

Aureobasidium: Often found on wooden surfaces, wallpaper, and painted surfaces.

Mucor: Commonly discovered in damp areas like basements and near air conditioning units.

Ulocladium: Usually located in wet building materials and damp indoor spaces.

Toxigenic Molds

Toxigenic molds produce toxic compounds called mycotoxins, which can adversely impact your health. The most notorious toxigenic mold is Stachybotrys, also known as “black mold.” It produces harmful substances that can lead to severe health problems. Other toxigenic molds include:

Chaetomium: Generally found on water-damaged building materials such as drywall and insulation.

Fusarium: Commonly grows on water-damaged carpets and fabrics.

Acremonium: Usually discovered in humidifiers, window sealants, and cooling coils.

Geotrichum: Can be found on decaying food and damp surfaces.

Exposure to toxigenic molds can lead to temporary irritation or even long-term illness, depending on the individual ⁽²⁾.

According to the Centers for Disease Control (CDC), molds are very common in buildings and homes and will grow anywhere indoors where there is moisture. The most common indoor molds are Cladosporium, Penicillium, Aspergillus and Alternaria.

There are no Federal or State standards for the interpretation of wipe or bulk samples. Microbiological laboratories often categorize results for these types of samples as low, moderate, or high; the limits of these categories are arbitrary, but are based on extensive experience in the analysis of samples from residential and commercial sites.

The tape lift samples identified the presence of the following fungi:

1. Acremonium
2. Ascospores
3. Basidiospores
4. Chaetomium
5. Cladosporium
6. Memnoniella
7. Penicillium/Aspergillus
8. Trichoderma
9. Ulocladium

Some of the spores identified indoors do have the potential to cause allergies, hay fever, asthma, and hypersensitivity pneumonitis in individuals and could have originated from outdoor sources.

MOLD FINDINGS AND REMEDIATION

The inspection identified visible mold growth on TSI, HVAC equipment, wooden components, SACT, GWB walls in the building.

The mold is related to the building materials becoming wet either through lack of humidity control or water leaks. These conditions need to be corrected to ensure the mold growth does not continue.

All mold removal/remediation work should be completed in accordance with the Environmental Protection Agency's (EPA's) document “Mold Remediation in Schools and Commercial Buildings.”

LOW LEVEL RADIOACTIVE COMPONENTS

The building was inspected for components that may contain low level radioactive (LLR) material such as smoke detectors and tritium containing exit signs.

Ionization smoke detectors contain a small amount of radioactive material, generally Americium-241 and use ionized particles to detect smoke. Photoelectric smoke detectors use a light source or light sensor to detect smoke.

Smoke detectors were observed in the building. The smoke detectors were inspected for radioactive material labeling. The smoke detectors did not appear to contain radioactive material, they appeared to be photoelectric smoke detectors.

There are multiple types of Emergency exit signs. They can be electrically powered, photo luminescent (power free), or self-luminous (contain Tritium). Exit signs which contain Tritium are LLR. The emergency exit signs in the building appeared to be electrically powered. They do not appear to be LLR.

LIMITATIONS

This report has been prepared for the exclusive use of Woolpert and/or their agents. This service was performed in accordance with generally accepted environmental practices. No other warranty, expressed or implied, is made. Our conclusions and recommendations are based, in part, upon information provided to us by others and our site observations. We have not verified the completeness or accuracy of the information provided by others, unless otherwise noted. Our observations and recommendations are based upon conditions readily visible at the time of our site visits in March and June 2025, and upon current industry standards. During our inspection, accessible areas were visually inspected for the presence of asbestos and lead based paints. The findings at these locations area assumed to be representative throughout the impacted areas of the building. In accessible areas, such as inside HVAC equipment and ducts were not visually inspected. Areas inspected for the above-referenced materials were limited to those designated by the client. The inspection did not include the entire building and was limited to the areas described in the report.

Under this scope of services, **GER** assumes no responsibility regarding response actions (e.g. O&M Plans, Remediation, Notifications, etc.) initiated as a result of these findings. **GER** assumes no liability for the duties and responsibilities of the Client with respect to compliance with local, state and Federal regulations. Compliance with regulations and response actions are the sole responsibility of the Client and should be conducted in accordance with local, state and Federal regulations and should be performed by appropriately licensed personnel, as warranted.

REFERENCES

- (1) Ward, John, "Acremonium," Mold Busters, <https://library.bustmold.com/acremonium/>.
- (2) Ward, John, "Basidiospores," Mold Busters, <https://library.bustmold.com/basidiospores/>.
- (3) Bennett RJ, Turgeon BG (2016). Fungal Sex: The Ascomycota. Microbiol Spectr. 4(5).
- (4) Ward, John, "Memnoniella," Mold Busters, <https://library.bustmold.com/memnoniella/>.
- (5) Sadikovic, Dusan, "Trichoderma," Mold Busters, <https://library.bustmold.com/Trichoderma/>.
- (6) Sadikovic, Dusan, "Ulocladium," Mold Busters, <https://library.bustmold.com/Ulocladium/>.

SECTION 2

Bulk Sample Results/Laboratory Sheets

Table 1 - Asbestos Sample Results

Table 2 - Paint Sample Results

Table 3 - PCB Sample Results

Table 4 - TCLP Sample Results

Table 1 - Asbestos Bulk Sample Results

NO.	HA	SAMPLE LOCATION	SAMPLE MATERIAL	% & TYPE OF ASBESTOS
1	1	034 HVAC Duct	Black vibration cloth	None Detected
2	2	034 Fiberglass (FG) Thermal System Insulation (TSI)	White sealant	2% Chrysotile
3	3	032 Ceiling SACT	2'x2' Gwb. SACT	None Detected
4	2	032 FG TSI	White end cap sealant	None Detected
5	4	032 CMU Wall	CMU block sealant	None Detected
6	5	032 Based of Wall	Black 4-inch covebase & yellow mastic	None Detected
7	6	Exterior Concrete at Base of Wall	Black mastic	6% Chrysotile
8	7	Exterior Wall Louver	White frame sealant	None Detected
9	8	134 Above SACT	Plaster ceiling	None Detected
10	9	134 Plaster Ceiling Above SACT	Brown puck	<1% Chrysotile 0.6% Chrysotile (Point Count)
11	10	134 Above SACT	1'x1' SACT, glued	None Detected
12	11	134 SACT	2'x2' SACT 4-squares	None Detected
13	2	060 Fiberglass (FG) Pipe Insulation	White end cap sealant	None Detected
14	12	060 FG Thermal System Insulation	Mudded pipe fitting	20% Chrysotile
15	13	055 Beneath carpet	Grey floor leveling compound and yellow carpet mastic	None Detected
16	14	055 Beneath Carpet and Floor Leveling Compound	Black material beneath floor leveling compound	None Detected
17	14	055 Beneath Carpet and Floor Leveling Compound	Black material beneath floor leveling compound	None Detected
18	13	055 Beneath carpet	Grey floor leveling compound and yellow carpet mastic	None Detected
19	10	S070 Ceiling	1'x1' SACT, glued	None Detected
20	15	056 Ceiling	Gypsum wall board (GWB) joint compound	None Detected
21	16	056 Ceiling	GWB	None Detected
22	17	035A Floor	9-inch floor tile and mastic, bottom layer	3% Chrysotile (PLM) - Tile 1.8% Chrysotile (Point Count) - Tile <1% Chrysotile (PLM) - Mastic 0.3% Chrysotile (Point Count) - Mastic
23	18	035A Floor	9-inch floor tile and mastic, top layer	3% Chrysotile (PLM) - Tile 1.2% Chrysotile (Point Count) - Tile None Detected (PLM) - Mastic
24	16	054 Ceiling	GWB	None Detected
25	19	042 Ceiling	Plater lathe	None Detected
26	20	SO6 Stair Tread	Black rubber tread and mastic	None Detected
27	20	SO6 Stair Tread	Red rubber tread and mastic	None Detected
28	1	012 HVAC Duct	Black vibration cloth	None Detected

Table 1 - Asbestos Bulk Sample Results

NO.	HA	SAMPLE LOCATION	SAMPLE MATERIAL	% & TYPE OF ASBESTOS
29	21	012 Steel Column Covering	Plaster	None Detected
30	2	012 FG TSI	White end cap sealant	None Detected
31	22	025 HVAC Duct, Metal	Brown sealant	None Detected
32	22	025 HVAC Duct, Metal	Brown sealant	None Detected
33	19	025 Ceiling	Plater lathe	None Detected
34	4	011 CMU Wall	CMU block sealant	None Detected
35	5	011 Base of Wall	Black 4-inch covebase & yellow mastic	None Detected
36	23	011 Insulated HVAC Duct	Yellow tape and sealant	None Detected
37	19	013 Ceiling	Plater lathe	None Detected
38	21	013 Steel Column Covering	Plaster	None Detected
39	23	038 Ceiling SACT	2'x4' SACT, worm	None Detected
40	23	038 Insulated HVAC Duct Above 2'x4' SACT	Yellow tape and sealant	2% Chrysotile (PLM) - Sealant 0.9% Chrysotile (Point Count) - Sealant None Detected (PLM) - Tape and Insulation
41	24	038 Based of Wall	Grey 4-inch covebase & tan mastic	None Detected
42	25	038 Base of Wall	Black mastic	None Detected
43	25	047 Base of Wall Behind Ceramic Base	Black mastic	None Detected
44	26	058 Floor	12-inch tan floor tile with black and yellow mastic	None Detected
45	19	023 Ceiling	Plater lathe	None Detected
46	27	006 Floor	12-inch grey floor tile with yellow mastic	None Detected
47	27	006 Floor	12-inch grey floor tile and black mastic	None Detected
48	28	006 Floor	12-inch pink floor tile with yellow mastic	None Detected
49	28	006 Floor	12-inch pink floor tile with black mastic	None Detected
50	29	006 Ceiling	Transite panel	20% Chrysotile
51	29	006 Ceiling	Transite panel	20% Chrysotile
52	30	004 HVAC Duct, metal	Grey sealant	None Detected
53	30	004 HVAC Duct, metal	Grey sealant	None Detected
54	31	002 Exterior Window	Glazing putty	None Detected None Detected (Point Count)
55	31	001 Exterior Window	Glazing putty	None Detected
56	23	148 Insulated HVAC Duct	Yellow tape and sealant	None Detected
57	2	148 FG TSI	White end cap sealant	None Detected

Table 1 - Asbestos Bulk Sample Results

NO.	HA	SAMPLE LOCATION	SAMPLE MATERIAL	% & TYPE OF ASBESTOS
58	19	148 Ceiling	Plater lathe	None Detected
59	32	116 Ceiling, Textured	Plaster lathe	None Detected
60	32	116 Ceiling, Textured	Plaster lathe	None Detected
61	33	116 Wall Behind Wainscotting	Brown mastic puck	5% Chrysotile
62	33	116 Wall Behind Wainscotting	Brown mastic puck	5% Chrysotile
63	34	116 Floor Beneath Carpet On Wood Sub Floor	Yellow carpet mastic	2% Chrysotile (PLM) <0.25% Chrysotile (Point Count)
64	33	116 Wall Behind Wainscotting	Brown mastic puck	5% Chrysotile
65	16	117 Wall	GWB	None Detected
66	15	117 Wall	GWB joint compound	None Detected
67	34	143 Floor Beneath Carpet On Wood Sub Floor	Yellow carpet mastic	None Detected
68	35	143 Floor	12-inch tan speckle floor tile and mastic	None Detected
69	35	143 Floor	12-inch tan speckle floor tile and mastic	None Detected
70	36	135 Floor Beneath Carpet on Wood Sub Floor	Yellow and black carpet mastic	None Detected
71	37	135 Floor Beneath Carpet	Yellow carpet mastic and grey floor leveler	None Detected
72	38	Flat Roof	Capsheet	None Detected
73	39	Edge of Flat Roof	Capsheet flashing	None Detected
74	40	HVAC Metal Foundation Post	Black mastic	None Detected
75	40	HVAC Metal Foundation Post	Black mastic	None Detected
76	39	Edge of Flat Roof	Capsheet flashing	None Detected
77	38	Flat Roof	Capsheet	None Detected
78	41	Flat Roof HVAC Vent	Capsheet flashing with silver paint	None Detected
79	41	Flat Roof HVAC Vent	Capsheet flashing with silver paint	None Detected
80	42	Metal Base of HVAC Equipment	Black mastic	None Detected
81	42	Metal Base of HVAC Equipment	Black mastic	None Detected
82	43	Wall at Roof Level Base Flashing	White sealant	None Detected
83	43	Wall at Roof Level Base Flashing	White sealant	4% Chrysotile
84	44	Access Door at Roof	White DF sealant	3% Chrysotile (PLM) 1.3% Chrysotile (Point Count)
85	44	Access Door at Roof	White DF sealant	3% Chrysotile (PLM) 0.8% Chrysotile (Point Count)
86	45	Slate Roof on Shingles	Black sealant	None Detected
87	46	Slate Roof on Shingles	Grey sealant	None Detected
88	46	Slate Roof on Shingles	Grey sealant	None Detected

Table 1 - Asbestos Bulk Sample Results

NO.	HA	SAMPLE LOCATION	SAMPLE MATERIAL	% & TYPE OF ASBESTOS
89	45	Slate Roof on Shingles	Black sealant	None Detected
90	47	Roof Top HVAC Equipment	Black duct vibration cloth	None Detected
91	47	Roof Top HVAC Equipment	Black duct vibration cloth	None Detected
92	48	Mech Room Roof, Metal HVAC Duct Sealant	Green sealant	None Detected
93	48	Mech Room Roof, Metal HVAC Duct Sealant	Green sealant	None Detected
94	49	Mech Room Roof, FG TSI	White end cap sealant	None Detected
95	49	Mech Room Roof, FG TSI	White end cap sealant	None Detected
96	50	149 Behind Vanity in Wall Cavity on Wood Studs	Black material	None Detected
97	50	149 Behind Vanity in Wall Cavity on Wood Studs	Black material	None Detected
98	51	153 Ceiling SACT	2'x2' SACT Decorative	None Detected
99	51	153 Ceiling SACT	2'x2' SACT Decorative	None Detected
100	52	151 Beneath Carpet Squares on Wood Floor	Black mastic	None Detected
101	52	151 Beneath Carpet Squares on Wood Floor	Black mastic	None Detected
102	53	151 Column Covering	GWB	None Detected
103	54	151 Column Covering	GWB joint compound	2% Chrysotile (PLM) <0.25% Chrysotile (Point Count)
104	16	151 Ceiling	GWB	None Detected
105	16	Janitor Room Wall	GWB	None Detected
106	15	Janitor Room Wall	GWB joint compound	None Detected
107	55	Janitor Floor	12-inch tan floor tile with yellow mastic	None Detected
108	55	Janitor Floor	12-inch tan floor tile with yellow mastic	None Detected
109	16	020 Ceiling	GWB	None Detected
110	15	020 Ceiling	GWB joint compound	None Detected
111	56	018 Ceiling	Ceiling finish on foam insulation	<1% Chrysotile None Detected (Point Count)
112	56	018 Ceiling	Ceiling finish on foam insulation	None Detected
113	52	136 Floor Beneath Carpet	Black mastic	None Detected
114	57	130 Double Wood Doors	Interior insulation, white	None Detected
115	57	130 Double Wood Doors	Interior insulation, white	None Detected
116	58	130 Ceiling SACT	2'x2' SACT Decorative	None Detected
117	58	130 Ceiling SACT	2'x2' SACT Decorative	None Detected
118	59	130 Ceiling SACT	2'x2' SACT Textured	None Detected

Table 1 - Asbestos Bulk Sample Results

NO.	HA	SAMPLE LOCATION	SAMPLE MATERIAL	% & TYPE OF ASBESTOS
119	60	130 Ceiling SACT	2'x2' SACT Smooth	None Detected
120	60	130 Ceiling SACT	2'x2' SACT Smooth	None Detected
121	59	130 Ceiling SACT	2'x2' SACT Textured	None Detected
122	61	130 Ceiling SACT	2'x2' SACT Worm	None Detected
123	61	130 Ceiling SACT	2'x2' SACT Worm	None Detected
124	62	130 Ceiling SACT	2'x2' SACT Pinhole	None Detected
125	62	130 Ceiling SACT	2'x2' SACT Pinhole	None Detected
126	63	130 Wall	Plaster lathe	None Detected
127	64	130 Interior Window	White WF sealant	None Detected
128	64	130 Interior Window	White WF sealant	None Detected
129	65	130 Exterior Window	Black WF Sealant	None Detected
130	65	130 Exterior Window	Black WF Sealant	None Detected
131	66	129 FG Insulated HVAC Duct	Tan mastic	None Detected
132	67	129 CMU Wall Above SACT	Black mastic on CMU	6% Chrysotile
133	67	129 CMU Wall Above SACT	Black mastic on CMU	5% Chrysotile
134	68	123 Ceiling	Plaster lathe	None Detected
135	68	124 Ceiling	Plaster lathe	None Detected
136	4	126 CMU Wall	CMU block sealant	None Detected
137	50	148 Plaster Wall	Black material	None Detected
138	36	202 Floor Beneath Carpet Over Concrete	Yellow and black carpet mastic	None Detected
139	15	201 Ceiling	GWB joint compound	None Detected
140	16	201 Ceiling	GWB	None Detected
141	64	210 Interior Window	White WF sealant	None Detected
142	69	237 Floor	9-inch brown floor tile with black mastic	3% Chrysotile (PLM) - Tile 1.9% Chrysotile (Point Count) - Tile None Detected (PLM) - Mastic
143	70	237 Floor	9-inch grey streaks floor tile with black mastic	3% Chrysotile (PLM) - Tile 1.6% Chrysotile (Point Count) - Tile None Detected (PLM) - Mastic
144	71	236 Floor Over Wood Sub Floor	12-inch blue floor tile with yellow mastic	None Detected
145	71	236 Floor Over Wood Sub Floor	12-inch blue floor tile with yellow mastic	None Detected
146	72	226 Floor	Yellow carpet mastic	None Detected

Table 1 - Asbestos Bulk Sample Results

NO.	HA	SAMPLE LOCATION	SAMPLE MATERIAL	% & TYPE OF ASBESTOS
147	72	228 Floor	Yellow carpet mastic	None Detected
148	73	225 Door Jamb	Plaster lathe	None Detected
149	73	225 Door Jamb	Plaster lathe	None Detected
150	74	207 Ceiling	Plaster lathe	None Detected
151	74	207 Ceiling	Plaster lathe	None Detected
152	3	032 Ceiling SACT	2'x2' Gwb. SACT	None Detected
153	6	Exterior Concrete at Base of Wall	Black mastic	6% Chrysotile
154	7	Exterior Wall Louver	White frame sealant	4% Chrysotile
155	8	134 Above SACT	Plaster ceiling	None Detected
156	9	134 Plaster Ceiling Above SACT	Brown puck	None Detected
157	10	134 Above SACT	1'x1' SACT, glued	None Detected
158	11	134 SACT	2'x2' SACT 4-squares	None Detected
159	12	060 FG Thermal System Insulation	Mudded pipe fitting	4% Amosite 20% Chrysotile
160	15	056 Ceiling	Gypsum wall board (GWB) joint compound	None Detected
161	17	035A Floor	9-inch floor tile and mastic, bottom layer, white	3% Chrysotile (PLM) - Tile 1.4% Chrysotile (Point Count) - Tile None Detected - Mastic
162	18	035A Floor	9-inch floor tile and mastic, top layer, green	3% Chrysotile (PLM) - Tile 1.8% Chrysotile (Point Count) - Tile None Detected - Mastic
163	17A	035A Floor	9-inch floor tile and mastic, top layer, white	4% Chrysotile - Tile <1% Chrysotile (PLM) - Mastic <0.25% Chrysotile (Point Count) - Mastic
164	17A	035A Floor	9-inch floor tile and mastic, top layer, wwhite	3% Chrysotile (PLM) - Tile 2.1% Chrysotile (Point Count) - Tile None Detected - Mastic
165	24	038 Base of Wall	Grey 4-inch covebase & tan mastic	None Detected
166	75	228 Ceiling Coating	Grey fireproofing	4% Chrysotile
167	75	228 Ceiling Coating	Grey fireproofing	6% Chrysotile
168	75	228 Ceiling Coating	Grey fireproofing	6% Chrysotile
169	16	223 Wall Above SACT	GWB	None Detected
170	63	223 Wall Above SACT	Plaster lathe	None Detected
171	76	224 Metal HVAC Duct	Brown sealant	None Detected

Table 1 - Asbestos Bulk Sample Results

NO.	HA	SAMPLE LOCATION	SAMPLE MATERIAL	% & TYPE OF ASBESTOS
172	76	224 Metal HVAC Duct	Brown sealant	None Detected
173	77	223 Storage Room, Former Exterior Wall	White window frame sealant	3% Chrysotile (PLM) 1.3% Chrysotile (Point Count)
174	77	223 Storage Room, Former Exterior Wall	White window frame sealant	3% Chrysotile (PLM) 1.4% Chrysotile (Point Count)
175	78	Exterior Lower Roof	Pitch Pocket	None Detected
176	78	Exterior Lower Roof	Pitch Pocket	None Detected
177	43	Exterior Lower Roof at Base Flashing	White sealant	None Detected
178	79	Exterior 2nd Floor Window Frame	White WF sealant	None Detected
179	79	Exterior 2nd Floor Window Frame	White WF sealant	None Detected
180	80	Through Wall Base Flashing on Brick Wall Above Exterior Lower Roof	Red sealant	None Detected
181	80	Through Wall Base Flashing on Brick Wall Above Exterior Lower Roof	Red sealant	None Detected
182	38	Exterior Lower Roof	Capsheet	None Detected
183	81	Exterior Roof	Built-up roof	None Detected
184	81	Exterior Roof	Built-up roof	None Detected
185	82	Exterior Roof Gravel Stop	Built-up roof	None Detected
186	82	Exterior Roof Gravel Stop	Built-up roof	None Detected
187	83	134 Ceiling at Entry Doors	Plaster ceiling	2% Chrysotile (PLM) - White Coat <0.25% Chrysotile (Point Count) - White Coat <1% Chrysotile - Gray Coat <0.25% Chrysotile (Point Count) - Gray Coat
188	83	134 Ceiling at Entry Doors	Plaster ceiling	2% Chrysotile (PLM) - White Coat <0.25% Chrysotile (Point Count) - White Coat <1% Chrysotile - Gray Coat None Detected (Point Count) - Gray Coat
189	84	134 Entry Doors	White exterior DF sealant	None Detected
190	84	134 Entry Doors	White exterior DF sealant	3% Chrysotile (PLM) 0.9% Chrysotile (Point Count)

Table 2 - PAINT SAMPLE RESULTS

NO.	SAMPLE LOCATION	SAMPLE MATERIAL	% LEAD	% CHROMIUM	% CADMIUM
P1	034 I-beam	Orange paint	39	0.0061	0.00089
P2	032 CMU wall	Brown paint	0.0043	0.00026	<0.000039
P3	042 Brick Wall	White paint	0.25	0.00026	<0.000039
P4	011 Concrete Floor	Red paint	0.0025	0.0015	0.00029
P5	Mech Room Roof, Structural steel	Red paint	0.015	0.024	0.00076
P6	237 Plaster wall	Tan paint	11	0.017	0.00062
P7	134 Structural Steel	Green paint	14	0.013	0.0008

NOTES:

1. D - Dilution Sample required a dilution which was used to calculate final results.
2. **BOLD** results indicate the sample is Lead Based Paint (LBP).
3. All YELLOW HIGHLIGHTED samples exceed the laboratory reporting limit (RL).

Table 3 - TCLP Sample Results

		TCLP-1	
ANALYTE	REGULATORY LEVEL (mg/L)	RESULT (mg/L)	RL
Arsenic	5.0	<0.050	1.0
Barium	100.0	<0.5 (F1)	20
Cadmium	1.0	<0.050	1.0
Chromium	5.0	<0.050	2.0
Lead	5.0	<0.050	1.0
Selenium	1.0	<0.050	1.0
Silver	5.0	<0.050	2.0
Mercury	0.2	<0.0020	0.0020

NOTES:

1. J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
2. RL - Reporting Limit
3. YELLOW HIGHLIGHTED results exceed the Regulatory Level classifying the sample as a Hazardous Waste.

Table 4 - PCB Sealant Sample Results

NO.	SAMPLE LOCATION	SAMPLE MATERIAL	RESULTS (mg/Kg)
PCB-1	223 Storage Room, Former Exterior Wall	White exterior WF sealant	13 (Aroclor 1254)
PCB-2	223 Storage Room, Former Exterior Wall	White exterior WF sealant	8.3 (Aroclor 1254)

All samples were analyzed for the following Aroclors: 1016, 1221, 1232, 1242, 1248, 1254, 1260, 1262, and 1268. Only Aroclors which were detected above the laboratory minimum detection limit (MDL) are shown above.

