December 23, 2020

University of North Texas Health Science Center
3416 Darcy Street
Fort Worth, Texas
Attention: Mr. Robert E. Short, Jr. P.E.

Re: Asbestos Survey
University of North Texas Health Science Center
Gibson D. Lewis Library (LIB)
955 Montgomery Street
Fort Worth, Texas
Apex project No.725010720021

Apex TITAN, Inc., a subsidiary of Apex Companies, LLC (Apex) was retained by University of North Texas Health Science Center to conduct an asbestos survey of the second, third, and fourth floors of the Gibson D. Lewis Library (LIB) located at 955 Montgomery Street in Fort Worth, Texas. At the request of the client results from the previous sampling of the first floor, Apex Project Number 725010720014, dated March 16, 2020 have been included in this report. The survey was performed from July 29 - 31, 2020 by Mr. Zurisaday Diego, a Texas Department of State Health Service (TDSHS) licensed asbestos inspector (TDSHS License No. 60-3759). This survey has been performed in accordance with Apex Proposal No. P725010720021rev dated July 1, 2020. The following is a summary of the suspect asbestos containing materials (ACM) collected from the building. ACM previously identified by Apex was incorporated into this report.

The following materials were observed on the day of the survey; however, they were not sampled due to the destructive nature of the sampling:

- **First Floor**
  - **Mastic associated with Raised Wooden Floor Pedestals**
  - **Mirror Mastic - Restrooms**
- **Second Floor**
  - **12” x 12” Ceramic Floor Tile (Grey) - Restrooms**
  - **Mirror Mastic - Restrooms**
  - **12” x 16” Ceramic Wall Tile (White) - Restrooms**
- **Third Floor**
  - **Resilient Vinyl Flooring (Red, Wood Pattern)**
  - **12” x 12” Ceramic Floor Tile (Grey) - Restrooms**
  - **Mirror Mastic - Restrooms**
  - **12” x 16” Ceramic Wall Tile (White) - Restrooms**
- **Fourth Floor**
  - **Mastic associated with Corner Guards**
  - **12” x 12” Ceramic Floor Tile (Grey) - Restrooms**
  - **Mirror Mastic - Restrooms**
  - **12” x 16” Ceramic Wall Tile (White) - Restrooms**

These materials must be sampled prior to disturbance or assumed to be asbestos containing and handled according to local, state, and federal regulations.

This survey applies only to the materials sampled on the interior of the Gibson D. Lewis Library located at the above referenced address. Any materials located on the roof and building envelope were not evaluated as part of this survey should be assumed to contain asbestos until testing is performed.

This survey applies only to the materials sampled in the above referenced locations. Any materials located in the building not evaluated as part of this survey should be assumed to contain asbestos until testing is performed.

The survey activities began with a preliminary visual observation of readily accessible portions of the survey area by Apex personnel to identify homogeneous areas of suspect ACM. A homogeneous area consists of building materials, which appear similar throughout in terms of color, texture and date of application. A visual assessment was conducted throughout the areas surveyed. The identification of homogeneous materials was made by visual observations. Based on results of the visual observation, bulk samples of suspect ACM were collected in general accordance with AHERA sampling protocols.

Each homogeneous area of suspect ACM was physically touched to assess the friability and condition of the materials. A friable material is defined by the EPA as a material which can be crumbled, pulverized or reduced to powder by hand pressure when dry.

The suspect ACM samples collected were obtained by physically removing a small portion of the suspect material using a sharp instrument. Disturbance of adjacent material was kept to a minimum during the sampling program. Appropriately attired inspectors collected bulk samples using wet methods as applicable to reduce the potential for fiber release. Each sample was placed into a separate labeled container, which was then sealed. The sampling instrument was cleaned after each sample was collected. Each sample was placed into a sealable container and labeled with a sample number with an indelible marker.

A total of one hundred ninety (190) samples of suspect ACM were obtained from fifty-nine (59) homogeneous materials. Analyses was conducted utilizing Polarized-Light Microscopy (PLM), following the Environmental Protection Agency (EPA) PLM Method EPA-600/R-93/116. The bulk samples were analyzed by Cates Laboratories located in Dallas, Texas. Cates is accredited by the National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program (NVLAP No. 200569-0) and the TDSHS (License No. 30-0287).

A list of the homogeneous areas/materials sampled as part of this asbestos survey is included in **Appendix B**.

Apex identified friable and non-friable asbestos containing materials (ACM) within the areas surveyed. The materials identified to contain asbestos are presented in the Asbestos Containing Materials Summary table within **Appendix A**. It is Apex's understanding that the areas surveyed are scheduled for renovation/demolition. If any renovation/demolition activities will impact the identified ACMs, the ACMs must be abated prior to the renovation/demolition. The asbestos abatement must be performed by a State of Texas licensed asbestos abatement contractor in accordance with a project design prepared by a State of Texas licensed asbestos consultant. In addition, third party air monitoring must be performed during the abatement. Some category I

non-friable materials may be demolished in place with the structure; however, for the purpose of this report, Apex recommends that all ACM be abated prior to demolition.

If the identified ACM is not abated, the materials should be incorporated into the existing management plan.

Apex performed its services in a manner consistent with the level of care and expertise exercised by asbestos professionals performing the same or similar services at the same time and in the same geographic area. No express or implied warranties apply to these services or this report. Due to the limited extent of the assessment and sampling activities at the Site, Apex cannot and does not imply, warranty or guarantee that materials *not sampled* contain no asbestos. This Asbestos Survey was intended to identify reasonably accessible materials most likely to contain asbestos in quantities subject to regulation. Please note that due to the non-destructive nature of the survey, the potential exists for additional materials to be present in hidden or concealed areas.

All conclusions and recommendations in this report represent the professional opinions of the Apex personnel involved with the project. The results, findings, conclusions and recommendations expressed in this report are based on access provided and conditions observed, and samples taken during Apex survey of the building. The information contained in this report is relevant as of the date on which the field work was performed and should not be relied upon to represent Site's conditions at a later date. This study and report were prepared on behalf of and for the exclusive use of University of North Texas solely for their use and reliance in determining the presence of asbestos in identified areas of the site. The results of this report are not intended or to be construed as legal interpretation of existing federal, state or local environmental, health and safety laws or regulations. Apex assumes no responsibility or liability for errors in information or data provided to Apex by the Client or any third party or developments resulting from activities or situations outside the scope of this project. This report is not to be used as a bidding document.

Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary. Apex does not warrant the work of regulatory agencies, laboratories or other third parties supplying information, which may have been used in the preparation of this report. No warranty, express or implied is made.

Apex appreciates the opportunity to be of service on this project. If we can be of further assistance, please contact our office at 469-365-1100.

Sincerely yours,
Apex TITAN, Inc.

Zurisaday Diego
Asbestos Inspector
TDSHS Lic. No. 60-3759

Phillip G. Fronczek, CHMM
Program Manager
Industrial Hygiene Services
TDSHS Lic. No. 10-5737

Attachments:
Appendix A: Asbestos Containing Materials Summary
Appendix B: Analytical Results/Chain(s) of Custody
Appendix C: Figures
Appendix D: Previous Report
Appendix E: Licenses

Asbestos Containing Materials
University of North Texas Health Science Center
Gibson D. Lewis Library (LIB)
955 Montgomery Street
Fort Worth, Texas
Apex Project No. 725010720021

Sample No.	ACM Sample Description	Location	Friable/ Non-Friable	% Asbestos	Assessment	Condition	Estimated Quantity
2-143 2-144 2-145	Duct Mastic (white)	2nd Floor	NF	5%	5	Good	Through out
2-182 2-183 2-184	Mastic (black) associated w/Perimeter Walls	2nd Floor	NF	5%	5	Good	Through out
3-204 3-205 3-206	Mastic (black) associated w/Perimeter Walls	3rd Floor	NF	5%	5	Good	Through out
3-207 3-208 3-209	Duct Mastic (white)	3rd Floor	NF	5%	5	Good	Through out
4-276 4-277 4-278	Mastic (black) associated w/Perimeter Walls	4th Floor	NF	3%	5	Good	Through out
Assumed Materials							
N/A	Mastic associated with Raised Wooden Floor Pedestals	1st Floor	NF	Assumed	5	Good	250SF
N/A	Mirror Mastic	1st, 2nd, 3rd, and 4th Floors	NF	Assumed	5	Good	400SF
N/A	12” x 12” Ceramic Floor Tile (Grey)	2nd, 3rd, and 4th Floors	NF	Assumed	5	Good	1,800SF
N/A	12” x 16” Ceramic Wall Tile (White)	2nd, 3rd, and 4th Floors	NF	Assumed	5	Good	800SF
N/A	Mastic associated with Corner Guards	4th Floor	NF	Assumed	5	Good	Through out

Assessment:
1) Damaged or significantly damaged thermal system insulation ACM;
2) Damaged friable surfacing ACM;
3) Significantly damaged friable surfacing ACM;
4) Damaged or significantly damaged friable miscellaneous ACM;
5) ACBM with potential for damage;
6) ACBM with potential for significant damage;
7) Any remaining friable ACBM or friable suspected ACBM

Identified Homogeneous Materials
University of North Texas Health Science Center
Gibson D. Lewis Library (LIB)
955 Montgomery Street
Fort Worth, Texas
Apex Project No. 725010720021

Material	Category	Condition	ACM	Sample Number
First Floor Survey (Apex Project Number 725010720014)				
12”x 12” Floor Tile (Pink with Grey Streaks) and Mastic (Yellow)	Category I Non-friable	G	Non-Detected	1-1 1-2 1-3
Mastic (Yellow) associated with Carpet (Dark Green with Red, and White Stripe Pattern) Multilayer	Category II Non-friable	G	Non-Detected	1-4 1-5 1-6
Mastic (Tan) associated with Carpet (Brown with Dark Brown Stripe Pattern) Multilayer	Category II Non-friable	G	Non-Detected	1-7 1-8 1-9
Mastic (Yellow) associated with Carpet (Yellow, with Multicolor Dot Pattern) Multilayer	Category II Non-friable	G	Non-Detected	1-10 1-11 1-12
Mastic (Yellow) associated with Carpet (Dark Yellow with Multicolor Dot Pattern)	Category II Non-friable	G	Non-Detected	1-13 1-14 1-15
Mastic (Yellow) associated with Carpet (Blue with Multicolor Dot Pattern) Multilayer	Category II Non-friable	G	Non-Detected	1-16 1-17 1-18
Mastic (Yellow) associated with Carpet (Light Brown)	Category II Non-friable	G	Non-Detected	1-19 1-20 1-21
Mastic (Clear) associated with Carpet (Red) Multilayer	Category II Non-friable	G	Non-Detected	1-22 1-23 1-24
Mastic (Yellow) associated with Carpet (Dark Blue with Light Grey Streak Pattern) Multilayer	Category II Non-friable	G	Non-Detected	1-25 1-26 1-27
Mastic (Yellow) associated with Carpet (Brown with Dark Brown and Grey Stripe Pattern)	Category II Non-friable	G	Non-Detected	1-28 1-29 1-30

Material	Category	Condition	ACM	Sample Number
12” x 12” Ceramic Floor Tile (Light Grey) with Grout (Grey) and Mortar (Grey)	Category I Non-friable	G	Non-Detected	1-31 1-32 1-33
Epoxy Floor Coating (Grey, Sandy)	Category II Non-friable	G	Non-Detected	1-34 1-35 1-36
Resilient Vinyl Flooring (Grey with Multicolor Stripes) with Mastic (Yellow) and Leveling Compound (Grey)	Category I Non-friable	G	Non-Detected	1-37 1-38 1-39
Resilient Vinyl Flooring (Brown, Wood Pattern) with Mastic (Yellow)	Category I Non-friable	G	Non-Detected	1-40 1-41 1-42
2”x 6” Ceramic Floor Tile (Brown) with Grout (Grey) and Mortar (Grey)	Category II Non-friable	G	Non-Detected	1-43 1-44 1-45
Mastic (Yellow) associated with 4” Cove Base (Black)	Category II Non-friable	G	Non-Detected	1-46 1-47 1-48
Mastic (Yellow) associated with Fiberglass Reinforced Panel (FRP) (White)	Category II Non-friable	G	Non-Detected	1-49 1-50 1-51
Concrete Wall Texture (Grey, Sandy)	Category II Non-friable	G	Non-Detected	1-52 1-53 1-54 1-55 1-56
CMU Wall Texture (White) with Grout (Grey)	Category II Non-friable	G	Non-Detected	1-57 1-58 1-59
Unfinished Drywall/Joint Compound	Category II Non-friable	G	Non-Detected	1-60 1-61 1-62
Ceiling/Wall Texture (White, Blue, Tan, Sandy) Drywall/Joint Compound	Category II Non-friable	G	Non-Detected	1-63 1-64 1-65 1-66 1-67 1-68 1-69
12”x 24” Ceramic Wall Tile (White) with Grout (White) and Thinset (White)	Category II Non-friable	G	Non-Detected	1-70 1-71 1-72
Sink Under Coating (Black)	Category I Non-friable	G	Non-Detected	1-73 1-74 1-75
Interior Building Expansion Joint Caulking (Tan)	Category II Non-friable	G	Non-Detected	1-76 1-77 1-78

G – Good, D – Damaged, SD – Significantly Damaged

Material	Category	Condition	ACM	Sample Number
2'x4' Acoustical Ceiling Tile (White, Pinhole and Fissured)	Category II Non-friable	G	Non-Detected	1-79 1-80 1-81
2'x2' Acoustical Ceiling Tile (White, Rough Finish)	Category II Non-friable	G	Non-Detected	1-82 1-83 1-84
Duct Mastic (White)	Category I Non-friable	G	Non-Detected	1-85 1-86 1-87
Duct Mastic (Grey)	Category I Non-friable	G	Non-Detected	1-88 1-89 1-90
Thermal System Insulation (White)	Category II Non-friable	G	Non-Detected	1-91 1-92 1-93
Second Floor Survey				
Mastic (yellow) associated w/Carpet (grey w/blue & green stripe pattern) & Leveling Compound (grey) -	Category I Non-friable	G	Non-Detected	2-94 2-95 2-96
Mastic (yellow) associated w/Carpet (green w/yellow, blue & red spot pattern)	Category I Non-friable	G	Non-Detected	2-97 2-98 2-99
Mastic (yellow) associated w/Carpet (tan w/green & red dot pattern) & Leveling Compound (grey)	Category I Non-friable	G	Non-Detected	2-100 2-101 2-102
Mastic (yellow) associated w/Carpet (light grey w/dark grey stripe pattern) & Leveling Compound (grey)	Category I Non-friable	G	Non-Detected	2-103 2-104 2-105
Resilient Vinyl Flooring (tan wood pattern) & Mastic (yellow)	Category I Non-friable	G	Non-Detected	2-106 2-107 2-108
Resilient Vinyl Flooring (dark brown wood pattern) & Mastic (yellow) & Leveling Compound (grey)	Category I Non-friable	G	Non-Detected	2-109 2-110 2-111
Resilient Vinyl Flooring (light brown wood pattern) & Mastic (yellow) & Leveling Compound (grey)	Category I Non-friable	G	Non-Detected	2-112 2-113 2-114
12" X 12" Floor Tile (pink w/black & white streaks) & Mastic (yellow) & Leveling Compound (grey)	Category I Non-friable	G	Non-Detected	2-115 2-116 2-117

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Material	Category	Condition	ACM	Sample Number
4" Cove Base (black) w/Mastic (tan)	Category I Non-friable	G	Non-Detected	2-118 2-119 2-120 2-121 2-122 2-123 2-124
Wall/Ceiling Texture (white, semi-smooth) Drywall/Joint Compound	Category II Non-friable	G	Non-Detected	2-125 2-126 2-127
4' X 6' Acoustical Ceiling Tile (light grey, pinhole)	Category II Non-friable	G	Non-Detected	2-128 2-129 2-130
2' X 2' Acoustical Ceiling Tile (white, pinhole, rough finish)	Category II Non-friable	G	Non-Detected	2-131 2-132 2-133
2' X 4' Acoustical Ceiling Tile (white, pinhole & fissured)	Category II Non-friable	G	Non-Detected	2-134 2-135 2-136
2' X 4' Acoustical Ceiling Tile (white, fissured)	Category II Non-friable	G	Non-Detected	2-137 2-138 2-139
Duct Mastic (grey)	Category I Non-friable	G	Non-Detected	2-140 2-141 2-142
Duct Mastic (white)	**Category I Non-friable**	**G**	**5% Chrysotile - White Mastic**	**2-143** **2-144** **2-145**
Interior Building Caulking (white) above Ceiling	Category II Non-friable	G	Non-Detected	2-146 2-147 2-148
Firestop (red, yellow)	Category II Non-friable	G	Non-Detected	2-149 2-150 2-151
Thermal System Insulation (white)	Category II Non-friable	G	Non-Detected	2-179 2-180 2-181
Mastic (black) associated w/Perimeter Walls	**Category I Non-friable**	**G**	**10% Chrysotile**	**2-182** **2-183** **2-184**

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Material	Category	Condition	ACM	Sample Number
Third Floor Survey				
Mastic (yellow) associated w/Carpet (tan w/blue & red stripe pattern)	Category I Non-friable	G	Non-Detected	3-152 3-153 3-154
Mastic (yellow) associated w/Carpet (tan w/yellow & black spot design)	Category I Non-friable	G	Non-Detected	3-145 3-156 3-157
Mastic (yellow) associated w/Carpet (red, blue, & tan multi-color pattern) & Leveling Compound (grey)	Category I Non-friable	G	Non-Detected	3-158 3-159 3-160
Mastic (yellow) associated w/Carpet (grey w/blue & green stripe pattern) & Leveling Compound (grey)	Category I Non-friable	G	Non-Detected	3-161 3-162 3-163
Resilient Vinyl Flooring (light brown, wood pattern) & Mastic (brown	Category I Non-friable	G	Non-Detected	3-164 3-165 3-166
4" Cove Base (dark grey) w/Mastic (tan) -	Category I Non-friable	G	Non-Detected	3-167 3-168 3-169
Sink Undercoating (grey)	Category I Non-friable	G	Non-Detected	3-170 3-171 3-172
Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound	Category II Non-friable	G	Non-Detected	3-173 3-174 3-175 3-176 3-177 3-178 3-179
Wall/Ceiling Cover Paper (light purple, rough) Drywall/Joint Compound	Category II Non-friable	G	Non-Detected	3-180 3-181 3-182
Unfinished Drywall/Joint Compound	Category II Non-friable	G	Non-Detected	3-183 3-184 3-185
4' X 6' Acoustical Ceiling Tile (light grey, pinhole)	Category II Non-friable	G	Non-Detected	3-186 3-187 3-188
2' X 2' Acoustical Ceiling Tile (white, pinhole, rough finish)	Category II Non-friable	G	Non-Detected	3-189 3-190 3-191
Firestop (red)	Category II Non-friable	G	Non-Detected	3-192 3-193 3-194

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Material	Category	Condition	ACM	Samp3e Number
Thermal System Insulation (white)	Category II Non-friable	G	Non-Detected	3-195 3-196 3-197
2' X 4' Acoustical Ceiling Tile (white, pinhole & fissured)	Category II Non-friable	G	Non-Detected	3-198 3-199 3-200
Firestop (grey)	Category II Non-friable	G	Non-Detected	3-201 3-202 3-203
Mastic (black) associated w/Perimeter Walls	**Category I Non-friable**	**G**	**5% Chrysotile**	**3-204 3-205 3-206**
Duct Mastic (white)	**Category I Non-friable**	**G**	**20% Chrysotile**	**3-207 3-208 3-209**
Duct Mastic (grey)	Category I Non-friable	G	Non-Detected	3-210 3-211 3-212
Fireproofing (grey	Category II Non-friable	G	Non-Detected	3-213 3-214 3-215 3-216 3-217
Fourth Floor Survey				
Mastic (red) associated w/Carpet (tan w/multi-color green stripes) & Leveling Compound (grey)	Category I Non-friable	G	Non-Detected	4-218 4-219 4-220
Mastic (yellow) associated w/Carpet (red, blue, & tan multi-color pattern)	Category I Non-friable	G	Non-Detected	4-221 4-222 4-223
Mastic (yellow) associated w/Carpet (tan w/green spot pattern) (stairway, all levels)	Category I Non-friable	G	Non-Detected	4-224 4-225 4-226
12" X 12" Floor Tile (grey w/dark grey & white streaks) & Mastic (yellow) & Leveling Compound (grey)	Category I Non-friable	G	Non-Detected	4-227 4-228 4-229
12" X 12" Floor Tile (dark blue w/black streaks) & Mastic (yellow) & Leveling Compound (grey)	Category I Non-friable	G	Non-Detected	4-230 4-231 4-232
Resilient Vinyl Flooring (light brown, wood pattern) & Mastic (yellow)	Category I Non-friable	G	Non-Detected	4-233 4-234 4-235

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Material	Category	Condition	ACM	Sample Number
4" Cove Base (dark grey) w/Mastic (tan)	Category I Non-friable	G	Non-Detected	4-236 4-237 4-238
Sink Undercoating (grey)	Category I Non-friable	G	Non-Detected	4-239 4-240 4-241
Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound	Category II Non-friable	G	Non-Detected	4-242 4-243 4-244 4-245 4-246 4-247 4-248
Unfinished Drywall/Joint Compound	Category II Non-friable	G	Non-Detected	4-249 4-250 4-251
Firestop (red)	Category II Non-friable	G	Non-Detected	4-252 4-253 4-254
Firestop (grey)	Category II Non-friable	G	Non-Detected	4-255 4-256 4-257
4' X 6' Acoustical Ceiling Tile (light grey, pinhole)	Category II Non-friable	G	Non-Detected	4-258 4-259 4-260
2' X 2' Acoustical Ceiling Tile (white, pinhole, rough finish)	Category II Non-friable	G	Non-Detected	4-261 4-262 4-263
2' X 4' Acoustical Ceiling Tile (white, fissured)	Category II Non-friable	G	Non-Detected	4-264 4-265 4-266
Duct Mastic (grey)	Category I Non-friable	G	Non-Detected	4-267 4-268 4-269
Duct Mastic (white)	Category I Non-friable	G	Non-Detected	4-270 4-271 4-272
Thermal System Insulation (white)	Category II Non-friable	G	Non-Detected	4-273 4-274 4-275
Mastic (black) associated w/Perimeter Walls	**Category II Non-friable**	**G**	**5% Chrysotile**	**4-276** **4-277** **4-278**

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Assumed ACM Materials				
First floor Assumed Materials				
Mastic associated with Raised Wooden Floor Pedestals	Category I Non-friable	G	**Assumed**	**N/A**
Mirror Mastic	Category I Non-friable	G	**Assumed**	**N/A**
Second Floor Assumed Materials				
12”x 12” Ceramic Floor Tile (Grey)	Category II Non-friable	G	**Assumed**	**N/A**
Mirror Mastic	Category I Non-friable	G	**Assumed**	**N/A**
12” x 16” Ceramic Wall Tile (White)	Category II Non-friable	G	**Assumed**	**N/A**
Third Floor Assumed Materials				
Resilient Vinyl Flooring (Red, Wood Pattern)	Category I Non-friable	G	**Assumed**	**N/A**
12”x 12” Ceramic Floor Tile (Grey)	Category II Non-friable	G	**Assumed**	**N/A**
Mirror Mastic	Category I Non-friable	G	**Assumed**	**N/A**
12” x 16” Ceramic Wall Tile (White)	Category II Non-friable	G	**Assumed**	**N/A**
Fourth Floor Assumed Material				
Mastic Associated with Corner Guards	Category I Non-friable	G	**Assumed**	**N/A**
12”x 12” Ceramic Floor Tile (Grey)	Category II Non-friable	G	**Assumed**	**N/A**

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Mirror Mastic	Category I Non-friable	G	**Assumed**	**N/A**
12” x 16” Ceramic Wall Tile (White)	Category II Non-friable	G	**Assumed**	**N/A**

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PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Apex TITAN	Lab Job No.:	PLM-23736
Project (Line 1):	UNT - Gibson Library Floor #2	Set No.:	35092
Project (Line 2):		Report Date:	8/14/2020
Project No:	725010720021	Sample Date:	Not Provided
Identification:	Asbestos, Bulk Sample Analysis		
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 8/13/2020, sixty-four (64) bulk samples were submitted by Mr. Edgar Roque of Apex TITAN for asbestos analysis by PLM/DS. Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL847809	2-94	Mastic (yellow) associated w/Carpet (grey w/blue & green stripe pattern) & Leveling Compound (grey) - Room 200	None Detected - Yellow Mastic None Detected - Leveling Compound
CL847810	2-95	Mastic (yellow) associated w/Carpet (grey w/blue & green stripe pattern) & Leveling Compound (grey) - Room 230H	None Detected - Yellow Mastic None Detected - Leveling Compound
CL847811	2-96	Mastic (yellow) associated w/Carpet (grey w/blue & green stripe pattern) & Leveling Compound (grey) - Room 222G	None Detected - Yellow Mastic None Detected - Leveling Compound
CL847812	2-97	Mastic (yellow) associated w/Carpet (green w/yellow, blue & red spot pattern) - Room 234	None Detected - Yellow Mastic None Detected - Leveling Compound
CL847813	2-98	Mastic (yellow) associated w/Carpet (green w/yellow, blue & red spot pattern) - Room 230D	None Detected - Yellow Mastic None Detected - Leveling Compound
CL847814	2-99	Mastic (yellow) associated w/Carpet (green w/yellow, blue & red spot pattern) - Room 230A	None Detected - Yellow Mastic None Detected - Leveling Compound
CL847815	2-100	Mastic (yellow) associated w/Carpet (tan w/green & red dot pattern) & Leveling Compound (grey) - Room 210	None Detected - Yellow Mastic None Detected - Leveling Compound
CL847816	2-101	Mastic (yellow) associated w/Carpet (tan w/green & red dot pattern) & Leveling Compound (grey) - Room 212	None Detected - Yellow Mastic None Detected - Leveling Compound
CL847817	2-102	Mastic (yellow) associated w/Carpet (tan w/green & red dot pattern) & Leveling Compound (grey) - Room 208	None Detected - Yellow Mastic None Detected - Leveling Compound
CL847818	2-103	Mastic (yellow) associated w/Carpet (light grey w/dark grey stripe pattern) & Leveling Compound (grey) - Room 218E	None Detected - Yellow Mastic None Detected - Leveling Compound
CL847819	2-104	Mastic (yellow) associated w/Carpet (light grey w/dark grey stripe pattern) & Leveling Compound (grey) - Room 218B	None Detected - Yellow Mastic None Detected - Leveling Compound
CL847820	2-105	Mastic (yellow) associated w/Carpet (light grey w/dark grey stripe pattern) & Leveling Compound (grey) - Room 218D	None Detected - Yellow Mastic None Detected - Leveling Compound
CL847821	2-106	Resilient Vinyl Flooring (tan wood pattern) & Mastic (yellow) - Room 225	None Detected - Flooring None Detected - Yellow Mastic
CL847822	2-107	Resilient Vinyl Flooring (tan wood pattern) & Mastic (yellow) - Room 225	None Detected - Flooring None Detected - Yellow Mastic

These samples were analyzed by layers. The overall percent asbestos for the sample is reported when relevant. The EPA considers a material to be asbestos containing only if it contains greater than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) – materials that are friable or may become friable – be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. CatesLab utilizes CVAE on a routine basis and does not include point counting unless specifically requested by the client. The results may not be reproduced except in full.

PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Apex TITAN	Lab Job No.:	PLM-23736
Project (Line 1):	UNT - Gibson Library Floor #2	Set No.:	35092
Project (Line 2):		Report Date:	8/14/2020
Project No:	725010720021	Sample Date:	Not Provided
Identification:	Asbestos, Bulk Sample Analysis		
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 8/13/2020, sixty-four (64) bulk samples were submitted by Mr. Edgar Roque of Apex TITAN for asbestos analysis by PLM/DS. Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL847823	2-108	Resilient Vinyl Flooring (tan wood pattern) & Mastic (yellow) - Room 225	None Detected - Flooring None Detected - Yellow Mastic
CL847824	2-109	Resilient Vinyl Flooring (dark brown wood pattern) & Mastic (yellow) & Leveling Compound (grey) - Room 218	None Detected - Flooring None Detected - Yellow Mastic None Detected - Leveling Compound
CL847825	2-110	Resilient Vinyl Flooring (dark brown wood pattern) & Mastic (yellow) & Leveling Compound (grey) - Room 218	None Detected - Flooring None Detected - Yellow Mastic None Detected - Leveling Compound
CL847826	2-111	Resilient Vinyl Flooring (dark brown wood pattern) & Mastic (yellow) & Leveling Compound (grey) - Room 218	None Detected - Flooring None Detected - Yellow Mastic None Detected - Leveling Compound
CL847827	2-112	Resilient Vinyl Flooring (light brown wood pattern) & Mastic (yellow) & Leveling Compound (grey) - Room 230	None Detected - Flooring None Detected - Yellow Mastic None Detected - Leveling Compound
CL847828	2-113	Resilient Vinyl Flooring (light brown wood pattern) & Mastic (yellow) & Leveling Compound (grey) - Room 222	None Detected - Flooring None Detected - Yellow Mastic None Detected - Leveling Compound
CL847829	2-114	Resilient Vinyl Flooring (light brown wood pattern) & Mastic (yellow) & Leveling Compound (grey) - Room 202	None Detected - Flooring None Detected - Yellow Mastic None Detected - Leveling Compound
CL847830	2-115	12" X 12" Floor Tile (pink w/black & white streaks) & Mastic (yellow) & Leveling Compound (grey) - Room 222A	None Detected - Floor Tile None Detected - Yellow Mastic None Detected - Leveling Compound
CL847831	2-116	12" X 12" Floor Tile (pink w/black & white streaks) & Mastic (yellow) & Leveling Compound (grey) - Room 222A	None Detected - Floor Tile None Detected - Yellow Mastic None Detected - Leveling Compound
CL847832	2-117	12" X 12" Floor Tile (pink w/black & white streaks) & Mastic (yellow) & Leveling Compound (grey) - Room 222A	None Detected - Floor Tile None Detected - Yellow Mastic None Detected - Leveling Compound

These samples were analyzed by layers. The overall percent asbestos for the sample is reported when relevant. The EPA considers a material to be asbestos containing only if it contains greater than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) – materials that are friable or may become friable – be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. CatesLab utilizes CVAE on a routine basis and does not include point counting unless specifically requested by the client. The results may not be reproduced except in full.

PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Apex TITAN	Lab Job No.:	PLM-23736
Project (Line 1):	UNT - Gibson Library Floor #2	Set No.:	35092
Project (Line 2):		Report Date:	8/14/2020
Project No:	725010720021	Sample Date:	Not Provided
Identification:	Asbestos, Bulk Sample Analysis		
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 8/13/2020, sixty-four (64) bulk samples were submitted by Mr. Edgar Roque of Apex TITAN for asbestos analysis by PLM/DS.
Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL847833	2-118	4" Cove Base (black) w/Mastic (tan) - Room 206	None Detected - Cove Base None Detected - Tan Mastic
CL847834	2-119	4" Cove Base (black) w/Mastic (tan) - Hallway 2L4	None Detected - Cove Base None Detected - Tan Mastic
CL847835	2-120	4" Cove Base (black) w/Mastic (tan) - Room 222C	None Detected - Cove Base None Detected - Tan Mastic
CL847836	2-121	Wall/Ceiling Texture (white, semi-smooth) Drywall/Joint Compound - Room 2L2	None Detected - Paint Texture None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL847837	2-122	Wall/Ceiling Texture (white, semi-smooth) Drywall/Joint Compound - Room 234	None Detected - Paint Texture None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL847838	2-123	Wall/Ceiling Texture (white, semi-smooth) Drywall/Joint Compound - Room 222F	None Detected - Paint Texture None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL847839	2-124	Wall/Ceiling Texture (white, semi-smooth) Drywall/Joint Compound - Room 220	None Detected - Paint Texture None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL847840	2-125	Wall/Ceiling Texture (white, semi-smooth) Drywall/Joint Compound - Room 218E	None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL847841	2-126	Wall/Ceiling Texture (white, semi-smooth) Drywall/Joint Compound - Room 211	None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material

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PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Apex TITAN	Lab Job No.:	PLM-23736
Project (Line 1):	UNT - Gibson Library Floor #2	Set No.:	35092
Project (Line 2):		Report Date:	8/14/2020
Project No:	725010720021	Sample Date:	Not Provided
Identification:	Asbestos, Bulk Sample Analysis		
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 8/13/2020, sixty-four (64) bulk samples were submitted by Mr. Edgar Roque of Apex TITAN for asbestos analysis by PLM/DS.
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Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL847842	2-127	Wall/Ceiling Texture (white, semi-smooth) Drywall/Joint Compound - Room 206	None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL847843	2-128	4' X 6' Acoustical Ceiling Tile (light grey, pinhole) - Room 200	None Detected
CL847844	2-129	4' X 6' Acoustical Ceiling Tile (light grey, pinhole) - Room 129	None Detected
CL847845	2-130	4' X 6' Acoustical Ceiling Tile (light grey, pinhole) - Room 200	None Detected
CL847846	2-131	2' X 2' Acoustical Ceiling Tile (white, pinhole, rough finish) - Room 222	None Detected
CL847847	2-132	2' X 2' Acoustical Ceiling Tile (white, pinhole, rough finish) - Room 202	None Detected
CL847848	2-133	2' X 2' Acoustical Ceiling Tile (white, pinhole, rough finish) - Room 2T2	None Detected
CL847849	2-134	2' X 4' Acoustical Ceiling Tile (white, pinhole & fissured) - Room 2L2	None Detected
CL847850	2-135	2' X 4' Acoustical Ceiling Tile (white, pinhole & fissured) - Room 230C	None Detected
CL847851	2-136	2' X 4' Acoustical Ceiling Tile (white, pinhole & fissured) - Room 230	None Detected
CL847852	2-137	2' X 4' Acoustical Ceiling Tile (white, fissured) - Room 2A	None Detected
CL847853	2-138	2' X 4' Acoustical Ceiling Tile (white, fissured) - Room 222F	None Detected
CL847854	2-139	2' X 4' Acoustical Ceiling Tile (white, fissured) - Room 212	None Detected
CL847855	2-140	Duct Mastic (grey) - Room 204	None Detected
CL847856	2-141	Duct Mastic (grey) - Room 2ME2	None Detected
CL847857	2-142	Duct Mastic (grey) - Room 2T1A	None Detected
CL847858	2-143	Duct Mastic (white) - Room 200	5% Chrysotile - White Mastic None Detected - Wrap None Detected - Insulation
CL847859	2-144	Duct Mastic (white) - Room 222	Not Analyzed - Positive Stop
CL847860	2-145	Duct Mastic (white) - Room 204D	Not Analyzed - Positive Stop

These samples were analyzed by layers. The overall percent asbestos for the sample is reported when relevant. The EPA considers a material to be asbestos containing only if it contains greater than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) – materials that are friable or may become friable – be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. CatesLab utilizes CVAE on a routine basis and does not include point counting unless specifically requested by the client. The results may not be reproduced except in full.

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NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Apex TITAN	Lab Job No.:	PLM-23736
Project (Line 1):	UNT - Gibson Library Floor #2	Set No.:	35092
Project (Line 2):		Report Date:	8/14/2020
Project No:	725010720021	Sample Date:	Not Provided
Identification:	Asbestos, Bulk Sample Analysis		
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 8/13/2020, sixty-four (64) bulk samples were submitted by Mr. Edgar Roque of Apex TITAN for asbestos analysis by PLM/DS.
Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL847861	2-146	Interior Building Caulking (white) above Ceiling - Room 2T1A	None Detected
CL847862	2-147	Interior Building Caulking (white) above Ceiling - Room 230	None Detected
CL847863	2-148	Interior Building Caulking (white) above Ceiling - Room 218C	None Detected
CL847864	2-149	Firestop (red, yellow) - Room 2T1A	None Detected
CL847865	2-150	Firestop (red, yellow) - Room 206	None Detected
CL847866	2-151	Firestop (red, yellow) - Room 2ME1	None Detected
CL847867	2-279	Thermal System Insulation (white) - Room 200	None Detected - White Mastic None Detected - Wrap None Detected - Insulation
CL847868	2-280	Thermal System Insulation (white) - Room 204A	None Detected - White Mastic None Detected - Wrap None Detected - Insulation
CL847869	2-281	Thermal System Insulation (white) - Room 206	None Detected - White Mastic None Detected - Wrap None Detected - Insulation
CL847870	2-282	Mastic (black) associated w/Perimeter Walls - Room 207	10% Chrysotile
CL847871	2-283	Mastic (black) associated w/Perimeter Walls - Room 218D	Not Analyzed - Positive Stop
CL847872	2-284	Mastic (black) associated w/Perimeter Walls - Room 220	Not Analyzed - Positive Stop

These samples were analyzed by layers. The overall percent asbestos for the sample is reported when relevant. The EPA considers a material to be asbestos containing only if it contains greater than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) – materials that are friable or may become friable – be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. CatesLab utilizes CVAE on a routine basis and does not include point counting unless specifically requested by the client. The results may not be reproduced except in full.

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Client:	Apex TITAN	Lab Job No.:	PLM-23736
Project (Line 1):	UNT - Gibson Library Floor #2	Set No.:	35092
Project (Line 2):		Report Date:	8/14/2020
Project No:	725010720021	Sample Date:	Not Provided
Identification:	Asbestos, Bulk Sample Analysis		
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 8/13/2020, sixty-four (64) bulk samples were submitted by Mr. Edgar Roque of Apex TITAN for asbestos analysis by PLM/DS.
Copies of the lab data sheets are attached; additional information may be found therein.

STATEMENT OF LABORATORY ACCREDITATION

The samples were analyzed in general accordance with the procedures outlined in the Method for the Determination of Asbestos in Bulk Building Materials, EPA/600/R-93/116 or the U.S. Environmental Protection Agency EPA 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, by polarized light microscopy. The results of each bulk sample relate only to the material tested and the results shall not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Specific questions concerning bulk sample results shall be directed to the Laboratory Director.

Analyst: Curtis Grigg

Laboratory Director: John R. Cates, P.G.

Approved Signatory:

NVLAP LAB CODE 200569-0

PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Apex TITAN	Lab Job No.:	PLM-23736
Project (Line 1):	UNT - Gibson Library	Set No.:	35093
Project (Line 2):		Report Date:	8/14/2020
Project No:	725010720021	Sample Date:	Not Provided
Identification:	Asbestos, Bulk Sample Analysis		
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 8/13/2020, sixty-six (66) bulk samples were submitted by Mr. Edgar Roque of Apex TITAN for asbestos analysis by PLM/DS.
Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL847873	3-152	Mastic (yellow) associated w/Carpet (tan w/blue & red stripe pattern) - Room 300	None Detected
CL847874	3-153	Mastic (yellow) associated w/Carpet (tan w/blue & red stripe pattern) - Room 302	None Detected
CL847875	3-154	Mastic (yellow) associated w/Carpet (tan w/blue & red stripe pattern) - Room 318	None Detected
CL847876	3-155	Mastic (yellow) associated w/Carpet (tan w/yellow & black spot design) - Room 316	None Detected
CL847877	3-156	Mastic (yellow) associated w/Carpet (tan w/yellow & black spot design) - Room 306	None Detected
CL847878	3-157	Mastic (yellow) associated w/Carpet (tan w/yellow & black spot design) - Room 316	None Detected
CL847879	3-158	Mastic (yellow) associated w/Carpet (red, blue, & tan multi-color pattern) & Leveling Compound (grey) - Room 308	None Detected - Yellow Mastic None Detected - Leveling Compound
CL847880	3-159	Mastic (yellow) associated w/Carpet (red, blue, & tan multi-color pattern) & Leveling Compound (grey) - Room 308	None Detected - Yellow Mastic None Detected - Leveling Compound
CL847881	3-160	Mastic (yellow) associated w/Carpet (red, blue, & tan multi-color pattern) & Leveling Compound (grey) - Room 308	None Detected - Yellow Mastic None Detected - Leveling Compound
CL847882	3-161	Mastic (yellow) associated w/Carpet (grey w/blue & green stripe pattern) & Leveling Compound (grey) - Room 313	None Detected - Yellow Mastic None Detected - Leveling Compound
CL847883	3-162	Mastic (yellow) associated w/Carpet (grey w/blue & green stripe pattern) & Leveling Compound (grey) - Room 313B	None Detected - Yellow Mastic None Detected - Leveling Compound
CL847884	3-163	Mastic (yellow) associated w/Carpet (grey w/blue & green stripe pattern) & Leveling Compound (grey) - Room 313A	None Detected - Yellow Mastic None Detected - Leveling Compound
CL847885	3-164	Resilient Vinyl Flooring (light brown, wood pattern) & Mastic (brown) - Room 310	None Detected - Sheet Flooring None Detected - Yellow Mastic None Detected - Vapor Barrier

These samples were analyzed by layers. The overall percent asbestos for the sample is reported when relevant. The EPA considers a material to be asbestos containing only if it contains greater than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) – materials that are friable or may become friable – be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. CatesLab utilizes CVAE on a routine basis and does not include point counting unless specifically requested by the client. The results may not be reproduced except in full.

PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Apex TITAN	Lab Job No.:	PLM-23736
Project (Line 1):	UNT - Gibson Library	Set No.:	35093
Project (Line 2):		Report Date:	8/14/2020
Project No:	725010720021	Sample Date:	Not Provided
Identification:	Asbestos, Bulk Sample Analysis		
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 8/13/2020, sixty-six (66) bulk samples were submitted by Mr. Edgar Roque of Apex TITAN for asbestos analysis by PLM/DS.
Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL847886	3-165	Resilient Vinyl Flooring (light brown, wood pattern) & Mastic (brown) - Room 310C	None Detected - Sheet Flooring None Detected - Yellow Mastic None Detected - Vapor Barrier
CL847887	3-166	Resilient Vinyl Flooring (light brown, wood pattern) & Mastic (brown) - Hallway 3A	None Detected - Sheet Flooring None Detected - Yellow Mastic None Detected - Vapor Barrier
CL847888	3-167	4" Cove Base (dark grey) w/Mastic (tan) - Room 300	None Detected - Cove Base None Detected - Tan Mastic
CL847889	3-168	4" Cove Base (dark grey) w/Mastic (tan) - Room 310G	None Detected - Cove Base None Detected - Tan Mastic
CL847890	3-169	4" Cove Base (dark grey) w/Mastic (tan) - Room 312	None Detected - Cove Base None Detected - Tan Mastic
CL847891	3-170	Sink Undercoating (grey) - Room 313A	None Detected
CL847892	3-171	Sink Undercoating (grey) - Room 313A	None Detected
CL847893	3-172	Sink Undercoating (grey) - Room 313A	None Detected
CL847894	3-173	Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 320	None Detected - Paint Texture None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL847895	3-174	Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 311	None Detected - Paint Texture None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL847896	3-175	Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 313	None Detected - Paint Texture None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material

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PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
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NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Apex TITAN	Lab Job No.:	PLM-23736
Project (Line 1):	UNT - Gibson Library	Set No.:	35093
Project (Line 2):		Report Date:	8/14/2020
Project No:	725010720021	Sample Date:	Not Provided
Identification:	Asbestos, Bulk Sample Analysis		
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 8/13/2020, sixty-six (66) bulk samples were submitted by Mr. Edgar Roque of Apex TITAN for asbestos analysis by PLM/DS.
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Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL847897	3-176	Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 311A	None Detected - Texture None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL847898	3-177	Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 310	None Detected - Paint Texture None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL847899	3-178	Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 310D	None Detected - Paint Texture None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL847900	3-179	Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 3SC1	None Detected - Paint Texture None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL847901	3-180	Wall/Ceiling Cover Paper (light purple, rough) Drywall/Joint Compound - Room 300	None Detected - Wall Covering None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL847902	3-181	Wall/Ceiling Cover Paper (light purple, rough) Drywall/Joint Compound - Room 300	None Detected - Wall Covering None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL847903	3-182	Wall/Ceiling Cover Paper (light purple, rough) Drywall/Joint Compound - Room 300	None Detected - Wall Covering None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material

These samples were analyzed by layers. The overall percent asbestos for the sample is reported when relevant. The EPA considers a material to be asbestos containing only if it contains greater than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) – materials that are friable or may become friable – be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. CatesLab utilizes CVAE on a routine basis and does not include point counting unless specifically requested by the client. The results may not be reproduced except in full.

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Client:	Apex TITAN	Lab Job No.:	PLM-23736
Project (Line 1):	UNT - Gibson Library	Set No.:	35093
Project (Line 2):		Report Date:	8/14/2020
Project No:	725010720021	Sample Date:	Not Provided
Identification:	Asbestos, Bulk Sample Analysis		
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 8/13/2020, sixty-six (66) bulk samples were submitted by Mr. Edgar Roque of Apex TITAN for asbestos analysis by PLM/DS.
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Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL847904	3-183	Unfinished Drywall/Joint Compound - Room 3ME1	None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL847905	3-184	Unfinished Drywall/Joint Compound - Room 3ME2	None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL847906	3-185	Unfinished Drywall/Joint Compound - Room 3ME2	None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL847907	3-186	4' X 6' Acoustical Ceiling Tile (light grey, pinhole) - Room 300	None Detected
CL847908	3-187	4' X 6' Acoustical Ceiling Tile (light grey, pinhole) - Room 300	None Detected
CL847909	3-188	4' X 6' Acoustical Ceiling Tile (light grey, pinhole) - Room 306	None Detected
CL847910	3-189	2' X 2' Acoustical Ceiling Tile (white, pinhole, rough finish) - Room 319	None Detected
CL847911	3-190	2' X 2' Acoustical Ceiling Tile (white, pinhole, rough finish) - Room 312	None Detected
CL847912	3-191	2' X 2' Acoustical Ceiling Tile (white, pinhole, rough finish) - Restroom 3T1	None Detected
CL847913	3-192	Firestop (red) - Room 3ME1	None Detected
CL847914	3-193	Firestop (red) - Room 3ME2	None Detected
CL847915	3-194	Firestop (red) - Room 3ME2	None Detected
CL847916	3-195	Thermal System Insulation (white) - Room 3ME2	None Detected - White Mastic None Detected - Wrap
CL847917	3-196	Thermal System Insulation (white) - Room 300	None Detected - White Mastic None Detected - Wrap

These samples were analyzed by layers. The overall percent asbestos for the sample is reported when relevant. The EPA considers a material to be asbestos containing only if it contains greater than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) – materials that are friable or may become friable – be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. CatesLab utilizes CVAE on a routine basis and does not include point counting unless specifically requested by the client. The results may not be reproduced except in full.

PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: Apex TITAN
Project (Line 1): UNT - Gibson Library
Project (Line 2):
Project No: 725010720021
Identification: Asbestos, Bulk Sample Analysis
Test Method: Polarized Light Microscopy/Dispersion Staining (PLM/DS)
EPA Method 600/R-93/116

Lab Job No.: PLM-23736
Set No.: 35093
Report Date: 8/14/2020
Sample Date: Not Provided

On 8/13/2020, sixty-six (66) bulk samples were submitted by Mr. Edgar Roque of Apex TITAN for asbestos analysis by PLM/DS.
Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL847918	3-197	Thermal System Insulation (white) - Room 300	None Detected - White Mastic None Detected - Wrap
CL847919	3-198	2' X 4' Acoustical Ceiling Tile (white, pinhole & fissured) - Room 313	None Detected
CL847920	3-199	2' X 4' Acoustical Ceiling Tile (white, pinhole & fissured) - Room 313AA	None Detected
CL847921	3-200	2' X 4' Acoustical Ceiling Tile (white, pinhole & fissured) - Room 310	None Detected
CL847922	3-201	Firestop (grey) - Room 3ME1	None Detected
CL847923	3-202	Firestop (grey) - Room 3ME2	None Detected
CL847924	3-203	Firestop (grey) - Room 3ME2	None Detected
CL847925	3-204	Mastic (black) associated w/Perimeter Walls - Room 300	5% Chrysotile
CL847926	3-205	Mastic (black) associated w/Perimeter Walls - Room 312A	Not Analyzed - Positive Stop
CL847927	3-206	Mastic (black) associated w/Perimeter Walls - Room 310B	Not Analyzed - Positive Stop
CL847928	3-207	Duct Mastic (white) - Room 300	20% Chrysotile
CL847929	3-208	Duct Mastic (white) - Room 300	Not Analyzed - Positive Stop
CL847930	3-209	Duct Mastic (white) - Room 320	Not Analyzed - Positive Stop
CL847931	3-210	Duct Mastic (grey) - Room 300	None Detected
CL847932	3-211	Duct Mastic (grey) - Room 300	None Detected
CL847933	3-212	Duct Mastic (grey) - Room 311	None Detected
CL847934	3-213	Fireproofing (grey) - Room 300	None Detected
CL847935	3-214	Fireproofing (grey) - Room 300	None Detected
CL847936	3-215	Fireproofing (grey) - Room 300	None Detected
CL847937	3-216	Fireproofing (grey) - Room 300	None Detected

These samples were analyzed by layers. The overall percent asbestos for the sample is reported when relevant. The EPA considers a material to be asbestos containing only if it contains greater than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) – materials that are friable or may become friable – be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. CatesLab utilizes CVAE on a routine basis and does not include point counting unless specifically requested by the client. The results may not be reproduced except in full.

PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Apex TITAN	Lab Job No.:	PLM-23736
Project (Line 1):	UNT - Gibson Library	Set No.:	35093
Project (Line 2):		Report Date:	8/14/2020
Project No:	725010720021	Sample Date:	Not Provided
Identification:	Asbestos, Bulk Sample Analysis		
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 8/13/2020, sixty-six (66) bulk samples were submitted by Mr. Edgar Roque of Apex TITAN for asbestos analysis by PLM/DS.
Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL847938	3-217	Fireproofing (grey) - Room 300	None Detected

These samples were analyzed by layers. The overall percent asbestos for the sample is reported when relevant. The EPA considers a material to be asbestos containing only if it contains greater than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) – materials that are friable or may become friable – be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. CatesLab utilizes CVAE on a routine basis and does not include point counting unless specifically requested by the client. The results may not be reproduced except in full.

PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Apex TITAN	Lab Job No.:	PLM-23736
Project (Line 1):	UNT - Gibson Library	Set No.:	35093
Project (Line 2):		Report Date:	8/14/2020
Project No:	725010720021	Sample Date:	Not Provided
Identification:	Asbestos, Bulk Sample Analysis		
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 8/13/2020, sixty-six (66) bulk samples were submitted by Mr. Edgar Roque of Apex TITAN for asbestos analysis by PLM/DS.
Copies of the lab data sheets are attached; additional information may be found therein.

STATEMENT OF LABORATORY ACCREDITATION

The samples were analyzed in general accordance with the procedures outlined in the Method for the Determination of Asbestos in Bulk Building Materials, EPA/600/R-93/116 or the U.S. Environmental Protection Agency EPA 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, by polarized light microscopy. The results of each bulk sample relate only to the material tested and the results shall not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Specific questions concerning bulk sample results shall be directed to the Laboratory Director.

Analyst: Kathy Schosek

Laboratory Director: John R. Cates, P.G.

Approved Signatory:

NVLAP LAB CODE 200569-0

PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Apex TITAN	Lab Job No.:	PLM-23736
Project (Line 1):	UNT - Gibson Library Floor #4	Set No.:	35094
Project (Line 2):		Report Date:	8/17/2020
Project No:	725010720021	Sample Date:	Not Provided
Identification:	Asbestos, Bulk Sample Analysis		
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 8/13/2020, sixty-one (61) bulk samples were submitted by Mr. Edgar Roque of Apex TITAN for asbestos analysis by PLM/DS. Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL847939	4-218	Mastic (red) associated w/Carpet (tan w/multi-color green stripes) & Leveling Compound (grey) - Room 470	None Detected
CL847940	4-219	Mastic (red) associated w/Carpet (tan w/multi-color green stripes) & Leveling Compound (grey) - Room 450	None Detected
CL847941	4-220	Mastic (red) associated w/Carpet (tan w/multi-color green stripes) & Leveling Compound (grey) - Hallway 4L1	None Detected
CL847942	4-221	Mastic (yellow) associated w/Carpet (red, blue, & tan multi-color pattern) - Room 404	None Detected
CL847943	4-222	Mastic (yellow) associated w/Carpet (red, blue, & tan multi-color pattern) - Room 404	None Detected
CL847944	4-223	Mastic (yellow) associated w/Carpet (red, blue, & tan multi-color pattern) - Room 405	None Detected
CL847945	4-224	Mastic (yellow) associated w/Carpet (tan w/green spot pattern) (stairway, all levels) - Stairway 4S4	None Detected
CL847946	4-225	Mastic (yellow) associated w/Carpet (tan w/green spot pattern) (stairway, all levels) - Stairway 3S4	None Detected
CL847947	4-226	Mastic (yellow) associated w/Carpet (tan w/green spot pattern) (stairway, all levels) - Stairway 2S4	None Detected
CL847948	4-227	12" X 12" Floor Tile (grey w/dark grey & white streaks) & Mastic (yellow) & Leveling Compound (grey) - Room 450A	None Detected - Floor Tile None Detected - Yellow Mastic
CL847949	4-228	12" X 12" Floor Tile (grey w/dark grey & white streaks) & Mastic (yellow) & Leveling Compound (grey) - Room 450A	None Detected - Floor Tile None Detected - Yellow Mastic
CL847950	4-229	12" X 12" Floor Tile (grey w/dark grey & white streaks) & Mastic (yellow) & Leveling Compound (grey) - Room 450A	None Detected - Floor Tile None Detected - Yellow Mastic
CL847951	4-230	12" X 12" Floor Tile (dark blue w/black streaks) & Mastic (yellow) & Leveling Compound (grey) - Room 410	None Detected - Floor Tile None Detected - Yellow Mastic
CL847952	4-231	12" X 12" Floor Tile (dark blue w/black streaks) & Mastic (yellow) & Leveling Compound (grey) - Room 410	None Detected - Floor Tile None Detected - Yellow Mastic

These samples were analyzed by layers. The overall percent asbestos for the sample is reported when relevant. The EPA considers a material to be asbestos containing only if it contains greater than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) – materials that are friable or may become friable – be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. CatesLab utilizes CVAE on a routine basis and does not include point counting unless specifically requested by the client. The results may not be reproduced except in full.

PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Apex TITAN	Lab Job No.:	PLM-23736
Project (Line 1):	UNT - Gibson Library Floor #4	Set No.:	35094
Project (Line 2):		Report Date:	8/17/2020
Project No:	725010720021	Sample Date:	Not Provided
Identification:	Asbestos, Bulk Sample Analysis		
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 8/13/2020, sixty-one (61) bulk samples were submitted by Mr. Edgar Roque of Apex TITAN for asbestos analysis by PLM/DS.
Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL847953	4-232	12" X 12" Floor Tile (dark blue w/black streaks) & Mastic (yellow) & Leveling Compound (grey) - Room 410	None Detected - Floor Tile None Detected - Yellow Mastic
CL847954	4-233	Resilient Vinyl Flooring (light brown, wood pattern) & Mastic (yellow) - Room 401	None Detected - Flooring None Detected - Yellow Mastic None Detected - Vapor Barrier
CL847955	4-234	Resilient Vinyl Flooring (light brown, wood pattern) & Mastic (yellow) - Room 400	None Detected - Flooring None Detected - Yellow Mastic None Detected - Vapor Barrier
CL847956	4-235	Resilient Vinyl Flooring (light brown, wood pattern) & Mastic (yellow) - Room 454	None Detected - Flooring None Detected - Yellow Mastic None Detected - Vapor Barrier
CL847957	4-236	4" Cove Base (dark grey) w/Mastic (tan) - by Room 470	None Detected - Cove Base None Detected - Tan Mastic
CL847958	4-237	4" Cove Base (dark grey) w/Mastic (tan) - by Room 4T1	None Detected - Cove Base None Detected - Tan Mastic
CL847959	4-238	4" Cove Base (dark grey) w/Mastic (tan) - Room 448	None Detected - Cove Base None Detected - Tan Mastic
CL847960	4-239	Sink Undercoating (grey) - Room 401	None Detected
CL847961	4-240	Sink Undercoating (grey) - Room 401	None Detected
CL847962	4-241	Sink Undercoating (grey) - Room 401	None Detected
CL847963	4-242	Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 470	None Detected - Paint Texture None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material

These samples were analyzed by layers. The overall percent asbestos for the sample is reported when relevant. The EPA considers a material to be asbestos containing only if it contains greater than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) – materials that are friable or may become friable – be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. CatesLab utilizes CVAE on a routine basis and does not include point counting unless specifically requested by the client. The results may not be reproduced except in full.

PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Apex TITAN	Lab Job No.:	PLM-23736
Project (Line 1):	UNT - Gibson Library Floor #4	Set No.:	35094
Project (Line 2):		Report Date:	8/17/2020
Project No:	725010720021	Sample Date:	Not Provided
Identification:	Asbestos, Bulk Sample Analysis		
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 8/13/2020, sixty-one (61) bulk samples were submitted by Mr. Edgar Roque of Apex TITAN for asbestos analysis by PLM/DS. Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL847964	4-243	Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 460	None Detected - Paint Texture None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL847965	4-244	Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 428	None Detected - Paint Texture None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL847966	4-245	Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 401	None Detected - Paint Texture None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL847967	4-246	Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 244	None Detected - Paint Texture None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL847968	4-247	Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 448	None Detected - Paint Texture None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL847969	4-248	Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 257	None Detected - Paint Texture None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL847970	4-249	Unfinished Drywall/Joint Compound - Room 4ME1	None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material

These samples were analyzed by layers. The overall percent asbestos for the sample is reported when relevant. The EPA considers a material to be asbestos containing only if it contains greater than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) – materials that are friable or may become friable – be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. CatesLab utilizes CVAE on a routine basis and does not include point counting unless specifically requested by the client. The results may not be reproduced except in full.

PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Apex TITAN	Lab Job No.:	PLM-23736
Project (Line 1):	UNT - Gibson Library Floor #4	Set No.:	35094
Project (Line 2):		Report Date:	8/17/2020
Project No:	725010720021	Sample Date:	Not Provided
Identification:	Asbestos, Bulk Sample Analysis		
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 8/13/2020, sixty-one (61) bulk samples were submitted by Mr. Edgar Roque of Apex TITAN for asbestos analysis by PLM/DS.
Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL847971	4-250	Unfinished Drywall/Joint Compound - Room 4ME1	None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL847972	4-251	Unfinished Drywall/Joint Compound - Room 4ME1	None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL847973	4-252	Firestop (red) - Room 4ME2	None Detected
CL847974	4-253	Firestop (red) - Room 4ME2	None Detected
CL847975	4-254	Firestop (red) - Room 4ME1	None Detected
CL847976	4-255	Firestop (grey) - Room 4ME1	2% Chrysotile
CL847977	4-256	Firestop (grey) - Room 4ME3	Not Analyzed - Positive Stop
CL847978	4-257	Firestop (grey) - Room 4ME3	Not Analyzed - Positive Stop
CL847979	4-258	4' X 6' Acoustical Ceiling Tile (light grey, pinhole) - Room 446	None Detected
CL847980	4-259	4' X 6' Acoustical Ceiling Tile (light grey, pinhole) - Room 460	None Detected
CL847981	4-260	4' X 6' Acoustical Ceiling Tile (light grey, pinhole) - Room 430	None Detected
CL847982	4-261	2' X 2' Acoustical Ceiling Tile (white, pinhole, rough finish) - Room 450A	None Detected
CL847983	4-262	2' X 2' Acoustical Ceiling Tile (white, pinhole, rough finish) - Room 461	None Detected
CL847984	4-263	2' X 2' Acoustical Ceiling Tile (white, pinhole, rough finish) - Restroom 4T1	None Detected
CL847985	4-264	2' X 4' Acoustical Ceiling Tile (white, fissured) - Room 418	None Detected
CL847986	4-265	2' X 4' Acoustical Ceiling Tile (white, fissured) - Room 432	None Detected
CL847987	4-266	2' X 4' Acoustical Ceiling Tile (white, fissured) - Room 434	None Detected

These samples were analyzed by layers. The overall percent asbestos for the sample is reported when relevant. The EPA considers a material to be asbestos containing only if it contains greater than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) – materials that are friable or may become friable – be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. CatesLab utilizes CVAE on a routine basis and does not include point counting unless specifically requested by the client. The results may not be reproduced except in full.

PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Apex TITAN	Lab Job No.:	PLM-23736
Project (Line 1):	UNT - Gibson Library Floor #4	Set No.:	35094
Project (Line 2):		Report Date:	8/17/2020
Project No:	725010720021	Sample Date:	Not Provided
Identification:	Asbestos, Bulk Sample Analysis		
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 8/13/2020, sixty-one (61) bulk samples were submitted by Mr. Edgar Roque of Apex TITAN for asbestos analysis by PLM/DS.
Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL847988	4-267	Duct Mastic (grey) - Room 4ME3	None Detected
CL847989	4-268	Duct Mastic (grey) - Room 428	None Detected
CL847990	4-269	Duct Mastic (grey) - Room 400	None Detected
CL847991	4-270	Duct Mastic (white) - Room 446	None Detected
CL847992	4-271	Duct Mastic (white) - Room 470	None Detected
CL847993	4-272	Duct Mastic (white) - Hallway 4C	None Detected
CL847994	4-273	Thermal System Insulation (white) - Room 460	None Detected - White Mastic None Detected - Wrap None Detected - Insulation
CL847995	4-274	Thermal System Insulation (white) - Room 446	None Detected - White Mastic None Detected - Wrap None Detected - Insulation
CL847996	4-275	Thermal System Insulation (white) - Room 4ME3	None Detected - White Mastic None Detected - Wrap None Detected - Insulation
CL847997	4-276	Mastic (black) associated w/Perimeter Walls - Room 470	5% Chrysotile
CL847998	4-277	Mastic (black) associated w/Perimeter Walls - Room 453	Not Analyzed - Positive Stop
CL847999	4-278	Mastic (black) associated w/Perimeter Walls - Room 400	Not Analyzed - Positive Stop

These samples were analyzed by layers. The overall percent asbestos for the sample is reported when relevant. The EPA considers a material to be asbestos containing only if it contains greater than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) – materials that are friable or may become friable – be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. CatesLab utilizes CVAE on a routine basis and does not include point counting unless specifically requested by the client. The results may not be reproduced except in full.

PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Apex TITAN	Lab Job No.:	PLM-23736
Project (Line 1):	UNT - Gibson Library Floor #4	Set No.:	35094
Project (Line 2):		Report Date:	8/17/2020
Project No:	725010720021	Sample Date:	Not Provided
Identification:	Asbestos, Bulk Sample Analysis		
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 8/13/2020, sixty-one (61) bulk samples were submitted by Mr. Edgar Roque of Apex TITAN for asbestos analysis by PLM/DS.
Copies of the lab data sheets are attached; additional information may be found therein.

STATEMENT OF LABORATORY ACCREDITATION

The samples were analyzed in general accordance with the procedures outlined in the Method for the Determination of Asbestos in Bulk Building Materials, EPA/600/R-93/116 or the U.S. Environmental Protection Agency EPA 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, by polarized light microscopy. The results of each bulk sample relate only to the material tested and the results shall not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Specific questions concerning bulk sample results shall be directed to the Laboratory Director.

Analyst: Kathy Schosek

Laboratory Director: John R. Cates, P.G.

Approved Signatory:

NVLAP LAB CODE 200569-0

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-94**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847809**

Sample Description: **Mastic (yellow) associated w/Carpet (grey w/blue & green stripe pattern) & Leveling Compound (grey) - Room 200**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Leveling Compound**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	3		ribbons				high		
Aggregate/Binders	97		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847809**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-95**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847810**

Sample Description: **Mastic (yellow) associated w/Carpet (grey w/blue & green stripe pattern) & Leveling Compound (grey) - Room 230H**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Leveling Compound**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	3		ribbons				high		
Aggregate/Binders	97		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847810**

Bulk Asbestos Analysis Sheet

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Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-96**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847811**

Sample Description: **Mastic (yellow) associated w/Carpet (grey w/blue & green stripe pattern) & Leveling Compound (grey) - Room 222G**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Leveling Compound**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	3		ribbons				high		
Aggregate/Binders	97		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847811**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-97**
Sample Description: **Mastic (yellow) associated w/Carpet (green w/yellow, blue & red spot pattern) - Room 234**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847812**
Page 1 of 1

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Leveling Compound**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	3		ribbons				high		
Aggregate/Binders	97		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847812**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-98**
Sample Description: **Mastic (yellow) associated w/Carpet (green w/yellow, blue & red spot pattern) - Room 230D**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847813**
Page 1 of 1

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Leveling Compound**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	3		ribbons				high		
Aggregate/Binders	97		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847813**

Bulk Asbestos Analysis Sheet

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NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-99**
Sample Description: **Mastic (yellow) associated w/Carpet (green w/yellow, blue & red spot pattern) - Room 230A**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847814**
Page 1 of 1

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Leveling Compound**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	3		ribbons				high		
Aggregate/Binders	97		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847814**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-100**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847815**

Sample Description: **Mastic (yellow) associated w/Carpet (tan w/green & red dot pattern) & Leveling Compound (grey) - Room 210**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Leveling Compound**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	3		ribbons				high		
Aggregate/Binders	97		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847815**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-101**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847816**

Sample Description: **Mastic (yellow) associated w/Carpet (tan w/green & red dot pattern) & Leveling Compound (grey) - Room 212**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Leveling Compound**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	3		ribbons				high		
Aggregate/Binders	97		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847816**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-102**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847817**

Sample Description: **Mastic (yellow) associated w/Carpet (tan w/green & red dot pattern) & Leveling Compound (grey) - Room 208**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**50**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Leveling Compound**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Blocky**	**Yes**	**ND**	**ND**	**50**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**3**		**ribbons**				**high**		
Aggregate/Binders	**97**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847817**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-103**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847818**

Sample Description: **Mastic (yellow) associated w/Carpet (light grey w/dark grey stripe pattern) & Leveling Compound (grey) - Room 218E**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Leveling Compound**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	3		ribbons				high		
Aggregate/Binders	97		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847818**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-104**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847819**
Page 1 of 1

Sample Description: **Mastic (yellow) associated w/Carpet (light grey w/dark grey stripe pattern) & Leveling Compound (grey) - Room 218B**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Leveling Compound**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	3		ribbons				high		
Aggregate/Binders	97		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847819**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-105**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847820**

Sample Description: **Mastic (yellow) associated w/Carpet (light grey w/dark grey stripe pattern) & Leveling Compound (grey) - Room 218D**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Leveling Compound**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	3		ribbons				high		
Aggregate/Binders	97		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847820**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-106**
Sample Description: **Resilient Vinyl Flooring (tan wood pattern) & Mastic (yellow) - Room 225**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847821**

Layer 1 **Flooring**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	**Hard**	**Yes**	**ND**	**ND**	**99**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**1**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847821**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-107**
Sample Description: **Resilient Vinyl Flooring (tan wood pattern) & Mastic (yellow) - Room 225**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847822**

Layer 1 **Flooring**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	**Hard**	**Yes**	**ND**	**ND**	**99**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**1**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847822**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-108**
Sample Description: **Resilient Vinyl Flooring (tan wood pattern) & Mastic (yellow) - Room 225**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847823**

Layer 1 **Flooring**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	**Hard**	**Yes**	**ND**	**ND**	**99**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**1**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847823**

Bulk Asbestos Analysis Sheet

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NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-109**
Sample Description: **Resilient Vinyl Flooring (dark brown wood pattern) & Mastic (yellow) & Leveling Compound (grey) - Room 218**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847824**

Layer 1 Flooring

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Dk. Brown	Hard	Yes	ND	ND	90

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**
Asbestos Content: **None Detected**

Layer 2 Yellow Mastic

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	1

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**
Asbestos Content: **None Detected**

Layer 3 Leveling Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	9

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	3		ribbons				high		
Aggregate/Binders	97		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847824**

Bulk Asbestos Analysis Sheet

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Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-110**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847825**

Sample Description: **Resilient Vinyl Flooring (dark brown wood pattern) & Mastic (yellow) & Leveling Compound (grey) - Room 218**

Layer 1 Flooring

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Dk. Brown	Hard	Yes	ND	ND	90

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 Yellow Mastic

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	1

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 Leveling Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	9

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	3		ribbons				high		
Aggregate/Binders	97		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847825**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-111**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847826**

Sample Description: **Resilient Vinyl Flooring (dark brown wood pattern) & Mastic (yellow) & Leveling Compound (grey) - Room 218**

Layer 1 Flooring

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Dk. Brown	Hard	Yes	ND	ND	90

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 Yellow Mastic

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	1

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 Leveling Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	9

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	3		ribbons				high		
Aggregate/Binders	97		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847826**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-112**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847827**

Sample Description: **Resilient Vinyl Flooring (light brown wood pattern) & Mastic (yellow) & Leveling Compound (grey) - Room 230**

Layer 1 Flooring

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Lt. Brown	Hard	Yes	ND	ND	90

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 Yellow Mastic

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	1

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 Leveling Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	9

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	3		ribbons				high		
Aggregate/Binders	97		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847827**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-113**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847828**

Sample Description: **Resilient Vinyl Flooring (light brown wood pattern) & Mastic (yellow) & Leveling Compound (grey) - Room 222**

Layer 1 Flooring

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Lt. Brown	Hard	Yes	ND	ND	90

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 Yellow Mastic

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	1

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 Leveling Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	9

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	3		ribbons				high		
Aggregate/Binders	97		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847828**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-114**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847829**

Sample Description: **Resilient Vinyl Flooring (light brown wood pattern) & Mastic (yellow) & Leveling Compound (grey) - Room 202**

Layer 1 Flooring

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Lt. Brown	Hard	Yes	ND	ND	90

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 Yellow Mastic

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	1

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 Leveling Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	9

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	3		ribbons				high		
Aggregate/Binders	97		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847829**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-115**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847830**

Sample Description: **12" X 12" Floor Tile (pink w/black & white streaks) & Mastic (yellow) & Leveling Compound (grey) - Room 222A**

Layer 1 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Pink/Black	Hard	Yes	ND	ND	90

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	1

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 **Leveling Compound**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	9

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	3		ribbons				high		
Aggregate/Binders	97		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847830**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-116**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847831**

Sample Description: **12" X 12" Floor Tile (pink w/black & white streaks) & Mastic (yellow) & Leveling Compound (grey) - Room 222A**

Layer 1 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Pink/Black	Hard	Yes	ND	ND	90

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	1

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 **Leveling Compound**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	9

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	3		ribbons				high		
Aggregate/Binders	97		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847831**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-117**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847832**

Sample Description: **12" X 12" Floor Tile (pink w/black & white streaks) & Mastic (yellow) & Leveling Compound (grey) - Room 222A**

Layer 1 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Pink/Black	Hard	Yes	ND	ND	90

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	1

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 **Leveling Compound**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	9

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	3		ribbons				high		
Aggregate/Binders	97		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847832**

Bulk Asbestos Analysis Sheet

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Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-118**
Sample Description: **4" Cove Base (black) w/Mastic (tan) - Room 206**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847833**
Page 1 of 1

Layer 1 **Cove Base**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Black	**Rubbery**	**Yes**	**ND**	**ND**	**95**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Tan Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	**Rubbery**	**Yes**	**ND**	**ND**	**5**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847833**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-119**
Sample Description: **4" Cove Base (black) w/Mastic (tan) - Hallway 2L4**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847834**
Page 1 of 1

Layer 1 **Cove Base**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Black	**Rubbery**	**Yes**	**ND**	**ND**	**95**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Tan Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	**Rubbery**	**Yes**	**ND**	**ND**	**5**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847834**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-120**
Sample Description: **4" Cove Base (black) w/Mastic (tan) - Room 222C**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847835**
Page 1 of 1

Layer 1 **Cove Base**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Black	**Rubbery**	**Yes**	**ND**	**ND**	**95**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Tan Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	**Rubbery**	**Yes**	**ND**	**ND**	**5**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847835**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-121**
Sample Description: **Wall/Ceiling Texture (white, semi-smooth) Drywall/Joint Compound - Room 2L2**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847836**

Layer 1 Paint Texture

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders/Paint	100		Non-fibrous						

Prep/treatment: **solvent dissolution** Asbestos Content: **None Detected**

Layer 2 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	95		Non-fibrous						
Perlite	5		Glass Foam				0		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 5 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736** Sample #: **CL847836**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-122**
Sample Description: **Wall/Ceiling Texture (white, semi-smooth) Drywall/Joint Compound - Room 234**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847837**

Layer 1 Paint Texture

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders/Paint	100		Non-fibrous						

Prep/treatment: **solvent dissolution** Asbestos Content: **None Detected**

Layer 2 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	95		Non-fibrous						
Perlite	5		Glass Foam				0		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 5 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736** Sample #: **CL847837**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-123**
Sample Description: **Wall/Ceiling Texture (white, semi-smooth) Drywall/Joint Compound - Room 222F**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847838**

Layer 1 Paint Texture

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders/Paint	100		Non-fibrous						

Prep/treatment: **solvent dissolution** Asbestos Content: **None Detected**

Layer 2 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	95		Non-fibrous						
Perlite	5		Glass Foam				0		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 5 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736** Sample #: **CL847838**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-124**
Sample Description: **Wall/Ceiling Texture (white, semi-smooth) Drywall/Joint Compound - Room 220**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847839**

Layer 1 Paint Texture

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders/Paint	100		Non-fibrous						

Prep/treatment: **solvent dissolution** Asbestos Content: **None Detected**

Layer 2 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	95		Non-fibrous						
Perlite	5		Glass Foam				0		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 5 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736** Sample #: **CL847839**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-125**
Sample Description: **Wall/Ceiling Texture (white, semi-smooth) Drywall/Joint Compound - Room 218E**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847840**

Layer 1 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	95		Non-fibrous						
Perlite	5		Glass Foam				0		

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 2 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 3 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	80

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847840**

Bulk Asbestos Analysis Sheet

Cates Laboratories
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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-126**
Sample Description: **Wall/Ceiling Texture (white, semi-smooth) Drywall/Joint Compound - Room 211**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847841**

Layer 1 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	95		Non-fibrous						
Perlite	5		Glass Foam				0		

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 2 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 3 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	80

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847841**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-127**
Sample Description: **Wall/Ceiling Texture (white, semi-smooth) Drywall/Joint Compound - Room 206**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847842**

Layer 1 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	95		Non-fibrous						
Perlite	5		Glass Foam				0		

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 2 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 3 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	80

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847842**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-128**
Sample Description: **4' X 6' Acoustical Ceiling Tile (light grey, pinhole) - Room 200**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847843**

Layer 1 **Ceiling Tile Covering**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Fibrous/Woven	Yes	75	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glass Fibers	75		straight	none			none		
Binders / Fillers	25		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Layer 2 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow	Fibrous	Yes	90	ND	95

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Mineral Wool Fibers	90		Rods				0		
Resin Binders	10		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847843**

Bulk Asbestos Analysis Sheet

Cates Laboratories
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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-129**
Sample Description: **4' X 6' Acoustical Ceiling Tile (light grey, pinhole) - Room 129**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847844**

Layer 1 **Ceiling Tile Covering**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Fibrous/Woven	Yes	75	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glass Fibers	75		straight	none			none		
Binders / Fillers	25		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Layer 2 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow	Fibrous	Yes	90	ND	95

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Mineral Wool Fibers	90		Rods				0		
Resin Binders	10		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847844**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-130**
Sample Description: **4' X 6' Acoustical Ceiling Tile (light grey, pinhole) - Room 200**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847845**
Page 1 of 1

Layer 1 **Ceiling Tile Covering**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Fibrous/Woven	Yes	75	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glass Fibers	75		straight	none			none		
Binders / Fillers	25		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Layer 2 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow	Fibrous	Yes	90	ND	95

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Mineral Wool Fibers	90		Rods				0		
Resin Binders	10		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736** Sample #: **CL847845**

Bulk Asbestos Analysis Sheet

Cates Laboratories
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Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-131**
Sample Description: **2' X 2' Acoustical Ceiling Tile (white, pinhole, rough finish) - Room 222**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847846**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**30**		**ribbons**				**high**		
Mineral Wool Fibers	**30**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847846**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-132**
Sample Description: **2' X 2' Acoustical Ceiling Tile (white, pinhole, rough finish) - Room 202**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847847**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**30**		**ribbons**				**high**		
Mineral Wool Fibers	**30**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847847**

Bulk Asbestos Analysis Sheet

Cates Laboratories
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Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-133**
Sample Description: **2' X 2' Acoustical Ceiling Tile (white, pinhole, rough finish) - Room 2T2**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847848**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**30**		**ribbons**				**high**		
Mineral Wool Fibers	**30**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847848**

Bulk Asbestos Analysis Sheet

Cates Laboratories
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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-134**
Sample Description: **2' X 4' Acoustical Ceiling Tile (white, pinhole & fissured) - Room 2L2**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847849**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**55**		**ribbons**				**high**		
Mineral Wool Fibers	**5**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847849**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-135**
Sample Description: **2' X 4' Acoustical Ceiling Tile (white, pinhole & fissured) - Room 230C**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847850**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**55**		**ribbons**				**high**		
Mineral Wool Fibers	**5**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847850**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-136**
Sample Description: **2' X 4' Acoustical Ceiling Tile (white, pinhole & fissured) - Room 230**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847851**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**55**		**ribbons**				**high**		
Mineral Wool Fibers	**5**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847851**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-137**
Sample Description: **2' X 4' Acoustical Ceiling Tile (white, fissured) - Room 2A**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847852**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**30**		**ribbons**				**high**		
Mineral Wool Fibers	**30**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847852**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-138**
Sample Description: **2' X 4' Acoustical Ceiling Tile (white, fissured) - Room 222F**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847853**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**30**		**ribbons**				**high**		
Mineral Wool Fibers	**30**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847853**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-139**
Sample Description: **2' X 4' Acoustical Ceiling Tile (white, fissured) - Room 212**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847854**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**30**		**ribbons**				**high**		
Mineral Wool Fibers	**30**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847854**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-140**
Sample Description: **Duct Mastic (grey) - Room 204**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847855**

Layer 1 **Grey Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847855**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-141**
Sample Description: **Duct Mastic (grey) - Room 2ME2**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847856**

Layer 1 **Grey Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847856**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-142**
Sample Description: **Duct Mastic (grey) - Room 2T1A**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847857**

Layer 1 **Grey Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847857**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-143**
Sample Description: **Duct Mastic (white) - Room 200**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847858**

Layer 1 **White Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Hard	Yes	ND	ND	20

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Chrysotile	5	4	Silky / Wavy	None	1.556	1.549	low	Parallel	+
Binders / Fillers	95		Non-fibrous						

Prep/treatment: **heat / melt**
Asbestos Content: **5% Chrysotile**

Layer 2 **Wrap**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Brown / Silver	Fibrous	No	75	ND	20

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	70		ribbons				high		
Glass Fibers	5		straight	none			none		
Metal Foil	15			Opaque					
Binders	10		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 3 **Insulation**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Fibrous	Yes	95	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Mineral Wool Fibers	95		Rods				0		
Resin Binders	5		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847858**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-146**
Sample Description: **Interior Building Caulking (white) above Ceiling - Room 2T1A**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847861**

Layer 1 **Caulking**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847861**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-147**
Sample Description: **Interior Building Caulking (white) above Ceiling - Room 230**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847862**

Layer 1 **Caulking**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847862**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-148**
Sample Description: **Interior Building Caulking (white) above Ceiling - Room 218C**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847863**

Layer 1 **Caulking**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847863**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-149**
Sample Description: **Firestop (red, yellow) - Room 2T1A**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847864**

Layer 1 **Firestop**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Red	**Rubbery**	**Yes**	**2**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glass Fibers	**5**		**straight**	**none**			**none**		
Binders / Fillers	**95**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847864**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-150**
Sample Description: **Firestop (red, yellow) - Room 206**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847865**

Layer 1 **Firestop**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Red	**Rubbery**	**Yes**	**2**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glass Fibers	**5**		**straight**	**none**			**none**		
Binders / Fillers	**95**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847865**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-151**
Sample Description: **Firestop (red, yellow) - Room 2ME1**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847866**

Layer 1 **Firestop**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847866**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-279**
Sample Description: **Thermal System Insulation (white) - Room 200**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847867**

Layer 1 **White Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Rubbery	Yes	ND	ND	20

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Wollastonite	5		Laths						+/-
Aggregate/Binders	95		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Wrap**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White / Silver	Fibrous	No	75	ND	20

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	70		ribbons				high		
Glass Fibers	5		straight	none			none		
Metal Foil	15			Opaque					
Binders	10		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Layer 3 **Insulation**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Fibrous	Yes	95	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Mineral Wool Fibers	95		Rods				0		
Resin Binders	5		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847867**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-280**
Sample Description: **Thermal System Insulation (white) - Room 204A**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847868**

Layer 1 **White Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Rubbery	Yes	ND	ND	20

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Wollastonite	5		Laths						+/-
Aggregate/Binders	95		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Wrap**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White / Silver	Fibrous	No	75	ND	20

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	70		ribbons				high		
Glass Fibers	5		straight	none			none		
Metal Foil	15			Opaque					
Binders	10		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Layer 3 **Insulation**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Fibrous	Yes	95	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Mineral Wool Fibers	95		Rods				0		
Resin Binders	5		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847868**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-281**
Sample Description: **Thermal System Insulation (white) - Room 206**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847869**

Layer 1 **White Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Rubbery	Yes	ND	ND	20

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Wollastonite	5		Laths						+/-
Aggregate/Binders	95		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Wrap**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White / Silver	Fibrous	No	75	ND	20

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	70		ribbons				high		
Glass Fibers	5		straight	none			none		
Metal Foil	15			Opaque					
Binders	10		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Layer 3 **Insulation**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Fibrous	Yes	95	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Mineral Wool Fibers	95		Rods				0		
Resin Binders	5		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847869**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #2**
Project (Line 2):
Project #: **725010720021**
Field ID #: **2-282**
Sample Description: **Mastic (black) associated w/Perimeter Walls - Room 207**

Lab Proj #: **PLM-23736**
Set #: **35092**
Sample #: **CL847870**

Layer 1 **Black Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Black	**Asphaltic**	**Yes**	**2**	**2**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Chrysotile	**10**	**5**	**Silky / Wavy**	**None**	**1.556**	**1.549**	**low**	**Parallel**	**+**
Tar Binders	**90**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **10% Chrysotile**

Comments:

Analyst: **Curtis Grigg**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847870**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-152**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847873**

Sample Description: **Mastic (yellow) associated w/Carpet (tan w/blue & red stripe pattern) - Room 300**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847873**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-153**
Sample Description: **Mastic (yellow) associated w/Carpet (tan w/blue & red stripe pattern) - Room 302**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847874**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847874**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-154**
Sample Description: **Mastic (yellow) associated w/Carpet (tan w/blue & red stripe pattern) - Room 318**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847875**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847875**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-155**
Sample Description: **Mastic (yellow) associated w/Carpet (tan w/yellow & black spot design) - Room 316**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847876**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847876**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-156**
Sample Description: **Mastic (yellow) associated w/Carpet (tan w/yellow & black spot design) - Room 306**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847877**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847877**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-157**
Sample Description: **Mastic (yellow) associated w/Carpet (tan w/yellow & black spot design) - Room 316**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847878**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847878**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-158**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847879**

Sample Description: **Mastic (yellow) associated w/Carpet (red, blue, & tan multi-color pattern) & Leveling Compound (grey) - Room 308**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**50**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Leveling Compound**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Blocky**	**Yes**	**ND**	**ND**	**50**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	**100**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847879**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-159**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847880**

Sample Description: **Mastic (yellow) associated w/Carpet (red, blue, & tan multi-color pattern) & Leveling Compound (grey) - Room 308**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**50**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Leveling Compound**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Blocky**	**Yes**	**ND**	**ND**	**50**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	**100**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847880**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-160**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847881**

Sample Description: **Mastic (yellow) associated w/Carpet (red, blue, & tan multi-color pattern) & Leveling Compound (grey) - Room 308**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**50**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Leveling Compound**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Blocky**	**Yes**	**ND**	**ND**	**50**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	**100**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847881**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-161**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847882**

Sample Description: **Mastic (yellow) associated w/Carpet (grey w/blue & green stripe pattern) & Leveling Compound (grey) - Room 313**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**50**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Leveling Compound**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Blocky**	**Yes**	**ND**	**ND**	**50**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	**100**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847882**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-162**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847883**

Sample Description: **Mastic (yellow) associated w/Carpet (grey w/blue & green stripe pattern) & Leveling Compound (grey) - Room 313B**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**50**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Leveling Compound**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Blocky**	**Yes**	**ND**	**ND**	**50**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	**100**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847883**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-163**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847884**

Sample Description: **Mastic (yellow) associated w/Carpet (grey w/blue & green stripe pattern) & Leveling Compound (grey) - Room 313A**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**50**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Leveling Compound**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Blocky**	**Yes**	**ND**	**ND**	**50**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	**100**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847884**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-164**
Sample Description: **Resilient Vinyl Flooring (light brown, wood pattern) & Mastic (brown) - Room 310**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847885**

Layer 1 **Sheet Flooring**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Brown	**Rubbery**	**Yes**	**ND**	**ND**	**85**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**5**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 **Vapor Barrier**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Black	**Rubbery/Fibrous**	**Yes**	**ND**	**ND**	**10**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847885**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-165**
Sample Description: **Resilient Vinyl Flooring (light brown, wood pattern) & Mastic (brown) - Room 310C**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847886**

Layer 1 **Sheet Flooring**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Brown	**Rubbery**	**Yes**	**ND**	**ND**	**85**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**5**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 **Vapor Barrier**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Black	**Rubbery/Fibrous**	**Yes**	**ND**	**ND**	**10**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847886**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-166**
Sample Description: **Resilient Vinyl Flooring (light brown, wood pattern) & Mastic (brown) - Hallway 3A**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847887**

Layer 1 **Sheet Flooring**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Brown	**Rubbery**	**Yes**	**ND**	**ND**	**85**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**5**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 **Vapor Barrier**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Black	**Rubbery/Fibrous**	**Yes**	**ND**	**ND**	**10**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847887**

Bulk Asbestos Analysis Sheet

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NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-167**
Sample Description: **4" Cove Base (dark grey) w/Mastic (tan) - Room 300**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847888**

Layer 1 **Cove Base**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Dk. Grey	Rubbery	Yes	ND	ND	95

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Tan Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Rubbery	Yes	ND	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847888**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-168**
Sample Description: **4" Cove Base (dark grey) w/Mastic (tan) - Room 310G**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847889**

Layer 1 **Cove Base**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Dk. Grey	Rubbery	Yes	ND	ND	95

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Tan Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Rubbery	Yes	ND	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847889**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-169**
Sample Description: **4" Cove Base (dark grey) w/Mastic (tan) - Room 312**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847890**

Layer 1 **Cove Base**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Dk. Grey	**Rubbery**	**Yes**	**ND**	**ND**	**95**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Tan Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	**Rubbery**	**Yes**	**ND**	**ND**	**5**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847890**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-170**
Sample Description: **Sink Undercoating (grey) - Room 313A**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847891**

Layer 1 **Sink Undercoating**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Fibrous**	**Yes**	**5**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**30**		**ribbons**				**high**		
Aggregate/Binders	**70**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847891**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-171**
Sample Description: **Sink Undercoating (grey) - Room 313A**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847892**

Layer 1 **Sink Undercoating**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Fibrous**	**Yes**	**5**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**30**		**ribbons**				**high**		
Aggregate/Binders	**70**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847892**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-172**
Sample Description: **Sink Undercoating (grey) - Room 313A**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847893**

Layer 1 **Sink Undercoating**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Fibrous**	**Yes**	**5**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**30**		**ribbons**				**high**		
Aggregate/Binders	**70**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847893**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-173**
Sample Description: **Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 320**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847894**

Layer 1 Paint Texture

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders/Paint	100		Non-fibrous						

Prep/treatment: **solvent dissolution** Asbestos Content: **None Detected**

Layer 2 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 5 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736** Sample #: **CL847894**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-174**
Sample Description: **Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 311**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847895**

Layer 1 Paint Texture

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders/Paint	100		Non-fibrous						

Prep/treatment: **solvent dissolution** Asbestos Content: **None Detected**

Layer 2 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	65

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736** Sample #: **CL847895**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-175**
Sample Description: **Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 313**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847896**

Layer 1 Paint Texture

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders/Paint	100		Non-fibrous						

Prep/treatment: **solvent dissolution**
Asbestos Content: **None Detected**

Layer 2 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 3 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 4 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	2	ND	65

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Glass Fibers	1		straight	none			none		
Aggregate	3		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847896**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-176**
Sample Description: **Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 311A**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847897**

Layer 1 Texture

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **solvent dissolution** Asbestos Content: **None Detected**

Layer 2 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	2	ND	65

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Glass Fibers	1		straight	none			none		
Aggregate	3		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736** Sample #: **CL847897**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-177**
Sample Description: **Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 310**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847898**

Layer 1 Paint Texture

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders/Paint	100		Non-fibrous						

Prep/treatment: **solvent dissolution**
Asbestos Content: **None Detected**

Layer 2 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 3 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 4 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	65

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847898**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-178**
Sample Description: **Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 310D**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847899**

Layer 1 Paint Texture

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders/Paint	100		Non-fibrous						

Prep/treatment: **solvent dissolution**
Asbestos Content: **None Detected**

Layer 2 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 3 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 4 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	65

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847899**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-179**
Sample Description: **Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 3SC1**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847900**

Layer 1 Paint Texture

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders/Paint	100		Non-fibrous						

Prep/treatment: **solvent dissolution** Asbestos Content: **None Detected**

Layer 2 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	65

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736** Sample #: **CL847900**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-180**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847901**

Sample Description: **Wall/Ceiling Cover Paper (light purple, rough) Drywall/Joint Compound - Room 300**

Layer 1 Wall Covering

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Lt. Mauve-Grey	Fibrous	Yes	30	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	15		ribbons				high		
Synthetic Fibers	15		Monofilaments						
Binders	10		Non-fibrous						
Vinyl	60		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 2 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 5 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736** Sample #: **CL847901**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-180**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847901**

