			
13)	13Pb Tan paint / perimeter fence / maint.			
14)				
15)				
16)				
17)				
18)				
19)				
20)				

1) Relinquished by:	Date: 6-10-19	Time: 12:01	3) Relinquished by:	Date:	Time:
2) Received by:	Date: 6-10-19	Time: 12:01	4) Received by:	Date:	Time:
* Test Water Sampler's name Required by State of Arizona	Print Name	Fiberquant assigned Job Number >	201905446		
Review of Analysis Request (Initials):			C.H		

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