SECTION 2.1

PATTON Hall, Building 214 Asbestos Analytical Results



EMSL Analytical, Inc.

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Tel/Fax: (704) 525-2205 / (704) 525-2382

<http://www.EMSL.com> / charlottelab@emsl.com

EMSL Order: 412507903

Customer ID: GEOE25

Customer PO:

Project ID:

Attention: Nelson Adcock

GeoEnvironmental Resources

2712 Southern Blvd.

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Project: 130-8310 Patton Hall B214 Ft. Meyers, Arlington, VA

Phone: (757) 463-3200

Fax: (757) 463-3080

Received Date: 07/29/2025 9:55 AM

Analysis Date: 08/04/2025 - 08/05/2025

Collected Date:

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1 412507903-0001	034 HVAC Duct - Black Vibration Cloth	White/Black Non-Fibrous Homogeneous	<1% Cellulose 80% Glass	20% Non-fibrous (Other)	None Detected
2 412507903-0002	034 Fiberglass (FG) Thermal Sysytem Insulaton (TSI) - White Sealant	Brown/White/Silver Fibrous Heterogeneous	60% Cellulose 25% Glass	13% Non-fibrous (Other)	2% Chrysotile
Result includes a small amount of inseparable attached wrap.					
3 412507903-0003	032 Ceiling SACT - 2'x2' Gwb. SACT	Brown/White Non-Fibrous Homogeneous	5% Cellulose 2% Glass	93% Non-fibrous (Other)	None Detected
4-Sealant 412507903-0004	032 FG TSI - White End Cap Sealant	White Non-Fibrous Homogeneous	5% Fibrous (Other)	15% Ca Carbonate 80% Non-fibrous (Other)	None Detected
4-Insulation 412507903-0004A	032 FG TSI - White End Cap Sealant	Yellow Fibrous Homogeneous	99% Glass	1% Non-fibrous (Other)	None Detected
5 412507903 0005	032 CMU Wall CMU Block Sealant	White/Green/Beige Non-Fibrous Homogeneous	1% Cellulose	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
6-Cove Base 412507903-0006	032 Based of Wall - Black 4-Inch Cove Base & Yellow Mastic	Black Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
6-Mastic 412507903-0006A	032 Based of Wall - Black 4-Inch Cove Base & Yellow Mastic	Tan/Yellow Non-Fibrous Homogeneous		2% Ca Carbonate 98% Non-fibrous (Other)	None Detected
7 412507903-0007	Exterior Concrete at Base of Wall - Black Mastic	Black Fibrous Homogeneous	10% Cellulose	84% Non-fibrous (Other)	6% Chrysotile
8 412507903-0008	Exterior Wall Louver - White Frame Sealant	White/Silver Non-Fibrous Homogeneous	2% Fibrous (Other)	20% Ca Carbonate 78% Non-fibrous (Other)	None Detected
Result includes a small amount of inseparable attached silver paint.					
9-White Coat 412507903-0009	134 Above SACT - Plaster Ceiling	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
9-Beige Coat 412507903-0009A	134 Above SACT - Plaster Ceiling	White/Beige Non-Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate 15% Perlite 75% Non-fibrous (Other)	None Detected
10 412507903-0010	134 Plaster Ceiling Above SACT - Brown Puck	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	<1% Chrysotile
11 412507903 0011	134 Above SACT 1'x1' SACT, Glued	White/Beige Fibrous Homogeneous	30% Cellulose 40% Min. Wool	20% Perlite 10% Non-fibrous (Other)	None Detected
12 412507903-0012	134 SACT - 1'x1' SACT 4-Squares	White/Beige Fibrous Homogeneous	30% Cellulose 50% Min. Wool	2% Perlite 18% Non-fibrous (Other)	None Detected

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EMSL Order: 412507903

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Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
13-Sealant 412507903-0013	060 Fiberglass(FG) Pipe Insulation - White End Cap Sealant	White Non-Fibrous Homogeneous	2% Fibrous (Other)	20% Ca Carbonate 78% Non-fibrous (Other)	None Detected
13-Wrap 412507903-0013A	060 Fiberglass(FG) Pipe Insulation - White End Cap Sealant	Brown/White/Silver Fibrous Homogeneous	60% Cellulose 30% Glass	10% Non-fibrous (Other)	None Detected
13-Insulation 412507903-0013B	060 Fiberglass(FG) Pipe Insulation - White End Cap Sealant	Yellow Fibrous Homogeneous	99% Glass	1% Non-fibrous (Other)	None Detected
14 412507903-0014	060 FG Thermal System Insulation - Mudded Pipe Fitting	Beige Fibrous Homogeneous		20% Ca Carbonate 60% Non-fibrous (Other)	20% Chrysotile
15-Top Yellow Mastic 412507903-0015	055 Beneath Carpet - Grey Floor Leveling Compound & Yellow Carpet Mastic	Yellow Non-Fibrous Homogeneous	3% Synthetic	97% Non-fibrous (Other)	None Detected
15-Leveling Compound 412507903-0015A	055 Beneath Carpet - Grey Floor Leveling Compound & Yellow Carpet Mastic	Gray Non-Fibrous Homogeneous	10% Cellulose	15% Ca Carbonate 75% Non-fibrous (Other)	None Detected
15-Bottom Yellow Mastic 412507903-0015B	055 Beneath Carpet - Grey Floor Leveling Compound & Yellow Carpet Mastic	Yellow Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
16 412507903-0016	055 Beneath Carpet & Floor Leveling Compound - Black Material Beneath Floor Leveling Compound	Black/Yellow Non-Fibrous Homogeneous	5% Synthetic	95% Non-fibrous (Other)	None Detected
17 412507903-0017	055 Beneath Carpet & Floor Leveling Compound - Black Material Beneath Floor Leveling Compound	Tan/Black Non-Fibrous Heterogeneous		3% Quartz 15% Ca Carbonate 82% Non-fibrous (Other)	None Detected
18-Top Yellow Mastic 412507903-0018	055 Beneath Carpet - Grey Floor Leveling Compound & Yellow Carpet Mastic	Yellow Non-Fibrous Homogeneous	3% Synthetic	10% Ca Carbonate 87% Non-fibrous (Other)	None Detected
18-Leveling Compound 412507903-0018A	055 Beneath Carpet - Grey Floor Leveling Compound & Yellow Carpet Mastic	Gray Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
18-Bottom Yellow Mastic 412507903-0018B	055 Beneath Carpet - Grey Floor Leveling Compound & Yellow Carpet Mastic	Yellow Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
19 412507903-0019	S070 Ceiling - 1'x1' SACT, Glued	White/Beige Fibrous Homogeneous	2% Cellulose 50% Min. Wool	2% Ca Carbonate 46% Non-fibrous (Other)	None Detected
20 412507903-0020	056 Ceiling - Gypsum Wall Board (GWB) Joint Compound	Brown/White Non-Fibrous Homogeneous	5% Cellulose	70% Ca Carbonate 25% Non-fibrous (Other)	None Detected

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
21	056 Ceiling - GWB	Brown/Beige Non-Fibrous Homogeneous	3% Cellulose 5% Glass	92% Non-fibrous (Other)	None Detected
412507903-0021					
22-Top Black Mastic	035A Floor - 9-Inch Floor Tile & Mastic,Bottom Layer	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	<1% Chrysotile
412507903-0022					
	Possible contamination.				
22-Floor Tile	035A Floor - 9-Inch Floor Tile & Mastic,Bottom Layer	Gray/White Non-Fibrous Homogeneous		30% Ca Carbonate 67% Non-fibrous (Other)	3% Chrysotile
412507903-0022A					
22-Bottom Black Mastic	035A Floor - 9-Inch Floor Tile & Mastic,Bottom Layer	Black Non-Fibrous Homogeneous		2% Ca Carbonate 98% Non-fibrous (Other)	None Detected
412507903-0022B					
23-Floor Tile	035A Floor - 9-Inch Floor Tile & Mastic,Top Layer	White Non-Fibrous Homogeneous		30% Ca Carbonate 67% Non-fibrous (Other)	3% Chrysotile
412507903-0023					
23-Mastic	035A Floor - 9-Inch Floor Tile & Mastic,Top Layer	Black Non-Fibrous Homogeneous		2% Quartz 98% Non-fibrous (Other)	None Detected
412507903-0023A					
24	054 Ceiling - GWB	Brown/Gray Non-Fibrous Homogeneous	5% Cellulose <1% Glass	95% Non-fibrous (Other)	None Detected
412507903-0024					
25	042 Ceiling - Plater Lathe	White Non-Fibrous Homogeneous	<1% Cellulose	30% Quartz 70% Non-fibrous (Other)	None Detected
412507903-0025					
26-Mastic	S06 Stair Tread - Black Rubber Tread & Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
412507903-0026					
	No rubber tread present.				
27-Rubber Tread	S06 Stair Tread - Red Rubber Tread & Mastic	Red Non-Fibrous Homogeneous	<1% Cellulose	<1% Quartz 100% Non-fibrous (Other)	None Detected
412507903-0027					
27-Mastic	S06 Stair Tread - Red Rubber Tread & Mastic	Brown/Tan Non-Fibrous Homogeneous	3% Cellulose	97% Non-fibrous (Other)	None Detected
412507903-0027A					
28	012 HVAC Duct - Black Vibration Cloth	Brown Fibrous Homogeneous	95% Cellulose	3% Ca Carbonate 2% Non-fibrous (Other)	None Detected
412507903-0028					
29	012 Steel Column Covering - Plaster	Gray/White Non-Fibrous Homogeneous	<1% Cellulose	40% Quartz 60% Non-fibrous (Other)	None Detected
412507903-0029					
30	012 FG TSI - White End Cap Sealant	White/Yellow Non-Fibrous Heterogeneous	3% Glass 5% Fibrous (Other)	92% Non-fibrous (Other)	None Detected
412507903-0030					
	Result includes a small amount of inseparable attached insulation.				
31-Sealant/Wrap	025 HVAC Duct,Metal - Brown Sealant	Brown/Tan/Silver Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
412507903-0031					
31-Insulation	025 HVAC Duct,Metal - Brown Sealant	Gray Fibrous Homogeneous	99% Glass	1% Non-fibrous (Other)	None Detected
412507903-0031A					
32	025 HVAC Duct,Metal - Brown Sealant	Brown/Silver Fibrous Heterogeneous	40% Cellulose 30% Glass	15% Ca Carbonate 15% Non-fibrous (Other)	None Detected
412507903-0032					
	Result includes inseparable attached wrap.				
33-White Coat	025 Ceiling - Plater Lathe	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
412507903-0033					

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
33-Gray Coat 412507903-0033A	025 Ceiling - Plater Lathe	Gray Non-Fibrous Homogeneous	<1% Cellulose	10% Quartz 10% Ca Carbonate 80% Non-fibrous (Other)	None Detected
34 412507903-0034	011 CMU Wall - CMU Block Sealant	Gray/White Non-Fibrous Homogeneous	<1% Cellulose	15% Quartz 10% Ca Carbonate 75% Non-fibrous (Other)	None Detected
35-Cove Base 412507903-0035	011 Base of Wall - Black 4-Inch Cove base & Yellow Mastic	Black Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
35-Mastic 412507903-0035A	011 Base of Wall - Black 4-Inch Cove base & Yellow Mastic	Yellow Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
36 412507903-0036	011 Insulated HVAC Duct - Yellow Tape & Sealant	White/Yellow Non-Fibrous Heterogeneous	20% Cellulose 10% Glass	10% Ca Carbonate 60% Non-fibrous (Other)	None Detected
37-White Coat 412507903-0037	013 Ceiling - Plater Lathe	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
37-Gray Coat 412507903-0037A	013 Ceiling - Plater Lathe	Gray Non-Fibrous Homogeneous	<1% Cellulose	30% Quartz 70% Non-fibrous (Other)	None Detected
38-White Coat 412507903-0038	013 Steel Column Covering - Plaster	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
38-Gray Coat 412507903-0038A	013 Steel Column Covering - Plaster	Gray Non-Fibrous Homogeneous	<1% Cellulose	20% Quartz 80% Non-fibrous (Other)	None Detected
39 412507903-0039	038 Ceiling SACT - 2'x4' SACT, Worm	White/Beige Fibrous Homogeneous	60% Cellulose 30% Min. Wool	5% Perlite 5% Non-fibrous (Other)	None Detected
40-Sealant 412507903-0040	038 Insulated HVAC Duct Above 2'x4' SACT - Yellow Tape & Sealant	White/Beige Non-Fibrous Homogeneous	2% Cellulose <1% Fibrous (Other)	96% Non-fibrous (Other)	2% Chrysotile
40-Tape 412507903-0040A	038 Insulated HVAC Duct Above 2'x4' SACT - Yellow Tape & Sealant	Brown/Silver Non-Fibrous Homogeneous	60% Cellulose 30% Glass	10% Non-fibrous (Other)	None Detected
40-Insulation 412507903-0040B	038 Insulated HVAC Duct Above 2'x4' SACT - Yellow Tape & Sealant	Yellow Fibrous Homogeneous	99% Glass	1% Non-fibrous (Other)	None Detected
41-Cove Base 412507903-0041	038 Based of Wall - Grey 4-Inch Cove Base & Tan Mastic	Gray Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
41-Mastic 412507903-0041A	038 Based of Wall - Grey 4-Inch Cove Base & Tan Mastic	Tan Non-Fibrous Homogeneous	<1% Synthetic <1% Fibrous (Other)	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
42-Tan Mastic 412507903-0042	038 Base of Wall - Black Mastic	Tan Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
42-Brown Mastic 412507903-0042A	038 Base of Wall - Black Mastic	Brown Non-Fibrous Homogeneous	3% Fibrous (Other)	97% Non-fibrous (Other)	None Detected
43 412507903-0043	047 Base of Wall Behind Ceramic Base - Black Mastic	Black Non-Fibrous Homogeneous	3% Cellulose <1% Synthetic	5% Ca Carbonate 92% Non-fibrous (Other)	None Detected

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
44-Floor Tile 412507903-0044	058 Floor - 12-Inch Tan Floor Tile w/Black & Yellow Mastic	Tan Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
44-Mastic 412507903-0044A	058 Floor - 12-Inch Tan Floor Tile w/Black & Yellow Mastic	Black/Yellow Non-Fibrous Heterogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
45-White Coat 412507903-0045	023 Ceiling - Plater Lathe	White Non-Fibrous Homogeneous		<1% Quartz 100% Non-fibrous (Other)	None Detected
45-Gray Coat 412507903-0045A	023 Ceiling - Plater Lathe	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
46-Floor Tile 412507903-0046	006 Floor - 12-Inch Grey Floor Tile w/Yellow Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
46-Mastic/Leveler 412507903-0046A	006 Floor - 12-Inch Grey Floor Tile w/Yellow Mastic	White/Yellow Non-Fibrous Heterogeneous	<1% Cellulose	5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
47-Floor Tile 412507903-0047	006 Floor - 12-Inch Grey Floor Tile & Black Mastic	Gray Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
47-Black Mastic 412507903-0047A	006 Floor - 12-Inch Grey Floor Tile & Black Mastic	Black Non-Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate <1% Mica 90% Non-fibrous (Other)	None Detected
47-Tan Mastic/Leveler 412507903-0047B	006 Floor - 12-Inch Grey Floor Tile & Black Mastic	Gray/Tan/White Non-Fibrous Heterogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
48-Floor Tile 412507903-0048	006 Floor - 12-Inch Pink Floor Tile & Black Mastic	Tan/Pink Non-Fibrous Homogeneous	<1% Cellulose	40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
48-Mastic 412507903-0048A	006 Floor - 12-Inch Pink Floor Tile & Black Mastic	Yellow Non-Fibrous Homogeneous	<1% Cellulose	2% Ca Carbonate 98% Non-fibrous (Other)	None Detected
49-Floor Tile 412507903-0049	006 Floor - 12-Inch Pink Floor Tile & Black Mastic	Pink/Beige Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
49-Mastic 412507903-0049A	006 Floor - 12-Inch Pink Floor Tile & Black Mastic	Black Non-Fibrous Homogeneous	<1% Cellulose	5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
50 412507903-0050	006 Ceiling - Transite Panel	Gray Fibrous Homogeneous		80% Non-fibrous (Other)	20% Chrysotile
51 412507903-0051	006 Ceiling - Transite Panel	Tan Fibrous Homogeneous		80% Non-fibrous (Other)	20% Chrysotile
52 412507903-0052	004 HVAC Duct,Metal - Grey Sealant	Gray Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
53 412507903-0053	004 HVAC Duct,Metal - Grey Sealant	Gray Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
54 412507903-0054	002 Exterior Window - Glazing Putty	Gray/White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
55 412507903-0055	001 Exterior Window - Glazing Putty	Gray/White Non-Fibrous Homogeneous	<1% Cellulose	20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
56-Sealant 412507903-0056	148 Insulated HVAC Duct - Yellow Tape & Sealant	Yellow/Beige Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
56-Tape 412507903-0056A	148 Insulated HVAC Duct - Yellow Tape & Sealant	White/Silver Fibrous Homogeneous	60% Cellulose 20% Glass	20% Non-fibrous (Other)	None Detected
57 412507903-0057	148 FG TSI - White End Cap Sealant	Brown/White/Black Non-Fibrous Heterogeneous	3% Cellulose 2% Glass	10% Ca Carbonate 85% Non-fibrous (Other)	None Detected
Result includes a small amount of inseparable attached insulation.					
58-Texture 412507903-0058	148 Ceiling - Plater Lathe	White Non-Fibrous Homogeneous		80% Ca Carbonate 20% Non-fibrous (Other)	None Detected
58-White Coat 412507903-0058A	148 Ceiling - Plater Lathe	White Non-Fibrous Homogeneous		<1% Quartz 100% Non-fibrous (Other)	None Detected
58-Gray Coat 412507903-0058B	148 Ceiling - Plater Lathe	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
59 412507903-0059	116 Ceiling, Textured - Plaster Lathe	White Non-Fibrous Homogeneous		60% Ca Carbonate 40% Non-fibrous (Other)	None Detected
60-Plaster 412507903-0060	116 Ceiling, Textured - Plaster Lathe	White Non-Fibrous Homogeneous		3% Quartz 5% Ca Carbonate 92% Non-fibrous (Other)	None Detected
60-Drywall 412507903-0060A	116 Ceiling, Textured - Plaster Lathe	Brown/Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
61 412507903-0061	116 Wall Behind Wainscotting - Brown Mastic Puck	Gray Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
62 412507903-0062	116 Wall Behind Wainscotting - Brown Mastic Puck	Gray Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
63 412507903-0063	116 Floor Beneath Carpet on Wood Sub Floor - Yellow Carpet Mastic	Brown/Tan Non-Fibrous Heterogeneous		98% Non-fibrous (Other)	2% Chrysotile
64 412507903-0064	116 Wall Behind Wainscotting - Brown Mastic Puck	Gray/Beige Non-Fibrous Homogeneous		10% Ca Carbonate 85% Non-fibrous (Other)	5% Chrysotile
65-Tape 412507903-0065	117 Wall - GWB	Beige Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
No gypsum wallboard present.					
66-Gypsum Wallboard 412507903-0066	117 Wall - GWB Joint Compound	Brown/Gray Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
No joint compound present.					
67 412507903-0067	143 Floor Beneath Carpet on Wood Sub Floor - Yellow Carpet Mastic	Tan Non-Fibrous Homogeneous	<1% Synthetic	10% Quartz 5% Ca Carbonate 85% Non-fibrous (Other)	None Detected

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
68-Floor Tile 412507903-0068	143 Floor - 12-Inch Tan Speckle Floor Tile & Mastic	Tan Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
68-Mastic 412507903-0068A	143 Floor - 12-Inch Tan Speckle Floor Tile & Mastic	Yellow Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
69 412507903-0069	143 Floor - 12-Inch Tan Speckle Floor Tile & Mastic	Tan Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
70-Yellow Mastic 412507903-0070	135 Floor Beneath Carpet on Wood Sub Floor - Yellow & Black Carpet Mastic	Yellow Non-Fibrous Homogeneous	2% Cellulose	2% Ca Carbonate 96% Non-fibrous (Other)	None Detected
70-Black Mastic 412507903-0070A	135 Floor Beneath Carpet on Wood Sub Floor - Yellow & Black Carpet Mastic	Black Non-Fibrous Homogeneous	10% Cellulose 3% Synthetic	87% Non-fibrous (Other)	None Detected
71-Mastic 412507903-0071	135 Floor Beneath Carpet - Yellow Carpet Mastic & Grey Floor Leveler	White/Yellow Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
71-Leveler 412507903-0071A	135 Floor Beneath Carpet - Yellow Carpet Mastic & Grey Floor Leveler	Gray Non-Fibrous Homogeneous	5% Cellulose	15% Ca Carbonate 80% Non-fibrous (Other)	None Detected
72-Roofing 412507903-0072	Flat Roof - Capsheet	Gray/Black Fibrous Homogeneous	30% Synthetic 2% Glass	5% Quartz 10% Ca Carbonate 53% Non-fibrous (Other)	None Detected
72-Foam 412507903-0072A	Flat Roof - Capsheet	Black/Yellow Fibrous Heterogeneous	30% Cellulose 5% Glass	65% Non-fibrous (Other)	None Detected
72-Insulation 412507903-0072B	Flat Roof - Capsheet	Brown/White Fibrous Homogeneous	60% Cellulose	20% Perlite 20% Non-fibrous (Other)	None Detected
73 412507903-0073	Edge of Flat Roof - Capsheet Flashing	Black Fibrous Homogeneous	20% Synthetic	2% Quartz 10% Ca Carbonate 68% Non-fibrous (Other)	None Detected
74 412507903-0074	HVAC Metal Foundation Post - Black Mastic	Gray/Black Fibrous Homogeneous	2% Synthetic	10% Quartz 15% Ca Carbonate 73% Non-fibrous (Other)	None Detected
75 412507903-0075	HVAC Metal Foundation Post - Black Mastic	Black Non-Fibrous Homogeneous	<1% Cellulose 3% Synthetic	15% Ca Carbonate 82% Non-fibrous (Other)	None Detected
76 412507903-0076	Edge of Flat Roof - Capsheet Flashing	Gray/Black Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
77-Roofing 412507903-0077	Flat Roof - Capsheet	Gray/Black Fibrous Homogeneous	30% Cellulose	10% Quartz 15% Ca Carbonate 45% Non-fibrous (Other)	None Detected
77-Insulation 412507903-0077A	Flat Roof - Capsheet	Brown Fibrous Homogeneous	80% Cellulose	15% Perlite 5% Non-fibrous (Other)	None Detected
78-Silver Paint 412507903-0078	Flat Roof HVAC Vent - Capsheet Flashing w/Silver Paint	Silver Non-Fibrous Homogeneous	<1% Cellulose	5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
78-Roofing 412507903-0078A	Flat Roof HVAC Vent - Capsheet Flashing w/Silver Paint	Gray/Black Fibrous Homogeneous	20% Synthetic	10% Quartz 15% Ca Carbonate 55% Non-fibrous (Other)	None Detected

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			% Fibrous	% Non-Fibrous	% Type
79-Silver Paint 412507903-0079	Flat Roof HVAC Vent - Capsheet Flashing w/Silver Paint	Silver Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
79-Roofing 412507903-0079A	Flat Roof HVAC Vent - Capsheet Flashing w/Silver Paint	Black Fibrous Homogeneous	20% Synthetic	20% Ca Carbonate 60% Non-fibrous (Other)	None Detected
80 412507903-0080	Metal Base of HVAC Equipment - Black Mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
81 412507903-0081	Metal Base of HVAC Equipment - Black Mastic	Black Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
82 412507903-0082	Wall at Roof Level Base Flashing - White Sealant	White Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
83 412507903-0083	Wall at Roof Level Base Flashing - White Sealant	Gray Non-Fibrous Homogeneous		20% Ca Carbonate 76% Non-fibrous (Other)	4% Chrysotile
84 412507903-0084	Access Door at Roof - White DF Sealant	Gray/Tan Non-Fibrous Homogeneous		15% Ca Carbonate 82% Non-fibrous (Other)	3% Chrysotile
85 412507903-0085	Access Door at Roof - White DF Sealant	Gray/Tan Non-Fibrous Homogeneous		25% Ca Carbonate 72% Non-fibrous (Other)	3% Chrysotile
86 412507903-0086	Slate Roof on Shingles - Black Sealant	Black Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
87 412507903-0087	Slate Roof on Shingles - Grey Sealant	Gray Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
88 412507903-0088	Slate Roof on Shingles - Grey Sealant	Gray Non-Fibrous Homogeneous	3% Synthetic	15% Ca Carbonate 82% Non-fibrous (Other)	None Detected
89 412507903-0089	Slate Roof on Shingles - Black Sealant	Black Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
90 412507903-0090	Roof Top HVAC Equipment - Black Duct Vibration Cloth	White/Black Fibrous Homogeneous	60% Glass	10% Ca Carbonate 30% Non-fibrous (Other)	None Detected
91 412507903-0091	Roof Top HVAC Equipment - Black Duct Vibration Cloth	White Fibrous Homogeneous	80% Glass	20% Non-fibrous (Other)	None Detected
92 412507903-0092	Mech Room Roof,Metal HVAC Duct Sealant - Grean Sealant	Gray Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
93 412507903-0093	Mech Room Roof,Metal HVAC Duct Sealant - Grean Sealant	Gray/Green Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
94-Sealant 412507903-0094	Mech Room Roof,FG TSI - White End Cap Sealant	White Non-Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
94-Insulation 412507903-0094A	Mech Room Roof,FG TSI - White End Cap Sealant	Yellow Fibrous Homogeneous	99% Glass	1% Non-fibrous (Other)	None Detected