Sample Description: **Wall/Ceiling Cover Paper (light purple, rough) Drywall/Joint Compound - Room 300**

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847901**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-181**
Sample Description: **Wall/Ceiling Cover Paper (light purple, rough) Drywall/Joint Compound - Room 300**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847902**

Layer 1 Wall Covering

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Lt. Mauve-Grey	Fibrous	Yes	30	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	15		ribbons				high		
Synthetic Fibers	15		Monofilaments						
Binders	10		Non-fibrous						
Vinyl	60		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 2 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 5 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736** Sample #: **CL847902**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-181**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847902**

Sample Description: **Wall/Ceiling Cover Paper (light purple, rough) Drywall/Joint Compound - Room 300**

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847902**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-182**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847903**

Sample Description: **Wall/Ceiling Cover Paper (light purple, rough) Drywall/Joint Compound - Room 300**

Layer 1 Wall Covering

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Lt. Mauve-Grey	Fibrous	Yes	30	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	15		ribbons				high		
Synthetic Fibers	15		Monofilaments						
Binders	10		Non-fibrous						
Vinyl	60		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 2 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 5 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736** Sample #: **CL847903**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-182**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847903**

Sample Description: **Wall/Ceiling Cover Paper (light purple, rough) Drywall/Joint Compound - Room 300**

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847903**

Bulk Asbestos Analysis Sheet

Cates Laboratories
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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-183**
Sample Description: **Unfinished Drywall/Joint Compound - Room 3ME1**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847904**

Layer 1 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 2 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	2	ND	65

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Glass Fibers	1		straight	none			none		
Aggregate	3		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736** Sample #: **CL847904**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-184**
Sample Description: **Unfinished Drywall/Joint Compound - Room 3ME2**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847905**

Layer 1 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 2 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	2	ND	65

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Glass Fibers	1		straight	none			none		
Aggregate	3		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736** Sample #: **CL847905**

Bulk Asbestos Analysis Sheet

Cates Laboratories
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Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-185**
Sample Description: **Unfinished Drywall/Joint Compound - Room 3ME2**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847906**

Layer 1 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 2 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	2	ND	65

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Glass Fibers	1		straight	none			none		
Aggregate	3		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736** Sample #: **CL847906**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-186**
Sample Description: **4' X 6' Acoustical Ceiling Tile (light grey, pinhole) - Room 300**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847907**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow/White	**Fibrous**	**Yes**	**90**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Mineral Wool Fibers	**90**		**Rods**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847907**

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-187**
Sample Description: **4' X 6' Acoustical Ceiling Tile (light grey, pinhole) - Room 300**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847908**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow/White	**Fibrous**	**Yes**	**90**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Mineral Wool Fibers	**90**		**Rods**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847908**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-188**
Sample Description: **4' X 6' Acoustical Ceiling Tile (light grey, pinhole) - Room 306**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847909**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow/White	**Fibrous**	**Yes**	**90**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Mineral Wool Fibers	**90**		**Rods**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847909**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-189**
Sample Description: **2' X 2' Acoustical Ceiling Tile (white, pinhole, rough finish) - Room 319**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847910**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**30**		**ribbons**				**high**		
Mineral Wool Fibers	**30**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847910**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-190**
Sample Description: **2' X 2' Acoustical Ceiling Tile (white, pinhole, rough finish) - Room 312**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847911**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**30**		**ribbons**				**high**		
Mineral Wool Fibers	**30**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847911**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-191**
Sample Description: **2' X 2' Acoustical Ceiling Tile (white, pinhole, rough finish) - Restroom 3T1**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847912**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**30**		**ribbons**				**high**		
Mineral Wool Fibers	**30**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847912**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-192**
Sample Description: **Firestop (red) - Room 3ME1**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847913**

Layer 1 **Firestop**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Red	**Rubbery**	**Yes**	**2**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glass Fibers	**2**		**straight**	**none**			**none**		
Binders / Fillers	**98**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847913**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-193**
Sample Description: **Firestop (red) - Room 3ME2**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847914**

Layer 1 **Firestop**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Red	**Rubbery**	**Yes**	**2**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glass Fibers	**2**		**straight**	**none**			**none**		
Binders / Fillers	**98**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847914**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-194**
Sample Description: **Firestop (red) - Room 3ME2**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847915**

Layer 1 **Firestop**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Red	**Rubbery**	**Yes**	**2**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glass Fibers	**2**		**straight**	**none**			**none**		
Binders / Fillers	**98**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847915**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-195**
Sample Description: **Thermal System Insulation (white) - Room 3ME2**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847916**

Layer 1 **White Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Rubbery	Yes	ND	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Wrap**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White / Silver	Fibrous	No	75	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	70		ribbons				high		
Glass Fibers	5		straight	none			none		
Metal Foil	15			Opaque					
Binders	10		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847916**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-196**
Sample Description: **Thermal System Insulation (white) - Room 300**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847917**

Layer 1 **White Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Rubbery	Yes	ND	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Wrap**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White / Silver	Fibrous	No	75	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	70		ribbons				high		
Glass Fibers	5		straight	none			none		
Metal Foil	15			Opaque					
Binders	10		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847917**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-197**
Sample Description: **Thermal System Insulation (white) - Room 300**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847918**

Layer 1 **White Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	**Rubbery**	**Yes**	**ND**	**ND**	**50**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Wrap**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White / Silver	**Fibrous**	**No**	**75**	**ND**	**50**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**70**		**ribbons**				**high**		
Glass Fibers	**5**		**straight**	**none**			**none**		
Metal Foil	**15**			**Opaque**					
Binders	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847918**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-198**
Sample Description: **2' X 4' Acoustical Ceiling Tile (white, pinhole & fissured) - Room 313**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847919**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**55**		**ribbons**				**high**		
Mineral Wool Fibers	**5**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847919**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-199**
Sample Description: **2' X 4' Acoustical Ceiling Tile (white, pinhole & fissured) - Room 313AA**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847920**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**55**		**ribbons**				**high**		
Mineral Wool Fibers	**5**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847920**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-200**
Sample Description: **2' X 4' Acoustical Ceiling Tile (white, pinhole & fissured) - Room 310**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847921**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**55**		**ribbons**				**high**		
Mineral Wool Fibers	**5**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847921**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-201**
Sample Description: **Firestop (grey) - Room 3ME1**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847922**

Layer 1 **Firestop**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Putty**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847922**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-202**
Sample Description: **Firestop (grey) - Room 3ME2**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847923**

Layer 1 **Firestop**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Putty**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847923**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-203**
Sample Description: **Firestop (grey) - Room 3ME2**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847924**

Layer 1 **Firestop**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Putty**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847924**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-204**
Sample Description: **Mastic (black) associated w/Perimeter Walls - Room 300**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847925**

Layer 1 **Black Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Black	**Asphaltic**	**Yes**	**5**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Chrysotile	**5**	**4**	**Silky / Wavy**	**None**	**1.556**	**1.549**	**low**	**Parallel**	**+**
Cellulose Fibers	**5**		**ribbons**				**high**		
Tar Binders	**90**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **5% Chrysotile**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847925**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-207**
Sample Description: **Duct Mastic (white) - Room 300**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847928**

Layer 1 **Duct Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	**Rubbery**	**Yes**	**30**	**15**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Chrysotile	**20**	**10**	**Silky / Wavy**	**None**	**1.556**	**1.549**	**low**	**Parallel**	**+**
Glass Fibers	**15**		**straight**	**none**			**none**		
Binders	**65**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **20% Chrysotile**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847928**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-210**
Sample Description: **Duct Mastic (grey) - Room 300**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847931**

Layer 1 **Grey Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847931**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-211**
Sample Description: **Duct Mastic (grey) - Room 300**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847932**

Layer 1 **Grey Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847932**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-212**
Sample Description: **Duct Mastic (grey) - Room 311**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847933**

Layer 1 **Grey Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847933**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-213**
Sample Description: **Fireproofing (grey) - Room 300**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847934**

Layer 1 **Fireproofing**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Lt. Grey	**Fibrous**	**Yes**	**100**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**100**		**ribbons**				**high**		

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847934**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-214**
Sample Description: **Fireproofing (grey) - Room 300**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847935**

Layer 1 **Fireproofing**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Lt. Grey	**Fibrous**	**Yes**	**100**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**100**		**ribbons**				**high**		

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847935**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-215**
Sample Description: **Fireproofing (grey) - Room 300**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847936**

Layer 1 **Fireproofing**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Lt. Grey	**Fibrous**	**Yes**	**100**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**100**		**ribbons**				**high**		

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847936**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-216**
Sample Description: **Fireproofing (grey) - Room 300**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847937**

Layer 1 **Fireproofing**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Lt. Grey	**Fibrous**	**Yes**	**100**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**100**		**ribbons**				**high**		

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847937**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library**
Project (Line 2):
Project #: **725010720021**
Field ID #: **3-217**
Sample Description: **Fireproofing (grey) - Room 300**

Lab Proj #: **PLM-23736**
Set #: **35093**
Sample #: **CL847938**

Layer 1 **Fireproofing**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Lt. Grey	**Fibrous**	**Yes**	**100**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**100**		**ribbons**				**high**		

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/14/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847938**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-218**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847939**

Sample Description: **Mastic (red) associated w/Carpet (tan w/multi-color green stripes) & Leveling Compound (grey) - Room 470**

Layer 1 **Red Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Red	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847939**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-219**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847940**

Sample Description: **Mastic (red) associated w/Carpet (tan w/multi-color green stripes) & Leveling Compound (grey) - Room 450**

Layer 1 **Red Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Red	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847940**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-220**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847941**

Sample Description: **Mastic (red) associated w/Carpet (tan w/multi-color green stripes) & Leveling Compound (grey) - Hallway 4L1**

Layer 1 **Red Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Red	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847941**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-221**
Sample Description: **Mastic (yellow) associated w/Carpet (red, blue, & tan multi-color pattern) - Room 404**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847942**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847942**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-222**
Sample Description: **Mastic (yellow) associated w/Carpet (red, blue, & tan multi-color pattern) - Room 404**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847943**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847943**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-223**
Sample Description: **Mastic (yellow) associated w/Carpet (red, blue, & tan multi-color pattern) - Room 405**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847944**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847944**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-224**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847945**

Sample Description: **Mastic (yellow) associated w/Carpet (tan w/green spot pattern) (stairway, all levels) - Stairway 4S4**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847945**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-225**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847946**

Sample Description: **Mastic (yellow) associated w/Carpet (tan w/green spot pattern) (stairway, all levels) - Stairway 3S4**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847946**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-226**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847947**

Sample Description: **Mastic (yellow) associated w/Carpet (tan w/green spot pattern) (stairway, all levels) - Stairway 2S4**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847947**

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NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-227**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847948**

Sample Description: **12" X 12" Floor Tile (grey w/dark grey & white streaks) & Mastic (yellow) & Leveling Compound (grey) - Room 450A**

Layer 1 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Hard**	**Yes**	**ND**	**ND**	**99**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**1**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847948**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-228**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847949**

Sample Description: **12" X 12" Floor Tile (grey w/dark grey & white streaks) & Mastic (yellow) & Leveling Compound (grey) - Room 450A**

Layer 1 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Hard	Yes	ND	ND	99

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	1

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847949**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-229**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847950**

Sample Description: **12" X 12" Floor Tile (grey w/dark grey & white streaks) & Mastic (yellow) & Leveling Compound (grey) - Room 450A**

Layer 1 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Hard	Yes	ND	ND	99

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	1

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847950**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-230**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847951**

Sample Description: **12" X 12" Floor Tile (dark blue w/black streaks) & Mastic (yellow) & Leveling Compound (grey) - Room 410**

Layer 1 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey-Blue	**Hard**	**Yes**	**ND**	**ND**	**99**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**1**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847951**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-231**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847952**

Sample Description: **12" X 12" Floor Tile (dark blue w/black streaks) & Mastic (yellow) & Leveling Compound (grey) - Room 410**

Layer 1 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey-Blue	**Hard**	**Yes**	**ND**	**ND**	**99**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**1**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847952**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-232**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847953**

Sample Description: **12" X 12" Floor Tile (dark blue w/black streaks) & Mastic (yellow) & Leveling Compound (grey) - Room 410**

Layer 1 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey-Blue	**Hard**	**Yes**	**ND**	**ND**	**99**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**1**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847953**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-233**
Sample Description: **Resilient Vinyl Flooring (light brown, wood pattern) & Mastic (yellow) - Room 401**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847954**

Layer 1 **Flooring**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Lt. Brown	Rubbery	Yes	ND	ND	85

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 **Vapor Barrier**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Black	Rubbery	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Vinyl Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847954**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-234**
Sample Description: **Resilient Vinyl Flooring (light brown, wood pattern) & Mastic (yellow) - Room 400**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847955**

Layer 1 **Flooring**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Lt. Brown	Rubbery	Yes	ND	ND	85

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**
Asbestos Content: **None Detected**

Layer 2 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**
Asbestos Content: **None Detected**

Layer 3 **Vapor Barrier**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Black	Rubbery	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Vinyl Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847955**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-235**
Sample Description: **Resilient Vinyl Flooring (light brown, wood pattern) & Mastic (yellow) - Room 454**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847956**

Layer 1 **Flooring**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Lt. Brown	Rubbery	Yes	ND	ND	85

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**
Asbestos Content: **None Detected**

Layer 2 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**
Asbestos Content: **None Detected**

Layer 3 **Vapor Barrier**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Black	Rubbery	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Vinyl Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847956**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-236**
Sample Description: **4" Cove Base (dark grey) w/Mastic (tan) - by Room 470**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847957**

Layer 1 **Cove Base**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Dk. Grey	Rubbery	Yes	ND	ND	95

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Tan Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Rubbery	Yes	ND	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847957**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-237**
Sample Description: **4" Cove Base (dark grey) w/Mastic (tan) - by Room 4T1**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847958**

Layer 1 **Cove Base**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Dk. Grey	**Rubbery**	**Yes**	**ND**	**ND**	**95**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Tan Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	**Rubbery**	**Yes**	**ND**	**ND**	**5**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847958**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-238**
Sample Description: **4" Cove Base (dark grey) w/Mastic (tan) - Room 448**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847959**

Layer 1 **Cove Base**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Dk. Grey	Rubbery	Yes	ND	ND	95

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Tan Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Rubbery	Yes	ND	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847959**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-239**
Sample Description: **Sink Undercoating (grey) - Room 401**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847960**

Layer 1 **Sink Undercoating**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey-Off White	**Fibrous**	**Yes**	**5**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**30**		**ribbons**				**high**		
Aggregate/Binders	**70**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847960**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-240**
Sample Description: **Sink Undercoating (grey) - Room 401**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847961**

Layer 1 **Sink Undercoating**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey-Off White	**Fibrous**	**Yes**	**5**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**30**		**ribbons**				**high**		
Aggregate/Binders	**70**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847961**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-241**
Sample Description: **Sink Undercoating (grey) - Room 401**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847962**

Layer 1 **Sink Undercoating**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey-Off White	**Fibrous**	**Yes**	**5**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**30**		**ribbons**				**high**		
Aggregate/Binders	**70**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847962**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-242**
Sample Description: **Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 470**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847963**

Layer 1 Paint Texture

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders/Paint	95		Non-fibrous						
Perlite	5		Glass Foam				0		

Prep/treatment: **solvent dissolution** Asbestos Content: **None Detected**

Layer 2 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 5 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	2	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Glass Fibers	1		straight	none			none		
Aggregate	3		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736** Sample #: **CL847963**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-242**
Sample Description: **Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 470**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847963**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847963**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-243**
Sample Description: **Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 460**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847964**

Layer 1 Paint Texture

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders/Paint	95		Non-fibrous						
Perlite	5		Glass Foam				0		

Prep/treatment: **solvent dissolution** Asbestos Content: **None Detected**

Layer 2 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 5 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	2	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Glass Fibers	1		straight	none			none		
Aggregate	3		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736** Sample #: **CL847964**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-243**
Sample Description: **Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 460**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847964**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847964**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-244**
Sample Description: **Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 428**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847965**

Layer 1 Paint Texture

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders/Paint	95		Non-fibrous						
Perlite	5		Glass Foam				0		

Prep/treatment: **solvent dissolution** Asbestos Content: **None Detected**

Layer 2 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 5 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736** Sample #: **CL847965**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-245**
Sample Description: **Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 401**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847966**

Layer 1 Paint Texture

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders/Paint	100		Non-fibrous						

Prep/treatment: **solvent dissolution** Asbestos Content: **None Detected**

Layer 2 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 5 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736** Sample #: **CL847966**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-246**
Sample Description: **Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 244**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847967**

Layer 1 Paint Texture

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders/Paint	100		Non-fibrous						

Prep/treatment: **solvent dissolution** Asbestos Content: **None Detected**

Layer 2 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 5 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736** Sample #: **CL847967**

Bulk Asbestos Analysis Sheet

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1339 Motor Circle
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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-247**
Sample Description: **Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 448**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847968**

Layer 1 Paint Texture

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders/Paint	100		Non-fibrous						

Prep/treatment: **solvent dissolution** Asbestos Content: **None Detected**

Layer 2 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 5 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736** Sample #: **CL847968**

Bulk Asbestos Analysis Sheet

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1339 Motor Circle
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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-248**
Sample Description: **Wall/Ceiling Texture (grey, semi-smooth) Drywall/Joint Compound - Room 257**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847969**

Layer 1 Paint Texture

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders/Paint	100		Non-fibrous						

Prep/treatment: **solvent dissolution** Asbestos Content: **None Detected**

Layer 2 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 5 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736** Sample #: **CL847969**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-249**
Sample Description: **Unfinished Drywall/Joint Compound - Room 4ME1**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847970**

Layer 1 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 2 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	65

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736** Sample #: **CL847970**

Bulk Asbestos Analysis Sheet

Cates Laboratories
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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-250**
Sample Description: **Unfinished Drywall/Joint Compound - Room 4ME1**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847971**

Layer 1 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 2 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	65

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736** Sample #: **CL847971**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-251**
Sample Description: **Unfinished Drywall/Joint Compound - Room 4ME1**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847972**

Layer 1 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 2 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	65

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736** Sample #: **CL847972**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-252**
Sample Description: **Firestop (red) - Room 4ME2**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847973**

Layer 1 **Firestop**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Red	**Rubbery**	**Yes**	**2**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glass Fibers	**2**		**straight**	**none**			**none**		
Binders / Fillers	**98**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847973**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-253**
Sample Description: **Firestop (red) - Room 4ME2**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847974**

Layer 1 **Firestop**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Red	**Rubbery**	**Yes**	**2**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glass Fibers	**2**		**straight**	**none**			**none**		
Binders / Fillers	**98**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847974**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-254**
Sample Description: **Firestop (red) - Room 4ME1**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847975**

Layer 1 **Firestop**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Red	**Rubbery**	**Yes**	**2**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glass Fibers	**2**		**straight**	**none**			**none**		
Binders / Fillers	**98**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847975**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-255**
Sample Description: **Firestop (grey) - Room 4ME1**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847976**

Layer 1 **Firestop**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Putty**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Chrysotile	**2**	**2**	**Silky / Wavy**	**None**	**1.556**	**1.549**	**low**	**Parallel**	**+**
Binders / Fillers	**98**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **2% Chrysotile**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847976**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-258**
Sample Description: **4' X 6' Acoustical Ceiling Tile (light grey, pinhole) - Room 446**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847979**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow/White	**Fibrous**	**Yes**	**90**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Mineral Wool Fibers	**90**		**Rods**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847979**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-259**
Sample Description: **4' X 6' Acoustical Ceiling Tile (light grey, pinhole) - Room 460**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847980**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow/White	**Fibrous**	**Yes**	**90**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Mineral Wool Fibers	**90**		**Rods**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847980**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-260**
Sample Description: **4' X 6' Acoustical Ceiling Tile (light grey, pinhole) - Room 430**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847981**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow/White	**Fibrous**	**Yes**	**90**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Mineral Wool Fibers	**90**		**Rods**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847981**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-261**
Sample Description: **2' X 2' Acoustical Ceiling Tile (white, pinhole, rough finish) - Room 450A**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847982**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**30**		**ribbons**				**high**		
Mineral Wool Fibers	**30**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847982**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-262**
Sample Description: **2' X 2' Acoustical Ceiling Tile (white, pinhole, rough finish) - Room 461**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847983**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**30**		**ribbons**				**high**		
Mineral Wool Fibers	**30**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847983**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-263**
Sample Description: **2' X 2' Acoustical Ceiling Tile (white, pinhole, rough finish) - Restroom 4T1**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847984**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**30**		**ribbons**				**high**		
Mineral Wool Fibers	**30**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847984**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-264**
Sample Description: **2' X 4' Acoustical Ceiling Tile (white, fissured) - Room 418**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847985**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**30**		**ribbons**				**high**		
Mineral Wool Fibers	**30**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847985**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-265**
Sample Description: **2' X 4' Acoustical Ceiling Tile (white, fissured) - Room 432**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847986**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**55**		**ribbons**				**high**		
Mineral Wool Fibers	**5**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847986**

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-266**
Sample Description: **2' X 4' Acoustical Ceiling Tile (white, fissured) - Room 434**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847987**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**30**		**ribbons**				**high**		
Mineral Wool Fibers	**30**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847987**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-267**
Sample Description: **Duct Mastic (grey) - Room 4ME3**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847988**

Layer 1 **Grey Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847988**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-268**
Sample Description: **Duct Mastic (grey) - Room 428**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847989**

Layer 1 **Grey Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847989**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-269**
Sample Description: **Duct Mastic (grey) - Room 400**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847990**

Layer 1 **Grey Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847990**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-270**
Sample Description: **Duct Mastic (white) - Room 446**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847991**

Layer 1 **Duct Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Wollastonite	**5**		**Laths**						**+/-**
Aggregate/Binders	**95**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847991**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-271**
Sample Description: **Duct Mastic (white) - Room 470**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847992**

Layer 1 **Duct Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Wollastonite	**5**		**Laths**						**+/-**
Aggregate/Binders	**95**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847992**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-272**
Sample Description: **Duct Mastic (white) - Hallway 4C**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847993**

Layer 1 **Duct Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Wollastonite	**5**		**Laths**						**+/-**
Aggregate/Binders	**95**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847993**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-273**
Sample Description: **Thermal System Insulation (white) - Room 460**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847994**

Layer 1 **White Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Rubbery	Yes	ND	ND	40

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Wollastonite	5		Laths						+/-
Aggregate/Binders	95		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Wrap**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White / Silver	Fibrous	No	75	ND	25

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	70		ribbons				high		
Glass Fibers	5		straight	none			none		
Metal Foil	15			Opaque					
Binders	10		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Layer 3 **Insulation**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Fibrous	Yes	95	ND	35

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Mineral Wool Fibers	95		Rods				0		
Resin Binders	5		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847994**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-274**
Sample Description: **Thermal System Insulation (white) - Room 446**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847995**

Layer 1 **White Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Rubbery	Yes	ND	ND	40

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Wollastonite	5		Laths						+/-
Aggregate/Binders	95		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Wrap**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White / Silver	Fibrous	No	75	ND	25

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	70		ribbons				high		
Glass Fibers	5		straight	none			none		
Metal Foil	15			Opaque					
Binders	10		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Layer 3 **Insulation**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Fibrous	Yes	95	ND	35

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Mineral Wool Fibers	95		Rods				0		
Resin Binders	5		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847995**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-275**
Sample Description: **Thermal System Insulation (white) - Room 4ME3**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847996**

Layer 1 **White Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Rubbery	Yes	ND	ND	40

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Wollastonite	5		Laths						+/-
Aggregate/Binders	95		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Wrap**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White / Silver	Fibrous	No	75	ND	25

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	70		ribbons				high		
Glass Fibers	5		straight	none			none		
Metal Foil	15			Opaque					
Binders	10		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Layer 3 **Insulation**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Fibrous	Yes	95	ND	35

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Mineral Wool Fibers	95		Rods				0		
Resin Binders	5		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847996**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project (Line 1): **UNT - Gibson Library Floor #4**
Project (Line 2):
Project #: **725010720021**
Field ID #: **4-276**
Sample Description: **Mastic (black) associated w/Perimeter Walls - Room 470**

Lab Proj #: **PLM-23736**
Set #: **35094**
Sample #: **CL847997**

Layer 1 **Black Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Black	**Asphaltic**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Chrysotile	**5**	**4**	**Silky / Wavy**	**None**	**1.556**	**1.549**	**low**	**Parallel**	**+**
Tar Binders	**95**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **5% Chrysotile**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **8/17/2020**

Lab Job #: **PLM-23736**
Sample #: **CL847997**

CATES LABORATORIES

CHAIN OF CUSTODY

CL Project No PLM – 23736
(Lab Only) SET-35092

Company: Apex

Contact/Results to: Phillip - Veronica - Zuri - Edgar **Verbal** ☐ **Email** ☐ **Fax** ☐ (check all that apply)

Email(s):

Telephone No.: 469 - 732 - 0567 **Fax No.:**

Project Information

Project: UNT Gibson Library Floor #2 **Project No.:** 725010720021

Address: **P.O. No.:**

Turnaround (check one)

CLEARANCE (PCM) ☐ **ASAP (SAME DAY)** ☐ **(IMMEDIATE)** ☐ **RUSH (1-DAY)** ☐ **STANDARD (2-DAY)** ☐ **3-4-DAY** ☐ **5-DAY** ☐

Testing Services (check all that apply, use separate COC's for Asbestos & IAQ)

Asbestos		IAQ - Mold (Non-Viable)
PLM-BULK	**PCM-AIR**	**AIR (spore trap)** - Standard Profile (count/genus identification) ☐
EPA 600/R-93/116 ☐	NIOSH 7400 ☐	**AIR (spore trap)** - Expanded Profile (w/insect parts/pollen/skin) ☐
Point Count (400) ☐	OSHA TWA ☐	**BULK (tape lift, swab)** - Standard Profile (genus identification) ☐

CatesLab No Range (Lab Only)	Sample Date	
847809 - 847872		No of Samples 64 Positive Stop Yes ☑ No ☐

Sample No.	Sample Description/Location	Volume (air only)
	See Attachment	

Relinquished By:	Date/Time:	Received By:	Date/Time:
Edgar Roque	8/12-2020	15:30	8/13/2020

AF72017-10 - *Issued 1/7/2020* Walk-In ☑ D-Drop ☐ F-Drop ☐ FedEx ☐ UPS ☐ Lonestar ☐ USPS ☐

*1339 Motor Circle, Dallas, TX 75207 * (214) 920-5006. Fax 1-972-767-0167*
NVLAP Lab Code 200569-0 TDSHS-Asbestos 30-0287. TDLR-Mold LAB1034. AZ Lab Cert AZ0948

HOMOGENEOUS MATERIALS FORM

Project No.:

Date:

Project Name: UNT Gibson Library

Inspector: Zurisaday Diego/ Edgar Roque

PCM- 23736 SET-35092

Homo. Ident.	Materials Description	Sample No.	Location
CM-01	Mastic (Yellow) associated with Carpet (Grey, with	2-94	Room 200
	Blue And green stripe pattern) and Leveling	2-95	Room 230H
	Compound (grey)	2-96	Room 222G
CM-02	Mastic (Yellow) associated with Carpet (Green, with	2-97	Room 234
	Yellow, blue, and red Spot Pattern)	2-98	Room 230D
		2-99	Room 230A
CM-03	Mastic (Yellow) associated with Carpet (Tan, with	2-100	Room 210
	Green And red dot Pattern) and Leveling	2-101	Room 212
	Compound (Grey)	2-102	Room 208
CM-04	Mastic (Yellow) associated with Carpet (Light Grey,	2-103	Room 218E
	with Dark grey stripe pattern) and Leveling	2-104	Room 218B
	Compound (Grey)	2-105	Room 218D
RVF-01	Resilient Vinyl Flooring (Tan, Wood	2-106	Room 225
	Pattern) and Mastic (Yellow)	2-107	Room 225
		2-108	Room 225
RVF-01	Resilient Vinyl Flooring (Dark Brown, Wood Pattern)	2-109	Room 218
	And Mastic (Yellow) and leveling Compound (Grey)	2-110	Room 218
		2-111	Room 218
RVF-03	Resilient Vinyl Flooring (Light Brown, Wood Pattern	2-112	Room 230
	And Mastic (Yellow) and leveling compound (Grey)	2-113	Room 222
		2-114	Room 202
FT-01	12"x12" Floor Tile (Pink with black and white	2-115	Room 222A
	Streaks) and Mastic (Yellow) and leveling	2-116	Room 222A
	Compound (Grey)	2-117	Room 222A
CB-01	4" Cove Base (Black) with Mastic (Tan)	2-118	Room 206
		2-119	Hallway 2L4
		2-120	Room 222C

PLM-23736 SET-35092

Homo. Ident.	Materials Description	Sample No.	Location
WCTX-01	Wall/Ceiling Texture (White, Semi Smooth) Dry	2-121	Room 2L2
	Wall/ Joint Compound	2-122	Room 234
		2-123	Room 222F
		2 124	Room 220
		2-125	Room 218 E
		2-126	Room 211
		2-127	Room 206
CT-01	4'x 6' Acoustical Ceiling Tile (Light Grey, Pinhole)	2-128	Room 200
		2-129	Room 129
		2-130	Room 200
CT-02	2'x 2' Acoustical Ceiling tile (White, pinhole, Rough	2-131	Room 222
	Finish)	2-132	Room 202
		2-133	Room 2T2
CT-03	2'x4' Acoustical Ceiling tile (White, Pinhole and	2-134	Room 2L2
	Fissured)	2-135	Room 230C
		2-136	Room 230
CT-04	2'x 4' Acoustical Ceiling tile (White, Fissured)	2-137	Room 2A
		2-138	Room 222F
		2-139	Room 212
DM-01	Duct Mastic (Grey)	2-140	Room 204
		2-141	Room 2VE2
		2-142	Room 2T1A
DM-02	Duct Mastic (White)	2-143	Room 200
		2-144	Room 222
		2-145	Room 204D