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
95-Sealant/Wrap <i>412507903-0095</i>	Mech Room Roof, FG TSI - White End Cap Sealant	White/Silver Fibrous Heterogeneous	5% Cellulose 5% Fibrous (Other)	3% Quartz 87% Non-fibrous (Other)	None Detected
95-Insulation <i>412507903-0095A</i>	Mech Room Roof, FG TSI - White End Cap Sealant	Yellow Fibrous Homogeneous	99% Glass	1% Non-fibrous (Other)	None Detected
96-Flooring <i>412507903-0096</i>	149 Behind Vanity in Wall Cavity on Wood Studs - Black Material	Black/Green Fibrous Homogeneous	30% Cellulose 5% Synthetic	10% Ca Carbonate 55% Non-fibrous (Other)	None Detected
96-Mastic <i>412507903-0096A</i>	149 Behind Vanity in Wall Cavity on Wood Studs - Black Material	White/Yellow Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
97-Flooring <i>412507903-0097</i>	149 Behind Vanity in Wall Cavity on Wood Studs - Black Material	Black/Green Fibrous Homogeneous	30% Cellulose	10% Ca Carbonate 60% Non-fibrous (Other)	None Detected
97-Mastic <i>412507903-0097A</i>	149 Behind Vanity in Wall Cavity on Wood Studs - Black Material	White/Beige Non-Fibrous Homogeneous	<1% Cellulose	2% Ca Carbonate 98% Non-fibrous (Other)	None Detected
98 <i>412507903-0098</i>	153 Ceiling SACT - 2'x2' SACT Decorative	Gray/White Fibrous Homogeneous	30% Cellulose 60% Min. Wool	2% Ca Carbonate 8% Non-fibrous (Other)	None Detected
99 <i>412507903-0099</i>	153 Ceiling SACT - 2'x2' SACT Decorative	Gray/White Fibrous Homogeneous	15% Cellulose 70% Min. Wool	5% Perlite 10% Non-fibrous (Other)	None Detected
100-Felt <i>412507903-0100</i>	151 Beneath Carpet Squares on Wood Floor - Black mastic	Black Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
100-Mastic <i>412507903-0100A</i>	151 Beneath Carpet Squares on Wood Floor - Black mastic	Brown Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
101-Felt <i>412507903-0101</i>	151 Beneath Carpet Squares on Wood Floor - Black mastic	Black Fibrous Homogeneous	80% Cellulose 5% Synthetic	15% Non-fibrous (Other)	None Detected
101-Mastic <i>412507903-0101A</i>	151 Beneath Carpet Squares on Wood Floor - Black mastic	Brown Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
102 <i>412507903-0102</i>	151 Column Covering - GWB	Brown/Gray/White Non-Fibrous Homogeneous	5% Cellulose <1% Glass	95% Non-fibrous (Other)	None Detected
103 <i>412507903-0103</i>	151 Column Covering - GWB Joint Compound	Tan Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
104 <i>412507903-0104</i>	151 Ceiling - GWB	Brown/White/Beige Non-Fibrous Homogeneous	5% Cellulose <1% Glass	95% Non-fibrous (Other)	None Detected
105 <i>412507903-0105</i>	Janitor Room Wall - GWB	Brown/Beige Non-Fibrous Homogeneous	10% Cellulose <1% Glass	90% Non-fibrous (Other)	None Detected
106 <i>412507903-0106</i>	Janitor Room Wall - GWB Joint Compound	White Non-Fibrous Homogeneous		80% Ca Carbonate 20% Non-fibrous (Other)	None Detected
107-Floor Tile <i>412507903-0107</i> <i>No mastic present.</i>	Janitor Floor - 12-Inch Tan Floor Tile w/Yellow mastic	Tan/Pink Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
108-Floor Tile <i>412507903-0108</i>	Janitor Floor - 12-Inch Tan Floor Tile w/Yellow mastic	Tan/Pink Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
108-Mastic 412507903-0108A	Janitor Floor - 12-Inch Tan Floor Tile w/Yellow mastic	Yellow Non-Fibrous Homogeneous		5% Quartz 95% Non-fibrous (Other)	None Detected
109 412507903-0109	020 Ceiling - GWB	Brown/Gray/White Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
110 412507903-0110	020 Ceiling - GWB Joint Compound	White Non-Fibrous Homogeneous		80% Ca Carbonate 20% Non-fibrous (Other)	None Detected
111 412507903-0111 Possible contamination.	018 Ceiling - Ceiling Finish on Foam Insulation	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	<1% Chrysotile
112 412507903-0112	018 Ceiling - Ceiling Finish on Foam Insulation	White Non-Fibrous Homogeneous	3% Fibrous (Other)	40% Quartz 57% Non-fibrous (Other)	None Detected
113-Felt 412507903-0113	136 Floor Beneath Carpet - Black Mastic	Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
113-Mastic 412507903-0113A	136 Floor Beneath Carpet - Black Mastic	Brown Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
114 412507903-0114	130 Double Wood Doors - Interior Insulation,White	White Fibrous Homogeneous	30% Cellulose	10% Ca Carbonate 10% Mica 50% Non-fibrous (Other)	None Detected
115 412507903-0115	130 Double Wood Doors - Interior Insulation,White	White Fibrous Homogeneous	30% Cellulose	20% Mica 50% Non-fibrous (Other)	None Detected
116 412507903-0116	130 Ceiling SACT - 2'x2' SACT Decorative	Gray/White Fibrous Homogeneous	40% Cellulose 50% Min. Wool	10% Non-fibrous (Other)	None Detected
117 412507903-0117	130 Ceiling SACT - 2'x2' SACT Decorative	Gray/White Fibrous Homogeneous	20% Cellulose 60% Min. Wool	5% Perlite 15% Non-fibrous (Other)	None Detected
118 412507903-0118	130 Ceiling SACT - 2'x2' SACTTextured	White/Beige Fibrous Homogeneous	60% Cellulose 15% Min. Wool	10% Ca Carbonate 15% Non-fibrous (Other)	None Detected
119 412507903-0119	130 Ceiling SACT - 2'x2' SACTSmooth	White Fibrous Homogeneous	90% Min. Wool	2% Ca Carbonate 8% Non-fibrous (Other)	None Detected
120 412507903-0120	130 Ceiling SACT - 2'x2' SACTSmooth	Gray/White Fibrous Homogeneous	5% Cellulose 60% Min. Wool	20% Perlite 15% Non-fibrous (Other)	None Detected
121 412507903-0121	130 Ceiling SACT - 2'x2' SACTTextured	Gray/White Fibrous Homogeneous	15% Cellulose 40% Min. Wool	20% Perlite 25% Non-fibrous (Other)	None Detected
122 412507903-0122	130 Ceiling SACT - 2'x2' SACT Worm	White/Beige Fibrous Homogeneous	70% Cellulose 5% Min. Wool	20% Perlite 5% Non-fibrous (Other)	None Detected
123 412507903-0123	130 Ceiling SACT - 2'x2' SACT Worm	Gray/White Fibrous Homogeneous	30% Cellulose 15% Min. Wool	40% Perlite 15% Non-fibrous (Other)	None Detected
124 412507903-0124	130 Ceiling SACT - 2'x2' SACT Pinhole	White/Beige Fibrous Homogeneous	70% Cellulose 10% Min. Wool	15% Perlite 5% Non-fibrous (Other)	None Detected

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
125	130 Ceiling SACT - 2'x2' SACT Pinhole	Gray/White Fibrous	20% Cellulose 40% Min. Wool	30% Perlite 10% Non-fibrous (Other)	None Detected
412507903-0125		Homogeneous			
126	130 Wall - Plaster Lathe	White Non-Fibrous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
412507903-0126		Homogeneous			
127	130 Interior Window - White WF Sealant	White Non-Fibrous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
412507903-0127		Homogeneous			
128	130 Interior Window - White WF Sealant	White Non-Fibrous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
412507903-0128		Homogeneous			
129	130 Exterior Window - Black WF Sealant	Black Non-Fibrous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
412507903-0129		Homogeneous			
130	130 Exterior Window - Black WF Sealant	White/Black Non-Fibrous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
412507903-0130		Homogeneous			
131-Mastic	129 FG Insulated HVAC Duct - Tan Mastic	Tan Non-Fibrous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
412507903-0131		Homogeneous			
131-Wrap	129 FG Insulated HVAC Duct - Tan Mastic	Brown/Silver Non-Fibrous	60% Cellulose 30% Glass	10% Non-fibrous (Other)	None Detected
412507903-0131A		Homogeneous			
131-Insulation	129 FG Insulated HVAC Duct - Tan Mastic	Yellow Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
412507903-0131B		Homogeneous			
132	129 CMU Wall Above SACT - Black Mastic on CMU	Black Non-Fibrous		94% Non-fibrous (Other)	6% Chrysotile
412507903-0132		Homogeneous			
133	129 CMU Wall Above SACT - Black Mastic on CMU	Black Non-Fibrous		3% Ca Carbonate 92% Non-fibrous (Other)	5% Chrysotile
412507903-0133		Homogeneous			
134	123 Ceiling - Plaster Lathe	White Non-Fibrous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
412507903-0134		Homogeneous			
135	124 Ceiling - Plaster Lathe	White Non-Fibrous		10% Quartz 5% Ca Carbonate 85% Non-fibrous (Other)	None Detected
412507903-0135		Homogeneous			
136	126 CMU Wall - CMU Block Sealant	Gray/Red/Beige Non-Fibrous		20% Quartz 10% Ca Carbonate 70% Non-fibrous (Other)	None Detected
412507903-0136		Homogeneous			
137	148 Plaster Wall - Black Material	Brown/Black Fibrous	60% Cellulose	20% Ca Carbonate 20% Non-fibrous (Other)	None Detected
412507903-0137		Heterogeneous			
Result includes a small amount of inseparable attached mastic.					
138-Yellow Mastic	210 Floor Beneath Carpet Over Concrete - Yellow & Black Carpet Mastic	Yellow Non-Fibrous		15% Quartz 85% Non-fibrous (Other)	None Detected
412507903-0138		Homogeneous			
138-Black Mastic	210 Floor Beneath Carpet Over Concrete - Yellow & Black Carpet Mastic	Black Non-Fibrous	3% Cellulose	10% Ca Carbonate 87% Non-fibrous (Other)	None Detected
412507903-0138A		Homogeneous			
138-Leveler	210 Floor Beneath Carpet Over Concrete - Yellow & Black Carpet Mastic	Gray Non-Fibrous		30% Quartz 70% Non-fibrous (Other)	None Detected
412507903-0138B		Homogeneous			

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
139-Paint 412507903-0139 No joint compound present.	201 Ceiling - GWB Joint Compound	Tan Non-Fibrous Homogeneous		3% Ca Carbonate 97% Non-fibrous (Other)	None Detected
140 412507903-0140	201 Ceiling - GWB	Brown/Gray Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
141 412507903-0141	210 Interior Window - White WF Sealant	White Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
142-Floor Tile 412507903-0142	237 Floor - 9-Inch Brown Floor Tile w/Black Mastic	Tan Non-Fibrous Homogeneous		20% Ca Carbonate 77% Non-fibrous (Other)	3% Chrysotile
142-Mastic 412507903-0142A	237 Floor - 9-Inch Brown Floor Tile w/Black Mastic	Black Non-Fibrous Homogeneous		2% Quartz 98% Non-fibrous (Other)	None Detected
143-Floor Tile 412507903-0143	237 Floor - 9-Inch Grey Streaks Floor Tile w/Yellow Mastic	White Non-Fibrous Homogeneous		20% Ca Carbonate 77% Non-fibrous (Other)	3% Chrysotile
143-Mastic/Leveler 412507903-0143A	237 Floor - 9-Inch Grey Streaks Floor Tile w/Yellow Mastic	Black Non-Fibrous Heterogeneous		2% Quartz 98% Non-fibrous (Other)	None Detected
144 412507903-0144	236 Floor Over Wood Sub Floor - 12-Inch Blue Floor Tile w/Yellow Mastic	Blue Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
145-Floor Tile 412507903-0145	236 Floor Over Wood Sub Floor - 12-Inch Blue Floor Tile w/Yellow Mastic	Blue Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
145-Mastic 412507903-0145A	236 Floor Over Wood Sub Floor - 12-Inch Blue Floor Tile w/Yellow Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
146-Carpet 412507903-0146	226 Floor - Yellow Carpet Mastic	Red Fibrous Homogeneous	99% Synthetic	1% Non-fibrous (Other)	None Detected
146-Mastic 412507903-0146A	226 Floor - Yellow Carpet Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose 2% Synthetic	98% Non-fibrous (Other)	None Detected
147 412507903-0147	226 Floor - Yellow Carpet Mastic	Tan Non-Fibrous Homogeneous	3% Synthetic	20% Quartz 77% Non-fibrous (Other)	None Detected
148-White Coat 412507903-0148	225 Door Jamb - Plaster Lathe	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
148-Gray Coat 412507903-0148A	225 Door Jamb - Plaster Lathe	Gray/Tan Non-Fibrous Homogeneous	<1% Cellulose	40% Quartz 60% Non-fibrous (Other)	None Detected
149-White Coat 412507903-0149	225 Door Jamb - Plaster Lathe	White Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
149-Gray Coat 412507903-0149A	225 Door Jamb - Plaster Lathe	Gray Non-Fibrous Homogeneous	<1% Cellulose	20% Quartz 80% Non-fibrous (Other)	None Detected
150-White Coat 412507903-0150	207 Ceiling - Plaster Lathe	White Non-Fibrous Homogeneous		70% Ca Carbonate 30% Non-fibrous (Other)	None Detected

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
150-Beige Coat 412507903-0150A	207 Ceiling - Plaster Lathe	Tan/Beige Non-Fibrous Homogeneous		10% Quartz 10% Perlite 80% Non-fibrous (Other)	None Detected
151-White Coat 412507903-0151	207 Ceiling - Plaster Lathe	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
151-Beige Coat 412507903-0151A	207 Ceiling - Plaster Lathe	Beige Non-Fibrous Homogeneous		10% Quartz 15% Ca Carbonate 10% Perlite 65% Non-fibrous (Other)	None Detected
152 412507903-0152	032 Ceiling SACT - 2'x2' GWB. SACT	Brown/White Fibrous Homogeneous	10% Cellulose 2% Glass	88% Non-fibrous (Other)	None Detected
153 412507903-0153	Exterior Concrete at Base of Wall - Black Mastic	Black Fibrous Homogeneous	5% Cellulose	89% Non-fibrous (Other)	6% Chrysotile
154 412507903-0154	Exterior Wall Louver - White Frame Sealant	White Non-Fibrous Homogeneous	3% Fibrous (Other)	20% Ca Carbonate 73% Non-fibrous (Other)	4% Chrysotile
155-Plaster 412507903-0155	134 Above SACT - Plaster Ceiling	Gray/Beige Non-Fibrous Homogeneous		3% Quartz 10% Ca Carbonate 5% Perlite 82% Non-fibrous (Other)	None Detected
155-Mastic 412507903-0155A	134 Above SACT - Plaster Ceiling	Tan Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
156 412507903-0156	134 Plaster Ceiling Above SACT - Brown Puck	Brown Non-Fibrous Homogeneous	6% Fibrous (Other)	3% Quartz 91% Non-fibrous (Other)	None Detected
157 412507903-0157	134 Above SACT - 1'x1' SACT, Glued	White/Beige Fibrous Homogeneous	20% Cellulose 40% Min. Wool	30% Perlite 10% Non-fibrous (Other)	None Detected
158 412507903-0158	134 SACT - 2'x2' SACT 4-Squares	Gray/White Fibrous Homogeneous	30% Cellulose 60% Min. Wool	10% Non-fibrous (Other)	None Detected
159 412507903-0159	060 FG Thermal System Insulation - Mudded Pipe Fitting	White Non-Fibrous Homogeneous		10% Ca Carbonate 66% Non-fibrous (Other)	4% Amosite 20% Chrysotile
160 412507903-0160	056 Ceiling - Gypsum Wall Board (GWB) Joint Compound	White Non-Fibrous Homogeneous		80% Ca Carbonate 20% Non-fibrous (Other)	None Detected
161-Floor Tile 412507903-0161	035A Floor - 9-Inch Floor Tile & Mastic, Bottom Layer, White	Gray Non-Fibrous Homogeneous		20% Ca Carbonate 77% Non-fibrous (Other)	3% Chrysotile
161-Mastic 412507903-0161A	035A Floor - 9-Inch Floor Tile & Mastic, Bottom Layer, White	Black Non-Fibrous Homogeneous		2% Ca Carbonate 98% Non-fibrous (Other)	None Detected
162-Floor Tile 412507903-0162	035A Floor - 9-Inch Floor Tile & Mastic, Bottom Layer, Green	Green Non-Fibrous Homogeneous		30% Ca Carbonate 67% Non-fibrous (Other)	3% Chrysotile
162-Mastic 412507903-0162A	035A Floor - 9-Inch Floor Tile & Mastic, Bottom Layer, Green	Black Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
163-Floor Tile 412507903-0163	035A Floor - 9-Inch Floor Tile & Mastic,Bottom Layer,White	White Non-Fibrous Homogeneous		10% Ca Carbonate 86% Non-fibrous (Other)	4% Chrysotile
163-Mastic 412507903-0163A	035A Floor - 9-Inch Floor Tile & Mastic,Bottom Layer,White	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	<1% Chrysotile
Result includes a small amount of inseparable attached floor tile.					
164-Floor Tile 412507903-0164	035A Floor - 9-Inch Floor Tile & Mastic,Bottom Layer,White	White/Green Non-Fibrous Homogeneous		30% Ca Carbonate 67% Non-fibrous (Other)	3% Chrysotile
164-Mastic 412507903-0164A	035A Floor - 9-Inch Floor Tile & Mastic,Bottom Layer,White	Black Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
165-Cove Base 412507903-0165	038 Based of Wall - Grey 4-Inch Cove Base & Tan Mastic	Gray Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
165-Mastic 412507903-0165A	038 Based of Wall - Grey 4-Inch Cove Base & Tan Mastic	Tan Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
166 412507903-0166	228 Ceiling Coating - Grey Fireproofing	Gray/Tan/White Fibrous Homogeneous	25% Cellulose	5% Mica 15% Perlite 51% Non-fibrous (Other)	4% Chrysotile
167 412507903-0167	228 Ceiling Coating - Grey Fireproofing	Tan Non-Fibrous Homogeneous		30% Mica 64% Non-fibrous (Other)	6% Chrysotile
168 412507903-0168	228 Ceiling Coating - Grey Fireproofing	Beige Non-Fibrous Homogeneous		20% Mica 74% Non-fibrous (Other)	6% Chrysotile
169 412507903-0169	217 Wall Above SACT - GWB	Tan/White Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
170-White Coat 412507903-0170	217 Wall Above SACT - Plaster Lathe	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
170-Gray Coat 412507903-0170A	217 Wall Above SACT Plaster Lathe	Gray Non Fibrous Homogeneous	<1% Cellulose	15% Quartz 2% Perlite 83% Non-fibrous (Other)	None Detected
171 412507903-0171	224 Metal HVAC Duct - Brown Sealant	Brown Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
172 412507903-0172	224 Metal HVAC Duct - Brown Sealant	Brown Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
173 412507903-0173	223 Storage Room,Former Exterior Wall - White Window Frame Sealant	Tan Non-Fibrous Homogeneous		10% Ca Carbonate 87% Non-fibrous (Other)	3% Chrysotile
174 412507903-0174	223 Storage Room,Former Exterior Wall - White Window Frame Sealant	Gray/Tan Non-Fibrous Homogeneous		20% Ca Carbonate 77% Non-fibrous (Other)	3% Chrysotile
175 412507903-0175	Exterior Lower Roof - Pitch Pocket	Black Non Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (Other)	None Detected

Initial report from: 08/05/2025 10:52:42



EMSL Analytical, Inc.

10801 Southern Loop Blvd Pineville, NC 28134

Tel/Fax: (704) 525-2205 / (704) 525-2382

<http://www.EMSL.com> / charlottelab@emsl.com

EMSL Order: 412507903

Customer ID: GEOE25

Customer PO:

Project ID:

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
176 412507903-0176	Exterior Lower Roof - Pitch Pocket	Black Non-Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
177 412507903-0177	Exterior Lower Roof at Base Flashing - White Sealant	Gray Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
178 412507903-0178	Exterior 2nd Floor Window Frame - White WF Sealant	White/Red Non-Fibrous Heterogeneous		10% Quartz 10% Ca Carbonate 80% Non-fibrous (Other)	None Detected
179 412507903-0179	Exterior 2nd Floor Window Frame - White WF Sealant	Gray/White Non-Fibrous Homogeneous	<1% Cellulose	2% Quartz 15% Ca Carbonate 83% Non-fibrous (Other)	None Detected
180 412507903-0180	Through Wall Base Flashing on Brick Wall Above Exterior Lower Roof - Red Sealant	Red Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
181 412507903-0181	Through Wall Base Flashing on Brick Wall Above Exterior Lower Roof - Red Sealant	Brown/Red Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
182-Roofing 412507903-0182	Exterior Lower Roof - Capsheet	Black Fibrous Homogeneous	30% Synthetic	70% Non-fibrous (Other)	None Detected
182-Insulation 412507903-0182A	Exterior Lower Roof - Capsheet	Brown Fibrous Homogeneous	75% Cellulose	20% Perlite 5% Non-fibrous (Other)	None Detected
183 412507903-0183	Exterior Roof - Built Up Roof	Black Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
184 412507903-0184	Exterior Roof - Built Up Roof	Black Fibrous Homogeneous	2% Cellulose 5% Glass	10% Ca Carbonate 83% Non-fibrous (Other)	None Detected
185 412507903-0185	Exterior Roof Gravel Stop - Built Up Roof	Brown/Black Fibrous Homogeneous	25% Cellulose	75% Non-fibrous (Other)	None Detected
186 412507903-0186	Exterior Roof Gravel Stop - Built Up Roof	Black Fibrous Homogeneous	30% Cellulose	10% Ca Carbonate 60% Non-fibrous (Other)	None Detected
187-White Coat 412507903-0187	134 Ceiling at Entry Doors - Plaster Ceiling	White Non-Fibrous Homogeneous		60% Ca Carbonate 38% Non-fibrous (Other)	2% Chrysotile
187-Gray Coat 412507903-0187A	134 Ceiling at Entry Doors - Plaster Ceiling	Gray Non-Fibrous Homogeneous	<1% Cellulose	40% Quartz 60% Non-fibrous (Other)	<1% Chrysotile
188-White Coat 412507903-0188	134 Ceiling at Entry Doors - Plaster Ceiling	White Non-Fibrous Homogeneous		30% Ca Carbonate 68% Non-fibrous (Other)	2% Chrysotile
188-Gray Coat 412507903-0188A	134 Ceiling at Entry Doors - Plaster Ceiling	Gray Non-Fibrous Homogeneous		30% Quartz 70% Non-fibrous (Other)	<1% Chrysotile
189 412507903-0189	134 Entry Doors - White Exterior DF Sealant	Black Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
190 412507903-0190	134 Entry Doors - White Exterior DF Sealant	Gray/Tan Non-Fibrous Homogeneous		30% Ca Carbonate 67% Non-fibrous (Other)	3% Chrysotile

Initial report from: 08/05/2025 10:52:42



EMSL Analytical, Inc.

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EMSL Order: 412507903

Customer ID: GEOE25

Customer PO:

Project ID:

Analyst(s)

Ashley Hill (35)

David Zalewski (22)

Kelsie Dwyer (57)

Maggie Pasour (147)

Lee Plumley, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Pineville, NC NVLAP Lab Code 200841-0, VA 3333 00312

Initial report from: 08/05/2025 10:52:42

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

412507903

PINEVILLE

10801 SOUTHERN LOOP BLVD.

PINEVILLE, NC 28134

PHONE (704) 525-2205

FAX (704) 525-2382

Company : GeoEnvironmental Resources, Inc.		EMSL-Bill to: ☒ Same ☐ Different If Bill to is Different note instructions in Comments**	
Street: 2712 Southern Boulevard, Suite 101		Third Party Billing requires written authorization from third party	
City: Virginia Beach	State/Province: VA	Zip/Postal Code: 23452	Country:
Report To (Name): Nelson Adcock		Fax #: 757-463-3080	
Telephone #: 757-463-3200		Email Address: hnadcock@geronline.com	
Project Name/Number: 130-8310 Patton Hall B214 Ft. Myers, Arlington, VA			
Please Provide Results: ☐ Fax ☒ Email		Purchase Order: 130-8310	U.S. State Samples Taken: VA
Turnaround Time (TAT) Options* – Please Check			
☐ 3 Hours ☐ 6 Hours ☐ 24 Hrs ☐ 48 Hrs ☐ 3 Days ☐ 4 Days ☒ 5 Days ☐ 10 Days			
*For TEM Air 3 hours/6 hours, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.			
PCM - Air ☐ NIOSH 7400 ☐ w/ OSHA 8hr. TWA PLM - Bulk (reporting limit) ☒ PLM EPA 600/R-93/116 (<1%) ☐ PLM EPA NOB (<1%) Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%) Point Count w/Gravimetric ☐ 400 (<0.25%) ☐ 1000 (<0.1%) ☐ NYS 198.1 (friable in NY) ☐ NYS 198.6 NOB (non-friable-NY) ☐ NIOSH 9002 (<1%)		TEM - Air ☐ AHERA 40 CFR, Part 763 ☐ NIOSH 7402 ☐ EPA Level II ☐ ISO 10312 TEM - Bulk ☐ TEM EPA NOB ☐ NYS NOB 198.4 (non-friable-NY) ☐ Chatfield SOP ☐ TEM Mass Analysis-EPA 600 sec. 2.5 TEM - Water: EPA 100.2 Fibers >10µm ☐ Waste ☐ Drinking All Fiber Sizes ☐ Waste ☐ Drinking	
		TEM- Dust ☐ Microvac - ASTM D 5755 ☐ Wipe - ASTM D6480 ☐ Carpet Sonication (EPA 600/J-93/167) Soil/Rock/Vermiculite ☐ PLM CARB 435 - A (0.25% sensitivity) ☐ PLM CARB 435 - B (0.1% sensitivity) ☐ TEM CARB 435 - B (0.1% sensitivity) ☐ TEM CARB 435 - C (0.01% sensitivity) ☐ EPA Protocol (Semi-Quantitative) ☐ EPA Protocol (Quantitative) Other: ☐	
☐ Check For Positive Stop – Clearly Identify Homogenous Group			
Samplers Name: Nelson Adcock		Samplers Signature:	
Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
	See Attached	BULK	7/28/25
Client Sample # (s):	#1 - #190	Total # of Samples:	6
Relinquished (Client):	Nelson Adcock	Date:	7/28/2025
Received (Lab):		Date:	7/29/25
Comments/Special Instructions:		Time:	3:30 pm
		Time:	955

FX 8831 1128 3386
112

412507903

B214 Patton Hall, Ft. Myers, VA

GER 130-8310

Table 1 - Asbestos Bulk Sample Results

NO.	HA	SAMPLE LOCATION	SAMPLE MATERIAL	% & TYPE OF ASBESTOS
1	1	034 HVAC Duct	Black vibration cloth	
2	2	034 Fiberglass (FG) Thermal System Insulation (TSI)	White sealant	
3	3	032 Ceiling SACT	2'x2' Gwb. SACT	
4	2	032 FG TSI	White end cap sealant	
5	4	032 CMU Wall	CMU block sealant	
6	5	032 Based of Wall	Black 4-inch covebase & yellow mastic	
7	6	Exterior Concrete at Base of Wall	Black mastic	
8	7	Exterior Wall Louver	White frame sealant	
9	8	134 Above SACT	Plaster ceiling	
10	9	134 Plaster Ceiling Above SACT	Brown puck	
11	10	134 Above SACT	1'x1' SACT, glued	
12	11	134 SACT	2'x2' SACT 4-squares	
13	2	060 Fiberglass (FG) Pipe Insulation	White end cap sealant	
14	12	060 FG Thermal System Insulation	Mudded pipe fitting	
15	13	055 Beneath carpet	Grey floor leveling compound and yellow carpet mastic	
16	14	055 Beneath Carpet and Floor Leveling Compound	Black material beneath floor leveling compound	
17	14	055 Beneath Carpet and Floor Leveling Compound	Black material beneath floor leveling compound	
18	13	055 Beneath carpet	Grey floor leveling compound and yellow carpet mastic	
19	10	S070 Ceiling	1'x1' SACT, glued	
20	15	056 Ceiling	Gypsum wall board (GWB) joint compound	
21	16	056 Ceiling	GWB	
22	17	035A Floor	9-inch floor tile and mastic, bottom layer	
23	18	035A Floor	9-inch floor tile and mastic, top layer	
24	16	054 Ceiling	GWB	
25	19	042 Ceiling	Plater lathe	
26	20	S06 Stair Tread	Black rubber tread and mastic	

P2/3

HHA

B214 Patton Hall, Ft. Myers, VA

GER 130-8310

Table 1 - Asbestos Bulk Sample Results

NO.	HA	SAMPLE LOCATION	SAMPLE MATERIAL	% & TYPE OF ASBESTOS
27	20	S06 Stair Tread	Red rubber tread and mastic	
28	1	012 HVAC Duct	Black vibration cloth	
29	21	012 Steel Column Covering	Plaster	
30	2	012 FG TSI	White end cap sealant	
31	22	025 HVAC Duct, Metal	Brown sealant	
32	22	025 HVAC Duct, Metal	Brown sealant	
33	19	025 Ceiling	Plater lathe	
34	4	011 CMU Wall	CMU block sealant	
35	5	011 Base of Wall	Black 4-inch covebase & yellow mastic	
36	23	011 Insulated HVAC Duct	Yellow tape and sealant	
37	19	013 Ceiling	Plater lathe	
38	21	013 Steel Column Covering	Plaster	
39	23	038 Ceiling SACT	2'x4' SACT, worm	
40	23	038 Insulated HVAC Duct Above 2'x4' SACT	Yellow tape and sealant	
41	24	038 Based of Wall	Grey 4-inch covebase & tan mastic	
42	25	038 Base of Wall	Black mastic	
43	25	047 Base of Wall Behind Ceramic Base	Black mastic	
44	26	058 Floor	12-inch tan floor tile with black and yellow mastic	
45	19	023 Ceiling	Plater lathe	
46	27	006 Floor	12-inch grey floor tile with yellow mastic	
47	27	006 Floor	12-inch grey floor tile and black mastic	
48	28	006 Floor	12-inch pink floor tile with yellow mastic	
49	28	006 Floor	12-inch pink floor tile with black mastic	
50	29	006 Ceiling	Transite panel	
51	29	006 Ceiling	Transite panel	
52	30	004 HVAC Duct, metal	Grey sealant	

412507903

B214 Patton Hall, Ft. Myers, VA

GER 130-8310

Table 1 - Asbestos Bulk Sample Results

NO.	HA	SAMPLE LOCATION	SAMPLE MATERIAL	% & TYPE OF ASBESTOS
53	30	004 HVAC Duct, metal	Grey sealant	
54	31	002 Exterior Window	Glazing putty	
55	31	001 Exterior Window	Glazing putty	
56	23	148 Insulated HVAC Duct	Yellow tape and sealant	
57	2	148 FG TSI	White end cap sealant	
58	19	148 Ceiling	Plaster lathe	
59	32	116 Ceiling, Textured	Plaster lathe	
60	32	116 Ceiling, Textured	Plaster lathe	
61	33	116 Wall Behind Wainscotting	Brown mastic puck	
62	33	116 Wall Behind Wainscotting	Brown mastic puck	
63	34	116 Floor Beneath Carpet On Wood Sub Floor	Yellow carpet mastic	
64	33	116 Wall Behind Wainscotting	Brown mastic puck	
65	16	117 Wall	GWB	
66	15	117 Wall	GWB joint compound	
67	34	143 Floor Beneath Carpet On Wood Sub Floor	Yellow carpet mastic	
68	35	143 Floor	12-inch tan speckle floor tile and mastic	
69	35	143 Floor	12-inch tan speckle floor tile and mastic	
70	36	135 Floor Beneath Carpet on Wood Sub Floor	Yellow and black carpet mastic	
71	37	135 Floor Beneath Carpet	Yellow carpet mastic and grey floor leveler	
72	38	Flat Roof	Capsheet	
73	39	Edge of Flat Roof	Capsheet flashing	
74	40	HVAC Metal Foundation Post	Black mastic	
75	40	HVAC Metal Foundation Post	Black mastic	
76	39	Edge of Flat Roof	Capsheet flashing	
77	38	Flat Roof	Capsheet	
78	41	Flat Roof HVAC Vent	Capsheet flashing with silver paint	

P3/5

HIA

B214 Patton Hall, Ft. Myers, VA

GER 130-8310

Table 1 - Asbestos Bulk Sample Results

NO.	HA	SAMPLE LOCATION	SAMPLE MATERIAL	% & TYPE OF ASBESTOS
79	41	Flat Roof HVAC Vent	Capsheet flashing with silver paint	
80	42	Metal Base of HVAC Equipment	Black mastic	
81	42	Metal Base of HVAC Equipment	Black mastic	
82	43	Wall at Roof Level Base Flashing	White sealant	
83	43	Wall at Roof Level Base Flashing	White sealant	
84	44	Access Door at Roof	White DF sealant	
85	44	Access Door at Roof	White DF sealant	
86	45	Slate Roof on Shingles	Black sealant	
87	46	Slate Roof on Shingles	Grey sealant	
88	46	Slate Roof on Shingles	Grey sealant	
89	45	Slate Roof on Shingles	Black sealant	
90	47	Roof Top HVAC Equipment	Black duct vibration cloth	
91	47	Roof Top HVAC Equipment	Black duct vibration cloth	
92	48	Mech Room Roof, Metal HVAC Duct Sealant	Green sealant	
93	48	Mech Room Roof, Metal HVAC Duct Sealant	Green sealant	
94	49	Mech Room Roof, FG TSI	White end cap sealant	
95	49	Mech Room Roof, FG TSI	White end cap sealant	
96	50	149 Behind Vanity in Wall Cavity on Wood Studs	Black material	
97	50	149 Behind Vanity in Wall Cavity on Wood Studs	Black material	
98	51	153 Ceiling SACT	2'x2' SACT Decorative	
99	51	153 Ceiling SACT	2'x2' SACT Decorative	
100	52	151 Beneath Carpet Squares on Wood Floor	Black mastic	
101	52	151 Beneath Carpet Squares on Wood Floor	Black mastic	
102	53	151 Column Covering	GWB	
103	54	151 Column Covering	GWB joint compound	
104	16	151 Ceiling	GWB	

412507903

B214 Patton Hall, Ft. Myers, VA

GER 130-8310

Table 1 - Asbestos Bulk Sample Results

NO.	HA	SAMPLE LOCATION	SAMPLE MATERIAL	% & TYPE OF ASBESTOS
105	16	Janitor Room Wall	GWB	
106	15	Janitor Room Wall	GWB joint compound	
107	55	Janitor Floor	12-inch tan floor tile with yellow mastic	
108	55	Janitor Floor	12-inch tan floor tile with yellow mastic	
109	16	020 Ceiling	GWB	
110	15	020 Ceiling	GWB joint compound	
111	56	018 Ceiling	Ceiling finish on foam insulation	
112	56	018 Ceiling	Ceiling finish on foam insulation	
113	52	136 Floor Beneath Carpet	Black mastic	
114	57	130 Double Wood Doors	Interior insulation, white	
115	57	130 Double Wood Doors	Interior insulation, white	
116	58	130 Ceiling SACT	2'x2' SACT Decorative	
117	58	130 Ceiling SACT	2'x2' SACT Decorative	
118	59	130 Ceiling SACT	2'x2' SACT Textured	
119	60	130 Ceiling SACT	2'x2' SACT Smooth	
120	60	130 Ceiling SACT	2'x2' SACT Smooth	
121	59	130 Ceiling SACT	2'x2' SACT Textured	
122	61	130 Ceiling SACT	2'x2' SACT Worm	
123	61	130 Ceiling SACT	2'x2' SACT Worm	
124	62	130 Ceiling SACT	2'x2' SACT Pinhole	
125	62	130 Ceiling SACT	2'x2' SACT Pinhole	
126	63	130 Wall	Plaster lathe	
127	64	130 Interior Window	White WF sealant	
128	64	130 Interior Window	White WF sealant	
129	65	130 Exterior Window	Black WF Sealant	
130	65	130 Exterior Window	Black WF Sealant	

B214 Patton Hall, Ft. Myers, VA

GER 130-8310

Table 1 - Asbestos Bulk Sample Results

NO.	HA	SAMPLE LOCATION	SAMPLE MATERIAL	% & TYPE OF ASBESTOS
131	66	129 FG Insulated HVAC Duct	Tan mastic	
132	67	129 CMU Wall Above SACT	Black mastic on CMU	
133	67	129 CMU Wall Above SACT	Black mastic on CMU	
134	68	123 Ceiling	Plaster lathe	
135	68	124 Ceiling	Plaster lathe	
136	4	126 CMU Wall	CMU block sealant	
137	50	148 Plaster Wall	Black material	
138	36	210 Floor Beneath Carpet Over Concrete	Yellow and black carpet mastic	
139	15	201 Ceiling	GWB joint compound	
140	16	201 Ceiling	GWB	
141	64	210 Interior Window	White WF sealant	
142	69	237 Floor	9-inch brown floor tile with black mastic	
143	70	237 Floor	9-inch grey streaks floor tile with black mastic	
144	71	236 Floor Over Wood Sub Floor	12-inch blue floor tile with yellow mastic	
145	71	236 Floor Over Wood Sub Floor	12-inch blue floor tile with yellow mastic	
146	72	226 Floor	Yellow carpet mastic	
147	72	228 Floor	Yellow carpet mastic	
148	73	225 Door Jamb	Plaster lathe	
149	73	225 Door Jamb	Plaster lathe	
150	74	207 Ceiling	Plaster lathe	
151	74	207 Ceiling	Plaster lathe	
152	3	032 Ceiling SACT	2'x2' Gwb. SACT	
153	6	Exterior Concrete at Base of Wall	Black mastic	
154	7	Exterior Wall Louver	White frame sealant	
155	8	134 Above SACT	Plaster ceiling	
156	9	134 Plaster Ceiling Above SACT	Brown puck	

412507903

B214 Patton Hall, Ft. Myers, VA

GER 130-8310

Table 1 - Asbestos Bulk Sample Results

NO.	HA	SAMPLE LOCATION	SAMPLE MATERIAL	% & TYPE OF ASBESTOS
157	10	134 Above SACT	1'x1' SACT, glued	
158	11	134 SACT	2'x2' SACT 4-squares	
159	12	060 FG Thermal System Insulation	Mudded pipe fitting	
160	15	056 Ceiling	Gypsum wall board (GWB) joint compound	
161	17	035A Floor	9-inch floor tile and mastic, bottom layer, white	
162	18	035A Floor	9-inch floor tile and mastic, top layer, green	
163	17A	035A Floor	9-inch floor tile and mastic, top layer, wwhite	
164	17A	035A Floor	9-inch floor tile and mastic, top layer, wwhite	
165	24	038 Based of Wall	Grey 4-inch covebase & tan mastic	
166	75	228 Ceiling Coating	Grey fireproofing	
167	75	228 Ceiling Coating	Grey fireproofing	
168	75	228 Ceiling Coating	Grey fireproofing	
169	16	217 Wall Above SACT	GWB	
170	63	217 Wall Above SACT	Plaster lathe	
171	76	224 Metal HVAC Duct	Brown sealant	
172	76	224 Metal HVAC Duct	Brown sealant	
173	77	223 Storage Room, Former Exterior Wall	White window frame sealant	
174	77	223 Storage Room, Former Exterior Wall	White window frame sealant	
175	78	Exterior Lower Roof	Pitch Pocket	
176	78	Exterior Lower Roof	Pitch Pocket	
177	43	Exterior Lower Roof at Base Flashing	White sealant	
178	79	Exterior 2nd Floor Window Frame	White WF sealant	
179	79	Exterior 2nd Floor Window Frame	White WF sealant	
180	80	Through Wall Base Flashing on Brick Wall Above Exterior Lower Roof	Red sealant	
181	80	Through Wall Base Flashing on Brick Wall Above Exterior Lower Roof	Red sealant	
182	38	Exterior Lower Roof	Capsheet	

PS/5

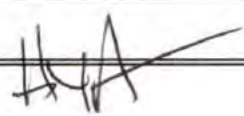
HIA

B214 Patton Hall, Ft. Myers, VA

GER 130-8310

Table 1 - Asbestos Bulk Sample Results

NO.	HA	SAMPLE LOCATION	SAMPLE MATERIAL	% & TYPE OF ASBESTOS
183	81	Exterior Roof	Built-up roof	
184	81	Exterior Roof	Built-up roof	
185	82	Exterior Roof Gravel Stop	Built-up roof	
186	82	Exterior Roof Gravel Stop	Built-up roof	
187	83	134 Ceiling at Entry Doors	Plaster ceiling	
188	83	134 Ceiling at Entry Doors	Plaster ceiling	
189	84	134 Entry Doors	White exterior DF sealant	
190	84	134 Entry Doors	White exterior DF sealant	





EMSL Analytical, Inc.

10801 Southern Loop Blvd Pineville, NC 28134

Phone/Fax: (704) 525-2205 / (704) 525-2382

<http://www.EMSL.com> / charlottelab@emsl.com

EMSL Order: 412507903

Customer ID: GEOE25

Customer PO:

Project ID:

Attention: Nelson Adcock
GeoEnvironmental Resources
2712 Southern Blvd.
Suite 101
Virginia Beach, VA 23452

Project: 130-8310 Patton Hall B214 Ft. Meyers, Arlington, VA

Phone: (757) 463-3200

Fax: (757) 463-3080

Received: 07/29/2025 9:55 AM

Analysis Date: 08/19/2025

Collected:

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy. Quantitation using 400 Point Count Procedure

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
111 412507903-0111	018 Ceiling - Ceiling Finish on Foam Insulation	White Non-Fibrous Homogeneous	<1% Glass 2% Fibrous_Other	20% Quartz 78.0% Non-fibrous (Other)	None Detected
187-Gray Coat 412507903-0187A	134 Ceiling at Entry Doors - Plaster Ceiling	Gray Non-Fibrous Homogeneous		40% Quartz 60.0% Non-fibrous (Other)	<0.25% Chrysotile
188-Gray Coat 412507903-0188A	134 Ceiling at Entry Doors - Plaster Ceiling	Gray Non-Fibrous Homogeneous		40% Quartz 60.0% Non-fibrous (Other)	None Detected

Analyst(s)

Jessica Glover (3)

Lee Plumley, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Pineville, NC NVLAP Lab Code 200841-0

Initial report from: 08/19/2025 17:50:03

**EMSL Analytical, Inc.**

10801 Southern Loop Blvd, Pineville, NC 28134

Phone/Fax: (704) 525-2205 / (704) 525-2382

<http://www.EMSL.com>charlottelab@emsl.com

EMSL Order: 412507903

CustomerID: GEOE25

CustomerPO:

ProjectID:

Attn: **Nelson Adcock**
GeoEnvironmental Resources
2712 Southern Blvd.
Suite 101
Virginia Beach, VA 23452

Phone: (757) 463-3200
Fax: (757) 463-3080
Received: 7/29/2025 09:55 AM
Analysis Date: 8/19/2025
Collected:

Project: **130-8310 Patton Hall B214 Ft. Meyers, Arlington, VA**

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763
Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light
Microscopy with Gravimetric Reduction. Quantitation using 400 Point Count
Procedure.

SAMPLE ID	DESCRIPTION	APPEARANCE	Matrix		NON- ASBESTOS % Fibrous	NON- ASBESTOS % NON-FIBROUS	ASBESTOS % TYPES
			(%) Organic	(%) Acid			
10 412507903-0010	134 Plaster Ceiling Above SACT - Brown Puck	Brown Fibrous Homogeneous	50.4	5.6		43.4 Non-fibrous (other)	0.6 Chrysotile
22-Top Black Mastic 412507903-0022	035A Floor - 9- Inch Floor Tile & Mastic, Bottom Layer	Black Fibrous Homogeneous	53.6	24.0		22.2 Non-fibrous (other)	0.3 Chrysotile
22-Floor Tile 412507903-0022A	035A Floor - 9- Inch Floor Tile & Mastic, Bottom Layer	Gray/White Fibrous Homogeneous	22.9	29.6		45.7 Non-fibrous (other)	1.8 Chrysotile
54 412507903-0054	002 Exterior Window - Glazing Putty	Gray/White Fibrous Homogeneous	19.7	53.3		27.0 Non-fibrous (other)	None Detected
163-Mastic 412507903-0163A	035A Floor - 9- Inch Floor Tile & Mastic, Bottom Layer, White	Black Fibrous Homogeneous	41.8	29.5		28.7 Non-fibrous (other)	<0.25 Chrysotile

Analyst(s)

David Zalewski (2)

Jessica Glover (3)

Lee Plumley, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Pineville, NC NVLAP Lab Code 200841-0

Initial report from 08/19/2025 17:50:03



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Project: 130-8310 Patton Hall B214 Ft. Meyers, Arlington, VA

Phone: (757) 463-3200

Fax: (757) 463-3080

Received: 07/29/2025 9:55 AM

Analysis Date: 08/19/2025 - 08/20/2025

Collected:

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy. Quantitation using 400 Point Count Procedure

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
103 412507903-0103	151 Column Covering - GWB Joint Compound	Tan Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	<0.25% Chrysotile
111 412507903-0111	018 Ceiling - Ceiling Finish on Foam Insulation	White Non-Fibrous Homogeneous	<1% Glass 2% Fibrous_Other	20% Quartz 78.0% Non-fibrous (Other)	None Detected
187-Gray Coat 412507903-0187A	134 Ceiling at Entry Doors - Plaster Ceiling	Gray Non-Fibrous Homogeneous		40% Quartz 60.0% Non-fibrous (Other)	<0.25% Chrysotile
188-Gray Coat 412507903-0188A	134 Ceiling at Entry Doors - Plaster Ceiling	Gray Non-Fibrous Homogeneous		40% Quartz 60.0% Non-fibrous (Other)	None Detected

Analyst(s)

Jessica Glover (3)

Kelsie Dwyer (1)

Lee Plumley, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Pineville, NC NVLAP Lab Code 200841-0

Report amended: 08/20/2025 18:42:56 Replaces initial report from: 08/19/2025 17:50:06 Reason Code: Client-Additional Analysis



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Phone: (757) 463-3200

Fax: (757) 463-3080

Received: 07/29/2025 9:55 AM

Analysis Date: 08/19/2025 - 08/27/2025

Collected:

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy. Quantitation using 400 Point Count Procedure

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
103 412507903-0103	151 Column Covering - GWB Joint Compound	Tan Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	<0.25% Chrysotile
111 412507903-0111	018 Ceiling - Ceiling Finish on Foam Insulation	White Non-Fibrous Homogeneous	<1% Glass 2% Fibrous_Other	20% Quartz 78.0% Non-fibrous (Other)	None Detected
187-White Coat 412507903-0187	134 Ceiling at Entry Doors - Plaster Ceiling	White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	<0.25% Chrysotile
187-Gray Coat 412507903-0187A	134 Ceiling at Entry Doors - Plaster Ceiling	Gray Non-Fibrous Homogeneous		40% Quartz 60.0% Non-fibrous (Other)	<0.25% Chrysotile
188-White Coat 412507903-0188	134 Ceiling at Entry Doors - Plaster Ceiling	White Non-Fibrous Homogeneous		100.0% Non-fibrous (Other)	<0.25% Chrysotile
188-Gray Coat 412507903-0188A	134 Ceiling at Entry Doors - Plaster Ceiling	Gray Non-Fibrous Homogeneous		40% Quartz 60.0% Non-fibrous (Other)	None Detected

additional samples added

Analyst(s)

Jessica Glover (3)

Kelsie Dwyer (3)

Lee Plumley, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Pineville, NC NVLAP Lab Code 200841-0

Report amended: 08/27/2025 16:22:12 Replaces amended report from: 08/20/2025 18:42:56 Reason Code: Client-Additional Analysis

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Received: 7/29/2025 09:55 AM
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Collected:

Project: 130-8310 Patton Hall B214 Ft. Meyers, Arlington, VA

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763
Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light
Microscopy with Gravimetric Reduction. Quantitation using 400 Point Count
Procedure.