PLM – 23736 SET – 35092

Homo. Ident.	Materials Description	Sample No.	Location
IC-01	Interior Building Caulking (White)	2-146	Room 2T1A
	(Above Ceiling)	2-147	Room 230
		2-148	Room 218C
FS-01	Fire Stop (Red, yellow)	2-149	Room 2T1A
		2-150	Room 206
		2-151	Room 2ME1
	12"x 12" Ceramic Floor Tile (Grey)		**Assume**
	(Restrooms)		
	Mirror Mastic		**Assume**
	(Restrooms)		
	12" x 16" Ceramic Wall Tile (White)		**Assume**
	(Restrooms)		

PCM – 23736 SET – 35092

Homo. Ident.	Materials Description	Sample No.	Location
TSI-01	Thermal System Insulation (White)	2-279	Room 200
		2 280	Room 204A
		2-281	Room 206
WM-01	Mastic (Black) associated with Perimeter Walls	2-282	Room 207
		2-283	Room 218D
		2-284	Room 220

CATES LABORATORIES

CHAIN OF CUSTODY

CL Project No PLM- 23736
(Lab Only) SET- 35093

Company: Apex

Contact/Results to: Phillip - Veronica - Zuri - Edgar- Marshall **Verbal** ☐ **Email** ☐ **Fax** ☐ (check all that apply)

Email(s):

Telephone No.: 469 - 732 - 0567 **Fax No.:**

Project Information

Project. UNT Gibson Library **Project No.:** 725010720021

Address: **P.O. No.:**

Turnaround (check one)

CLEARANCE (PCM) ☐ **ASAP (SAME DAY)** ☐ **(IMMEDIATE)** ☐ **RUSH (1-DAY)** ☑ **STANDARD (2-DAY)** ☑ **3-4-DAY** ☐ **5-DAY** ☐

E.R

Testing Services (check all that apply, use separate COC's for Asbestos & IAQ)

Asbestos		IAQ - Mold (Non-Viable)
PLM-BULK	**PCM-AIR**	**AIR (spore trap)** - Standard Profile (count/genus identification) ☐
EPA 600/R-93/116 ☑	NIOSH 7400 ☐	**AIR (spore trap)** - Expanded Profile (w/insect parts/pollen/skin) ☐
~~Point Count (400)~~ ☐	OSHA TWA ☐	**BULK (tape lift, swab)** - Standard Profile (genus identification) ☐

CatesLab No Range (Lab Only)	Sample Date	
847873 - 847938		No of Samples 66 Positive Stop Yes ☑ No ☐

Sample No.	Sample Description/Location	Volume (air only)
	See Attachment	

Relinquished By:	Date/Time:	Received By:	Date/Time:
Edgar Roque	8/13/2020	[signature] 15:30	8/13/2020

AF72017-10 - issued 1/7/2020 Walk-In ☑ D-Drop ☐ F-Drop ☐ FedEx ☐ UPS ☐ Lonestar ☐ USPS ☐

PLM-23736 SET-35093

Homo. Ident.	Materials Description	Sample No.	Location
CM-01	Mastic (Yellow) Associated with Carpet (Tan with	3-152	Room 300
	Blue and red stripe Pattern)	3-153	Room 302
		3-154	Room 318
CM-02	Mastic (Yellow) Associated with Carpet (Tan with	3-155	Room 316
	yellow And Black Spot Design)	3-156	Room 306
		3-157	Room 316
CM-03	Mastic (Yellow) Associated with Carpet (Red, Blue,	3-158	Room 308
	and Tan Multicolor Pattern) and Leveling	3-159	Room 308
	Compound (Grey)	3-160	Room 308
CM-04	Mastic (Yellow) associated with Carpet (Grey, with	3-161	Room 313
	Blue And green stripe pattern) and Leveling	3-162	Room 313B
	Compound (Grey)	3-163	Room 313A
RVF-01	Resilient Vinyl Flooring (Light Brown, Wood Pattern	3-164	Room 310
	And Mastic (Brown)	3-165	Room 310C
		3-166	Hallway 3A
CB-01	4" Cove Base (Dark Grey) with Mastic (Tan)	3-167	Room 300
		3-168	Room 310G
		3-169	Room 312
SU-01	Sink Under Coating (Grey)	3-170	Room 313A
		3-171	Room 313A
		3-172	Room 313A
WCTX-01	Wall/ Ceiling Texture (Grey, Semi smooth) Dry wall/	3-173	Room 320
	Joint Compound	3-174	Room 311
		3-175	Room 313
		3-176	Room 311A
		3-177	Room 310
		3-178	Room 310D

PLM-23736 SET-35093

Homo. Ident.	Materials Description	Sample No.	Location
		3-179	Room 3SC1
WCP-01	Wall/Ceiling Cover Paper (Light Purple, Rough)	3-180	Room 300
	Drywall/Joint Compound	3-181	Room 300
		3-182	Room 300
UDW-01	Unfinished Drywall/ Joint Compound	3-183	Room 3ME1
		3-184	Room 3ME2
		3-185	Room 3ME2
CT-01	4'x 6' Acoustical Ceiling Tile (Light Grey, Pinhole)	3-186	Room 300
		3-187	Room 300
		3-188	Room 306
CT-02	2'x 2' Acoustical Ceiling tile (White, pinhole, Rough	3-189	Room 319
	Finish)	3-190	Room 312
		3-191	Restroom 3T1
FS-01	Fire Stop (Red)	3-192	Room 3ME1
		3-193	Room 3ME2
		3-194	Room 3ME2
TSI-01	Thermal System Insulation (White)	3-195	Room 3ME2
		3-196	Room 300
		3-197	Room 300
CT-03	2'x4' Acoustical Ceiling tile (White, Pinhole and	3-198	Room 313
	Fissured)	3-199	Room 313AA
		3-200	Room 310
FS-02	Fire Stop (Grey)	3-201	Room 3ME1
		3-202	Room 3ME2
		3-203	Room 3ME2

PLM-23736 SET-35093

Homo. Ident.	Materials Description	Sample No.	Location
WM-01	Mastic (Black) associated with Perimeter Walls	3-204	Room 300
		3-205	Room 312A
		3-206	Room 310B
DM-01	Duct Mastic (White)	3-207	Room 300
		3-208	Room 300
		3-209	Room 320
DM-02	Duct Mastic (Grey)	3-210	Room 300
		3-211	Room 300
		3-212	Room 311
FP-01	Fire Proofing (Grey)	3-213	Room 300
		3-214	Room 300
		3-215	Room 300
		3-216	Room 300
		3-217	Room 300
	Resilient Vinyl Flooring (Red, Wood Pattern)		Assume
	12"x 12" Ceramic Floor Tile (Grey)		Assume
	(Restrooms)		
	Mirror Mastic		Assume
	(Restrooms)		
	12" x 16" Ceramic Wall Tile (White)		Assume
	(Restrooms)		

CATES LABORATORIES

CHAIN OF CUSTODY

CL Project No. PLM – 23736
(Lab Only) SET – 35094

Company: Apex

Contact/Results to: Phillip - Veronica - Zuri - Edgar **Verbal** ☐ **Email** ☐ **Fax** ☐ (check all that apply)

Email(s):

Telephone No.: 469 - 732 - 0567 **Fax No.:**

Project Information

Project: UNT Gibson Library Floor # 4 **Project No.:** 725010720021

Address: **P.O. No.:**

Turnaround (check one)

CLEARANCE (PCM) ☐ **ASAP (SAME DAY)** ☐ **(IMMEDIATE)** ☐ **RUSH (1-DAY)** ☑ **STANDARD (2-DAY)** ☑ **3-4-DAY** ☐ **5-DAY** ☐

Testing Services (check all that apply, use separate COC's for Asbestos & IAQ)

Asbestos		IAQ - Mold (Non-Viable)
PLM-BULK	**PCM-AIR**	**AIR (spore trap)** - Standard Profile (count/genus identification) ☐
EPA 600/R-93/116 ☑	NIOSH 7400 ☐	**AIR (spore trap)** - Expanded Profile (w/insect parts/pollen/skin) ☐
Point Count (400) ☐	OSHA TWA ☐	**BULK (tape lift, swab)** - Standard Profile (genus identification) ☐
CatesLab No. Range (Lab Only): 847939 – 847999	**Sample Date**	No of Samples 61 Positive Stop. Yes ☑ No ☐

Sample No.	Sample Description/Location	Volume (air only)
	See Attachment	

Relinquished By:	Date/Time:	Received By:	Date/Time:
Edgar Roque	8-13-2020	15:30	8/13/2020

AF72017-10 - *Issued 1/7/2020* Walk-In ☒ D-Drop ☐ F-Drop ☐ FedEx ☐ UPS ☐ Lonestar ☐ USPS ☐

*1339 Motor Circle, Dallas, TX 75207 * (214) 920-5006, Fax 1-972-767-0167*
NVLAP Lab Code 200569-0 TDSHS-Asbestos 30-0287 TDLR-Mold LAB1034, AZ Lab Cert AZ0948

PLM – 23736 SGT – 35094

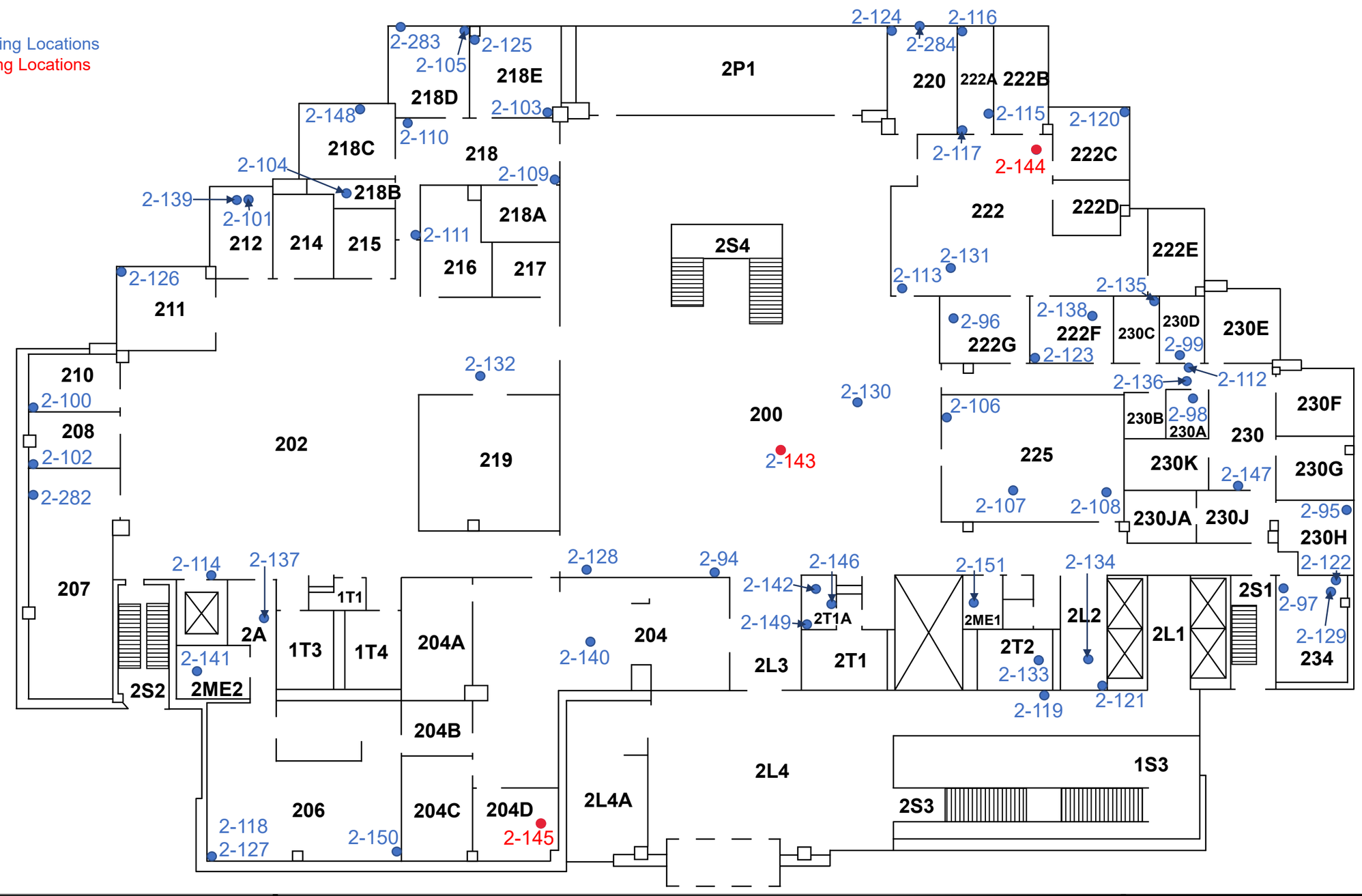
Homo. Ident.	Materials Description	Sample No.	Location
CM-01	Mastic (red) Associated with Carpet (Tan, with	4-218	Room 470
	Multicolor Green stripes) and Leveling	4-219	Room 450
	Compound (Grey)	4-220	Hallway 4L1
CM-02	Mastic (Yellow) Associated with Carpet (Red, Blue,	4-221	Room 404
	and Tan Multicolor Pattern)	4-222	Room 404
		4-223	Room 405
CM-03	Mastic (Yellow) Associated with Carpet (Tan with	4-224	Stairway 4S4
	Green spot Pattern)	4-225	Stairway 3S4
	(Stair Way, All Levels)	4-226	Stairway 2S4
FT-01	12"x 12" Floortile (Grey, with Dark grey and white	4-227	Room 450A
	Streaks) and Mastic (Yellow) and Leveling	4-228	Room 450A
	Compound (Grey)	4-229	Room 450A
FT-02	12"x 12" Floortile (Dark Blue with black streaks)	4-230	Room 410
	And Mastic (Yellow) and Leveling Compound	4-231	Room 410
	(Grey)	4-232	Room 410
RVF-01	Resilient Vinyl Flooring (Light Brown, Wood Pattern	4-233	Room 401
	And Mastic (Yellow)	4-234	Room 400
		4-235	Room 454
CB-01	4" Cove Base (Dark Grey) with Mastic (Tan)	4-236	By Room 470
		4-237	By Room 4T1
		4-238	Room 448
SU-01	Sink Under Coating (Grey)	4-239	Room 401
		4-240	Room 401
		4-241	Room 401
WCTX-01	Wall/ Ceiling Texture (Grey, Semi smooth) Dry wall/	4-242	Room 470
	Joint Compound	4-243	Room 460
		4-244	Room 428

PLM-23736 SET-35094

Homo. Ident.	Materials Description	Sample No.	Location
		4-245	Room 401
		4-246	Room 244
		4-247	Room 448
		4 248	Room 257
	Unfinished Drywall/Joint Compound	4-249	Room 4ME1
		4-250	Room 4ME1
		4-251	Room 4ME1
	Fire Stop (Red)	4-252	Room 4ME2
		4-253	Room 4ME2
		4-254	Room 4ME1
	Fire Stop (Grey)	4-255	Room 4ME1
		4-256	Room 4ME3
		4-257	Room 4ME3
CT-01	4'x 6' Acoustical Ceiling Tile (Light Grey, Pinhole)	4-258	Room 446
		4-259	Room 460
		4-260	Room 430
CT-02	2'x 2' Acoustical Ceiling tile (White, pinhole, Rough	4-261	Room 450A
	Finish)	4-262	Room 461
		4-263	Restroom 4T1
CT-03	2'x 4' Acoustical Ceiling tile (White, Fissured)	4-264	Room 418
		4-265	Room 432
		4-266	Room 434
DM-01	Duct Mastic (Grey)	4-267	Room 4ME3
		4-268	Room 428
		4-269	Room 400

PLM-23736 SET-35094

Homo. Ident.	Materials Description	Sample No.	Location
DM-02	Duct Mastic (White)	4-270	Room 446
		4-271	Room 470
		4-272	Hallway 4C
TSI-01	Thermal System Insulation (White)	4-273	Room 460
		4-274	Room 446
		4-275	Room 4ME3
WM-01	Mastic (Black) associated with Perimeter Walls	4-276	Room 470
		4-277	Room 453
		4-278	Room 400
	Mastic associated with Corner Guards		**Assume**
	12"x 12" Ceramic Floor Tile (Grey)		**Assume**
	(Restrooms)		
	Mirror Mastic		**Assume**
	(Restrooms)		
	12" x 16" Ceramic Wall Tile (White)		**Assume**
	(Restrooms)		



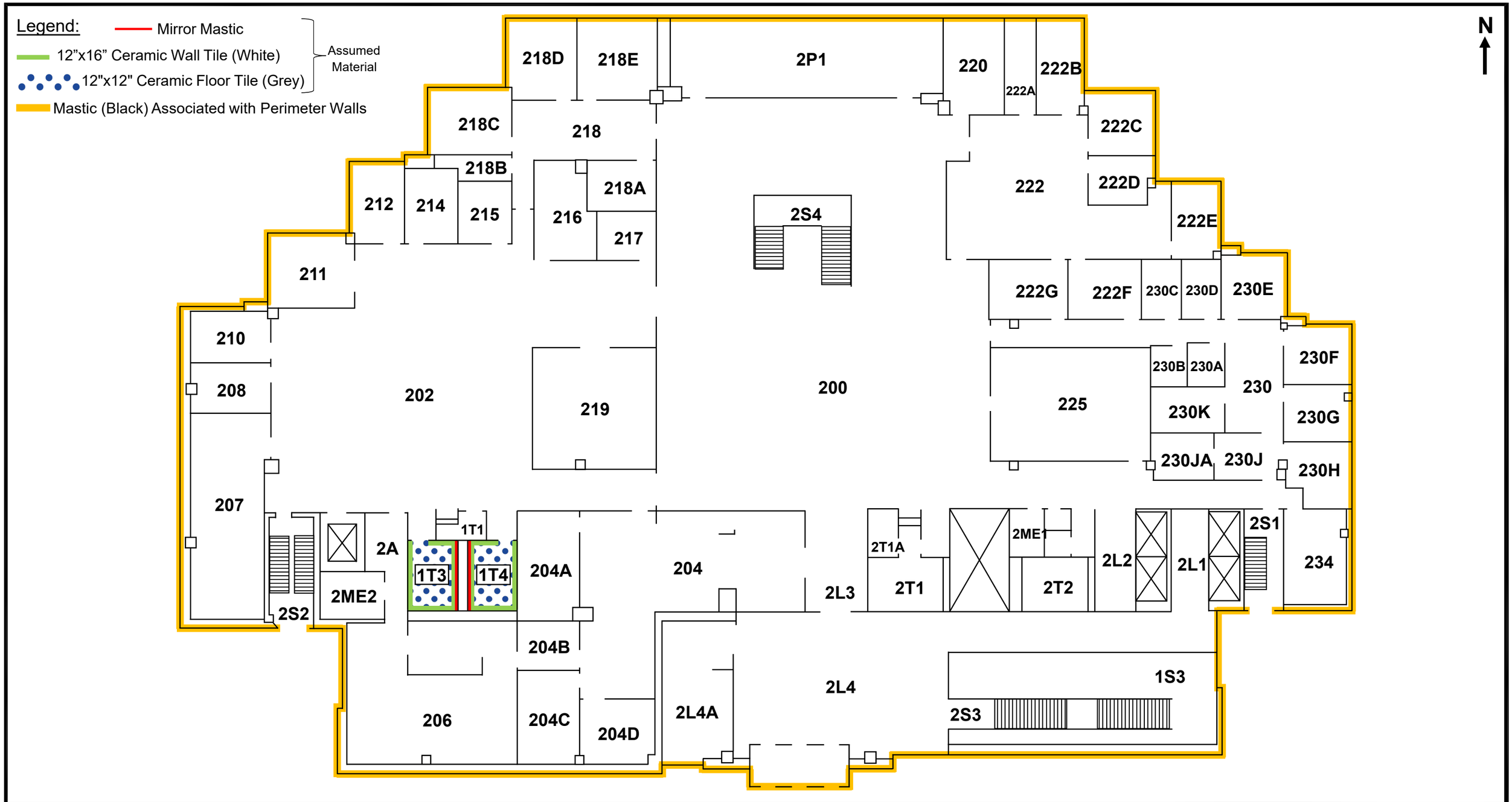
Asbestos Containing Material Survey
UNT Health Science Center
Gibson D. Lewis Library
955 Montgomery Street
Fort Worth, Texas 76107

Project No. 725010720021

FIGURE 1

Level 2 – Sampling Locations

Apex Companies, LLC
2100 Ford Road, Suite 401
Dallas, Texas 75234
Phone: (469) 365-1100
www.apexcos.com



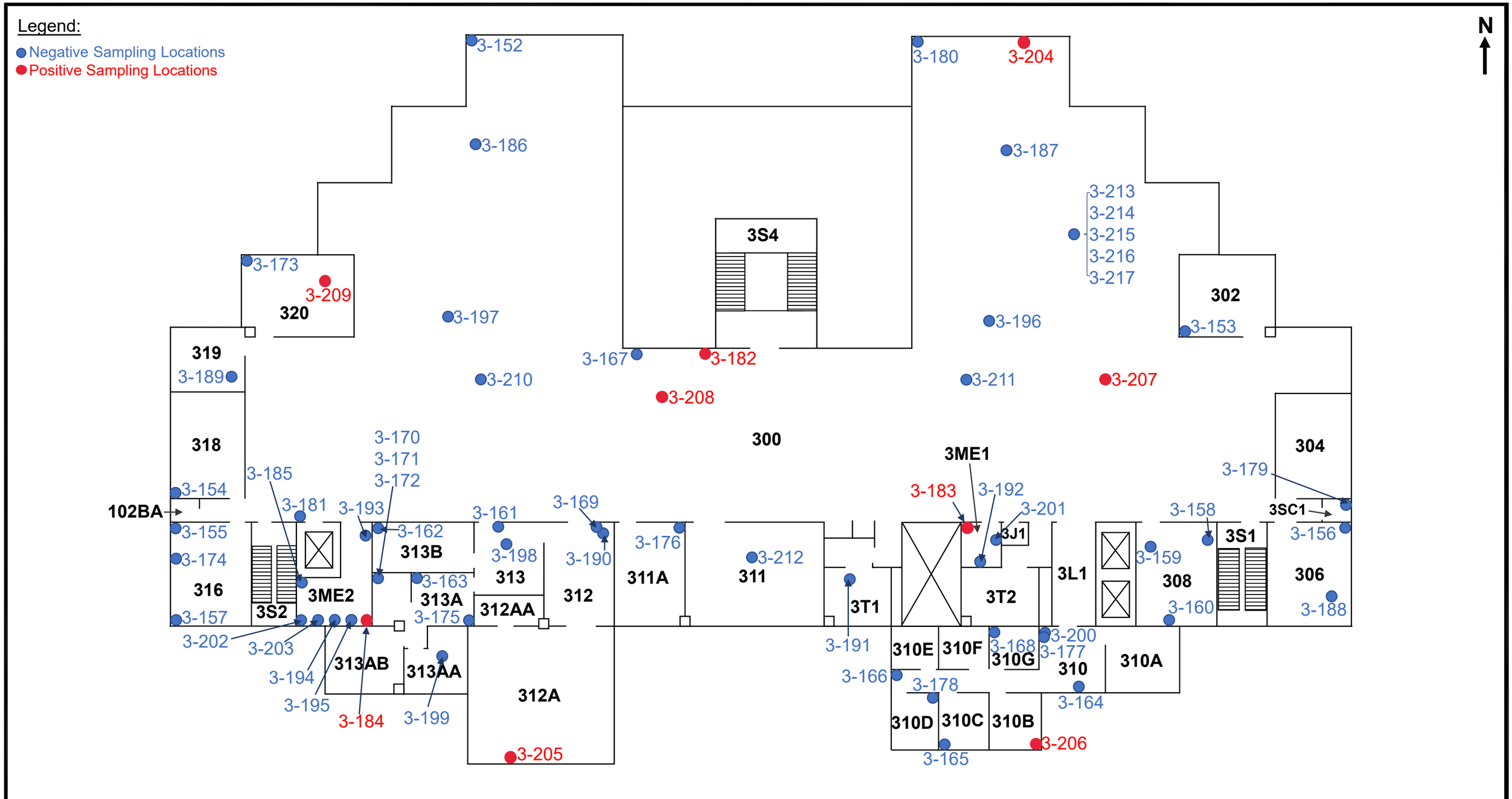
Asbestos Containing Material Survey
UNT Health Science Center
Gibson D. Lewis Library
955 Montgomery Street
Fort Worth, Texas 76107

Project No. 725010720021

FIGURE 2

Level 2 – Asbestos Containing Material Locations

Apex Companies, LLC
2100 Ford Road, Suite 401
Dallas, Texas 75234
Phone: (469) 365-1100
www.apexcos.com



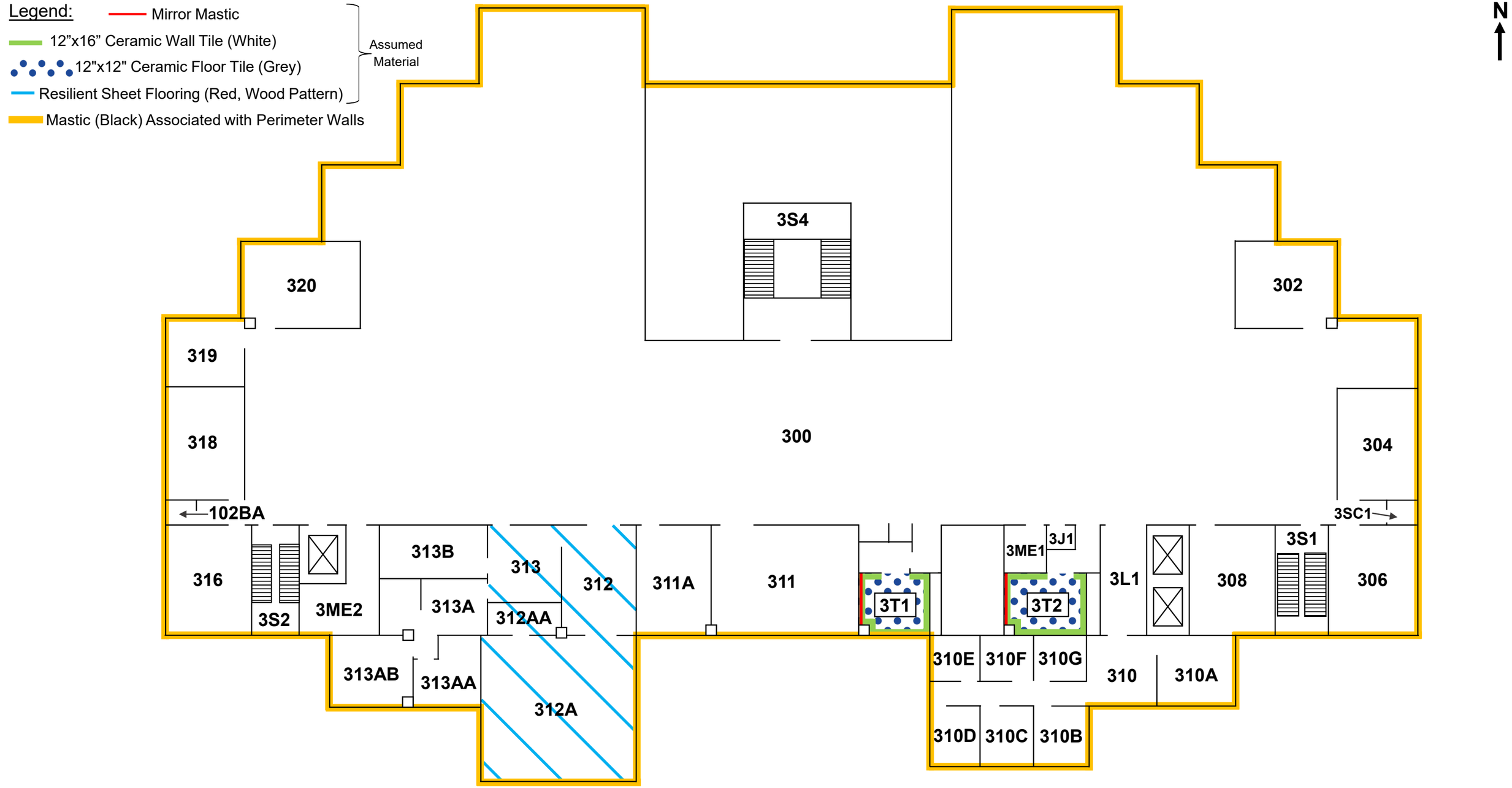
Asbestos Containing Material Survey
UNT Health Science Center
Gibson D. Lewis Library
955 Montgomery Street
Fort Worth, Texas 76107

Project No. 725010720021

FIGURE 3

Level 3 – Sampling Locations

Apex Companies, LLC
2100 Ford Road, Suite 401
Dallas, Texas 75234
Phone: (469) 365-1100
www.apexcos.com