SAMPLE ID	DESCRIPTION	APPEARANCE	(% Matrix Organic Acid		NON- ASBESTOS % Fibrous	NON- ASBESTOS % NON-FIBROUS	ASBESTOS % TYPES
2 412507903-0002	034 Fiberglass (FG) Thermal Sysytem Insulaton (TSI) - White Sealant						Insufficient Material
Insufficient Material							
10 412507903-0010	134 Plaster Ceiling Above SACT - Brown Puck	Brown Fibrous Homogeneous	50.4	5.6		43.4 Non-fibrous (other)	0.6 Chrysotile
22-Top Black Mastic 412507903-0022	035A Floor - 9-Inch Floor Tile & Mastic, Bottom Layer	Black Fibrous Homogeneous	53.6	24.0		22.2 Non-fibrous (other)	0.3 Chrysotile
22-Floor Tile 412507903-0022A	035A Floor - 9-Inch Floor Tile & Mastic, Bottom Layer	Gray/White Fibrous Homogeneous	22.9	29.6		45.7 Non-fibrous (other)	1.8 Chrysotile
23-Floor Tile 412507903-0023	035A Floor - 9-Inch Floor Tile & Mastic, Top Layer	White Fibrous Homogeneous	28.8	4.3		65.7 Non-fibrous (other)	1.2 Chrysotile

Analyst(s)

David Zalewski (2)

Maggie Pasour (6)

Jessica Glover (10)

Lee Plumley, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Pineville, NC NVLAP Lab Code 200841-0

Report Amended: 08/27/2025 16:22:12 Replaces the Inital Report 08/19/2025 17:50:06. Reason Code: Client-Additional Analysis

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Project: **130-8310 Patton Hall B214 Ft. Meyers, Arlington, VA**

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763
Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light
Microscopy with Gravimetric Reduction. Quantitation using 400 Point Count
Procedure.

SAMPLE ID	DESCRIPTION	APPEARANCE	(% Matrix Organic Acid)		NON- ASBESTOS % Fibrous	NON- ASBESTOS % NON-FIBROUS	ASBESTOS % TYPES
40-Sealant 412507903-0040	038 Insulated HVAC Duct Above 2'x4' SACT - Yellow Tape & Sealant	White/Beige Fibrous Homogeneous	39.6	29.8		29.6 Non-fibrous (other)	0.9 Chrysotile
54 412507903-0054	002 Exterior Window - Glazing Putty	Gray/White Fibrous Homogeneous	19.7	53.3		27.0 Non-fibrous (other)	None Detected
63 412507903-0063	116 Floor Beneath Carpet on Wood Sub Floor - Yellow Carpet Mastic	Brown/Tan Fibrous Homogeneous	62.1	9.0		28.9 Non-fibrous (other)	<0.25 Chrysotile
84 412507903-0084	Access Door at Roof - White DF Sealant	Gray/Tan Fibrous Homogeneous	38.9	34.5		25.3 Non-fibrous (other)	1.3 Chrysotile
85 412507903-0085	Access Door at Roof - White DF Sealant	Gray/Tan Fibrous Homogeneous	23.7	22.4		53.1 Non-fibrous (other)	0.8 Chrysotile
142-Floor Tile 412507903-0142	237 Floor - 9-Inch Brown Floor Tile w/Black Mastic	Tan Fibrous Homogeneous	27.6	20.6		49.9 Non-fibrous (other)	1.9 Chrysotile

Analyst(s)

David Zalewski (2)

Maggie Pasour (6)

Jessica Glover (10)

Lee Plumley, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Pineville, NC NVLAP Lab Code 200841-0

Report Amended: 08/27/2025 16:22:12 Replaces the Initial Report 08/19/2025 17:50:06. Reason Code: Client-Additional Analysis

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Microscopy with Gravimetric Reduction. Quantitation using 400 Point Count
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SAMPLE ID	DESCRIPTION	APPEARANCE	(% Matrix Organic Acid		NON- ASBESTOS % Fibrous	NON- ASBESTOS % NON-FIBROUS	ASBESTOS % TYPES
143-Floor Tile 412507903-0143	237 Floor - 9- Inch Grey Streaks Floor Tile w/Yellow Mastic	White Fibrous Homogeneous	27.4	10.6		60.4 Non-fibrous (other)	1.6 Chrysotile
161-Floor Tile 412507903-0161	035A Floor - 9- Inch Floor Tile & Mastic, Bottom Layer, White	Gray Fibrous Homogeneous	21.8	20.3		56.5 Non-fibrous (other)	1.4 Chrysotile
162-Floor Tile 412507903-0162	035A Floor - 9- Inch Floor Tile & Mastic, Bottom Layer, Green	Green Fibrous Homogeneous	27.6	14.0		56.6 Non-fibrous (other)	1.8 Chrysotile
163-Mastic 412507903-0163A	035A Floor - 9- Inch Floor Tile & Mastic, Bottom Layer, White	Black Fibrous Homogeneous	41.8	29.5		28.7 Non-fibrous (other)	<0.25 Chrysotile
164-Floor Tile 412507903-0164	035A Floor - 9- Inch Floor Tile & Mastic, Bottom Layer, White	White/Green Fibrous Homogeneous	54.4	8.1		35.4 Non-fibrous (other)	2.1 Chrysotile
173 412507903-0173	223 Storage Room, Former Exterior Wall - White Window Frame Sealant	Tan Fibrous Homogeneous	49.7	5.3		43.6 Non-fibrous (other)	1.3 Chrysotile

Analyst(s)

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Maggie Pasour (6)

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Lee Plumley, Laboratory Manager
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SAMPLE ID	DESCRIPTION	APPEARANCE	(% Matrix Organic Acid		NON- ASBESTOS % Fibrous	NON- ASBESTOS % NON-FIBROUS	ASBESTOS % TYPES
174 412507903-0174	223 Storage Room, Former Exterior Wall - White Window Frame Sealant	Gray/Tan Fibrous Homogeneous	39.7	38.2		20.7 Non-fibrous (other)	1.4 Chrysotile
190 412507903-0190	134 Entry Doors - White Exterior DF Sealant	Gray/Tan Fibrous Homogeneous	27.8	36.3		35.0 Non-fibrous (other)	0.9 Chrysotile

additional samples added

Analyst(s)

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EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

412507903

PINEVILLE

10801 SOUTHERN LOOP BLVD

PINEVILLE, NC 28134

PHONE (704) 525-2205

FAX (704) 525-2382

Company : GeoEnvironmental Resources, Inc.		EMSL-Bill to: ☒ Same ☐ Different If Bill to is Different note instructions in Comments**	
Street: 2712 Southern Boulevard, Suite 101		Third Party Billing requires written authorization from third party	
City: Virginia Beach	State/Province: VA	Zip/Postal Code: 23452	Country:
Report To (Name): Nelson Adcock		Fax #: 757-463-3080	
Telephone #: 757-463-3200		Email Address: hnadcock@geronline.com	
Project Name/Number: 130-8310 Patton Hall B214 Ft. Myers, Arlington, VA			
Please Provide Results: ☐ Fax ☒ Email		Purchase Order: 130-8310	U.S. State Samples Taken: VA
Turnaround Time (TAT) Options* – Please Check			
☐ 3 Hours ☐ 6 Hours ☐ 24 Hrs ☐ 48 Hrs ☐ 3 Days ☐ 4 Days ☒ 5 Days ☐ 10 Days			
*For TEM Air 3 hours/6 hours, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.			
PCM - Air ☐ NIOSH 7400 ☐ w/ OSHA 8hr. TWA PLM - Bulk (reporting limit) ☒ PLM EPA 600/R-93/116 (<1%) ☐ PLM EPA NOB (<1%) Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%) Point Count w/Gravimetric ☐ 400 (<0.25%) ☐ 1000 (<0.1%) ☐ NYS 198.1 (friable in NY) ☐ NYS 198.6 NOB (non-friable-NY) ☐ NIOSH 9002 (<1%)		TEM - Air ☐ AHERA 40 CFR, Part 763 ☐ NIOSH 7402 ☐ EPA Level II ☐ ISO 10312 TEM - Bulk ☐ TEM EPA NOB ☐ NYS NOB 198.4 (non-friable-NY) ☐ Chatfield SOP ☐ TEM Mass Analysis-EPA 600 sec. 2.5 TEM - Water: EPA 100.2 Fibers >10µm ☐ Waste ☐ Drinking All Fiber Sizes ☐ Waste ☐ Drinking	
		TEM- Dust ☐ Microvac - ASTM D 5755 ☐ Wipe - ASTM D6480 ☐ Carpet Sonication (EPA 600/J-93/167) Soil/Rock/Vermiculite ☐ PLM CARB 435 - A (0.25% sensitivity) ☐ PLM CARB 435 - B (0.1% sensitivity) ☐ TEM CARB 435 - B (0.1% sensitivity) ☐ TEM CARB 435 - C (0.01% sensitivity) ☐ EPA Protocol (Semi-Quantitative) ☐ EPA Protocol (Quantitative) Other: ☐	
☐ Check For Positive Stop – Clearly Identify Homogenous Group			
Samplers Name: Nelson Adcock		Samplers Signature:	
Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
	See Attached	BULK	7/28/25
Client Sample # (s):	#1 - #190	Total # of Samples:	6
Relinquished (Client):	Nelson Adcock	Date:	7/28/2025
Received (Lab):		Date:	7/29/25
Comments/Special Instructions:		Time:	3:30 pm
		Time:	955

FX 8831 1128 3386
112

412507903

B214 Patton Hall, Ft. Myers, VA

GER 130-8310

Table 1 - Asbestos Bulk Sample Results

NO.	HA	SAMPLE LOCATION	SAMPLE MATERIAL	% & TYPE OF ASBESTOS
1	1	034 HVAC Duct	Black vibration cloth	
2	2	034 Fiberglass (FG) Thermal System Insulation (TSI)	White sealant	
3	3	032 Ceiling SACT	2'x2' Gwb. SACT	
4	2	032 FG TSI	White end cap sealant	
5	4	032 CMU Wall	CMU block sealant	
6	5	032 Based of Wall	Black 4-inch covebase & yellow mastic	
7	6	Exterior Concrete at Base of Wall	Black mastic	
8	7	Exterior Wall Louver	White frame sealant	
9	8	134 Above SACT	Plaster ceiling	
10	9	134 Plaster Ceiling Above SACT	Brown puck	
11	10	134 Above SACT	1'x1' SACT, glued	
12	11	134 SACT	2'x2' SACT 4-squares	
13	2	060 Fiberglass (FG) Pipe Insulation	White end cap sealant	
14	12	060 FG Thermal System Insulation	Mudded pipe fitting	
15	13	055 Beneath carpet	Grey floor leveling compound and yellow carpet mastic	
16	14	055 Beneath Carpet and Floor Leveling Compound	Black material beneath floor leveling compound	
17	14	055 Beneath Carpet and Floor Leveling Compound	Black material beneath floor leveling compound	
18	13	055 Beneath carpet	Grey floor leveling compound and yellow carpet mastic	
19	10	S070 Ceiling	1'x1' SACT, glued	
20	15	056 Ceiling	Gypsum wall board (GWB) joint compound	
21	16	056 Ceiling	GWB	
22	17	035A Floor	9-inch floor tile and mastic, bottom layer	
23	18	035A Floor	9-inch floor tile and mastic, top layer	
24	16	054 Ceiling	GWB	
25	19	042 Ceiling	Plater lathe	
26	20	S06 Stair Tread	Black rubber tread and mastic	

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HIA

B214 Patton Hall, Ft. Myers, VA

GER 130-8310

Table 1 - Asbestos Bulk Sample Results

NO.	HA	SAMPLE LOCATION	SAMPLE MATERIAL	% & TYPE OF ASBESTOS
27	20	S06 Stair Tread	Red rubber tread and mastic	
28	1	012 HVAC Duct	Black vibration cloth	
29	21	012 Steel Column Covering	Plaster	
30	2	012 FG TSI	White end cap sealant	
31	22	025 HVAC Duct, Metal	Brown sealant	
32	22	025 HVAC Duct, Metal	Brown sealant	
33	19	025 Ceiling	Plater lathe	
34	4	011 CMU Wall	CMU block sealant	
35	5	011 Base of Wall	Black 4-inch covebase & yellow mastic	
36	23	011 Insulated HVAC Duct	Yellow tape and sealant	
37	19	013 Ceiling	Plater lathe	
38	21	013 Steel Column Covering	Plaster	
39	23	038 Ceiling SACT	2'x4' SACT, worm	
40	23	038 Insulated HVAC Duct Above 2'x4' SACT	Yellow tape and sealant	
41	24	038 Based of Wall	Grey 4-inch covebase & tan mastic	
42	25	038 Base of Wall	Black mastic	
43	25	047 Base of Wall Behind Ceramic Base	Black mastic	
44	26	058 Floor	12-inch tan floor tile with black and yellow mastic	
45	19	023 Ceiling	Plater lathe	
46	27	006 Floor	12-inch grey floor tile with yellow mastic	
47	27	006 Floor	12-inch grey floor tile and black mastic	
48	28	006 Floor	12-inch pink floor tile with yellow mastic	
49	28	006 Floor	12-inch pink floor tile with black mastic	
50	29	006 Ceiling	Transite panel	
51	29	006 Ceiling	Transite panel	
52	30	004 HVAC Duct, metal	Grey sealant	

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B214 Patton Hall, Ft. Myers, VA

GER 130-8310

Table 1 - Asbestos Bulk Sample Results

NO.	HA	SAMPLE LOCATION	SAMPLE MATERIAL	% & TYPE OF ASBESTOS
53	30	004 HVAC Duct, metal	Grey sealant	
54	31	002 Exterior Window	Glazing putty	
55	31	001 Exterior Window	Glazing putty	
56	23	148 Insulated HVAC Duct	Yellow tape and sealant	
57	2	148 FG TSI	White end cap sealant	
58	19	148 Ceiling	Plaster lathe	
59	32	116 Ceiling, Textured	Plaster lathe	
60	32	116 Ceiling, Textured	Plaster lathe	
61	33	116 Wall Behind Wainscotting	Brown mastic puck	
62	33	116 Wall Behind Wainscotting	Brown mastic puck	
63	34	116 Floor Beneath Carpet On Wood Sub Floor	Yellow carpet mastic	
64	33	116 Wall Behind Wainscotting	Brown mastic puck	
65	16	117 Wall	GWB	
66	15	117 Wall	GWB joint compound	
67	34	143 Floor Beneath Carpet On Wood Sub Floor	Yellow carpet mastic	
68	35	143 Floor	12-inch tan speckle floor tile and mastic	
69	35	143 Floor	12-inch tan speckle floor tile and mastic	
70	36	135 Floor Beneath Carpet on Wood Sub Floor	Yellow and black carpet mastic	
71	37	135 Floor Beneath Carpet	Yellow carpet mastic and grey floor leveler	
72	38	Flat Roof	Capsheet	
73	39	Edge of Flat Roof	Capsheet flashing	
74	40	HVAC Metal Foundation Post	Black mastic	
75	40	HVAC Metal Foundation Post	Black mastic	
76	39	Edge of Flat Roof	Capsheet flashing	
77	38	Flat Roof	Capsheet	
78	41	Flat Roof HVAC Vent	Capsheet flashing with silver paint	

P3/5

HIA

B214 Patton Hall, Ft. Myers, VA

GER 130-8310

Table 1 - Asbestos Bulk Sample Results

NO.	HA	SAMPLE LOCATION	SAMPLE MATERIAL	% & TYPE OF ASBESTOS
79	41	Flat Roof HVAC Vent	Capsheet flashing with silver paint	
80	42	Metal Base of HVAC Equipment	Black mastic	
81	42	Metal Base of HVAC Equipment	Black mastic	
82	43	Wall at Roof Level Base Flashing	White sealant	
83	43	Wall at Roof Level Base Flashing	White sealant	
84	44	Access Door at Roof	White DF sealant	
85	44	Access Door at Roof	White DF sealant	
86	45	Slate Roof on Shingles	Black sealant	
87	46	Slate Roof on Shingles	Grey sealant	
88	46	Slate Roof on Shingles	Grey sealant	
89	45	Slate Roof on Shingles	Black sealant	
90	47	Roof Top HVAC Equipment	Black duct vibration cloth	
91	47	Roof Top HVAC Equipment	Black duct vibration cloth	
92	48	Mech Room Roof, Metal HVAC Duct Sealant	Green sealant	
93	48	Mech Room Roof, Metal HVAC Duct Sealant	Green sealant	
94	49	Mech Room Roof, FG TSI	White end cap sealant	
95	49	Mech Room Roof, FG TSI	White end cap sealant	
96	50	149 Behind Vanity in Wall Cavity on Wood Studs	Black material	
97	50	149 Behind Vanity in Wall Cavity on Wood Studs	Black material	
98	51	153 Ceiling SACT	2'x2' SACT Decorative	
99	51	153 Ceiling SACT	2'x2' SACT Decorative	
100	52	151 Beneath Carpet Squares on Wood Floor	Black mastic	
101	52	151 Beneath Carpet Squares on Wood Floor	Black mastic	
102	53	151 Column Covering	GWB	
103	54	151 Column Covering	GWB joint compound	
104	16	151 Ceiling	GWB	

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B214 Patton Hall, Ft. Myers, VA

GER 130-8310

Table 1 - Asbestos Bulk Sample Results

NO.	HA	SAMPLE LOCATION	SAMPLE MATERIAL	% & TYPE OF ASBESTOS
105	16	Janitor Room Wall	GWB	
106	15	Janitor Room Wall	GWB joint compound	
107	55	Janitor Floor	12-inch tan floor tile with yellow mastic	
108	55	Janitor Floor	12-inch tan floor tile with yellow mastic	
109	16	020 Ceiling	GWB	
110	15	020 Ceiling	GWB joint compound	
111	56	018 Ceiling	Ceiling finish on foam insulation	
112	56	018 Ceiling	Ceiling finish on foam insulation	
113	52	136 Floor Beneath Carpet	Black mastic	
114	57	130 Double Wood Doors	Interior insulation, white	
115	57	130 Double Wood Doors	Interior insulation, white	
116	58	130 Ceiling SACT	2'x2' SACT Decorative	
117	58	130 Ceiling SACT	2'x2' SACT Decorative	
118	59	130 Ceiling SACT	2'x2' SACT Textured	
119	60	130 Ceiling SACT	2'x2' SACT Smooth	
120	60	130 Ceiling SACT	2'x2' SACT Smooth	
121	59	130 Ceiling SACT	2'x2' SACT Textured	
122	61	130 Ceiling SACT	2'x2' SACT Worm	
123	61	130 Ceiling SACT	2'x2' SACT Worm	
124	62	130 Ceiling SACT	2'x2' SACT Pinhole	
125	62	130 Ceiling SACT	2'x2' SACT Pinhole	
126	63	130 Wall	Plaster lathe	
127	64	130 Interior Window	White WF sealant	
128	64	130 Interior Window	White WF sealant	
129	65	130 Exterior Window	Black WF Sealant	
130	65	130 Exterior Window	Black WF Sealant	

B214 Patton Hall, Ft. Myers, VA

GER 130-8310

Table 1 - Asbestos Bulk Sample Results

NO.	HA	SAMPLE LOCATION	SAMPLE MATERIAL	% & TYPE OF ASBESTOS
131	66	129 FG Insulated HVAC Duct	Tan mastic	
132	67	129 CMU Wall Above SACT	Black mastic on CMU	
133	67	129 CMU Wall Above SACT	Black mastic on CMU	
134	68	123 Ceiling	Plaster lathe	
135	68	124 Ceiling	Plaster lathe	
136	4	126 CMU Wall	CMU block sealant	
137	50	148 Plaster Wall	Black material	
138	36	210 Floor Beneath Carpet Over Concrete	Yellow and black carpet mastic	
139	15	201 Ceiling	GWB joint compound	
140	16	201 Ceiling	GWB	
141	64	210 Interior Window	White WF sealant	
142	69	237 Floor	9-inch brown floor tile with black mastic	
143	70	237 Floor	9-inch grey streaks floor tile with black mastic	
144	71	236 Floor Over Wood Sub Floor	12-inch blue floor tile with yellow mastic	
145	71	236 Floor Over Wood Sub Floor	12-inch blue floor tile with yellow mastic	
146	72	226 Floor	Yellow carpet mastic	
147	72	228 Floor	Yellow carpet mastic	
148	73	225 Door Jamb	Plaster lathe	
149	73	225 Door Jamb	Plaster lathe	
150	74	207 Ceiling	Plaster lathe	
151	74	207 Ceiling	Plaster lathe	
152	3	032 Ceiling SACT	2'x2' Gwb. SACT	
153	6	Exterior Concrete at Base of Wall	Black mastic	
154	7	Exterior Wall Louver	White frame sealant	
155	8	134 Above SACT	Plaster ceiling	
156	9	134 Plaster Ceiling Above SACT	Brown puck	

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B214 Patton Hall, Ft. Myers, VA

GER 130-8310

Table 1 - Asbestos Bulk Sample Results

NO.	HA	SAMPLE LOCATION	SAMPLE MATERIAL	% & TYPE OF ASBESTOS
157	10	134 Above SACT	1'x1' SACT, glued	
158	11	134 SACT	2'x2' SACT 4-squares	
159	12	060 FG Thermal System Insulation	Mudded pipe fitting	
160	15	056 Ceiling	Gypsum wall board (GWB) joint compound	
161	17	035A Floor	9-inch floor tile and mastic, bottom layer, white	
162	18	035A Floor	9-inch floor tile and mastic, top layer, green	
163	17A	035A Floor	9-inch floor tile and mastic, top layer, wwhite	
164	17A	035A Floor	9-inch floor tile and mastic, top layer, wwhite	
165	24	038 Based of Wall	Grey 4-inch covebase & tan mastic	
166	75	228 Ceiling Coating	Grey fireproofing	
167	75	228 Ceiling Coating	Grey fireproofing	
168	75	228 Ceiling Coating	Grey fireproofing	
169	16	217 Wall Above SACT	GWB	
170	63	217 Wall Above SACT	Plaster lathe	
171	76	224 Metal HVAC Duct	Brown sealant	
172	76	224 Metal HVAC Duct	Brown sealant	
173	77	223 Storage Room, Former Exterior Wall	White window frame sealant	
174	77	223 Storage Room, Former Exterior Wall	White window frame sealant	
175	78	Exterior Lower Roof	Pitch Pocket	
176	78	Exterior Lower Roof	Pitch Pocket	
177	43	Exterior Lower Roof at Base Flashing	White sealant	
178	79	Exterior 2nd Floor Window Frame	White WF sealant	
179	79	Exterior 2nd Floor Window Frame	White WF sealant	
180	80	Through Wall Base Flashing on Brick Wall Above Exterior Lower Roof	Red sealant	
181	80	Through Wall Base Flashing on Brick Wall Above Exterior Lower Roof	Red sealant	
182	38	Exterior Lower Roof	Capsheet	

PS/5

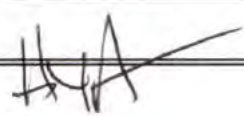
HIA

B214 Patton Hall, Ft. Myers, VA

GER 130-8310

Table 1 - Asbestos Bulk Sample Results

NO.	HA	SAMPLE LOCATION	SAMPLE MATERIAL	% & TYPE OF ASBESTOS
183	81	Exterior Roof	Built-up roof	
184	81	Exterior Roof	Built-up roof	
185	82	Exterior Roof Gravel Stop	Built-up roof	
186	82	Exterior Roof Gravel Stop	Built-up roof	
187	83	134 Ceiling at Entry Doors	Plaster ceiling	
188	83	134 Ceiling at Entry Doors	Plaster ceiling	
189	84	134 Entry Doors	White exterior DF sealant	
190	84	134 Entry Doors	White exterior DF sealant	



SECTION 2.2

PATTON Hall, Building 214 PAINT Chip ANALYTICAL RESULTS

**EMSL Analytical, Inc.**

6340 Castleplace Drive, Indianapolis, IN, 46250
Telephone: 317.803.2997 Fax: 317.803.3047
www.emsl.com

EMSL Order ID: 162558871
LIMS Reference ID: CD58871
EMSL Customer ID: GEOE25

Attention: Nelson Adcock
GeoEnvironmental Resources [GEOE25]
2712 Southern Blvd., Suite 101
Virginia Beach, VA 23452
(757) 463-3200
hnadcock@geronline.com

Project Name: 130-8310 PATTON HALL B214, FT. MYERS,
ARLINGTON, VA
Customer PO:
EMSL Sales Rep: Jason McDonald
Received: 07/30/2025 10:10
Reported: 08/06/2025 13:20

Analytical Results

Analyte	Results	RL	Weight(g)	Prep Date & Tech	Prep Method	Analysis Date & Analyst	Analytical Method	Q	DF
Client Sample ID: P1/034 I-BEAM, ORANGE PAINT						Date Sampled: 07/29/25			
Matrix: Solid						LIMS Reference ID: CD58871-01			
Cadmium	0.00089 % wt	0.000056 % wt	0.3549	08/01/25 JW	SW846 3050B	08/01/25 JW	SW-846 6010D	1	
Chromium	0.0061 % wt	0.00014 % wt	0.3549	08/01/25 JW	SW846 3050B	08/01/25 JW	SW-846 6010D	1	
Lead	39 % wt	0.11 % wt	0.3549	08/01/25 JW	SW846 3050B	08/01/25 JW	SW-846 6010D	400	
Sample Comments:									
Client Sample ID: P2/032 CMU WALL, BROWN PAINT						Date Sampled: 07/29/25			
Matrix: Solid						LIMS Reference ID: CD58871-02			
Cadmium	<0.000039 % wt	0.000039 % wt	0.5073	08/01/25 JW	SW846 3050B	08/01/25 JW	SW-846 6010D	1	
Chromium	0.00026 % wt	0.000099 % wt	0.5073	08/01/25 JW	SW846 3050B	08/01/25 JW	SW-846 6010D	1	
Lead	0.0043 % wt	0.00020 % wt	0.5073	08/01/25 JW	SW846 3050B	08/01/25 JW	SW-846 6010D	1	
Sample Comments:									
Client Sample ID: P3/042 BRICK WALL, WHITE PAINT						Date Sampled: 07/29/25			
Matrix: Solid						LIMS Reference ID: CD58871-03			
Cadmium	0.00029 % wt	0.000040 % wt	0.5016	08/01/25 JW	SW846 3050B	08/01/25 JW	SW-846 6010D	1	
Chromium	0.0015 % wt	0.00010 % wt	0.5016	08/01/25 JW	SW846 3050B	08/01/25 JW	SW-846 6010D	1	
Lead	0.25 % wt	0.0020 % wt	0.5016	08/01/25 JW	SW846 3050B	08/01/25 JW	SW-846 6010D	10	
Sample Comments:									
Client Sample ID: P4/011 CONCRETE FLLOR, RED PAINT						Date Sampled: 07/29/25			
Matrix: Solid						LIMS Reference ID: CD58871-04			
Cadmium	<0.000039 % wt	0.000039 % wt	0.5094	08/01/25 JW	SW846 3050B	08/01/25 JW	SW-846 6010D	1	
Chromium	0.0015 % wt	0.000098 % wt	0.5094	08/01/25 JW	SW846 3050B	08/01/25 JW	SW-846 6010D	1	
Lead	0.0025 % wt	0.00020 % wt	0.5094	08/01/25 JW	SW846 3050B	08/01/25 JW	SW-846 6010D	1	
Sample Comments:									
Client Sample ID: P5/MECH ROOM ROOD, STRUCTURAL STEEL, RED PAINT						Date Sampled: 07/29/25			
Matrix: Solid						LIMS Reference ID: CD58871-05			
Cadmium	0.00076 % wt	0.00027 % wt	0.0752	08/01/25 JW	SW846 3050B	08/01/25 JW	SW-846 6010D	1	
Chromium	0.024 % wt	0.00066 % wt	0.0752	08/01/25 JW	SW846 3050B	08/01/25 JW	SW-846 6010D	1	
Lead	0.015 % wt	0.0013 % wt	0.0752	08/01/25 JW	SW846 3050B	08/01/25 JW	SW-846 6010D	1	
Sample Comments:									
Client Sample ID: P6/237 PLASTER WALL, TAN PAINT						Date Sampled: 07/29/25			
Matrix: Solid						LIMS Reference ID: CD58871-06			
Cadmium	0.00062 % wt	0.000040 % wt	0.504	08/01/25 JW	SW846 3050B	08/01/25 JW	SW-846 6010D	1	
Chromium	0.017 % wt	0.000099 % wt	0.504	08/01/25 JW	SW846 3050B	08/01/25 JW	SW-846 6010D	1	
Lead	11 % wt	0.025 % wt	0.504	08/01/25 JW	SW846 3050B	08/01/25 JW	SW-846 6010D	125	
Sample Comments:									

**EMSL Analytical, Inc.**

6340 Castleplace Drive, Indianapolis, IN, 46250
Telephone: 317.803.2997 Fax:317.803.3047
www.emsl.com

EMSL Order ID: 162558871**LIMS Reference ID:** CD58871**EMSL Customer ID:** GEOE25

Attention: Nelson Adcock
GeoEnvironmental Resources [GEOE25]
2712 Southern Blvd., Suite 101
Virginia Beach, VA 23452
(757) 463-3200
hnadcock@geronline.com

Project Name: 130-8310 PATTON HALL B214, FT. MYERS,
ARLINGTON, VA

Customer PO:
EMSL Sales Rep: Jason McDonald

Received: 07/30/2025 10:10

Reported: 08/06/2025 13:20

Analytical Results (Continued)

Analyte	Results	RL	Weight(g)	Prep Date & Tech	Prep Method	Analysis Date & Analyst	Analytical Method	Q	DF
Client Sample ID: P7/134 STRUCTURAL STEEL, GREEN PAINT							Date Sampled: 07/29/25		
Matrix: Solid							LIMS Reference ID: CD58871-07		
Cadmium	0.00080 % wt	0.000039 % wt	0.5071	08/01/25 JW	SW846 3050B	08/01/25 JW	SW-846 6010D	1	
Chromium	0.013 % wt	0.000099 % wt	0.5071	08/01/25 JW	SW846 3050B	08/01/25 JW	SW-846 6010D	1	
Lead	14 % wt	0.039 % wt	0.5071	08/01/25 JW	SW846 3050B	08/01/25 JW	SW-846 6010D	200	

Sample Comments:

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Customer PO:
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Received: 07/30/2025 10:10

Reported: 08/06/2025 13:20

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 6010D in Solid</i>	
Cadmium	16-A2LA Chemistry
Chromium	16-A2LA Chemistry
Lead	16-A2LA Chemistry

List of Certifications

Code	Description	Number	Expires
16-MO	Missouri Drinking Water	10180	03/31/2026
16-NYDOH	New York Potable Water, Metals Solid and Hazardous Waste - Asbestos	12130	04/01/2026
16-AIHA ELLAP	American Industrial Hygiene Association (AIHA LAP, LLC) - ELLAP	157245	09/01/2025
16-AIHA IHLAP	American Industrial Hygiene Association (AIHA LAP, LLC) - IHLAP	157245	09/01/2025
16-CA ELAP	California Metals in DW, Chemistry and Bulk Asbestos in Hazardous Waste	2575	06/30/2026
16-A2LA Food	A2LA Food Microbiology	2845.11	01/31/2026
16-A2LA Chemistry	A2LA Environmental and Chemistry	2845.25	11/30/2025
16-IN Metals/Asbestos	Indiana Lead and Metals and Asbestos in Drinking Water	C-49-09	12/31/2026
16-OHDOH	Ohio - Lead in Paint Chips, Wipes, Soil and Air	E10040	05/03/2026
16-FLDOH	Florida Asbestos and Metals in Drinking Water, PCBs	E871170	06/30/2026
16-NJDEP	New Jersey Metals, Organics and Inorganics in DW PCBs	IN002	06/30/2026
16-IN Colilert/HPC	Indiana Colilert and HPC	M-49-06	12/31/2026

Please see the specific Field of Testing (FOT) on www.emsl.com <<http://www.emsl.com>> for a complete listing of parameters for which EMSL is certified.

Notes and Definitions

Item	Definition
(Dig)	For metals analysis, sample was digested.
[2C]	Reported from the second channel in dual column analysis.
DA	Direct Analysis
DF	Dilution Factor
MDL	Method Detection Limit.
ND	Analyte was NOT DETECTED at or above the detection limit.
NR	Spike/Surrogate showed no recovery.
Q	Qualifier
RCS	Respirable Crystalline Silica
RL	Reporting Limit
Wet	Sample is not dry weight corrected.

Measurement of uncertainty and any applicable definitions of method modifications are available upon request. Per EPA NLLAP policy, sample results are not blank corrected.

**EMSL Analytical, Inc.**

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Project Name: 130-8310 PATTON HALL B214, FT. MYERS,
ARLINGTON, VA

Customer PO:
EMSL Sales Rep: Jason McDonald
Received: 07/30/2025 10:10
Reported: 08/06/2025 13:20

Aleks Kuchenbrod Laboratory Manager or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. QC sample results are within quality control criteria and met method specifications unless otherwise noted. All results for soil samples are reported on a dry weight basis, unless otherwise noted.



EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Chain of Custody

EMSL Order Number (Lab Use Only):

102558871

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

Company: GeoEnvironmental Resources, Inc.		EMSL-Bill to: ☒ Same ☐ Different If Bill to is Different note instructions in Comments**	
Street: 2712 Southern Boulevard, Suite 101		Third Party Billing requires written authorization from third party	
City: Virginia Beach	State/Province: VA	Zip/Postal Code:	Country:
Report To (Name): Nelson Adcock		Fax #:	
Telephone #: 757-463-3200		Email Address: hnadcock@geronline.com	
Project Name/Number: 130-8310 Patton Hall B214, Ft. Myers, Arlington, VA			
Please Provide Results: ☐ Fax ☒ Email Purchase Order: U.S. State Samples Taken: VA			
Turnaround Time (TAT) Options* - Please Check			
☐ 3 Hour	☐ 6 Hour	☐ 24 Hour	☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☒ 1 Week ☐ 2 Week
*For RUSH TAT's Please Call Ahead to Confirm Lab Hours and Availability. Not all TAT options are valid for every test. Materials Science and IAQ TATs are in Business Days rather than Hours (i.e. 24 Hour = End of Next Business Day)			
Asbestos			
PCM - Air ☐ NIOSH 7400 ☐ w/ 8hr. TWA TEM - Air ☐ 4-4.5hr TAT (AHERA ONLY) ☐ AHERA 40 CFR, Part 763 ☐ NIOSH 7402 ☐ EPA Level II ☐ ISO 10312 TEM - Water Fibers $\geq 10\mu m$ ☐ Waste ☐ Drinking All Fiber Sizes ☐ Waste ☐ Drinking		PLM - Bulk ☐ PLM EPA 600/R-93/116 ☐ PLM EPA NOB (<1%) ☐ NYS 198.1 (friable-NY) ☐ NYS 198.6 (non-friable-NY) Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%) Point Count w/ Gravimetric ☐ 400 (<0.25%) ☐ 1000 (<0.1%) TEM - Dust ☐ Microvac - ASTM D 5755 ☐ Wipe-ASTM D6480	
Flame Atomic Absorption ☐ Chips SW846-7000B or AOAC 974.02 ☐ Soil SW846-7000B/7420 ☐ Air NIOSH 7082 ☐ Wastewater SM3111B or SW846-7000B/7420 ☐ ASTM Wipe SW846-7000B/7420 ☐ non ASTM Wipe SW846-7000B/7420 ☐ TCLP SW846-1311/7420/SM 3111B		ICP ☐ Air NIOSH 7300 Modified ☐ non ASTM Wipe SW846-6010B or C ☐ ASTM Wipe SW846-6010B or C ☐ Soil SW846-6010 B or C ☐ Waste Water SW846-6010B or C ☐ TCLP SW846-6010B or C	
Graphite Furnace Atomic Absorption ☐ Soil SW846-7421 ☐ Wastewater EPA 200.9 ☐ Air NIOSH 7105 ☐ Drinking Water EPA 200.9		Other: ☒ LEAD, CADMIUM, CHROMIUM	
Microbiology			
Wipe and Bulk Samples ☐ Mold & Fungi - Direct Examination ☐ Mold & Fungi Culture (Genus Only) ☐ Mold & Fungi Culture (Genus & Species) ☐ Bacterial Count & ID (Up to Three Types) ☐ Bacterial Count & ID (Up to Five Types) ☐ MRSA ☐ <i>Pseudomonas aeruginosa</i>		Air Samples ☐ Mold & Fungi (Spore Trap) ☐ Mold & Fungi Culture (Genus Only) ☐ Mold & Fungi (Genus & Species) ☐ Bacterial Culture & ID (Up to Three Types) ☐ Bacterial Culture & ID (Up to Five Types) ☐ Endotoxin Testing Real Time Q-PCR (See Analytical Guide for Code) Code: Legionella ☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Level 4 Other: ☐	
Water Samples ☐ Total Coliform & E.coli (P/A) ☐ Fecal Coliform (SM 9222D) ☐ Sewage Screen ☐ Heterotrophic Plate Count (SM 9215)		Materials Science ☐ Common Particle ID (large particles) ☐ Full Particle ID (environmental dust) ☐ Basic Material ID (solids) ☐ Advanced Material ID ☐ Physical Testing (Tensile, Compression) ☐ Combustion-by-products (soot, char, etc.) ☐ X-Ray Fluorescence (elem. analysis) ☐ X-Ray Diffraction (Crystalline Part.) ☐ MMVF's (Fibrous glass, RCF's) ☐ Particle Size (sieve/microscopy/laser) ☐ Combustible Dust ☐ Petrographic Examination Other: ☐	
IAQ			
Nuisance Dust NIOSH ☐ 0500 ☐ 0600 Airborne Dust ☐ PM10 ☐ TSP Silica Analysis: ☐ All Species Silica Analysis - Single Species ☐ Alpha Quartz ☐ Cristobalite ☐ Tridymite ☐ HVAC Efficiency ☐ Carbon Black ☐ Airborne Oil Mist Radon Testing: Call for Kit and COC Other: ☐			
**Comments/Special Instructions: Analyze for Pb, Cr & Cd, collected 7/22-24/2025, report as % by Weight			
Client Sample #'s - P1 - P7		Total # of Samples: 7	
Relinquished (Client): Nelson Adcock		Date: 7/28/2025	
Received (Lab):		Date: 7/29/25	
		Time: 9:55	

Analysis Completed in Accordance with EMSL's Terms and Conditions located in the Analytical Price Guide
 Controlled Document-OneChain-R2-1/12/2010

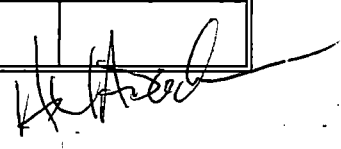
P12

FX 8831 1128 3386

7/30/25 1010A

Table 2 - PAINT SAMPLE RESULTS

NO.	SAMPLE LOCATION	SAMPLE MATERIAL	% LEAD	% CHROMIUM	% CADMIUM
P1	034 I-beam	Orange paint			
P2	032 CMU wall	Brown paint			
P3	042 Brick Wall	White paint			
P4	011 Concrete Floor	Red paint			
P5	Mech Room Roof, Structural steel	Red paint			
P6	237 Plaster wall	Tan paint			
P7	134 Structural Steel	Green paint			



NOTES:

1. D - Dilution Sample required a dilution which was used to calculate final results.
2. **BOLD** results indicate the sample is Lead Based Paint (LBP).
3. All YELLOW HIGHLIGHTED samples exceed the laboratory reporting limit (RL).

SECTION 2.3

PATTON Hall, Building 214 PCB SEALANT Sample Results

ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. H. Nelson Adcock, Jr.
GeoEnvironmental Resources Inc GER
2712 Southern Blvd
Suite 101
Virginia Beach, Virginia 23452

Generated 8/1/2025 4:07:04 PM

JOB DESCRIPTION

Patton Hall B214

JOB NUMBER

400-279802-1

Eurofins Pensacola

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization



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8/1/2025 4:07:04 PM

Authorized for release by
Mark Swafford, Project Manager II
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(850)471-6207

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Definitions/Glossary

Client: GeoEnvironmental Resources Inc GER
Project/Site: Patton Hall B214

Job ID: 400-279802-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, high biased.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: GeoEnvironmental Resources Inc GER
Project: Patton Hall B214

Job ID: 400-279802-1

Job ID: 400-279802-1

Eurofins Pensacola

Job Narrative 400-279802-1

Receipt

The samples were received on 7/26/2025 9:49 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.1° C.

GC Semi VOA

Method 8082A: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 400-717700 and analytical batch 400-717934 was outside control limits. Sample matrix interference is suspected.

Method 8082A: The following samples were diluted to bring the concentration of target analytes within the calibration range: PCB 1 (400-279802-1) and PCB 2 (400-279802-2). Elevated reporting limits (RLs) are provided.

Method 8082A: Surrogate recovery for the following sample was outside control limits: PCB 1 (400-279802-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8082A: Two surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following samples contained an allowable number of surrogate compounds outside limits: (400-279891-A-1-C) and (400-279891-A-1-E MS). These results have been reported and qualified.

Method 8082A: The following samples were diluted due to the nature of the sample matrix: (400-279891-A-1-C), (400-279891-A-1-E MS) and (400-279891-A-1-D MSD). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Eurofins Pensacola

Detection Summary

Client: GeoEnvironmental Resources Inc GER
Project/Site: Patton Hall B214

Job ID: 400-279802-1

Client Sample ID: PCB 1

Lab Sample ID: 400-279802-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1254	13		0.82	0.10	mg/Kg	20		8082A	Total/NA
Polychlorinated biphenyls, Total	13		0.82	0.53	mg/Kg	20		8082A	Total/NA

Client Sample ID: PCB 2

Lab Sample ID: 400-279802-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1254	8.3		0.78	0.097	mg/Kg	20		8082A	Total/NA
Polychlorinated biphenyls, Total	8.3		0.78	0.51	mg/Kg	20		8082A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Pensacola

Sample Summary

Client: GeoEnvironmental Resources Inc GER
Project/Site: Patton Hall B214

Job ID: 400-279802-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-279802-1	PCB 1	Solid	07/24/25 07:15	07/26/25 09:49
400-279802-2	PCB 2	Solid	07/24/25 07:30	07/26/25 09:49

1

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Client Sample Results

Client: GeoEnvironmental Resources Inc GER
Project/Site: Patton Hall B214

Job ID: 400-279802-1

Client Sample ID: PCB 1

Lab Sample ID: 400-279802-1

Date Collected: 07/24/25 07:15

Matrix: Solid

Date Received: 07/26/25 09:49

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.36		0.82	0.36	mg/Kg		07/29/25 15:27	08/01/25 13:22	20
PCB-1221	<0.39		0.82	0.39	mg/Kg		07/29/25 15:27	08/01/25 13:22	20
PCB-1232	<0.53		0.82	0.53	mg/Kg		07/29/25 15:27	08/01/25 13:22	20
PCB-1242	<0.40		0.82	0.40	mg/Kg		07/29/25 15:27	08/01/25 13:22	20
PCB-1248	<0.16		0.82	0.16	mg/Kg		07/29/25 15:27	08/01/25 13:22	20
PCB-1254	13		0.82	0.10	mg/Kg		07/29/25 15:27	08/01/25 13:22	20
PCB-1260	<0.28		0.82	0.28	mg/Kg		07/29/25 15:27	08/01/25 13:22	20
Polychlorinated biphenyls, Total	13		0.82	0.53	mg/Kg		07/29/25 15:27	08/01/25 13:22	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	715	S1+	10 - 150				07/29/25 15:27	08/01/25 13:22	20
Tetrachloro-m-xylene	38		15 - 131				07/29/25 15:27	08/01/25 13:22	20

Client Sample Results

Client: GeoEnvironmental Resources Inc GER
Project/Site: Patton Hall B214

Job ID: 400-279802-1

Client Sample ID: PCB 2

Lab Sample ID: 400-279802-2

Date Collected: 07/24/25 07:30

Matrix: Solid

Date Received: 07/26/25 09:49

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.35		0.78	0.35	mg/Kg		07/29/25 15:27	08/01/25 15:24	20
PCB-1221	<0.37		0.78	0.37	mg/Kg		07/29/25 15:27	08/01/25 15:24	20
PCB-1232	<0.51		0.78	0.51	mg/Kg		07/29/25 15:27	08/01/25 15:24	20
PCB-1242	<0.38		0.78	0.38	mg/Kg		07/29/25 15:27	08/01/25 15:24	20
PCB-1248	<0.15		0.78	0.15	mg/Kg		07/29/25 15:27	08/01/25 15:24	20
PCB-1254	8.3		0.78	0.097	mg/Kg		07/29/25 15:27	08/01/25 15:24	20
PCB-1260	<0.27		0.78	0.27	mg/Kg		07/29/25 15:27	08/01/25 15:24	20
Polychlorinated biphenyls, Total	8.3		0.78	0.51	mg/Kg		07/29/25 15:27	08/01/25 15:24	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	93		10 - 150				07/29/25 15:27	08/01/25 15:24	20
Tetrachloro-m-xylene	31		15 - 131				07/29/25 15:27	08/01/25 15:24	20

QC Sample Results

Client: GeoEnvironmental Resources Inc GER
Project/Site: Patton Hall B214

Job ID: 400-279802-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 400-717700/1-A

Matrix: Solid

Analysis Batch: 717934

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 717700

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.0075		0.017	0.0075	mg/Kg		07/29/25 15:26	07/31/25 11:27	1
PCB-1221	<0.0080		0.017	0.0080	mg/Kg		07/29/25 15:26	07/31/25 11:27	1
PCB-1232	<0.011		0.017	0.011	mg/Kg		07/29/25 15:26	07/31/25 11:27	1
PCB-1242	<0.0082		0.017	0.0082	mg/Kg		07/29/25 15:26	07/31/25 11:27	1
PCB-1248	<0.0033		0.017	0.0033	mg/Kg		07/29/25 15:26	07/31/25 11:27	1
PCB-1254	<0.0021		0.017	0.0021	mg/Kg		07/29/25 15:26	07/31/25 11:27	1
PCB-1260	<0.0058		0.017	0.0058	mg/Kg		07/29/25 15:26	07/31/25 11:27	1
Polychlorinated biphenyls, Total	<0.011		0.017	0.011	mg/Kg		07/29/25 15:26	07/31/25 11:27	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	99		10 - 150	07/29/25 15:26	07/31/25 11:27	1
Tetrachloro-m-xylene	74		15 - 131	07/29/25 15:26	07/31/25 11:27	1

Lab Sample ID: LCS 400-717700/2-A

Matrix: Solid

Analysis Batch: 717934

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 717700

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
PCB-1016	0.337	0.205		mg/Kg		61	17 - 156
PCB-1260	0.337	0.209		mg/Kg		62	27 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	92		10 - 150
Tetrachloro-m-xylene	69		15 - 131

Lab Sample ID: 400-279891-A-1-D MSD

Matrix: Solid

Analysis Batch: 717934

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 717700

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
PCB-1016	<0.074	F2	0.332	0.236	F2	mg/Kg		71	60 - 140	46	30
PCB-1260	<0.058		0.332	0.322		mg/Kg		97	60 - 140	15	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
DCB Decachlorobiphenyl	149		10 - 150
Tetrachloro-m-xylene	86		15 - 131

Lab Sample ID: 400-279891-A-1-E MS

Matrix: Solid

Analysis Batch: 717934

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 717700

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
PCB-1016	<0.074	F2	0.334	0.378		mg/Kg		113	60 - 140
PCB-1260	<0.058		0.334	0.278		mg/Kg		83	60 - 140

Surrogate	MS %Recovery	MS Qualifier	Limits
DCB Decachlorobiphenyl	159	S1+	10 - 150

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QC Sample Results

Client: GeoEnvironmental Resources Inc GER
Project/Site: Patton Hall B214

Job ID: 400-279802-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: 400-279891-A-1-E MS

Matrix: Solid

Analysis Batch: 717934

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 717700

	<i>MS</i>	<i>MS</i>	
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Tetrachloro-m-xylene</i>	83		15 - 131

QC Association Summary

Client: GeoEnvironmental Resources Inc GER
Project/Site: Patton Hall B214

Job ID: 400-279802-1

GC Semi VOA

Prep Batch: 717700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-279802-1	PCB 1	Total/NA	Solid	3546	
400-279802-2	PCB 2	Total/NA	Solid	3546	
MB 400-717700/1-A	Method Blank	Total/NA	Solid	3546	
LCS 400-717700/2-A	Lab Control Sample	Total/NA	Solid	3546	
400-279891-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	3546	
400-279891-A-1-E MS	Matrix Spike	Total/NA	Solid	3546	