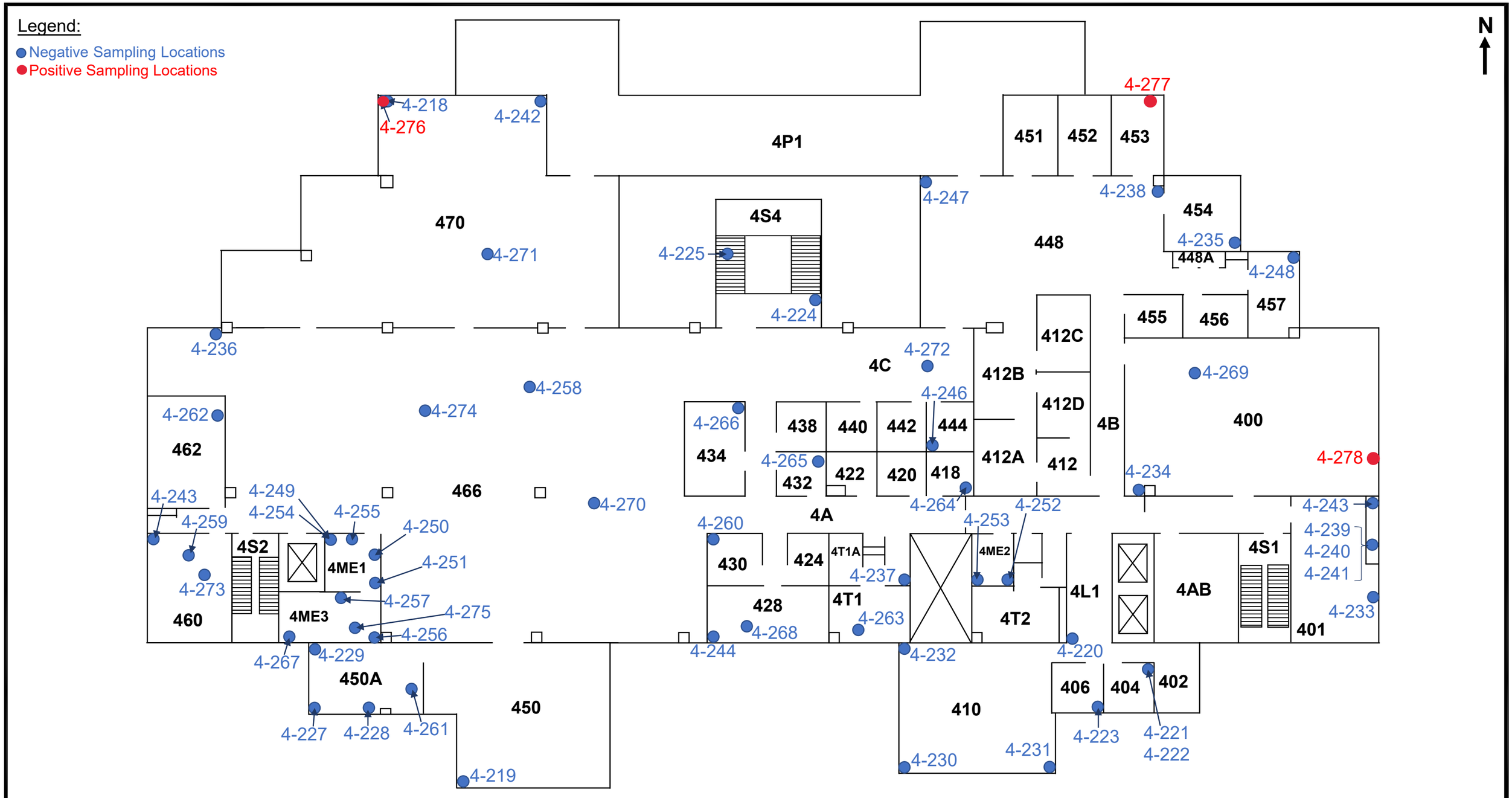
Asbestos Containing Material Survey
UNT Health Science Center
Gibson D. Lewis Library
955 Montgomery Street
Fort Worth, Texas 76107

Project No. 725010720021

FIGURE 4

Level 3 – Asbestos Containing Material Locations

Apex Companies, LLC
2100 Ford Road, Suite 401
Dallas, Texas 75234
Phone: (469) 365-1100
www.apexcos.com



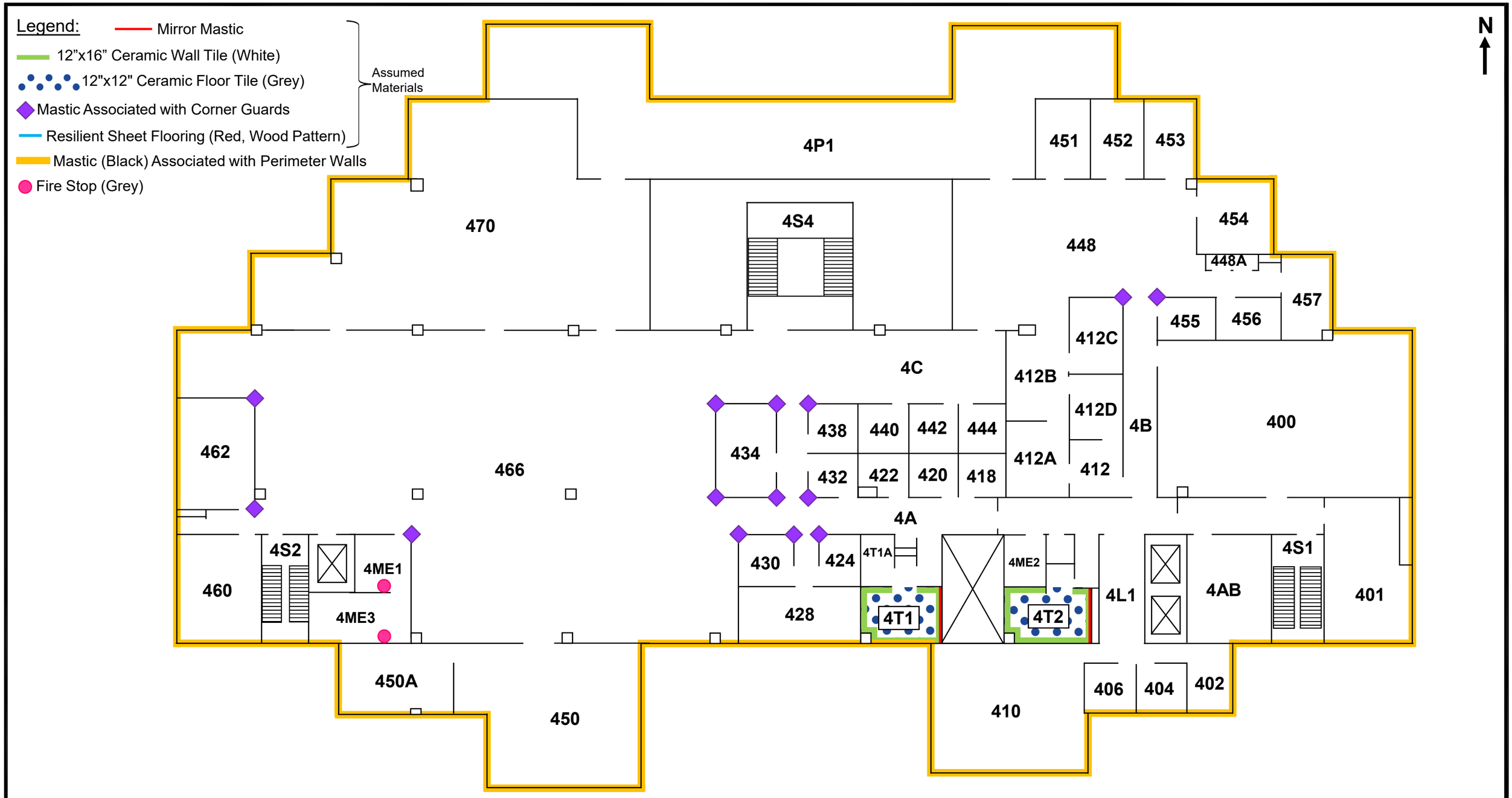
Asbestos Containing Material Survey
UNT Health Science Center
Gibson D. Lewis Library
955 Montgomery Street
Fort Worth, Texas 76107

Project No. 725010720021

FIGURE 5

Level 4 – Sampling Locations

Apex Companies, LLC
2100 Ford Road, Suite 401
Dallas, Texas 75234
Phone: (469) 365-1100
www.apexcos.com



Asbestos Containing Material Survey
UNT Health Science Center
Gibson D. Lewis Library
955 Montgomery Street
Fort Worth, Texas 76107

Project No. 725010720021

FIGURE 6

Level 4 – Asbestos Containing Material Locations

Apex Companies, LLC
2100 Ford Road, Suite 401
Dallas, Texas 75234
Phone: (469) 365-1100
www.apexcos.com

March 16, 2020

University of North Texas Health Science Center
3416 Darcy Street
Fort Worth, Texas
Attention: Mr. Robert E. Short, Jr. P.E.

Re: Asbestos Survey
University of North Texas Health Science Center
Gibson D. Lewis Library (LIB) Level 01
955 Montgomery Street
Fort Worth, Texas
Apex project No.725010720014

Apex TITAN, Inc., a subsidiary of Apex Companies, LLC (Apex) was retained by University of North Texas Health Science Center to conduct an asbestos survey of the first floor of the Gibson D. Lewis Library (LIB) located at 955 Montgomery Street in Fort Worth, Texas. The survey was performed in March 11, 2020 by Mr. Zurisaday Diego, a Texas Department of State Health Service (TDSHS) licensed asbestos inspector (TDSHS License No. 60-3759). This survey has been performed in accordance with Apex Proposal No. 047828 dated March 5, 2020. The following is a summary of the suspect asbestos containing materials (ACM) collected from the building. ACM previously identified by Apex was incorporated into this report.

The following materials were observed on the day of the survey; however, they were not sampled due to the destructive nature of the sampling:

- **Mirror mastic (Women's and Men's Restrooms level 01)**
- **Mastic associated with raised wooden floor pedestals (Room 114, 114A, 114B, 114C)**

These materials must be sampled prior to disturbance or assumed to be asbestos containing and handled according to local, state, and federal regulations.

This survey applies only to the materials sampled on the interior of the first floor of the Gibson D. Lewis Library located at the above referenced address. Any materials located on other floors of the building as well as the roof and building envelope were not evaluated as part of this survey should be assumed to contain asbestos until testing is performed.

The survey activities began with a preliminary visual observation of readily accessible portions of the survey area by Apex personnel to identify homogeneous areas of suspect ACM. A homogeneous area consists of building materials, which appear similar throughout in terms of color, texture and date of application. A visual assessment was conducted throughout the areas surveyed. The identification of homogeneous materials was made by visual observations. Based on results of the visual observation, bulk samples of suspect ACM were collected in general accordance with AHERA sampling protocols.

Each homogeneous area of suspect ACM was physically touched to assess the friability and condition of the materials. A friable material is defined by the EPA as a material which can be crumbled, pulverized or reduced to powder by hand pressure when dry.

The suspect ACM samples collected were obtained by physically removing a small portion of the suspect material using a sharp instrument. Disturbance of adjacent material was kept to a minimum during the sampling program. Appropriately attired inspectors collected bulk samples using wet methods as applicable to reduce the potential for fiber release. Each sample was placed into a separate labeled container, which was then sealed. The sampling instrument was cleaned after each sample was collected. Each sample was placed into a sealable container and labeled with a sample number with an indelible marker.

Ninety-three (93) samples of suspect ACM were obtained from twenty-nine (29) homogeneous materials. Analyses was conducted utilizing Polarized-Light Microscopy (PLM), following the Environmental Protection Agency (EPA) PLM Method EPA-600/R-93/116. The bulk samples were analyzed by Cates Labs located in Dallas, Texas. Cates Labs is accredited by the National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program (NVLAP No. 200569-0) and the TDSHS (License No. 30-0287).

Based on the laboratory results, no ACM was identified in the samples collected by Apex on the day of the survey. However, as mentioned above two materials, mirror mastic and mastic associated with the wooden floor pedestals, were not sampled on the day of the survey and thus must me assumed to be ACM until they can be sampled for asbestos content.

A list of the homogeneous areas/materials sampled as part of this asbestos survey is included in **Appendix A**..

It is Apex's understanding that the areas surveyed are scheduled for renovation/demolition. If any renovation/demolition activities will impact the identified assumed ACMs, the assumed ACMs must be sampled prior to any disturbance or abated per local, state, and federal regulations.

The asbestos abatement must be performed by a State of Texas licensed asbestos abatement contractor in accordance with a project design prepared by a State of Texas licensed asbestos consultant. In addition, third party air monitoring must be performed during the abatement. Some category I non-friable materials may be demolished in place with the structure; however, for the purpose of this report, Apex recommends that all ACM be abated prior to demolition.

If the assumed ACM is not abated, the materials should be incorporated into the existing management plan.

Apex performed its services in a manner consistent with the level of care and expertise exercised by asbestos professionals performing the same or similar services at the same time and in the same geographic area. No express or implied warranties apply to these services or this report. Due to the limited extent of the assessment and sampling activities at the Site, Apex cannot and does not imply, warranty or guarantee that materials *not sampled* contain no asbestos. This Asbestos Survey was intended to identify reasonably accessible materials most likely to contain asbestos in quantities subject to regulation. Please note that due to the non-destructive nature of the survey, the potential exists for additional materials to be present in hidden or concealed areas.

All conclusions and recommendations in this report represent the professional opinions of the Apex personnel involved with the project. The results, findings, conclusions and recommendations expressed in this report are based on access provided and conditions observed, and samples taken during Apex survey of the building. The information contained in this report is relevant as of the date on which the field work was performed and should not be relied upon to represent Site's conditions at a later date. This study and report were prepared on behalf of and for the exclusive use of University of North Texas solely for their use and reliance in determining the presence of asbestos in identified areas of the site. The results of this report are not intended or to be construed as legal interpretation of existing federal, state or local environmental, health and safety laws or regulations. Apex assumes no responsibility or liability for errors in information or data provided to Apex by the Client or any third party or developments resulting from activities or situations outside the scope of this project. This report is not to be used as a bidding document.

Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary. Apex does not warrant the work of regulatory agencies, laboratories or other third parties supplying information, which may have been used in the preparation of this report. No warranty, express or implied is made.

Apex appreciates the opportunity to be of service on this project. If we can be of further assistance, please contact our office at 469-365-1100.

Sincerely yours,
Apex TITAN, Inc.

Zurisaday Diego
Asbestos Inspector
TDSHS Lic. No. 60-3759

Phillip G. Fronczek, CHMM
Program Manager
Industrial Hygiene Services
TDSHS Lic. No. 10-5737

Attachments:
Appendix A: Asbestos Containing Materials Summary
Appendix B: Analytical Results/Chain(s) of Custody
Appendix C: Figures
Appendix D: Licenses

ATTACHMENTS

APPENDIX A

Identified Homogeneous Materials Table

Identified Homogeneous Materials
University of North Texas Health Science Center
Gibson D. Lewis Library (LIB) Level 01
955 Montgomery Street
Fort Worth, Texas
Apex Project No. 725010720014

Material	Category	Condition	ACM	Sample Number
12"x 12" Floor Tile (Pink with Grey Streaks) and Mastic (Yellow)	Category I Non-friable	G	Non-Detected	1-1 1-2 1-3
Mastic (Yellow) associated with Carpet (Dark Green with Red, and White Stripe Pattern) Multilayer	Category II Non-friable	G	Non-Detected	1-4 1-5 1-6
Mastic (Tan) associated with Carpet (Brown with Dark Brown Stripe Pattern) Multilayer	Category II Non-friable	G	Non-Detected	1-7 1-8 1-9
Mastic (Yellow) associated with Carpet (Yellow, with Multicolor Dot Pattern) Multilayer	Category II Non-friable	G	Non-Detected	1-10 1-11 1-12
Mastic (Yellow) associated with Carpet (Dark Yellow with Multicolor Dot Pattern)	Category II Non-friable	G	Non-Detected	1-13 1-14 1-15
Mastic (Yellow) associated with Carpet (Blue with Multicolor Dot Pattern) Multilayer	Category II Non-friable	G	Non-Detected	1-16 1-17 1-18
Mastic (Yellow) associated with Carpet (Light Brown)	Category II Non-friable	G	Non-Detected	1-19 1-20 1-21
Mastic (Clear) associated with Carpet (Red) Multilayer	Category II Non-friable	G	Non-Detected	1-22 1-23 1-24
Mastic (Yellow) associated with Carpet (Dark Blue with Light Grey Streak Pattern) Multilayer	Category II Non-friable	G	Non-Detected	1-25 1-26 1-27
Mastic (Yellow) associated with Carpet (Brown with Dark Brown and Grey Stripe Pattern)	Category II Non-friable	G	Non-Detected	1-28 1-29 1-30
12" x 12" Ceramic Floor Tile (Light Grey) with Grout (Grey) and Mortar (Grey)	Category I Non-friable	G	Non-Detected	1-31 1-32 1-33

Material	Category	Condition	ACM	Sample Number
Epoxy Floor Coating (Grey, Sandy)	Category II Non-friable	G	Non-Detected	1-34 1-35 1-36
Resilient Vinyl Flooring (Grey with Multicolor Stripes) with Mastic (Yellow) and Leveling Compound (Grey)	Category I Non-friable	G	Non-Detected	1-37 1-38 1-39
Resilient Vinyl Flooring (Brown, Wood Pattern) with Mastic (Yellow)	Category I Non-friable	G	Non-Detected	1-40 1-41 1-42
2”x 6” Ceramic Floor Tile (Brown) with Grout (Grey) and Mortar (Grey)	Category II Non-friable	G	Non-Detected	1-43 1-44 1-45
Mastic (Yellow) associated with 4” Cove Base (Black)	Category II Non-friable	G	Non-Detected	1-46 1-47 1-48
Mastic (Yellow) associated with Fiberglass Reinforced Panel (FRP) (White)	Category II Non-friable	G	Non-Detected	1-49 1-50 1-51
Concrete Wall Texture (Grey, Sandy)	Category II Non-friable	G	Non-Detected	1-52 1-53 1-54 1-55 1-56
CMU Wall Texture (White) with Grout (Grey)	Category II Non-friable	G	Non-Detected	1-57 1-58 1-59
Unfinished Drywall/Joint Compound	Category II Non-friable	G	Non-Detected	1-60 1-61 1-62
Ceiling/Wall Texture (White, Blue, Tan, Sandy) Drywall/Joint Compound	Category II Non-friable	G	Non-Detected	1-63 1-64 1-65 1-66 1-67 1-68 1-69
12”x 24” Ceramic Wall Tile (White) with Grout (White) and Thinset (White)	Category II Non-friable	G	Non-Detected	1-70 1-71 1-72
Sink Under Coating (Black)	Category II Non-friable	G	Non-Detected	1-73 1-74 1-75
Interior Building Expansion Joint Caulking (Tan)	Category II Non-friable	G	Non-Detected	1-76 1-77 1-78
2’x4’ Acoustical Ceiling Tile (White, Pinhole and Fissured)	Category II Non-friable	G	Non-Detected	1-79 1-80 1-81

G – Good, D – Damaged, SD – Significantly Damaged

Material	Category	Condition	ACM	Sample Number
2'x2' Acoustical Ceiling Tile (White, Rough Finish)	Category II Non-friable	G	Non-Detected	1-82 1-83 1-84
Duct Mastic (White)	Category II Non-friable	G	Non-Detected	1-85 1-86 1-87
Duct Mastic (Grey)	Category II Non-friable	G	Non-Detected	1-88 1-89 1-90
Thermal System Insulation (White)	Category II Non-friable	G	Non-Detected	1-91 1-92 1-93
Assumed ACM Materials				
Mastic associated with Raised Wooden Floor Pedestals	Category II Non-friable	G	**Assumed**	**N/A**
Mirror Mastic	Category II Non-friable	G	**Assumed**	**N/A**

G – Good, D – Damaged, SD – Significantly Damaged

APPENDIX B

Analytical Results/Chain(s) of Custody

APEX

PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Apex TITAN	Lab Job No.:	PLM-22826
Project:	Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX	Set No.:	33628
Project No:	725010720014	Report Date:	3/16/2020
Identification:	Asbestos, Bulk Sample Analysis	Sample Date:	3/12/2020
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 3/13/2020, ninety-three (93) bulk samples were submitted by Mr. Zuri Diego of Apex TITAN for asbestos analysis by PLM/DS. Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL811757	1-1	12" X 12" Floor Tile (pink w/grey streaks) & Mastic (yellow) - Room 100	None Detected - Floor Tile None Detected - Yellow Mastic
CL811758	1-2	12" X 12" Floor Tile (pink w/grey streaks) & Mastic (yellow) - Room 138	None Detected - Floor Tile None Detected - Yellow Mastic
CL811759	1-3	12" X 12" Floor Tile (pink w/grey streaks) & Mastic (yellow) - Room 122	None Detected - Floor Tile None Detected - Yellow Mastic
CL811760	1-4	Mastic (yellow) associated w/Carpet (dark green w/red & white stripe pattern) Multi-Layer - Room 100A	None Detected - Yellow Mastic None Detected - Floor Tile None Detected - Yellow Mastic
CL811761	1-5	Mastic (yellow) associated w/Carpet (dark green w/red & white stripe pattern) Multi-Layer - Room 100A	None Detected - Yellow Mastic None Detected - Floor Tile None Detected - Yellow Mastic
CL811762	1-6	Mastic (yellow) associated w/Carpet (dark green w/red & white stripe pattern) Multi-Layer - Room 100A	None Detected - Yellow Mastic None Detected - Floor Tile None Detected - Yellow Mastic
CL811763	1-7	Mastic (tan) associated w/Carpet (brown w/dark brown stripe pattern) Multi-Layer - Hallway by Room 108D	None Detected - Yellow Mastic None Detected - Floor Tile None Detected - Yellow Mastic None Detected - Leveling Compound
CL811764	1-8	Mastic (tan) associated w/Carpet (brown w/dark brown stripe pattern) Multi-Layer - Hallway by Women's Restroom	None Detected - Yellow Mastic None Detected - Floor Tile None Detected - Yellow Mastic None Detected - Leveling Compound
CL811765	1-9	Mastic (tan) associated w/Carpet (brown w/dark brown stripe pattern) Multi-Layer - Hallway by Room 138	None Detected - Yellow Mastic None Detected - Floor Tile None Detected - Yellow Mastic None Detected - Leveling Compound

These samples were analyzed by layers. The overall percent asbestos for the sample is reported when relevant. The EPA considers a material to be asbestos containing only if it contains greater than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) – materials that are friable or may become friable – be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. CatesLab utilizes CVAE on a routine basis and does not include point counting unless specifically requested by the client. The results may not be reproduced except in full.

PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Apex TITAN	Lab Job No.:	PLM-22826
Project:	Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX	Set No.:	33628
Project No:	725010720014	Report Date:	3/16/2020
Identification:	Asbestos, Bulk Sample Analysis	Sample Date:	3/12/2020
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 3/13/2020, ninety-three (93) bulk samples were submitted by Mr. Zuri Diego of Apex TITAN for asbestos analysis by PLM/DS. Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL811766	1-10	Mastic (yellow) associated w/Carpet (yellow w/multi-colored dot pattern) Multi-Layer - Room 126	None Detected - Yellow Mastic None Detected - Floor Tile 1 None Detected - Yellow Mastic None Detected - Floor Tile 2 None Detected - Yellow Mastic
CL811767	1-11	Mastic (yellow) associated w/Carpet (yellow w/multi-colored dot pattern) Multi-Layer - Room 126J	None Detected - Yellow Mastic
CL811768	1-12	Mastic (yellow) associated w/Carpet (yellow w/multi-colored dot pattern) Multi-Layer - Room 102A	None Detected - Yellow Mastic
CL811769	1-13	Mastic (yellow) associated w/Carpet (dark yellow w/multi-colored dot pattern) - Room 104	None Detected
CL811770	1-14	Mastic (yellow) associated w/Carpet (dark yellow w/multi-colored dot pattern) - Room 140	None Detected
CL811771	1-15	Mastic (yellow) associated w/Carpet (dark yellow w/multi-colored dot pattern) - Room 140	None Detected
CL811772	1-16	Mastic (yellow) associated w/Carpet (blue w/multi-colored dot pattern) Multi-Layer - Room 108	None Detected - Yellow Mastic None Detected - Floor Tile None Detected - Yellow Mastic
CL811773	1-17	Mastic (yellow) associated w/Carpet (blue w/multi-colored dot pattern) Multi-Layer - Room 108B	None Detected - Yellow Mastic None Detected - Floor Tile None Detected - Yellow Mastic
CL811774	1-18	Mastic (yellow) associated w/Carpet (blue w/multi-colored dot pattern) Multi-Layer - Room 108A	None Detected - Yellow Mastic None Detected - Floor Tile None Detected - Yellow Mastic
CL811775	1-19	Mastic (yellow) associated w/Carpet (light brown) - Room 110	None Detected
CL811776	1-20	Mastic (yellow) associated w/Carpet (light brown) - Room 110	None Detected
CL811777	1-21	Mastic (yellow) associated w/Carpet (light brown) - Room 110	None Detected

These samples were analyzed by layers. The overall percent asbestos for the sample is reported when relevant. The EPA considers a material to be asbestos containing only if it contains greater than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) – materials that are friable or may become friable – be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. CatesLab utilizes CVAE on a routine basis and does not include point counting unless specifically requested by the client. The results may not be reproduced except in full.

PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Apex TITAN	Lab Job No.:	PLM-22826
Project:	Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX	Set No.:	33628
Project No:	725010720014	Report Date:	3/16/2020
Identification:	Asbestos, Bulk Sample Analysis	Sample Date:	3/12/2020
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 3/13/2020, ninety-three (93) bulk samples were submitted by Mr. Zuri Diego of Apex TITAN for asbestos analysis by PLM/DS. Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL811778	1-22	Mastic (clear) associated w/Carpet (red) Multi-Layer - Room 122A	None Detected - Clear Mastic None Detected - Floor Tile None Detected - Yellow Mastic
CL811779	1-23	Mastic (clear) associated w/Carpet (red) Multi-Layer - Room 122A	None Detected - Clear Mastic None Detected - Floor Tile None Detected - Yellow Mastic
CL811780	1-24	Mastic (clear) associated w/Carpet (red) Multi-Layer - Room 122A	None Detected - Clear Mastic None Detected - Floor Tile None Detected - Yellow Mastic
CL811781	1-25	Mastic (yellow) associated w/Carpet (dark blue w/light grey streak pattern) Multi-Layer - Room 124B	None Detected - Yellow Mastic None Detected - Floor Tile None Detected - Yellow Mastic
CL811782	1-26	Mastic (yellow) associated w/Carpet (dark blue w/light grey streak pattern) Multi-Layer - Room 124B	None Detected - Yellow Mastic None Detected - Floor Tile None Detected - Yellow Mastic
CL811783	1-27	Mastic (yellow) associated w/Carpet (dark blue w/light grey streak pattern) Multi-Layer - Room 124B	None Detected - Yellow Mastic None Detected - Floor Tile None Detected - Yellow Mastic
CL811784	1-28	Mastic (yellow) associated w/Carpet (brown w/dark brown & grey stripe pattern) - Room 124A	None Detected
CL811785	1-29	Mastic (yellow) associated w/Carpet (brown w/dark brown & grey stripe pattern) - Room 124A	None Detected
CL811786	1-30	Mastic (yellow) associated w/Carpet (brown w/dark brown & grey stripe pattern) - Room 124A	None Detected
CL811787	1-31	12" X 12" Ceramic Floor Tile (light grey) w/Grout (grey) & Mortar (grey) - Restroom 1T3	None Detected - Ceramic Tile None Detected - Grout None Detected - Mortar
CL811788	1-32	12" X 12" Ceramic Floor Tile (light grey) w/Grout (grey) & Mortar (grey) - Restroom 1T4	None Detected - Ceramic Tile None Detected - Grout None Detected - Mortar

These samples were analyzed by layers. The overall percent asbestos for the sample is reported when relevant. The EPA considers a material to be asbestos containing only if it contains greater than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) – materials that are friable or may become friable – be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. CatesLab utilizes CVAE on a routine basis and does not include point counting unless specifically requested by the client. The results may not be reproduced except in full.

PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Apex TITAN	Lab Job No.:	PLM-22826
Project:	Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX	Set No.:	33628
Project No:	725010720014	Report Date:	3/16/2020
Identification:	Asbestos, Bulk Sample Analysis	Sample Date:	3/12/2020
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 3/13/2020, ninety-three (93) bulk samples were submitted by Mr. Zuri Diego of Apex TITAN for asbestos analysis by PLM/DS. Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL811789	1-33	12" X 12" Ceramic Floor Tile (light grey) w/Grout (grey) & Mortar (grey) - Hallway by Room TJ1	None Detected - Ceramic Tile None Detected - Grout None Detected - Mortar
CL811790	1-34	Epoxy Floor Coating (grey, sandy) - Room 102BA	None Detected
CL811791	1-35	Epoxy Floor Coating (grey, sandy) - Room 102AA	None Detected
CL811792	1-36	Epoxy Floor Coating (grey, sandy) - Room 102AA	None Detected
CL811793	1-37	Resilient Vinyl Flooring (grey w/multi-colored stripes) w/Mastic (yellow) & Leveling Compound (grey) - Room 1J2	None Detected - Sheet Flooring None Detected - Backing/Mastic None Detected - Leveling Compound
CL811794	1-38	Resilient Vinyl Flooring (grey w/multi-colored stripes) w/Mastic (yellow) & Leveling Compound (grey) - Room 1J2	None Detected - Sheet Flooring None Detected - Backing/Mastic None Detected - Leveling Compound
CL811795	1-39	Resilient Vinyl Flooring (grey w/multi-colored stripes) w/Mastic (yellow) & Leveling Compound (grey) - Room 1J2	None Detected - Sheet Flooring None Detected - Backing/Mastic None Detected - Leveling Compound
CL811796	1-40	Resilient Vinyl Flooring (brown, wood pattern) w/Mastic (yellow) - Room 106	None Detected - Sheet Flooring None Detected - Yellow Mastic
CL811797	1-41	Resilient Vinyl Flooring (brown, wood pattern) w/Mastic (yellow) - Room 116	None Detected - Sheet Flooring None Detected - Yellow Mastic
CL811798	1-42	Resilient Vinyl Flooring (brown, wood pattern) w/Mastic (yellow) - Room 142	None Detected - Sheet Flooring None Detected - Yellow Mastic
CL811799	1-43	2" X 6" Ceramic Floor Tile (brown) w/Grout (grey) & Mortar (grey) - Space 1L2	None Detected - Ceramic Tile None Detected - Grout None Detected - Mortar
CL811800	1-44	2" X 6" Ceramic Floor Tile (brown) w/Grout (grey) & Mortar (grey) - Hallway by South Elevators	None Detected - Ceramic Tile None Detected - Grout None Detected - Mortar

These samples were analyzed by layers. The overall percent asbestos for the sample is reported when relevant. The EPA considers a material to be asbestos containing only if it contains greater than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) – materials that are friable or may become friable – be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. CatesLab utilizes CVAE on a routine basis and does not include point counting unless specifically requested by the client. The results may not be reproduced except in full.

PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Apex TITAN	Lab Job No.:	PLM-22826
Project:	Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX	Set No.:	33628
Project No:	725010720014	Report Date:	3/16/2020
Identification:	Asbestos, Bulk Sample Analysis	Sample Date:	3/12/2020
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 3/13/2020, ninety-three (93) bulk samples were submitted by Mr. Zuri Diego of Apex TITAN for asbestos analysis by PLM/DS. Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL811801	1-45	2" X 6" Ceramic Floor Tile (brown) w/Grout (grey) & Mortar (grey) - Space 1L2	None Detected - Ceramic Tile None Detected - Grout None Detected - Mortar
CL811802	1-46	Mastic (yellow) associated w/4" Cove Base (black) - Hallway by Room 142	None Detected
CL811803	1-47	Mastic (yellow) associated w/4" Cove Base (black) - Hallway by Room 114	None Detected
CL811804	1-48	Mastic (yellow) associated w/4" Cove Base (black) - Hallway by Room 110	None Detected
CL811805	1-49	Mastic (yellow) associated w/Fiberglass Reinforced (FRP) Panel (white) - Room 1J2	None Detected
CL811806	1-50	Mastic (yellow) associated w/Fiberglass Reinforced (FRP) Panel (white) - Room TJ1	None Detected
CL811807	1-51	Mastic (yellow) associated w/Fiberglass Reinforced (FRP) Panel (white) - Room 1J2	None Detected
CL811808	1-52	Concrete Wall Texture (grey, sandy) - South Stairway	None Detected - Paint Texture None Detected - Concrete
CL811809	1-53	Concrete Wall Texture (grey, sandy) - South Stairway	None Detected - Paint Texture None Detected - Concrete
CL811810	1-54	Concrete Wall Texture (grey, sandy) - North Stairway	None Detected - Paint Texture None Detected - Concrete
CL811811	1-55	Concrete Wall Texture (grey, sandy) - Room 1ME1	None Detected - Paint Texture None Detected - Concrete
CL811812	1-56	Concrete Wall Texture (grey, sandy) - Room 1ME1	None Detected - Paint Texture None Detected - Concrete
CL811813	1-57	CMU Wall Texture (white) w/Grout (grey) - Room 1J2	None Detected - Filler/Texture None Detected - CMU Block None Detected - Grout

These samples were analyzed by layers. The overall percent asbestos for the sample is reported when relevant. The EPA considers a material to be asbestos containing only if it contains greater than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) – materials that are friable or may become friable – be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. CatesLab utilizes CVAE on a routine basis and does not include point counting unless specifically requested by the client. The results may not be reproduced except in full.

PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Apex TITAN	Lab Job No.:	PLM-22826
Project:	Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX	Set No.:	33628
Project No:	725010720014	Report Date:	3/16/2020
Identification:	Asbestos, Bulk Sample Analysis	Sample Date:	3/12/2020
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 3/13/2020, ninety-three (93) bulk samples were submitted by Mr. Zuri Diego of Apex TITAN for asbestos analysis by PLM/DS. Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL811814	1-58	CMU Wall Texture (white) w/Grout (grey) - North Stairway	None Detected - Filler/Texture None Detected - CMU Block None Detected - Grout
CL811815	1-59	CMU Wall Texture (white) w/Grout (grey) - South Stairway	None Detected - Filler/Texture None Detected - CMU Block None Detected - Grout
CL811816	1-60	Unfinished Drywall/Joint Compound - Room 1J2	None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL811817	1-61	Unfinished Drywall/Joint Compound - Room 1E1	None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL811818	1-62	Unfinished Drywall/Joint Compound - Room 1J2	None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL811819	1-63	Ceiling/Wall Texture (white, blue, tan, sandy) Drywall/Joint Compound - Hallway by Main Elevators	None Detected - Paint Texture None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL811820	1-64	Ceiling/Wall Texture (white, blue, tan, sandy) Drywall/Joint Compound - Room 124	None Detected - Paint Texture None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL811821	1-65	Ceiling/Wall Texture (white, blue, tan, sandy) Drywall/Joint Compound - Room 123	None Detected - Paint Texture None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material

These samples were analyzed by layers. The overall percent asbestos for the sample is reported when relevant. The EPA considers a material to be asbestos containing only if it contains greater than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) – materials that are friable or may become friable – be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. CatesLab utilizes CVAE on a routine basis and does not include point counting unless specifically requested by the client. The results may not be reproduced except in full.

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NVLAP Lab No. 200569-0
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Client:	Apex TITAN	Lab Job No.:	PLM-22826
Project:	Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX	Set No.:	33628
Project No:	725010720014	Report Date:	3/16/2020
Identification:	Asbestos, Bulk Sample Analysis	Sample Date:	3/12/2020
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 3/13/2020, ninety-three (93) bulk samples were submitted by Mr. Zuri Diego of Apex TITAN for asbestos analysis by PLM/DS. Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL811822	1-66	Ceiling/Wall Texture (white, blue, tan, sandy) Drywall/Joint Compound - Room 115	None Detected - Paint Texture None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL811823	1-67	Ceiling/Wall Texture (white, blue, tan, sandy) Drywall/Joint Compound - Room 114	None Detected - Paint Texture None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL811824	1-68	Ceiling/Wall Texture (white, blue, tan, sandy) Drywall/Joint Compound - Restroom 1T4	None Detected - Paint Texture None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL811825	1-69	Ceiling/Wall Texture (white, blue, tan, sandy) Drywall/Joint Compound - Room 126	None Detected - Paint Texture None Detected - Joint Tape None Detected - Joint Compound None Detected - Paper None Detected - Wallboard Material
CL811826	1-70	12" X 24" Ceramic Wall Tile (white) w/Grout (white) & Thinset (white) - Restroom 1T4	None Detected - Ceramic Tile None Detected - Grout None Detected - Thinset
CL811827	1-71	12" X 24" Ceramic Wall Tile (white) w/Grout (white) & Thinset (white) - Restroom 1T3	None Detected - Ceramic Tile None Detected - Grout None Detected - Thinset
CL811828	1-72	12" X 24" Ceramic Wall Tile (white) w/Grout (white) & Thinset (white) - Restroom 1T3	None Detected - Ceramic Tile None Detected - Grout None Detected - Thinset
CL811829	1-73	Sink Undercoating (black) - Space 1L2	None Detected
CL811830	1-74	Sink Undercoating (black) - Space 1L2	None Detected
CL811831	1-75	Sink Undercoating (black) - Space 1L2	None Detected

These samples were analyzed by layers. The overall percent asbestos for the sample is reported when relevant. The EPA considers a material to be asbestos containing only if it contains greater than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) – materials that are friable or may become friable – be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. CatesLab utilizes CVAE on a routine basis and does not include point counting unless specifically requested by the client. The results may not be reproduced except in full.

PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Apex TITAN	Lab Job No.:	PLM-22826
Project:	Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX	Set No.:	33628
Project No:	725010720014	Report Date:	3/16/2020
Identification:	Asbestos, Bulk Sample Analysis	Sample Date:	3/12/2020
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 3/13/2020, ninety-three (93) bulk samples were submitted by Mr. Zuri Diego of Apex TITAN for asbestos analysis by PLM/DS. Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL811832	1-76	Interior Building Expansion Joint Caulking (tan) - Space 1S3	None Detected
CL811833	1-77	Interior Building Expansion Joint Caulking (tan) - Space 1S3	None Detected
CL811834	1-78	Interior Building Expansion Joint Caulking (tan) - Space 1S3	None Detected
CL811835	1-79	2' X 4' Acoustical Ceiling Tile (white, pinhole & fissured) - Hallway by Room 110	None Detected
CL811836	1-80	2' X 4' Acoustical Ceiling Tile (white, pinhole & fissured) - Hallway by Room 114	None Detected
CL811837	1-81	2' X 4' Acoustical Ceiling Tile (white, pinhole & fissured) - Hallway by North Elevator	None Detected
CL811838	1-82	2' X 2' Acoustical Ceiling Tile (white, rough finish) - Restroom 1T3	None Detected
CL811839	1-83	2' X 2' Acoustical Ceiling Tile (white, rough finish) - Hallway by Room 123	None Detected
CL811840	1-84	2' X 2' Acoustical Ceiling Tile (white, rough finish) - Room 126A	None Detected
CL811841	1-85	Duct Mastic (white) - Room 124	None Detected - White Mastic None Detected - Wrap
CL811842	1-86	Duct Mastic (white) - Room 1J2	None Detected - White Mastic None Detected - Wrap
CL811843	1-87	Duct Mastic (white) - Hallway by Room 114	None Detected - White Mastic None Detected - Wrap None Detected - Insulation
CL811844	1-88	Duct Mastic (grey) - Hallway by Room 140	None Detected
CL811845	1-89	Duct Mastic (grey) - Hallway by Room 114C	None Detected
CL811846	1-90	Duct Mastic (grey) - Room 1J2	None Detected
CL811847	1-91	Thermal System Insulation (white) - Room 1J2	None Detected - Wrap None Detected - Insulation

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PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Apex TITAN	Lab Job No.:	PLM-22826
Project:	Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX	Set No.:	33628
Project No:	725010720014	Report Date:	3/16/2020
Identification:	Asbestos, Bulk Sample Analysis	Sample Date:	3/12/2020
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 3/13/2020, ninety-three (93) bulk samples were submitted by Mr. Zuri Diego of Apex TITAN for asbestos analysis by PLM/DS.
Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL811848	1-92	Thermal System Insulation (white) - Hallway by Restroom 1T4	None Detected - Wrap None Detected - Insulation
CL811849	1-93	Thermal System Insulation (white) - Hallway by Restroom 1T3	None Detected - Wrap None Detected - Insulation

These samples were analyzed by layers. The overall percent asbestos for the sample is reported when relevant. The EPA considers a material to be asbestos containing only if it contains greater than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) – materials that are friable or may become friable – be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. CatesLab utilizes CVAE on a routine basis and does not include point counting unless specifically requested by the client. The results may not be reproduced except in full.

PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Apex TITAN	Lab Job No.:	PLM-22826
Project:	Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX	Set No.:	33628
Project No:	725010720014	Report Date:	3/16/2020
Identification:	Asbestos, Bulk Sample Analysis	Sample Date:	3/12/2020
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 3/13/2020, ninety-three (93) bulk samples were submitted by Mr. Zuri Diego of Apex TITAN for asbestos analysis by PLM/DS.
Copies of the lab data sheets are attached; additional information may be found therein.

STATEMENT OF LABORATORY ACCREDITATION

The samples were analyzed in general accordance with the procedures outlined in the Method for the Determination of Asbestos in Bulk Building Materials, EPA/600/R-93/116 or the U.S. Environmental Protection Agency EPA 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, by polarized light microscopy. The results of each bulk sample relate only to the material tested and the results shall not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Specific questions concerning bulk sample results shall be directed to the Laboratory Director.

Analyst: Kathy Schosek

Laboratory Director: John R. Cates, P.G.

Approved Signatory:

NVLAP LAB CODE 200569-0

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-1**
Sample Description: **12" X 12" Floor Tile (pink w/grey streaks) & Mastic (yellow) - Room 100**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811757**
Page 1 of 1

Layer 1 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Pink-Tan/Grey	**Hard**	**Yes**	**ND**	**ND**	**99**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**1**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811757**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-2**
Sample Description: **12" X 12" Floor Tile (pink w/grey streaks) & Mastic (yellow) - Room 138**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811758**
Page 1 of 1

Layer 1 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Pink-Tan/Grey	**Hard**	**Yes**	**ND**	**ND**	**99**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**1**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811758**

Bulk Asbestos Analysis Sheet

Cates Laboratories
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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-3**
Sample Description: **12" X 12" Floor Tile (pink w/grey streaks) & Mastic (yellow) - Room 122**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811759**
Page 1 of 1

Layer 1 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Pink-Tan/Grey	**Hard**	**Yes**	**ND**	**ND**	**99**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**1**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811759**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-4**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811760**

Sample Description: **Mastic (yellow) associated w/Carpet (dark green w/red & white stripe pattern) Multi-Layer - Room 100A**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Clear-Yellow	**Rubbery**	**Yes**	**ND**	**ND**	**2**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Pink-Tan/Grey	**Hard**	**Yes**	**ND**	**ND**	**95**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**3**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811760**

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-5**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811761**

Sample Description: **Mastic (yellow) associated w/Carpet (dark green w/red & white stripe pattern) Multi-Layer - Room 100A**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Clear-Yellow	**Rubbery**	**Yes**	**ND**	**ND**	**2**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Pink-Tan/Grey	**Hard**	**Yes**	**ND**	**ND**	**95**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**3**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811761**

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NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-6**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811762**

Sample Description: **Mastic (yellow) associated w/Carpet (dark green w/red & white stripe pattern) Multi-Layer - Room 100A**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Clear-Yellow	**Rubbery**	**Yes**	**ND**	**ND**	**2**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Pink-Tan/Grey	**Hard**	**Yes**	**ND**	**ND**	**95**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**3**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811762**

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-7**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811763**

Sample Description: **Mastic (tan) associated w/Carpet (brown w/dark brown stripe pattern) Multi-Layer - Hallway by Room 108D**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow	Rubbery	Yes	ND	ND	1

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt** Asbestos Content: **None Detected**

Layer 2 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Pink-Tan/Grey	Hard	Yes	ND	ND	77

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt** Asbestos Content: **None Detected**

Layer 3 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	2

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt** Asbestos Content: **None Detected**

Layer 4 **Leveling Compound**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	20

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826** Sample #: **CL811763**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-8**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811764**

Sample Description: **Mastic (tan) associated w/Carpet (brown w/dark brown stripe pattern) Multi-Layer - Hallway by Women's Restroom**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow	Rubbery	Yes	ND	ND	1

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt** Asbestos Content: **None Detected**

Layer 2 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Pink-Tan/Grey	Hard	Yes	ND	ND	77

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt** Asbestos Content: **None Detected**

Layer 3 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	2

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt** Asbestos Content: **None Detected**

Layer 4 **Leveling Compound**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	20

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826** Sample #: **CL811764**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-9**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811765**

Sample Description: **Mastic (tan) associated w/Carpet (brown w/dark brown stripe pattern) Multi-Layer - Hallway by Room 138**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow	Rubbery	Yes	ND	ND	1

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Pink-Tan/Grey	Hard	Yes	ND	ND	77

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	2

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 4 **Leveling Compound**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	20

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811765**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-10**
Sample Description: **Mastic (yellow) associated w/Carpet (yellow w/multi-colored dot pattern) Multi-Layer - Room 126**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811766**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow	Rubbery	Yes	ND	ND	1

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**
Asbestos Content: **None Detected**

Layer 2 **Floor Tile 1**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Pink-Tan/Grey	Hard	Yes	ND	ND	50

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**
Asbestos Content: **None Detected**

Layer 3 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	1

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**
Asbestos Content: **None Detected**

Layer 4 **Floor Tile 2**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Lt. Grey	Hard	Yes	ND	ND	47

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**
Asbestos Content: **None Detected**

Layer 5 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	1

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**
Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811766**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-11**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811767**

Sample Description: **Mastic (yellow) associated w/Carpet (yellow w/multi-colored dot pattern) Multi-Layer - Room 126J**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811767**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-12**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811768**

Sample Description: **Mastic (yellow) associated w/Carpet (yellow w/multi-colored dot pattern) Multi-Layer - Room 102A**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811768**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-13**
Sample Description: **Mastic (yellow) associated w/Carpet (dark yellow w/multi-colored dot pattern) - Room 104**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811769**
Page 1 of 1

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811769**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-14**
Sample Description: **Mastic (yellow) associated w/Carpet (dark yellow w/multi-colored dot pattern) - Room 140**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811770**
Page 1 of 1

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811770**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-15**
Sample Description: **Mastic (yellow) associated w/Carpet (dark yellow w/multi-colored dot pattern) - Room 140**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811771**
Page 1 of 1

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811771**

Bulk Asbestos Analysis Sheet

Cates Laboratories
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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-16**
Sample Description: **Mastic (yellow) associated w/Carpet (blue w/multi-colored dot pattern) Multi-Layer - Room 108**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811772**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Clear-Yellow	**Rubbery**	**Yes**	**ND**	**ND**	**2**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Pink-Tan/Grey	**Hard**	**Yes**	**ND**	**ND**	**95**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**3**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811772**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-17**
Sample Description: **Mastic (yellow) associated w/Carpet (blue w/multi-colored dot pattern) Multi-Layer - Room 108B**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811773**
Page 1 of 1

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Clear-Yellow	**Rubbery**	**Yes**	**ND**	**ND**	**2**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Pink-Tan/Grey	**Hard**	**Yes**	**ND**	**ND**	**95**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**3**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811773**

Bulk Asbestos Analysis Sheet

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NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-18**
Sample Description: **Mastic (yellow) associated w/Carpet (blue w/multi-colored dot pattern) Multi-Layer - Room 108A**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811774**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Clear-Yellow	**Rubbery**	**Yes**	**ND**	**ND**	**2**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Pink-Tan/Grey	**Hard**	**Yes**	**ND**	**ND**	**95**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**3**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811774**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-19**
Sample Description: **Mastic (yellow) associated w/Carpet (light brown) - Room 110**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811775**
Page 1 of 1

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811775**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-20**
Sample Description: **Mastic (yellow) associated w/Carpet (light brown) - Room 110**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811776**
Page 1 of 1

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811776**

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-21**
Sample Description: **Mastic (yellow) associated w/Carpet (light brown) - Room 110**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811777**
Page 1 of 1

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811777**

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-22**
Sample Description: **Mastic (clear) associated w/Carpet (red) Multi-Layer - Room 122A**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811778**
Page 1 of 1

Layer 1 **Clear Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Clear-Yellow	Rubbery	Yes	ND	ND	2

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Pink-Tan/Grey	Hard	Yes	ND	ND	95

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	3

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811778**

Bulk Asbestos Analysis Sheet

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NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-23**
Sample Description: **Mastic (clear) associated w/Carpet (red) Multi-Layer - Room 122A**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811779**
Page 1 of 1

Layer 1 **Clear Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Clear-Yellow	Rubbery	Yes	ND	ND	2

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Pink-Tan/Grey	Hard	Yes	ND	ND	95

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	3

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811779**

Bulk Asbestos Analysis Sheet

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NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-24**
Sample Description: **Mastic (clear) associated w/Carpet (red) Multi-Layer - Room 122A**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811780**
Page 1 of 1

Layer 1 **Clear Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Clear-Yellow	Rubbery	Yes	ND	ND	2

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Pink-Tan/Grey	Hard	Yes	ND	ND	95

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Rubbery	Yes	ND	ND	3

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811780**

Bulk Asbestos Analysis Sheet

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NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-25**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811781**

Sample Description: **Mastic (yellow) associated w/Carpet (dark blue w/light grey streak pattern) Multi-Layer - Room 124B**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow/Green	**Rubbery**	**Yes**	**ND**	**ND**	**2**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Pink-Tan/Grey	**Hard**	**Yes**	**ND**	**ND**	**95**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**3**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811781**

Bulk Asbestos Analysis Sheet

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NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-26**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811782**

Sample Description: **Mastic (yellow) associated w/Carpet (dark blue w/light grey streak pattern) Multi-Layer - Room 124B**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow/Green	**Rubbery**	**Yes**	**ND**	**ND**	**2**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Pink-Tan/Grey	**Hard**	**Yes**	**ND**	**ND**	**95**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**3**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811782**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-27**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811783**
Page 1 of 1

Sample Description: **Mastic (yellow) associated w/Carpet (dark blue w/light grey streak pattern) Multi-Layer - Room 124B**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow/Green	**Rubbery**	**Yes**	**ND**	**ND**	**2**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Floor Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Pink-Tan/Grey	**Hard**	**Yes**	**ND**	**ND**	**95**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**3**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811783**

Bulk Asbestos Analysis Sheet

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NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-28**
Sample Description: **Mastic (yellow) associated w/Carpet (brown w/dark brown & grey stripe pattern) - Room 124A**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811784**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811784**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-29**
Sample Description: **Mastic (yellow) associated w/Carpet (brown w/dark brown & grey stripe pattern) - Room 124A**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811785**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811785**

Bulk Asbestos Analysis Sheet

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NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-30**
Sample Description: **Mastic (yellow) associated w/Carpet (brown w/dark brown & grey stripe pattern) - Room 124A**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811786**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811786**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-31**
Sample Description: **12" X 12" Ceramic Floor Tile (light grey) w/Grout (grey) & Mortar (grey) - Restroom 1T3**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811787**

Layer 1 Ceramic Tile

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Lt. Grey	Hard	Yes	ND	ND	75

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Sintered Clays	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 2 Grout

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Cementitious	Yes	ND	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	65		Non-fibrous						
Cement Binders	35		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Mortar

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Cementitious	Yes	ND	ND	20

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	65		Non-fibrous						
Cement Binders	35		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826** Sample #: **CL811787**

Bulk Asbestos Analysis Sheet

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NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-32**
Sample Description: **12" X 12" Ceramic Floor Tile (light grey) w/Grout (grey) & Mortar (grey) - Restroom 1T4**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811788**
Page 1 of 1

Layer 1 **Ceramic Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Lt. Grey	Hard	Yes	ND	ND	75

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Sintered Clays	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 2 **Grout**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Cementitious	Yes	ND	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	65		Non-fibrous						
Cement Binders	35		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 **Mortar**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Cementitious	Yes	ND	ND	20

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	65		Non-fibrous						
Cement Binders	35		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826** Sample #: **CL811788**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-33**
Sample Description: **12" X 12" Ceramic Floor Tile (light grey) w/Grout (grey) & Mortar (grey) - Hallway by Room TJ1**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811789**

Layer 1 **Ceramic Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Lt. Grey	Hard	Yes	ND	ND	75

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Sintered Clays	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 2 **Grout**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Cementitious	Yes	ND	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	65		Non-fibrous						
Cement Binders	35		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 **Mortar**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Cementitious	Yes	ND	ND	20

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	65		Non-fibrous						
Cement Binders	35		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826** Sample #: **CL811789**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-34**
Sample Description: **Epoxy Floor Coating (grey, sandy) - Room 102BA**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811790**
Page 1 of 1

Layer 1 **Floor Coating**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Hard**	**No**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811790**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-35**
Sample Description: **Epoxy Floor Coating (grey, sandy) - Room 102AA**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811791**
Page 1 of 1

Layer 1 **Floor Coating**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Hard**	**No**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811791**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-36**
Sample Description: **Epoxy Floor Coating (grey, sandy) - Room 102AA**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811792**

Layer 1 **Floor Coating**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Hard**	**No**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811792**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-37**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811793**

Sample Description: **Resilient Vinyl Flooring (grey w/multi-colored stripes) w/Mastic (yellow) & Leveling Compound (grey) - Room 1J2**

Layer 1 Sheet Flooring

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Rubbery	Yes	10	ND	75

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	30		ribbons				high		
Aggregate/Vinyl Binders	70		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 Backing/Mastic

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow	Rubbery	No	35	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Synthetic Fibers	35		Monofilaments						
Glue Binders	65		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 Leveling Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	20

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811793**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-38**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811794**

Sample Description: **Resilient Vinyl Flooring (grey w/multi-colored stripes) w/Mastic (yellow) & Leveling Compound (grey) - Room 1J2**

Layer 1 Sheet Flooring

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Rubbery	Yes	10	ND	75

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	30		ribbons				high		
Aggregate/Vinyl Binders	70		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 Backing/Mastic

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow	Rubbery	No	35	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Synthetic Fibers	35		Monofilaments						
Glue Binders	65		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 Leveling Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	20

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811794**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-39**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811795**

Sample Description: **Resilient Vinyl Flooring (grey w/multi-colored stripes) w/Mastic (yellow) & Leveling Compound (grey) - Room 1J2**

Layer 1 Sheet Flooring

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Rubbery	Yes	10	ND	75

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	30		ribbons				high		
Aggregate/Vinyl Binders	70		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 Backing/Mastic

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow	Rubbery	No	35	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Synthetic Fibers	35		Monofilaments						
Glue Binders	65		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 3 Leveling Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	20

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811795**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-40**
Sample Description: **Resilient Vinyl Flooring (brown, wood pattern) w/Mastic (yellow) - Room 106**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811796**

Layer 1 **Sheet Flooring**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Brown	**Rubbery**	**Yes**	**ND**	**ND**	**95**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**5**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811796**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-41**
Sample Description: **Resilient Vinyl Flooring (brown, wood pattern) w/Mastic (yellow) - Room 116**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811797**
Page 1 of 1

Layer 1 **Sheet Flooring**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Brown	**Rubbery**	**Yes**	**ND**	**ND**	**95**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**5**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811797**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-42**
Sample Description: **Resilient Vinyl Flooring (brown, wood pattern) w/Mastic (yellow) - Room 142**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811798**
Page 1 of 1

Layer 1 **Sheet Flooring**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Brown	**Rubbery**	**Yes**	**ND**	**ND**	**95**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**5**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811798**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-43**
Sample Description: **2" X 6" Ceramic Floor Tile (brown) w/Grout (grey) & Mortar (grey) - Space 1L2**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811799**

Layer 1 **Ceramic Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Brown	**Hard**	**Yes**	**ND**	**ND**	**75**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Sintered Clays	**100**		**Non-fibrous**						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 2 **Grout**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Brown	**Cementitious**	**Yes**	**ND**	**ND**	**5**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	**65**		**Non-fibrous**						
Cement Binders	**35**		**Non-fibrous**						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 **Mortar**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Brown	**Cementitious**	**Yes**	**ND**	**ND**	**20**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	**65**		**Non-fibrous**						
Cement Binders	**35**		**Non-fibrous**						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826** Sample #: **CL811799**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-44**
Sample Description: **2" X 6" Ceramic Floor Tile (brown) w/Grout (grey) & Mortar (grey) - Hallway by South Elevators**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811800**

Layer 1 **Ceramic Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Brown	**Hard**	**Yes**	**ND**	**ND**	**75**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Sintered Clays	**100**		**Non-fibrous**						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 2 **Grout**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Brown	**Cementitious**	**Yes**	**ND**	**ND**	**5**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	**65**		**Non-fibrous**						
Cement Binders	**35**		**Non-fibrous**						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 **Mortar**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Brown	**Cementitious**	**Yes**	**ND**	**ND**	**20**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	**65**		**Non-fibrous**						
Cement Binders	**35**		**Non-fibrous**						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826** Sample #: **CL811800**

Bulk Asbestos Analysis Sheet

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NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-45**
Sample Description: **2" X 6" Ceramic Floor Tile (brown) w/Grout (grey) & Mortar (grey) - Space 1L2**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811801**

Layer 1 **Ceramic Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Brown	**Hard**	**Yes**	**ND**	**ND**	**75**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Sintered Clays	**100**		**Non-fibrous**						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 2 **Grout**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Brown	**Cementitious**	**Yes**	**ND**	**ND**	**5**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	**65**		**Non-fibrous**						
Cement Binders	**35**		**Non-fibrous**						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 **Mortar**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Brown	**Cementitious**	**Yes**	**ND**	**ND**	**20**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	**65**		**Non-fibrous**						
Cement Binders	**35**		**Non-fibrous**						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826** Sample #: **CL811801**

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EPA Method 600/R-93/116

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-46**
Sample Description: **Mastic (yellow) associated w/4" Cove Base (black) - Hallway by Room 142**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811802**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811802**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-47**
Sample Description: **Mastic (yellow) associated w/4" Cove Base (black) - Hallway by Room 114**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811803**
Page 1 of 1

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811803**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-48**
Sample Description: **Mastic (yellow) associated w/4" Cove Base (black) - Hallway by Room 110**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811804**
Page 1 of 1

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811804**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-49**
Sample Description: **Mastic (yellow) associated w/Fiberglass Reinforced (FRP) Panel (white) - Room 1J2**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811805**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Beige	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811805**

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-50**
Sample Description: **Mastic (yellow) associated w/Fiberglass Reinforced (FRP) Panel (white) - Room TJ1**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811806**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Beige	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811806**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-51**
Sample Description: **Mastic (yellow) associated w/Fiberglass Reinforced (FRP) Panel (white) - Room 1J2**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811807**

Layer 1 **Yellow Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Beige	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811807**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-52**
Sample Description: **Concrete Wall Texture (grey, sandy) - South Stairway**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811808**
Page 1 of 1

Layer 1 **Paint Texture**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	25

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Wollastonite	3		Laths						+/-
Aggregate/Binders/Paint	97		Non-fibrous						

Prep/treatment: **solvent dissolution**

Asbestos Content: **None Detected**

Layer 2 **Concrete**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Cementitious	Yes	ND	ND	75

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	60		Non-fibrous						
Cement Binders	40		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811808**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-53**
Sample Description: **Concrete Wall Texture (grey, sandy) - South Stairway**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811809**
Page 1 of 1

Layer 1 **Paint Texture**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Blocky**	**Yes**	**ND**	**ND**	**25**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Wollastonite	**3**		**Laths**						**+/-**
Aggregate/Binders/Paint	**97**		**Non-fibrous**						

Prep/treatment: **solvent dissolution**

Asbestos Content: **None Detected**

Layer 2 **Concrete**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Cementitious**	**Yes**	**ND**	**ND**	**75**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	**60**		**Non-fibrous**						
Cement Binders	**40**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811809**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-54**
Sample Description: **Concrete Wall Texture (grey, sandy) - North Stairway**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811810**
Page 1 of 1

Layer 1 **Paint Texture**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Blocky	Yes	ND	ND	25

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Wollastonite	3		Laths						+/-
Aggregate/Binders/Paint	97		Non-fibrous						

Prep/treatment: **solvent dissolution**

Asbestos Content: **None Detected**

Layer 2 **Concrete**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Cementitious	Yes	ND	ND	75

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	60		Non-fibrous						
Cement Binders	40		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811810**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-55**
Sample Description: **Concrete Wall Texture (grey, sandy) - Room 1ME1**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811811**

Layer 1 **Paint Texture**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Blocky**	**Yes**	**ND**	**ND**	**25**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Wollastonite	**3**		**Laths**						**+/-**
Aggregate/Binders/Paint	**97**		**Non-fibrous**						

Prep/treatment: **solvent dissolution**

Asbestos Content: **None Detected**

Layer 2 **Concrete**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Cementitious**	**Yes**	**ND**	**ND**	**75**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	**60**		**Non-fibrous**						
Cement Binders	**40**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811811**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-56**
Sample Description: **Concrete Wall Texture (grey, sandy) - Room 1ME1**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811812**
Page 1 of 1