Analysis Batch: 717934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-717700/1-A	Method Blank	Total/NA	Solid	8082A	717700
LCS 400-717700/2-A	Lab Control Sample	Total/NA	Solid	8082A	717700
400-279891-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8082A	717700
400-279891-A-1-E MS	Matrix Spike	Total/NA	Solid	8082A	717700

Analysis Batch: 718088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-279802-1	PCB 1	Total/NA	Solid	8082A	717700
400-279802-2	PCB 2	Total/NA	Solid	8082A	717700

Lab Chronicle

Client: GeoEnvironmental Resources Inc GER
Project/Site: Patton Hall B214

Job ID: 400-279802-1

Client Sample ID: PCB 1

Date Collected: 07/24/25 07:15

Date Received: 07/26/25 09:49

Lab Sample ID: 400-279802-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3546			717700	DR	EET PEN	07/29/25 15:27
Total/NA	Analysis	8082A		20	718088	PG	EET PEN	08/01/25 13:22

Client Sample ID: PCB 2

Date Collected: 07/24/25 07:30

Date Received: 07/26/25 09:49

Lab Sample ID: 400-279802-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3546			717700	DR	EET PEN	07/29/25 15:27
Total/NA	Analysis	8082A		20	718088	PG	EET PEN	08/01/25 15:24

Laboratory References:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Accreditation/Certification Summary

Client: GeoEnvironmental Resources Inc GER
Project/Site: Patton Hall B214

Job ID: 400-279802-1

Laboratory: Eurofins Pensacola

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Virginia	NELAP	460166	06-14-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8082A	3546	Solid	Polychlorinated biphenyls, Total

Method Summary

Client: GeoEnvironmental Resources Inc GER
Project/Site: Patton Hall B214

Job ID: 400-279802-1

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	EET PEN
3546	Microwave Extraction	SW846	EET PEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TestAmerica Virginia Beach
5135 Cleveland St

Chain of Custody Record

TestAmerica

Virginia Beach Service Center

Virginia Beach, VA 23462-6501
phone 757 671 1291 fax

TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other

Client Contact GeoEnvironmental Resources, Inc. 2712 Southern Blvd., Suite 101 Virginia Beach, Virginia 23452 Phone 757-463-3200 FAX 757-463-3080 Project Name: Patton Hall B214, Ft. Myers, VA Site: Patton Hall B214 Ft. Myers, VA P O # 130-8310		Project Manager: H. Nelson Adcock, Jr. Tel/Fax: 757-463-3200 ☒ CALENDAR DAYS ☐ WORKING DAYS TAT if different from Below ☐ 2 weeks ☒ 1 week ☐ 2 days ☐ 1 day		Site Contact: H. Nelson Adcock, Jr. Lab Contact: Carrier: 7/25/2025 COC No. of COCs															
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	PCBs, 8082A, Microwave Extraction	For Lab Use Only: Walk-In Client: Lab Sampling Job / SDG No.										
PCB 1	7/24/2025	0715	G	S	1		X												
PCB 2	7/24/2025	0730	G	S	1		X												
Preservation Used: 1=Ice, 2=MCL, 3=HNO3, 4=HNO3, 5=NaOH, 6=Other Possible Hazard Identification: Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample. ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown Special Instructions/QC Requirements & Comments: PLEASE PROVIDE A MINIMUM DETECTION LIMIT OF LESS THAN 50 MG/KG. Email report to hnadcock@geronline.com																			
										Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)									
										☐ Return to Client ☐ Disposal by Lab ☐ Archive for Months									
										Cooler Temp (°C): Obs'd. _____									
										Therm ID No. _____									
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No		Received by: <i>h. nelson</i>		Company: ELLE		Date/Time: 7/25/25 1230											
Relinquished by: <i>H. Nelson Adcock, Jr.</i>		Company: GER		Received by:		Company:		Date/Time:											
Relinquished by: <i>Patton Hall</i>		Company: ELLE		Received in Laboratory by: <i>Patton Hall</i>		Company:		Date/Time: 7/26/25 949											

Login Sample Receipt Checklist

Client: GeoEnvironmental Resources Inc GER

Job Number: 400-279802-1

Login Number: 279802

List Source: Eurofins Pensacola

List Number: 1

Creator: Pardonner, Brett

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.1°C IR11
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

SECTION 2.4

PATTON Hall, Building 214 TCLP Sample Results

ANALYTICAL REPORT

PREPARED FOR

Attn: Wyatt Pine
GeoEnvironmental Resources Inc GER
2712 Southern Blvd
Suite 101
Virginia Beach, Virginia 23452

Generated 8/3/2025 10:18:36 PM

JOB DESCRIPTION

Patton Hall, B214

JOB NUMBER

400-279801-1

Eurofins Pensacola

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization



Generated
8/3/2025 10:18:36 PM

Authorized for release by
Mark Swafford, Project Manager II
Mark.Swafford@et.eurofinsus.com
(850)471-6207

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Definitions/Glossary

Client: GeoEnvironmental Resources Inc GER
Project/Site: Patton Hall, B214

Job ID: 400-279801-1

Qualifiers

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: GeoEnvironmental Resources Inc GER
Project: Patton Hall, B214

Job ID: 400-279801-1

Job ID: 400-279801-1

Eurofins Pensacola

Job Narrative 400-279801-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The sample was received on 7/26/2025 9:49 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.1°C.

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Organic Prep

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Pensacola

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Job ID: 400-279801-1

Lab Sample ID: 400-279801-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PSR sample generated	DONE				NONE	1		Part Size Red	Total/NA

8/3/2025

Sample Summary

Client: GeoEnvironmental Resources Inc GER
Project/Site: Patton Hall, B214

Job ID: 400-279801-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-279801-1	TCLP-1	Solid	07/24/25 09:00	07/26/25 09:49

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: GeoEnvironmental Resources Inc GER
Project/Site: Patton Hall, B214

Job ID: 400-279801-1

Client Sample ID: TCLP-1

Lab Sample ID: 400-279801-1

Date Collected: 07/24/25 09:00

Matrix: Solid

Date Received: 07/26/25 09:49

Method: SW846 6010D - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.50	F1	0.50		mg/L		07/31/25 14:00	08/01/25 19:34	1
Cadmium	<0.050		0.050		mg/L		07/31/25 14:00	08/01/25 19:34	1
Chromium	<0.050		0.050		mg/L		07/31/25 14:00	08/01/25 19:34	1
Silver	<0.050		0.050		mg/L		07/31/25 14:00	08/01/25 19:34	1
Arsenic	<0.050		0.050		mg/L		07/31/25 14:00	08/01/25 19:34	1
Lead	<0.050		0.050		mg/L		07/31/25 14:00	08/01/25 19:34	1
Selenium	<0.050		0.050		mg/L		07/31/25 14:00	08/01/25 19:34	1

Method: SW846 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.0020		0.0020		mg/L		07/31/25 14:00	08/01/25 13:21	1

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	DONE				NONE			07/30/25 07:11	1

QC Sample Results

Client: GeoEnvironmental Resources Inc GER
Project/Site: Patton Hall, B214

Job ID: 400-279801-1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-665962/2-A

Matrix: Solid

Analysis Batch: 666128

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 665962

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.50		0.50		mg/L		07/31/25 14:00	08/01/25 19:25	1
Cadmium	<0.050		0.050		mg/L		07/31/25 14:00	08/01/25 19:25	1
Chromium	<0.050		0.050		mg/L		07/31/25 14:00	08/01/25 19:25	1
Silver	<0.050		0.050		mg/L		07/31/25 14:00	08/01/25 19:25	1
Arsenic	<0.050		0.050		mg/L		07/31/25 14:00	08/01/25 19:25	1
Lead	<0.050		0.050		mg/L		07/31/25 14:00	08/01/25 19:25	1
Selenium	<0.050		0.050		mg/L		07/31/25 14:00	08/01/25 19:25	1

Lab Sample ID: LCS 240-665962/3-A

Matrix: Solid

Analysis Batch: 666128

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 665962

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Barium	2.00	2.02		mg/L		101	50 - 150
Cadmium	1.00	0.993		mg/L		99	50 - 150
Chromium	1.00	0.969		mg/L		97	50 - 150
Silver	0.100	0.0987		mg/L		99	50 - 150
Arsenic	2.00	2.13		mg/L		106	50 - 150
Lead	1.00	0.960		mg/L		96	50 - 150
Selenium	2.00	2.18		mg/L		109	50 - 150

Lab Sample ID: LB 240-665870/1-B

Matrix: Solid

Analysis Batch: 666128

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 665962

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.50		0.50		mg/L		07/31/25 14:00	08/01/25 19:21	1
Cadmium	<0.050		0.050		mg/L		07/31/25 14:00	08/01/25 19:21	1
Chromium	<0.050		0.050		mg/L		07/31/25 14:00	08/01/25 19:21	1
Silver	<0.050		0.050		mg/L		07/31/25 14:00	08/01/25 19:21	1
Arsenic	<0.050		0.050		mg/L		07/31/25 14:00	08/01/25 19:21	1
Lead	<0.050		0.050		mg/L		07/31/25 14:00	08/01/25 19:21	1
Selenium	<0.050		0.050		mg/L		07/31/25 14:00	08/01/25 19:21	1

Lab Sample ID: 400-279801-1 MS

Matrix: Solid

Analysis Batch: 666128

Client Sample ID: TCLP-1

Prep Type: TCLP

Prep Batch: 665962

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Barium	<0.50	F1	50.0	17.1	F1	mg/L		34	75 - 125
Cadmium	<0.050		1.00	1.05		mg/L		105	75 - 125
Chromium	<0.050		5.00	4.99		mg/L		99	75 - 125
Silver	<0.050		1.00	1.02		mg/L		102	75 - 125
Arsenic	<0.050		5.00	5.62		mg/L		112	75 - 125
Lead	<0.050		5.00	4.21		mg/L		84	75 - 125
Selenium	<0.050		1.00	1.16		mg/L		111	75 - 125

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QC Sample Results

Client: GeoEnvironmental Resources Inc GER
Project/Site: Patton Hall, B214

Job ID: 400-279801-1

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: 400-279801-1 MSD

Matrix: Solid

Analysis Batch: 666128

Client Sample ID: TCLP-1

Prep Type: TCLP

Prep Batch: 665962

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Barium	<0.50	F1	50.0	15.4	F1	mg/L		31	75 - 125	10	20
Cadmium	<0.050		1.00	1.03		mg/L		102	75 - 125	3	20
Chromium	<0.050		5.00	4.88		mg/L		97	75 - 125	2	20
Silver	<0.050		1.00	1.00		mg/L		100	75 - 125	2	20
Arsenic	<0.050		5.00	5.49		mg/L		109	75 - 125	2	20
Lead	<0.050		5.00	4.12		mg/L		82	75 - 125	2	20
Selenium	<0.050		1.00	1.14		mg/L		109	75 - 125	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-665965/2-A

Matrix: Solid

Analysis Batch: 666145

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 665965

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.0020		0.0020		mg/L		07/31/25 14:00	08/01/25 13:17	1

Lab Sample ID: LCS 240-665965/3-A

Matrix: Solid

Analysis Batch: 666145

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 665965

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00500	0.00483		mg/L		97	80 - 120

Lab Sample ID: LB 240-665870/1-C

Matrix: Solid

Analysis Batch: 666145

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 665965

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.0020		0.0020		mg/L		07/31/25 14:00	08/01/25 13:16	1

Lab Sample ID: 400-279801-1 MS

Matrix: Solid

Analysis Batch: 666145

Client Sample ID: TCLP-1

Prep Type: TCLP

Prep Batch: 665965

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	<0.0020		0.00500	0.00485		mg/L		97	80 - 120

Lab Sample ID: 400-279801-1 MSD

Matrix: Solid

Analysis Batch: 666145

Client Sample ID: TCLP-1

Prep Type: TCLP

Prep Batch: 665965

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	<0.0020		0.00500	0.00486		mg/L		97	80 - 120	0	20

Eurofins Pensacola

QC Association Summary

Client: GeoEnvironmental Resources Inc GER
Project/Site: Patton Hall, B214

Job ID: 400-279801-1

Metals

Leach Batch: 665870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-279801-1	TCLP-1	TCLP	Solid	1311	
LB 240-665870/1-B	Method Blank	TCLP	Solid	1311	
LB 240-665870/1-C	Method Blank	TCLP	Solid	1311	
400-279801-1 MS	TCLP-1	TCLP	Solid	1311	
400-279801-1 MSD	TCLP-1	TCLP	Solid	1311	

Prep Batch: 665962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-279801-1	TCLP-1	TCLP	Solid	3010A	665870
LB 240-665870/1-B	Method Blank	TCLP	Solid	3010A	665870
MB 240-665962/2-A	Method Blank	Total/NA	Solid	3010A	
LCS 240-665962/3-A	Lab Control Sample	Total/NA	Solid	3010A	
400-279801-1 MS	TCLP-1	TCLP	Solid	3010A	665870
400-279801-1 MSD	TCLP-1	TCLP	Solid	3010A	665870

Prep Batch: 665965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-279801-1	TCLP-1	TCLP	Solid	7470A	665870
LB 240-665870/1-C	Method Blank	TCLP	Solid	7470A	665870
MB 240-665965/2-A	Method Blank	Total/NA	Solid	7470A	
LCS 240-665965/3-A	Lab Control Sample	Total/NA	Solid	7470A	
400-279801-1 MS	TCLP-1	TCLP	Solid	7470A	665870
400-279801-1 MSD	TCLP-1	TCLP	Solid	7470A	665870

Analysis Batch: 666128

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-279801-1	TCLP-1	TCLP	Solid	6010D	665962
LB 240-665870/1-B	Method Blank	TCLP	Solid	6010D	665962
MB 240-665962/2-A	Method Blank	Total/NA	Solid	6010D	665962
LCS 240-665962/3-A	Lab Control Sample	Total/NA	Solid	6010D	665962
400-279801-1 MS	TCLP-1	TCLP	Solid	6010D	665962
400-279801-1 MSD	TCLP-1	TCLP	Solid	6010D	665962

Analysis Batch: 666145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-279801-1	TCLP-1	TCLP	Solid	7470A	665965
LB 240-665870/1-C	Method Blank	TCLP	Solid	7470A	665965
MB 240-665965/2-A	Method Blank	Total/NA	Solid	7470A	665965
LCS 240-665965/3-A	Lab Control Sample	Total/NA	Solid	7470A	665965
400-279801-1 MS	TCLP-1	TCLP	Solid	7470A	665965
400-279801-1 MSD	TCLP-1	TCLP	Solid	7470A	665965

Organic Prep

Analysis Batch: 665720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-279801-1	TCLP-1	Total/NA	Solid	Part Size Red	

Lab Chronicle

Client: GeoEnvironmental Resources Inc GER
Project/Site: Patton Hall, B214

Job ID: 400-279801-1

Client Sample ID: TCLP-1
Date Collected: 07/24/25 09:00
Date Received: 07/26/25 09:49

Lab Sample ID: 400-279801-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			665870	DRJ	EET CLE	07/30/25 16:55 - 07/31/25 09:10 ¹
TCLP	Prep	3010A			665962	MN7X	EET CLE	07/31/25 14:00
TCLP	Analysis	6010D		1	666128	AJC	EET CLE	08/01/25 19:34
TCLP	Leach	1311			665870	DRJ	EET CLE	07/30/25 16:55 - 07/31/25 09:10 ¹
TCLP	Prep	7470A			665965	MN7X	EET CLE	07/31/25 14:00
TCLP	Analysis	7470A		1	666145	GEV	EET CLE	08/01/25 13:21
Total/NA	Analysis	Part Size Red		1	665720	POP	EET CLE	07/30/25 07:11

¹ This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:
EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: GeoEnvironmental Resources Inc GER
Project/Site: Patton Hall, B214

Job ID: 400-279801-1

Laboratory: Eurofins Cleveland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Virginia	NELAP	460175	09-15-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Part Size Red		Solid	PSR sample generated

Method Summary

Client: GeoEnvironmental Resources Inc GER
Project/Site: Patton Hall, B214

Job ID: 400-279801-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EET CLE
7470A	Mercury (CVAA)	SW846	EET CLE
Part Size Red	Particle Size Reduction Preparation	None	EET CLE
1311	TCLP Extraction	SW846	EET CLE
3010A	Preparation, Total Metals	SW846	EET CLE
7470A	Preparation, Mercury	SW846	EET CLE

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

B-114

CAD: 0415933/CAFE3906

BILL RECIPIENT

159469-434 MTW EXP 01/26
/ 0233/236/CD085

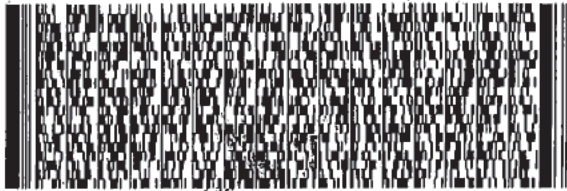
SAMPLE RECEIVING
EUROFINS PENSACOLA
3355 MCLEMORE DR

PENSACOLA FL 32514

(850) 474-1001

REF:

DEPT:



FedEx
Express



AT LTL 401 BY
J251024111401 BY

TRK# 4667 3458 6387
0201

SATURDAY 12:00P
PRIORITY OVERNIGHT

X0 PNSA

32514
FL-US BFM



1.1C IRL RP

22.6/22.8



Other	N/A
-------	-----

Eurofins - Cleveland Sample Receipt Form/Narrative

Login # _____

Barborton Facility

Client Eurofins Pensacola

Site Name _____

Cooler unpacked by _____

Cooler Received on 3/29/25Opened on 3/29/25JP4165FedEx 1st Grd ~~EXP~~

UPS

FAS

Waypoint

Client Drop Off

Eurofins Courier

Other _____

Receipt After-hours Drop-off Date/Time _____

Storage Location _____

Eurofins Cooler # EC-1P-7429

Foam Box

Client Cooler

~~Box~~

Other _____

Packing material used

Bubble Wrap

Foam

Plastic Bag

None

Other _____

1 Cooler temperature upon receipt

☐ See Multiple Cooler FormIR GUN # 17

(CF-1-2)

°C)

Observed Cooler Temp 22.60 °CCorrected Cooler Temp 22.8 °C2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 2 ~~Yes~~ No

Were the seals on the outside of the cooler(s) signed & dated?

~~Yes~~ No NA

-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?

Yes ~~No~~

Were tamper/custody seals intact and uncompromised?

Yes No ~~NA~~

3 Shippers packing slip attached to the cooler(s)?

~~Yes~~ No

4 Did custody papers accompany the sample(s)?

~~Yes~~ No

5 Were the custody papers relinquished & signed in the appropriate place?

~~Yes~~ No

6 Was/were the person(s) who collected the samples clearly identified on the COC?

Yes ~~No~~

7 Did all bottles arrive in good condition (Unbroken)?

~~Yes~~ No

8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?

~~Yes~~ No

9 For each sample, does the COC specify preservatives (V/N), # of containers (V/N), and sample type of grab/comp (V/N)?

~~Yes~~ No

10 Were correct bottle(s) used for the test(s) indicated?

~~Yes~~ No

11 Sufficient quantity received to perform indicated analyses?

~~Yes~~ No

12 Are these work share samples and all listed on the COC?

~~Yes~~ No

If yes, Questions 13-17 have been checked at the originating laboratory

13 Were all preserved sample(s) at the correct pH upon receipt?

Yes No NA

pH Strip Lot# HC463162

14 Were VOAs on the COC?

Yes No

15 Were air bubbles > 6 mm in any VOA vials?

Yes No NA

16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____

Yes No

17 Was a ~~LLHg~~ or Me Hg trip blank present?

Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Labeled by _____

Labels Verified by _____

19 SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired

Sample(s) _____ were received in a broken container

Sample(s) _____ were received with bubble > 6 mm in diameter (Notify PM)

20 SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory

Time preserved _____ Preservative(s) added/Lot number(s) _____

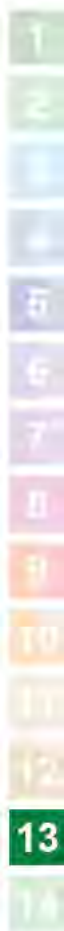
VOA Sample Preservation Date/Time VOAs Frozen _____

TRK# 4234 9606 9778
0201

TUE - 29 JUL 10:30A
PRIORITY OVERNIGHT

XS CAKA

44203
OH-US CLE



3355 McLemore Drive
Pensacola, FL 32514
Phone: 850-474-1001 Fax: 850-478-2671

22.6/22.8



Environment Testing

8/3/2025

Eurofins - Cleveland Sample Receipt Form/Narrative		Login # _____	
Barberton Facility			
Client <u>Eurofins Pensacola</u>		Site Name _____	
Cooler Received on <u>7/29/25</u>		Opened on <u>7/29/25</u>	
FedEx 1 st Grd <u>EXP</u> UPS FAS Waypoint Client Drop Off Eurofins Courier Other _____		Cooler unpacked by: <u>JPY/les</u>	
Receipt After-hours Drop-off Date/Time _____		Storage Location _____	
Eurofins Cooler # <u>EC-11291</u> Foam Box Client Cooler <u>POB</u> Other _____			
Packing material used: Bubble Wrap Foam Plastic Bag None Other _____			
COOLANT: Wet Ice Blue Ice Dry Ice Water <u>None</u>			
☐ Sec Multiple Cooler Form			
1 Cooler temperature upon receipt			
IR GUN # <u>17</u> (CF + <u>2</u> °C)		Observed Cooler Temp. <u>22.6</u> °C Corrected Cooler Temp. <u>22.8</u> °C	
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity <u>2</u> YES No <u>NO</u>			
-Were the seals on the outside of the cooler(s) signed & dated? <u>YES</u> No <u>NA</u>			
Were tamper/custody seals on the bottle(s) or bottle kins (L.Hg/M.Hg)? <u>YES</u> NO			
Were tamper/custody seals intact and uncompromised? <u>YES</u> No <u>NA</u>			
3 Shippers' packing slip attached to the cooler(s)? <u>YES</u> No <u>NO</u>			
4 Did custody papers accompany the sample(s)? <u>YES</u> No <u>NO</u>			
5 Were the custody papers relinquished & signed in the appropriate place? <u>YES</u> No <u>NO</u>			
6 Was/were the person(s) who collected the samples clearly identified on the COC? <u>YES</u> NO			
7 Did all bottles arrive in good condition (Unbroken)? <u>YES</u> No <u>NO</u>			
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC? <u>YES</u> No <u>NO</u>			
9 For each sample, does the COC specify preservatives (<u>DN</u>), # of containers (<u>DN</u>), and sample type of grab/comp (<u>DN</u>)? <u>YES</u> No <u>NO</u>			
10 Were correct bottle(s) used for the test(s) indicated? <u>YES</u> No <u>NO</u>			
11 Sufficient quantity received to perform indicated analyses? <u>YES</u> No <u>NO</u>			
12. Are these work share samples and all listed on the COC? <u>YES</u> No <u>NO</u>			
If yes- Questions 13-17 have been checked at the originating laboratory			
13 Were all preserved sample(s) at the correct pH upon receipt? <u>YES</u> No <u>NA</u> pH Strip Lot# <u>HC463162</u>			
14 Were VOAs on the COC? <u>YES</u> No <u>NO</u>			
15 Were air bubbles > 6 mm in any VOA vials? <u>YES</u> NO <u>larger than this</u> Yes No <u>NA</u>			
16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No <u>NO</u>			
17 Was a L.Hg or Me.Hg trip blank present? <u>YES</u> No <u>NO</u>			
Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____			
Concerning _____			
18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page		Labeled by: _____	
		Labels Verified by: _____	
19. SAMPLE CONDITION			
Sample(s) _____		were received after the recommended holding time had expired	
Sample(s) _____		were received in a broken container	
Sample(s) _____		were received with bubble > 6 mm in diameter (Notify PM)	
20. SAMPLE PRESERVATION			
Sample(s) _____		were further preserved in the laboratory	
Time preserved: _____		Preservative(s) added/Lot number(s) _____	
VOA Sample Preservation Date/Time VOAs Frozen _____			

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

RK# 4234 9606 9778
2201

TUE - 29 JUL 10:30A
PRIORITY OVERNIGHT

XS CAKA

44203
DH-US CLE



Login Sample Receipt Checklist

Client: GeoEnvironmental Resources Inc GER

Job Number: 400-279801-1

Login Number: 279801

List Source: Eurofins Pensacola

List Number: 1

Creator: Pardonner, Brett

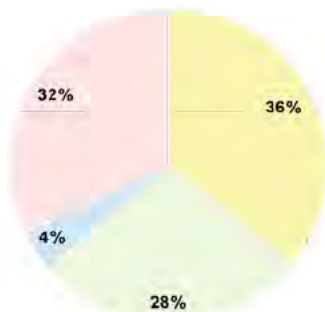
Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.1°C IR11
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

SECTION 3

SAMPLE LOCATION MAP

EXISTING BUILDING ANALYSIS - YEAR BUILT

The historic Patton Hall has seen several additions and minor renovations over the years. The original components, the administration wing and jailhouse, were both constructed in 1896. Minor renovations were conducted over the years as the building shifted in its function from administration to a conference center. Illustrated in the diagrams to the right, the original construction is shown highlighted in yellow. The next addition occurred in 1957, increasing the square footage by 33%. In 1964 there was a minor addition, mainly to the first level, that increased the building's footprint by 2%. The most recent addition was in 1969, and it increased the square footage by 36%. The majority of square footage built was in 1896, followed by 1969 (as per above), 1957 and 1969.