Layer 1 **Paint Texture**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Blocky**	**Yes**	**ND**	**ND**	**25**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Wollastonite	**3**		**Laths**						**+/-**
Aggregate/Binders/Paint	**97**		**Non-fibrous**						

Prep/treatment: **solvent dissolution**

Asbestos Content: **None Detected**

Layer 2 **Concrete**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Cementitious**	**Yes**	**ND**	**ND**	**75**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	**60**		**Non-fibrous**						
Cement Binders	**40**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811812**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-57**
Sample Description: **CMU Wall Texture (white) w/Grout (grey) - Room 1J2**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811813**

Layer 1 **Filler/Texture**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	**Blocky**	**Yes**	**ND**	**ND**	**15**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders/Paint	**100**		**Non-fibrous**						

Prep/treatment: **solvent dissolution** Asbestos Content: **None Detected**

Layer 2 **CMU Block**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Blocky/Hard**	**Yes**	**ND**	**ND**	**50**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	**100**		**Non-fibrous**						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 **Grout**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Cementitious**	**Yes**	**ND**	**ND**	**35**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	**65**		**Non-fibrous**						
Cement Binders	**35**		**Non-fibrous**						

Prep/treatment: **mortar & pestle** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826** Sample #: **CL811813**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-58**
Sample Description: **CMU Wall Texture (white) w/Grout (grey) - North Stairway**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811814**
Page 1 of 1

Layer 1 **Filler/Texture**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	**Blocky**	**Yes**	**ND**	**ND**	**15**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders/Paint	**100**		**Non-fibrous**						

Prep/treatment: **solvent dissolution** Asbestos Content: **None Detected**

Layer 2 **CMU Block**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Blocky/Hard**	**Yes**	**ND**	**ND**	**50**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	**100**		**Non-fibrous**						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 **Grout**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Cementitious**	**Yes**	**ND**	**ND**	**35**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	**65**		**Non-fibrous**						
Cement Binders	**35**		**Non-fibrous**						

Prep/treatment: **mortar & pestle** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826** Sample #: **CL811814**

Bulk Asbestos Analysis Sheet

Cates Laboratories
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Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-59**
Sample Description: **CMU Wall Texture (white) w/Grout (grey) - South Stairway**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811815**
Page 1 of 1

Layer 1 **Filler/Texture**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	**Blocky**	**Yes**	**ND**	**ND**	**15**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders/Paint	**100**		**Non-fibrous**						

Prep/treatment: **solvent dissolution**

Asbestos Content: **None Detected**

Layer 2 **CMU Block**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Blocky/Hard**	**Yes**	**ND**	**ND**	**50**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	**100**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Layer 3 **Grout**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Cementitious**	**Yes**	**ND**	**ND**	**35**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	**65**		**Non-fibrous**						
Cement Binders	**35**		**Non-fibrous**						

Prep/treatment: **mortar & pestle**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811815**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-60**
Sample Description: **Unfinished Drywall/Joint Compound - Room 1J2**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811816**

Layer 1 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 2 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	25

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826** Sample #: **CL811816**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-61**
Sample Description: **Unfinished Drywall/Joint Compound - Room 1E1**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811817**

Layer 1 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	No	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	80		ribbons				high		
Glass Fibers	20		straight	none			none		

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 2 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	25

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 3 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 4 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811817**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-62**
Sample Description: **Unfinished Drywall/Joint Compound - Room 1J2**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811818**

Layer 1 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	No	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	80		ribbons				high		
Glass Fibers	20		straight	none			none		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 2 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	25

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826** Sample #: **CL811818**

Bulk Asbestos Analysis Sheet

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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-63**
Sample Description: **Ceiling/Wall Texture (white, blue, tan, sandy) Drywall/Joint Compound - Hallway by Main Elevators**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811819**

Layer 1 Paint Texture

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Perlite	10		Glass Foam				0		
Aggregate/Binders/Paint	90		Non-fibrous						

Prep/treatment: **solvent dissolution**
Asbestos Content: **None Detected**

Layer 2 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	25

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 3 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 4 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glass Fibers	1		straight	none			none		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811819**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-64**
Sample Description: **Ceiling/Wall Texture (white, blue, tan, sandy) Drywall/Joint Compound - Room 124**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811820**

Layer 1 Paint Texture

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Perlite	10		Glass Foam				0		
Aggregate/Binders/Paint	90		Non-fibrous						

Prep/treatment: **solvent dissolution** Asbestos Content: **None Detected**

Layer 2 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	25

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glass Fibers	1		straight	none			none		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826** Sample #: **CL811820**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-65**
Sample Description: **Ceiling/Wall Texture (white, blue, tan, sandy) Drywall/Joint Compound - Room 123**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811821**

Layer 1 Paint Texture

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Perlite	10		Glass Foam				0		
Aggregate/Binders/Paint	90		Non-fibrous						

Prep/treatment: **solvent dissolution**
Asbestos Content: **None Detected**

Layer 2 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	25

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 3 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 4 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glass Fibers	1		straight	none			none		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811821**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-66**
Sample Description: **Ceiling/Wall Texture (white, blue, tan, sandy) Drywall/Joint Compound - Room 115**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811822**

Layer 1 Paint Texture

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Perlite	10		Glass Foam				0		
Aggregate/Binders/Paint	90		Non-fibrous						

Prep/treatment: **solvent dissolution** Asbestos Content: **None Detected**

Layer 2 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	25

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Brown	Blocky	Yes	1	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826** Sample #: **CL811822**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-67**
Sample Description: **Ceiling/Wall Texture (white, blue, tan, sandy) Drywall/Joint Compound - Room 114**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811823**

Layer 1 Paint Texture

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Lt. Grey	Blocky	Yes	ND	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders/Paint	100		Non-fibrous						

Prep/treatment: **solvent dissolution** Asbestos Content: **None Detected**

Layer 2 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 5 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826** Sample #: **CL811823**

Bulk Asbestos Analysis Sheet

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1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-68**
Sample Description: **Ceiling/Wall Texture (white, blue, tan, sandy) Drywall/Joint Compound - Restroom 1T4**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811824**

Layer 1 Paint Texture

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Lt. Grey	Blocky	Yes	ND	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders/Paint	100		Non-fibrous						

Prep/treatment: **solvent dissolution** Asbestos Content: **None Detected**

Layer 2 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 5 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826** Sample #: **CL811824**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-69**
Sample Description: **Ceiling/Wall Texture (white, blue, tan, sandy) Drywall/Joint Compound - Room 126**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811825**

Layer 1 Paint Texture

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Lt. Grey	Blocky	Yes	ND	ND	15

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders/Paint	100		Non-fibrous						

Prep/treatment: **solvent dissolution** Asbestos Content: **None Detected**

Layer 2 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders	100		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 4 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 5 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	60

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826** Sample #: **CL811825**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-70**
Sample Description: **12" X 24" Ceramic Wall Tile (white) w/Grout (white) & Thinset (white) - Restroom 1T4**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811826**

Layer 1 **Ceramic Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	**Hard**	**Yes**	**ND**	**ND**	**75**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Sintered Clays	**100**		**Non-fibrous**						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 2 **Grout**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	**Cementitious**	**Yes**	**ND**	**ND**	**10**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	**65**		**Non-fibrous**						
Cement Binders	**35**		**Non-fibrous**						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 **Thinset**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Off White	**Cementitious**	**Yes**	**ND**	**ND**	**15**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	**65**		**Non-fibrous**						
Cement Binders	**35**		**Non-fibrous**						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826** Sample #: **CL811826**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-71**
Sample Description: **12" X 24" Ceramic Wall Tile (white) w/Grout (white) & Thinset (white) - Restroom 1T3**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811827**

Layer 1 Ceramic Tile

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	**Hard**	**Yes**	**ND**	**ND**	**75**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Sintered Clays	**100**		**Non-fibrous**						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 2 Grout

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	**Cementitious**	**Yes**	**ND**	**ND**	**10**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	**65**		**Non-fibrous**						
Cement Binders	**35**		**Non-fibrous**						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Thinset

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Off White	**Cementitious**	**Yes**	**ND**	**ND**	**15**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	**65**		**Non-fibrous**						
Cement Binders	**35**		**Non-fibrous**						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826** Sample #: **CL811827**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-72**
Sample Description: **12" X 24" Ceramic Wall Tile (white) w/Grout (white) & Thinset (white) - Restroom 1T3**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811828**

Layer 1 **Ceramic Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	**Hard**	**Yes**	**ND**	**ND**	**75**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Sintered Clays	**100**		**Non-fibrous**						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 2 **Grout**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	**Cementitious**	**Yes**	**ND**	**ND**	**10**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	**65**		**Non-fibrous**						
Cement Binders	**35**		**Non-fibrous**						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 **Thinset**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Off White	**Cementitious**	**Yes**	**ND**	**ND**	**15**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	**65**		**Non-fibrous**						
Cement Binders	**35**		**Non-fibrous**						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826** Sample #: **CL811828**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-73**
Sample Description: **Sink Undercoating (black) - Space 1L2**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811829**

Layer 1 **Sink Undercoating**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Black	**Asphaltic**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Tar Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811829**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-74**
Sample Description: **Sink Undercoating (black) - Space 1L2**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811830**

Layer 1 **Sink Undercoating**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Black	**Asphaltic**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Tar Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811830**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-75**
Sample Description: **Sink Undercoating (black) - Space 1L2**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811831**

Layer 1 **Sink Undercoating**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Black	**Asphaltic**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Tar Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811831**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
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Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-76**
Sample Description: **Interior Building Expansion Joint Caulking (tan) - Space 1S3**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811832**
Page 1 of 1

Layer 1 **Expansion Jt. Caulking**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811832**

Bulk Asbestos Analysis Sheet

Cates Laboratories
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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-77**
Sample Description: **Interior Building Expansion Joint Caulking (tan) - Space 1S3**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811833**
Page 1 of 1

Layer 1 **Expansion Jt. Caulking**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811833**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-78**
Sample Description: **Interior Building Expansion Joint Caulking (tan) - Space 1S3**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811834**
Page 1 of 1

Layer 1 **Expansion Jt. Caulking**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811834**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-79**
Sample Description: **2' X 4' Acoustical Ceiling Tile (white, pinhole & fissured) - Hallway by Room 110**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811835**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**55**		**ribbons**				**high**		
Mineral Wool Fibers	**5**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811835**

Bulk Asbestos Analysis Sheet

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EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-80**
Sample Description: **2' X 4' Acoustical Ceiling Tile (white, pinhole & fissured) - Hallway by Room 114**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811836**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**55**		**ribbons**				**high**		
Mineral Wool Fibers	**5**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811836**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-81**
Sample Description: **2' X 4' Acoustical Ceiling Tile (white, pinhole & fissured) - Hallway by North Elevator**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811837**
Page 1 of 1

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**55**		**ribbons**				**high**		
Mineral Wool Fibers	**5**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811837**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-82**
Sample Description: **2' X 2' Acoustical Ceiling Tile (white, rough finish) - Restroom 1T3**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811838**
Page 1 of 1

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**30**		**ribbons**				**high**		
Mineral Wool Fibers	**30**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811838**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-83**
Sample Description: **2' X 2' Acoustical Ceiling Tile (white, rough finish) - Hallway by Room 123**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811839**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**30**		**ribbons**				**high**		
Mineral Wool Fibers	**30**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811839**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-84**
Sample Description: **2' X 2' Acoustical Ceiling Tile (white, rough finish) - Room 126A**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811840**
Page 1 of 1

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**30**		**ribbons**				**high**		
Mineral Wool Fibers	**30**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811840**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-85**
Sample Description: **Duct Mastic (white) - Room 124**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811841**
Page 1 of 1

Layer 1 **White Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Rubbery	Yes	20	ND	65

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glass Fibers	20		straight	none			none		
Wollastonite	5		Laths						+/-
Aggregate/Binders	75		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Wrap**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Brown / Silver	Fibrous	No	75	ND	35

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	70		ribbons				high		
Glass Fibers	5		straight	none			none		
Metal Foil	15			Opaque					
Binders	10		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811841**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-86**
Sample Description: **Duct Mastic (white) - Room 1J2**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811842**
Page 1 of 1

Layer 1 **White Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Rubbery	Yes	20	ND	65

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glass Fibers	20		straight	none			none		
Wollastonite	5		Laths						+/-
Aggregate/Binders	75		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Wrap**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Brown / Silver	Fibrous	No	75	ND	35

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	70		ribbons				high		
Glass Fibers	5		straight	none			none		
Metal Foil	15			Opaque					
Binders	10		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811842**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-87**
Sample Description: **Duct Mastic (white) - Hallway by Room 114**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811843**
Page 1 of 1

Layer 1 **White Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Rubbery	Yes	20	ND	25

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glass Fibers	20		straight	none			none		
Wollastonite	5		Laths						+/-
Aggregate/Binders	75		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Wrap**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Brown / Silver	Fibrous	No	75	ND	20

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	70		ribbons				high		
Glass Fibers	5		straight	none			none		
Metal Foil	15			Opaque					
Binders	10		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Layer 3 **Insulation**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Fibrous	Yes	95	ND	55

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Mineral Wool Fibers	95		Rods				0		
Resin Binders	5		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811843**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-88**
Sample Description: **Duct Mastic (grey) - Hallway by Room 140**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811844**
Page 1 of 1

Layer 1 **Grey Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811844**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-89**
Sample Description: **Duct Mastic (grey) - Hallway by Room 114C**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811845**
Page 1 of 1

Layer 1 **Grey Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811845**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-90**
Sample Description: **Duct Mastic (grey) - Room 1J2**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811846**

Layer 1 **Grey Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811846**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-91**
Sample Description: **Thermal System Insulation (white) - Room 1J2**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811847**

Layer 1 **Wrap**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White / Silver	**Fibrous**	**No**	**75**	**ND**	**20**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**70**		**ribbons**				**high**		
Glass Fibers	**5**		**straight**	**none**			**none**		
Metal Foil	**15**			**Opaque**					
Binders	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Layer 2 **Insulation**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	**Fibrous**	**Yes**	**95**	**ND**	**80**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Mineral Wool Fibers	**95**		**Rods**				**0**		
Resin Binders	**5**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811847**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-92**
Sample Description: **Thermal System Insulation (white) - Hallway by Restroom 1T4**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811848**

Layer 1 **Wrap**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White / Silver	Fibrous	No	75	ND	20

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	70		ribbons				high		
Glass Fibers	5		straight	none			none		
Metal Foil	15			Opaque					
Binders	10		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Layer 2 **Insulation**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Fibrous	Yes	95	ND	80

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Mineral Wool Fibers	95		Rods				0		
Resin Binders	5		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811848**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Apex TITAN**
Project: **Gibson D. Lewis Library (LIB) Level 01, 955 Montgomery Street, Fort Worth, TX**
Project #: **725010720014**
Field ID #: **1-93**
Sample Description: **Thermal System Insulation (white) - Hallway by Restroom 1T3**

Lab Proj #: **PLM-22826**
Set #: **33628**
Sample #: **CL811849**

Layer 1 **Wrap**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White / Silver	Fibrous	No	75	ND	20

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	70		ribbons				high		
Glass Fibers	5		straight	none			none		
Metal Foil	15			Opaque					
Binders	10		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Layer 2 **Insulation**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Yellow-Tan	Fibrous	Yes	95	ND	80

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Mineral Wool Fibers	95		Rods				0		
Resin Binders	5		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Kathy Schosek**
Date Analyzed: **3/16/2020**

Lab Job #: **PLM-22826**
Sample #: **CL811849**

CATES LABORATORIES

CHAIN OF CUSTODY

CL Project No PCM - 22826
(Lab Only) SET-33628

Company: APEX

Contact/Results to: Zuri/Phillip/ Marshall Rhodes **Verbal** ☐ **Email** ☑ **Fax** ☐ (check all that apply)

Email(s): Zuri.diego@apexcos.com/phillip.fronczek@apexcos.com/yewald@apexcos.com/marshall.Rhodes@apexcos.com

Telephone No.: 469-732-0567 **Fax No.:**

Project Information

Project: Gibson D. Lewis Library (LIB) Level 01 **Project No.:** 725010720014

Address: 955 Montgomery street Fort worth, Texas **P.O. No.:**

Turnaround (check one)

RUSH ASAP ☐ RUSH 24HR ☐ 2 DAY (standard) ☑ 3-4 DAY ☐ 5 DAY ☐

Testing Services (check all that apply)

Asbestos		IAQ - Mold (Non-Viable)
PLM-BULK	**PCM-AIR**	**AIR (spore trap)** - Standard Profile (count/genus identification) ☐
EPA 600/R-93/116 ☑	NIOSH 7400 ☐	**AIR (spore trap)** - Expanded Profile (w/insect parts/pollen/skin) ☐
Point Count (400) ☐	OSHA TWA ☐	**BULK (tape lift, swab)** - Standard Profile (genus identification) ☐
CatesLab No Range (Lab Only): 811757 - 811849	**Sample Date:** 3/12/2020	No of Samples 93 Positive Stop Yes ☐ No ☑

Sample No.	Sample Description/Location	Volume (air only)
	See Attachment	

Relinquished By:	Date/Time:	Received By:	Date/Time:
[signature]	3/12/2020	[signature]	03-13-2020

AF72017-09 · issued 4/3/2017 Walk-In ☐ D-Drop ☑ F-Drop ☐ FedEx ☐ UPS ☐ Lonestar ☐ USPS ☐

HOMOGENEOUS MATERIALS FORM

Project No.: 725010720014

Date:3/12/2020

PUM - 22826
SGT - 33628

Project Name: Gibson D. Lewis Library (LIB) Level 01

Inspector: Zurisaday Diego

Homo. Ident.	Materials Description	Sample No.	Location
FT-01	12"x 12" Floor tile (pink with grey streaks) and	1-1	Room 100
	Mastic (Yellow)	1-2	Room 138
		1-3	Room 122
CM-01	Mastic (Yellow) associated w/ carpet (Dark green	1-4	Room 100A
	With red, and white stripe pattern) Multilayer	1-5	Room 100A
		1-6	Room 100A
CM-02	Mastic (Tan) associated w/ carpet (Brown with dark	1-7	Hallway by room 108D
	Brown stripe pattern) Multilayer	1-8	Hallway by women's restroom
		1-9	Hallway by room 138
CM-03	Mastic (Yellow) associated w/ carpet (yellow, with	1-10	Room 126
	Multicolor dot pattern) Multilayer	1-11	Room 126J
		1-12	Room 102A
CM-04	Mastic (Yellow) associated w/ carpet (Dark yellow	1-13	Room 104
	With Multicolor dot pattern)	1-14	Room 140
		1-15	Room 140
CM-05	Mastic (Yellow) associated w/ carpet (Blue with	1-16	Room 108
	Multicolor dot pattern) Multilayer	1-17	Room 108B
		1-18	Room 108A
CM-06	Mastic (Yellow) associated w/ carpet (light Brown)	1-19	Room 110
		1-20	Room 110
		1-21	Room 110
CM-07	Mastic (Clear) associated w/ carpet (Red)	1-22	Room 122A
	Multilayer	1-23	Room 122A
		1-24	Room 122A
CM-08	Mastic (Yellow) associated w/ carpet (Dark Blue	1-25	Room 124B
	With Light grey streak pattern) Multilayer	1-26	Room 124B

PLM – 22826
SET- 33628

Homo. Ident.	Materials Description	Sample No.	Location
		1-27	Room 124B
CM-09	Mastic (Yellow) associated w/ carpet (Brown with	1-28	Room 124 A
	Dark brown and grey stripe pattern)	1-29	Room 124 A
		1-30	Room 124 A
CFT-01	12" x 12" Ceramic Floor tile (Light grey) with	1-31	Restroom 1T3
	Grout (grey) and mortar (grey)	1-32	Restroom 1T4
		1-33	Hallway by room TJ1
EFC-01	Epoxy Floor coating (Grey, sandy)	1-34	Room 102BA
		1-35	Room 102AA
		1-36	Room 102AA
RVF-01	Resilient vinyl flooring (grey with multicolor stripes)	1-37	Room 1J2
	With mastic (Yellow) and leveling compound (Grey)	1-38	Room 1J2
		1-39	Room 1J2
RVF-01	Resilient vinyl flooring (Brown, wood pattern)	1-40	Room 106
	with mastic (yellow)	1-41	Room 116
		1-42	Room 142
CFT-02	2"x 6" Ceramic floor tile (Brown) with grout (grey)	1-43	Space 1L2
	And mortar (Grey)	1-44	Hallway by south elevators
		1-45	Space 1L2
CB-01	Mastic (Yellow) associated w/ 4" cove base (black)	1-46	Hallway by room 142
		1-47	Hallway by room 114
		1-48	Hallway by room 110
FRP-01	Mastic (Yellow) associated with Fiberglass	1-49	Room 1J2
	reinforced (FRP) panel (White)	1-50	Room TJ1
		1-51	Room 1J2
WTX-01	Concrete Wall texture (Grey, sandy)	1-52	South stairway
		1-53	South stairway
		1-54	North stairway

PLM – 22826
SET – 33628

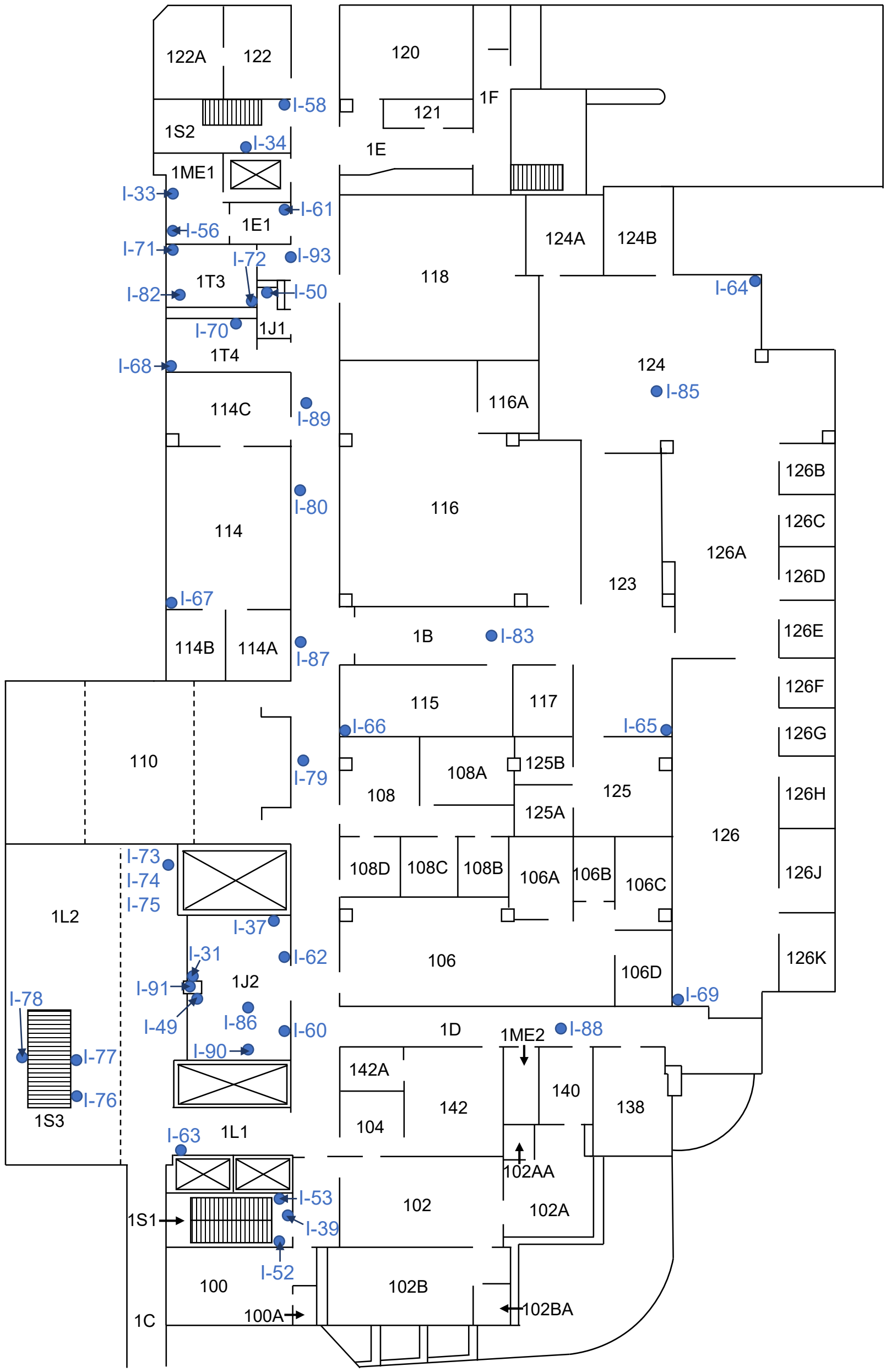
Homo. Ident.	Materials Description	Sample No.	Location
		1-55	Room 1ME1
		1-56	Room 1ME1
CMU-01	CMU wall texture (white) with grout (grey)	1-57	Room 1J2
		1-58	North stairway
		1-59	South stairway
UFDW-01	Unfinished drywall/ Joint compound	1-60	Room 1J2
		1-61	Room 1E1
		1-62	Room 1J2
CWJC-01	Ceiling/ Wall texture (White, blue, tan, Sandy)	1-63	Hallway by main elevators
	Drywall/ Joint compound	1-64	Room 124
		1-65	Room 123
		1-66	Room 115
		1-67	Room 114
		1-68	Restroom 1T4
		1-69	Room 126
CWT-01	12"x 24" Ceramic wall tile (White) W/grout	1-70	Restroom 1T4
	(White) and thinset (	1-71	Restroom 1T3
		1-72	Restroom 1T3
SU-01	Sink under coating (Black)	1-73	Space 1L2
		1-74	Space 1L2
		1-75	Space 1L2
BC-01	Interior building Expansion joint caulking (Tan)	1-76	Space 1S3
		1-77	Space 1S3
		1-78	Space 1S3

PLM - 22826
SET - 3 3628

Homo. Ident.	Materials Description	Sample No.	Location
CT-01	2'x4' Acoustical ceiling tile (White, pinhole and Fissured)	1-79	Hallway by room 110
		1-80	Hallway by room 114
		1-81	Hallway by north elevator
CT-02	2'x2' Acoustical ceiling tile (White, Rough finish)	1-82	Restroom 1T3
		1-83	Hallway by room 123
		1-84	Room 126A
DM-01	Duct Mastic (White)	1-85	Room 124
		1-86	Room 1J2
		1-87	Hallway by room 114
DM-02	Duct Mastic (Grey)	1-88	Hallway by room 140
		1-89	Hallway by room 114C
		1-90	Room 1J2
TS-01	Thermal system insulation (White)	1-91	Room 1J2
		1-92	Hallway by restroom 1T4
		1-93	Hallway by restroom 1T3
	Mastic associated with Raised wooden floor pedestals		**Assume**
	Mirror mastic		**Assume**

APPENDIX C

Figures



Key:

● Negative Sampling Locations

"100" Room Number

N

Gibson D. Lewis Library - Level 1
Asbestos Survey
University of North Texas HSC
955 Montgomery Street
Fort Worth, Texas 76107

Project No. 725010720014

FIGURE 1

Sampling Locations

Apex Companies, LLC
2100 Ford Road, Suite 401
Dallas, Texas 75234
Phone: (469) 365-1100
www.apexcos.com

APPENDIX D

State Licenses

Texas Department of State Health Services

APEX TITAN INC

is certified to perform as an

Asbestos Consultant Agency

in the State of Texas and is hereby governed by the rights, privileges and responsibilities set forth in Texas Occupations Code, Chapter 1954 and Title 12, Texas Administrative Code, Chapter 295 relating to Texas Asbestos Health Protection, as long as this license is not suspended or revoked.

License Number: 100479

Expiration Date: 02/28/2022

John Hellerstedt, M.D.,
Commissioner of Health

Control Number: 97255

(Void After Expiration Date)

VOID IF ALTERED NON-TRANSFERABLE

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Texas Department of State Health Services

Asbestos Individual Consultant

PHILLIP G FRONCZEK

License No. 105737

Control No. 97603

Expiration Date: 3-Oct-2021

Texas Department of State Health Services

Asbestos Inspector

ZURISADAY DIEGO

License No. 603759

Control No. 99236

Expiration Date: 6-Feb-2021

Texas Department of State Health Services

CATES LABORATORIES INC

is certified to perform as an

Asbestos Laboratory

PCM, PLM

in the State of Texas and is hereby governed by the rights, privileges and responsibilities set forth in Texas Occupations Code, Chapter 1954 and Title 12, Texas Administrative Code, Chapter 295 relating to Texas Asbestos Health Protection, as long as this license is not suspended or revoked.

License Number: 300287

Expiration Date: 04/07/2021

John Hellerstedt, M.D.,
Commissioner of Health

Control Number: 96366

(Void After Expiration Date)

VOID IF ALTERED NON-TRANSFERABLE

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United States Department of Commerce
National Institute of Standards and Technology

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 200569-0

Cates Laboratories, Inc.

Dallas, TX

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2019-04-01 through 2020-03-31

Effective Dates

For the National Voluntary Laboratory Accreditation Program

National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

Cates Laboratories, Inc.
1339 Motor Circle
Dallas, TX 75207
Mr. John R. Cates
Phone: 214-920-5006 Fax: 1-972-767-0167
Email: jrcates@cateslab.com
http://www.cateslab.com

ASBESTOS FIBER ANALYSIS — NVLAP LAB CODE 200569-0

Bulk Asbestos Analysis

Code	*Description*
18/A01	EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

For the National Voluntary Laboratory Accreditation Program

United States Department of Commerce
National Institute of Standards and Technology

Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 200569-0

Cates Laboratories, Inc.

Dallas, TX

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Asbestos Fiber Analysis

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SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

Cates Laboratories, Inc.
1339 Motor Circle
Dallas, TX 75207
Mr. John R. Cates
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ASBESTOS FIBER ANALYSIS

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Effective 2020-04-01 through 2021-03-31