GRAPHIC LEGEND

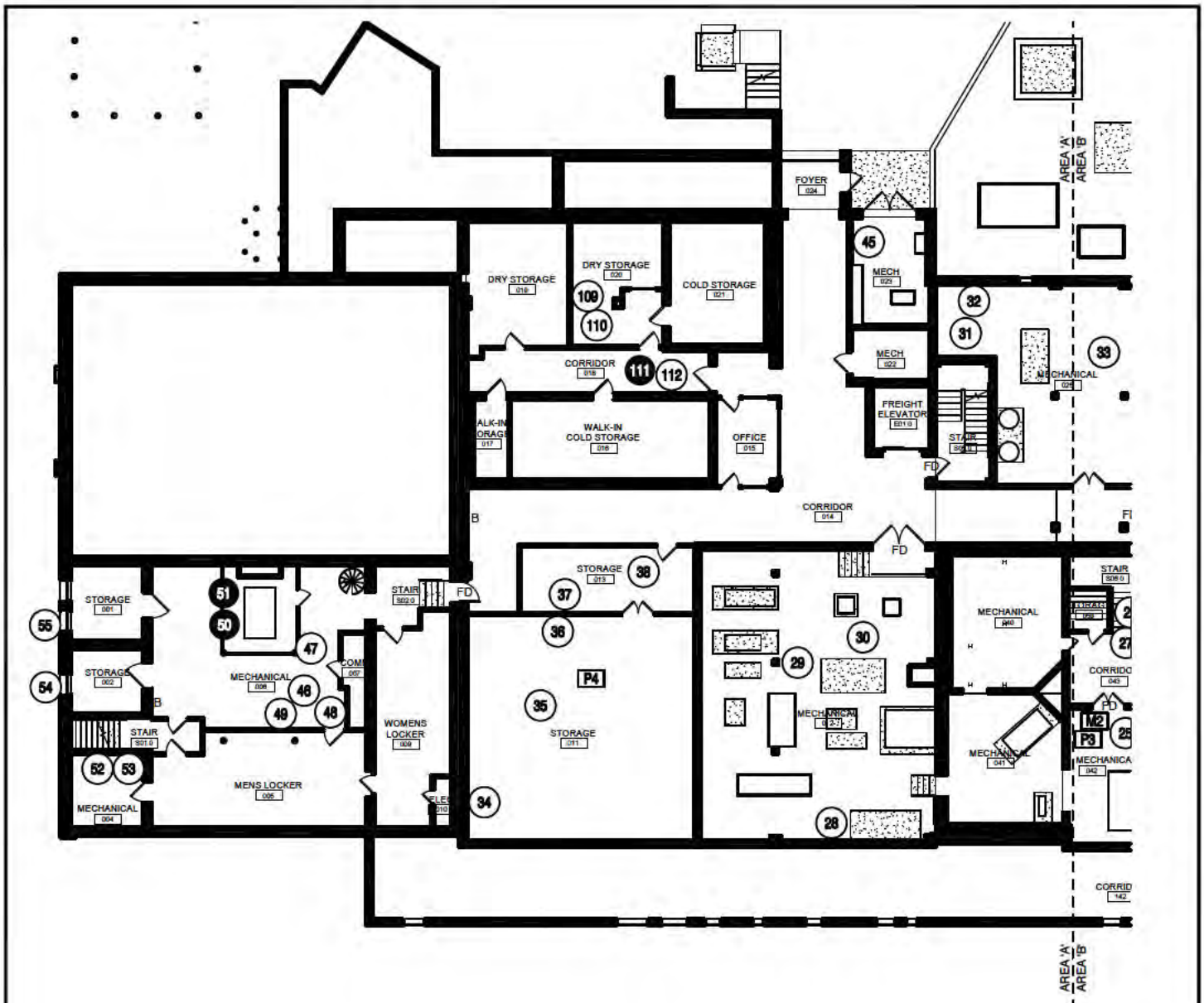


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EXISTING BUILDING ANALYSIS - YEAR BUILT PATTON HALL FORT MYERS, ARLINGTON, VA

DRAWN BY	DATE	SIZE	PROJECT NO.	DWG NO.	REV
H. N. ADCOCK	8/25/2025	A	130-8310	1	-
APPROVED BY	DATE	SCALE 1" = 24'-0"			SHEET 1 of 8
W. S. PINE	8/25/2025				



KEY TO SYMBOLS

- (888)** POSITIVE SAMPLE LOCATION FOR ASBESTOS
- (888)** NEGATIVE SAMPLE LOCATION FOR ASBESTOS
- [L1]** PAINT SAMPLE LOCATION

NOTE: THE LOCATION FROM WHICH THE SAMPLES WERE OBTAINED IS APPROXIMATE AND SHOULD NOT BE INTERPRETED AS THE ONLY LOCATION WHERE THE MATERIAL EXISTS.

PARTIAL BASEMENT FLOOR PLAN - AREA 'A'

1" = 24'-0"

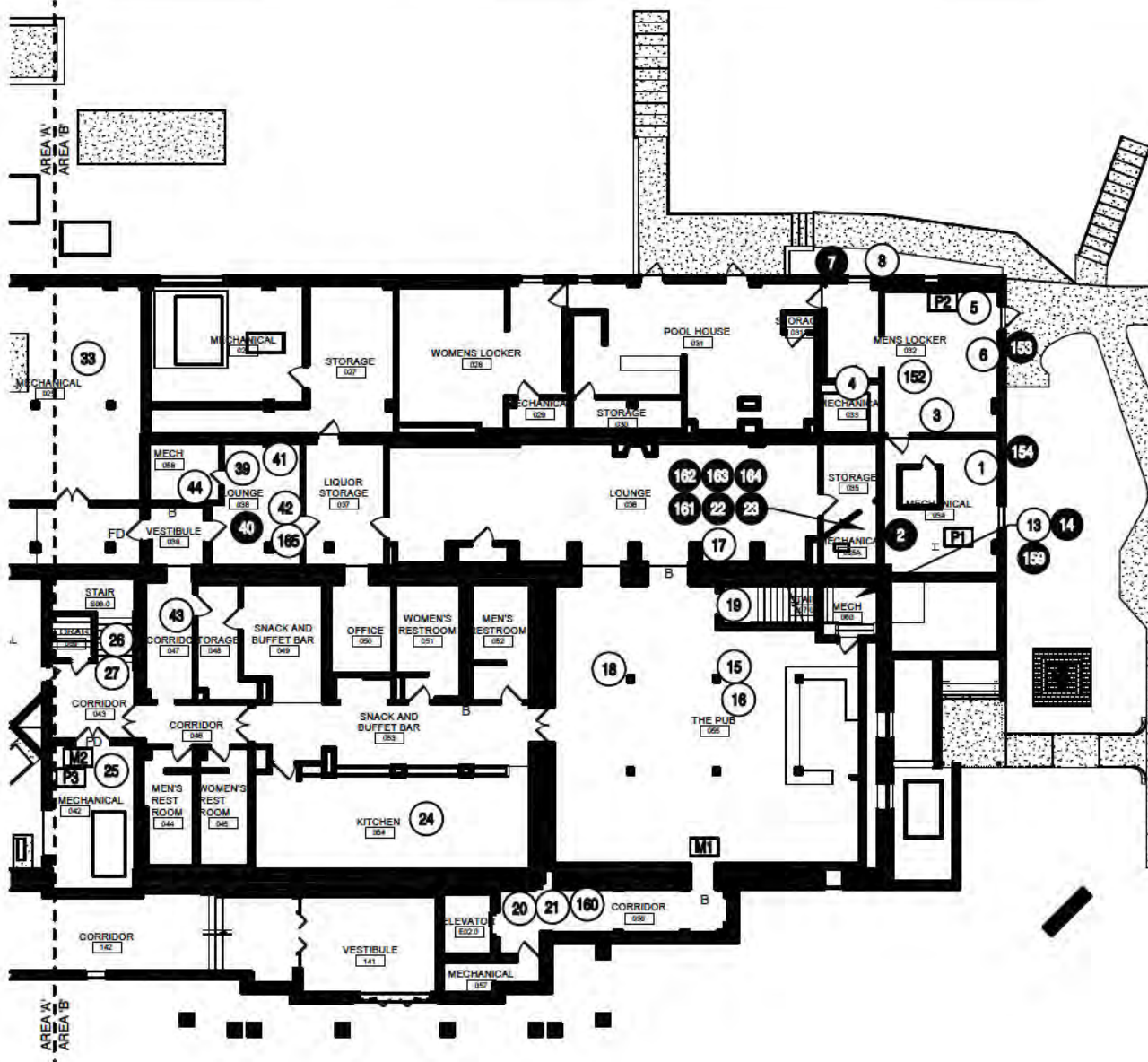


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HAZMAT SAMPLE LOCATION PLAN PATTON HALL FORT MYERS, ARLINGTON, VA

DRAWN BY	DATE	SIZE	PROJECT NO.	DWG NO.	REV
H. N. ADCOCK	8/25/2025	A	130-8310	2	-
APPROVED BY	DATE	SCALE 1" = 24'-0"			SHEET 2 of 9
W. S. PINE	8/25/2025				



KEY TO SYMBOLS

- 888 POSITIVE SAMPLE LOCATION FOR ASBESTOS
- 888 NEGATIVE SAMPLE LOCATION FOR ASBESTOS
- L1 PAINT SAMPLE LOCATION

NOTE: THE LOCATION FROM WHICH THE SAMPLES WERE OBTAINED IS APPROXIMATE AND SHOULD NOT BE INTERPRETED AS THE ONLY LOCATION WHERE THE MATERIAL EXISTS.

PARTIAL BASEMENT FLOOR PLAN - AREA 'B'

1" = 24'-0"

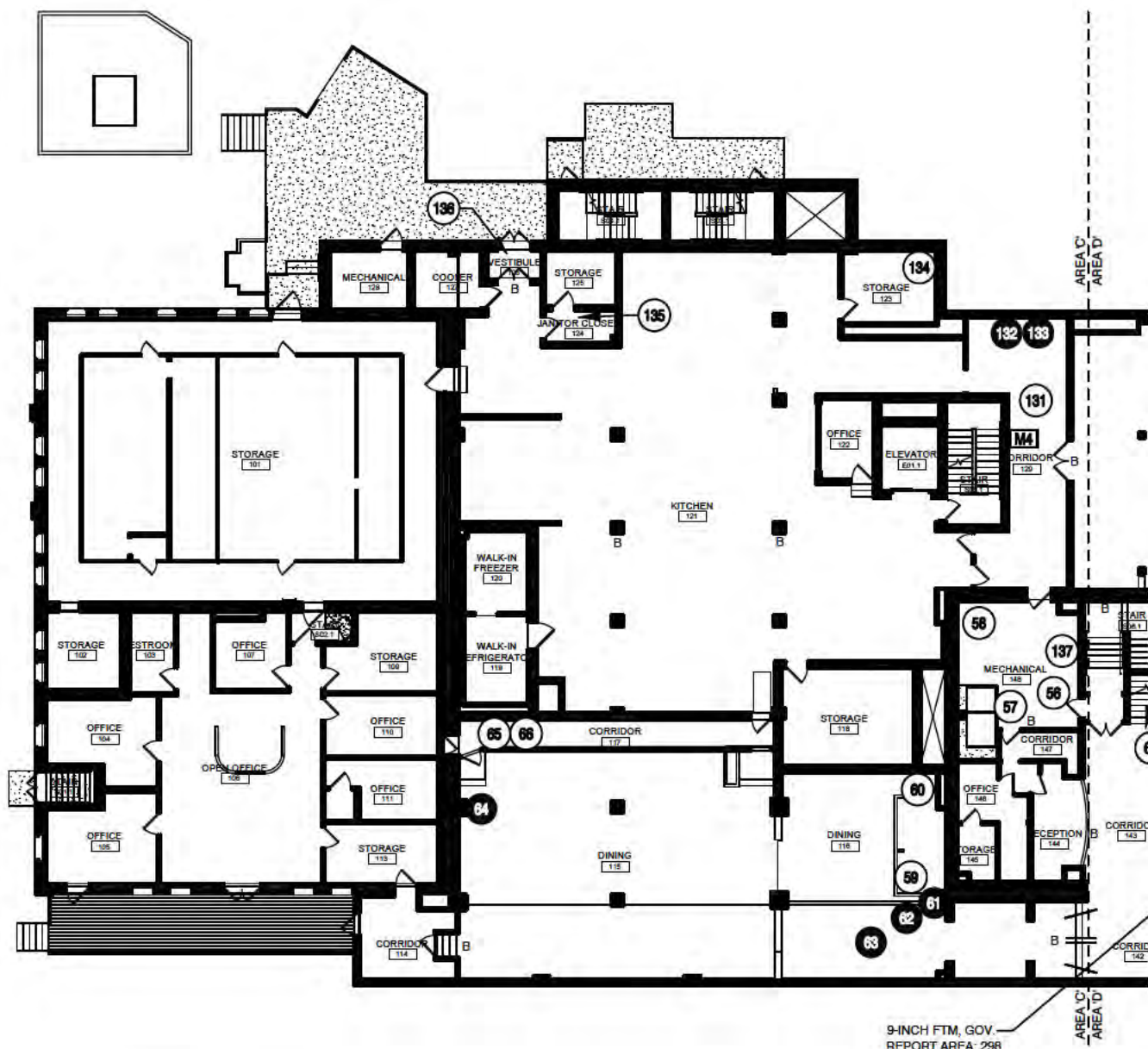


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HAZMAT SAMPLE LOCATION PLAN PATTON HALL FORT MYERS, ARLINGTON, VA

DRAWN BY	DATE	SIZE	PROJECT NO.	DWG NO.	REV
H. N. ADCOCK	8/25/2025	A	130-8310	3	-
APPROVED BY	DATE	SCALE 1" = 24'-0"		SHEET 3 of 9	
W. S. PINE	8/25/2025				



KEY TO SYMBOLS

- POSITIVE SAMPLE LOCATION FOR ASBESTOS
- NEGATIVE SAMPLE LOCATION FOR ASBESTOS
- PAINT SAMPLE LOCATION

NOTE: THE LOCATION FROM WHICH THE SAMPLES WERE OBTAINED IS APPROXIMATE AND SHOULD NOT BE INTERPRETED AS THE ONLY LOCATION WHERE THE MATERIAL EXISTS.

PARTIAL FIRST FLOOR PLAN - AREA 'C'

1" = 24'-0"

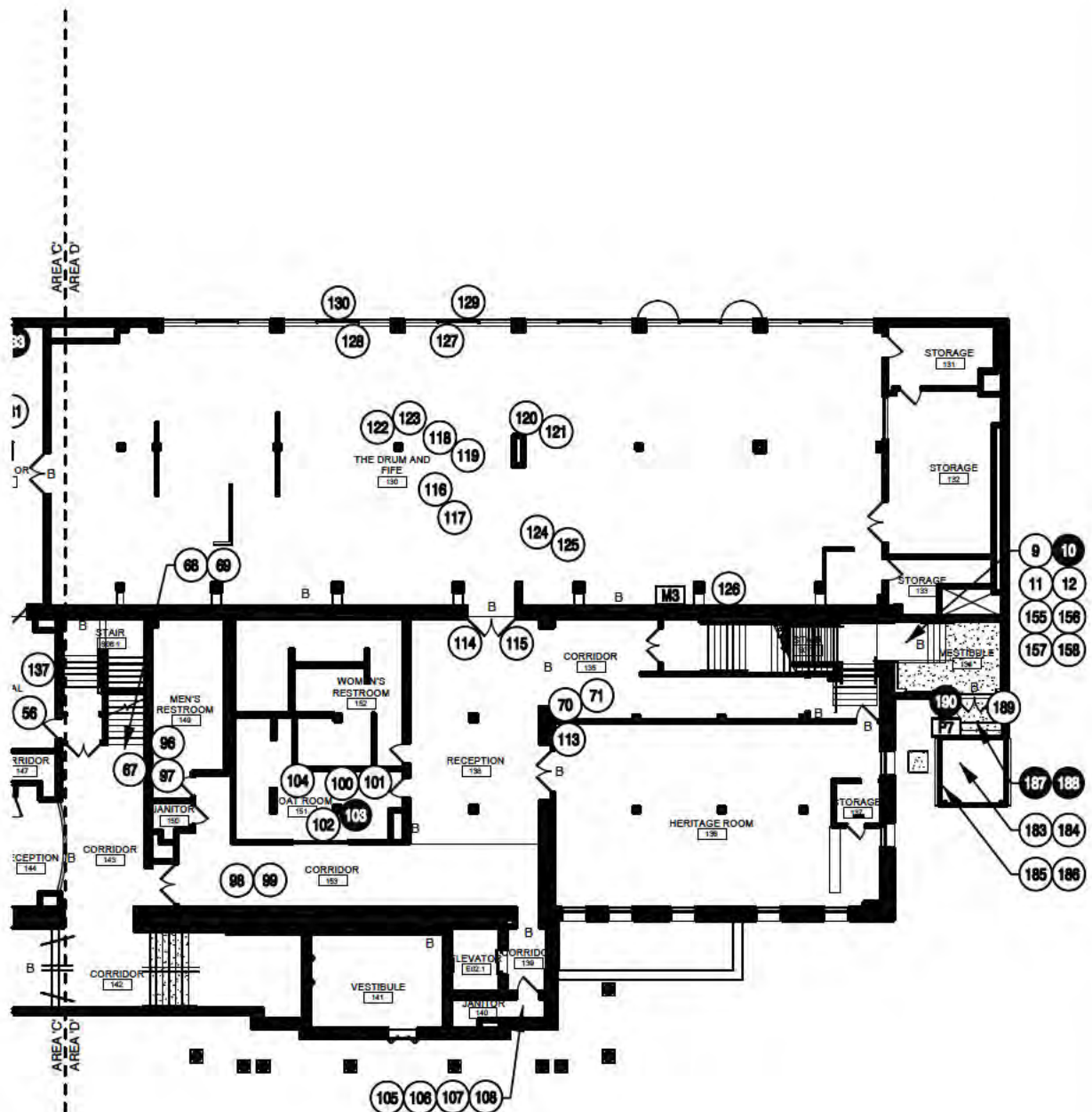


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HAZMAT SAMPLE LOCATION PLAN PATTON HALL FORT MYERS, ARLINGTON, VA

DRAWN BY	DATE	SIZE	PROJECT NO.	DWG NO.	REV
H. N. ADCOCK	8/25/2025	A	130-8310	4	-
APPROVED BY	DATE	SCALE 1" = 24'-0"			SHEET 4 of 9
W. S. PINE	8/25/2025				



KEY TO SYMBOLS

- POSITIVE SAMPLE LOCATION FOR ASBESTOS
- NEGATIVE SAMPLE LOCATION FOR ASBESTOS
- PAINT SAMPLE LOCATION

NOTE: THE LOCATION FROM WHICH THE SAMPLES WERE OBTAINED IS APPROXIMATE AND SHOULD NOT BE INTERPRETED AS THE ONLY LOCATION WHERE THE MATERIAL EXISTS.

PARTIAL FIRST FLOOR PLAN - AREA 'D'

1" = 24'-0"

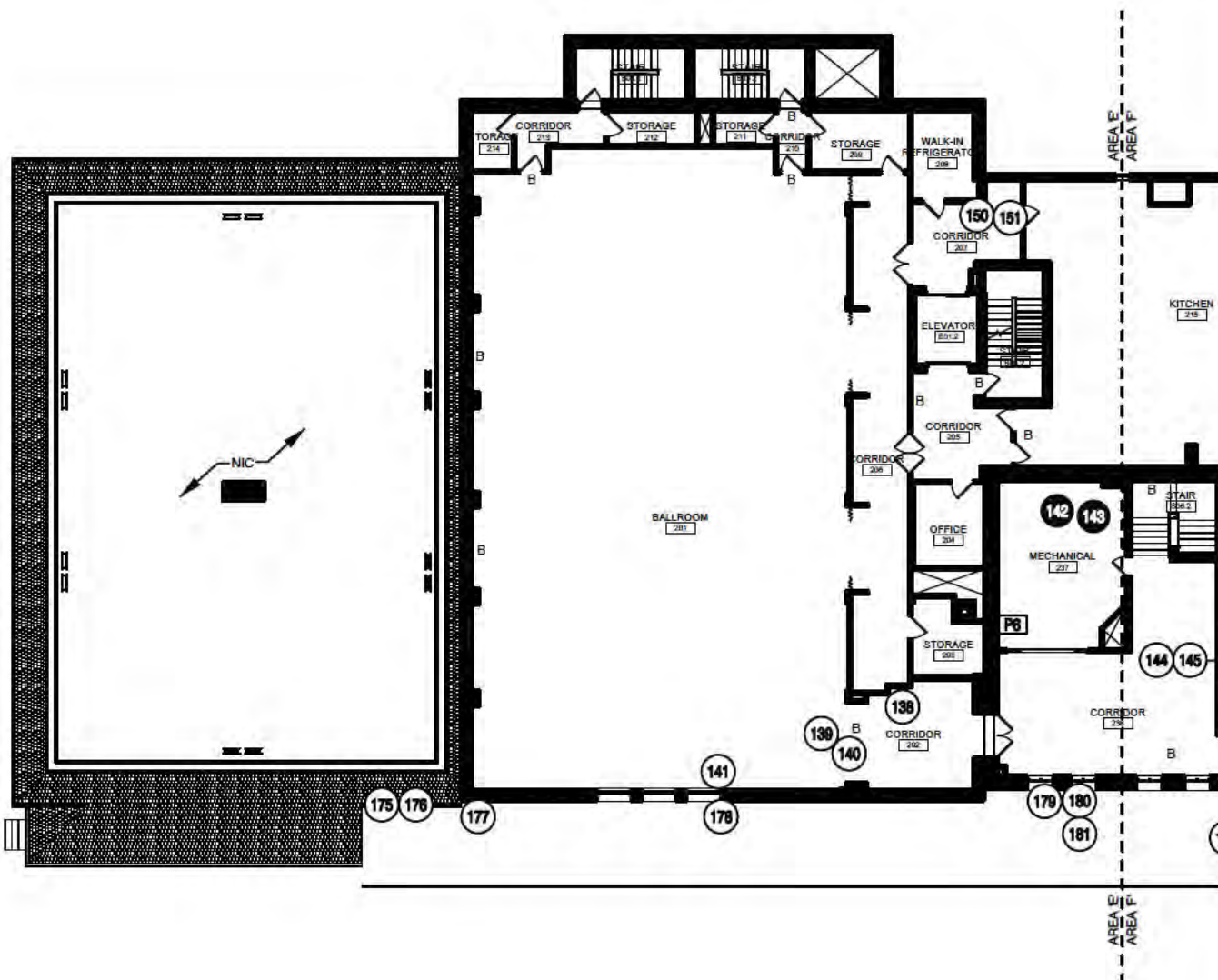


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HAZMAT SAMPLE LOCATION PLAN PATTON HALL FORT MYERS, ARLINGTON, VA

DRAWN BY	DATE	SIZE	PROJECT NO.	DWG NO.	REV
H. N. ADCOCK	8/25/2025	A	130-8310	5	-
APPROVED BY	DATE	SCALE 1" = 24'-0"			SHEET 5 of 9
W. S. PINE	8/25/2025				



KEY TO SYMBOLS

- POSITIVE SAMPLE LOCATION FOR ASBESTOS
- NEGATIVE SAMPLE LOCATION FOR ASBESTOS
- PAINT SAMPLE LOCATION

NOTE: THE LOCATION FROM WHICH THE SAMPLES WERE OBTAINED IS APPROXIMATE AND SHOULD NOT BE INTERPRETED AS THE ONLY LOCATION WHERE THE MATERIAL EXISTS.

PARTIAL SECOND FLOOR PLAN - AREA 'E'

1" = 24'-0"

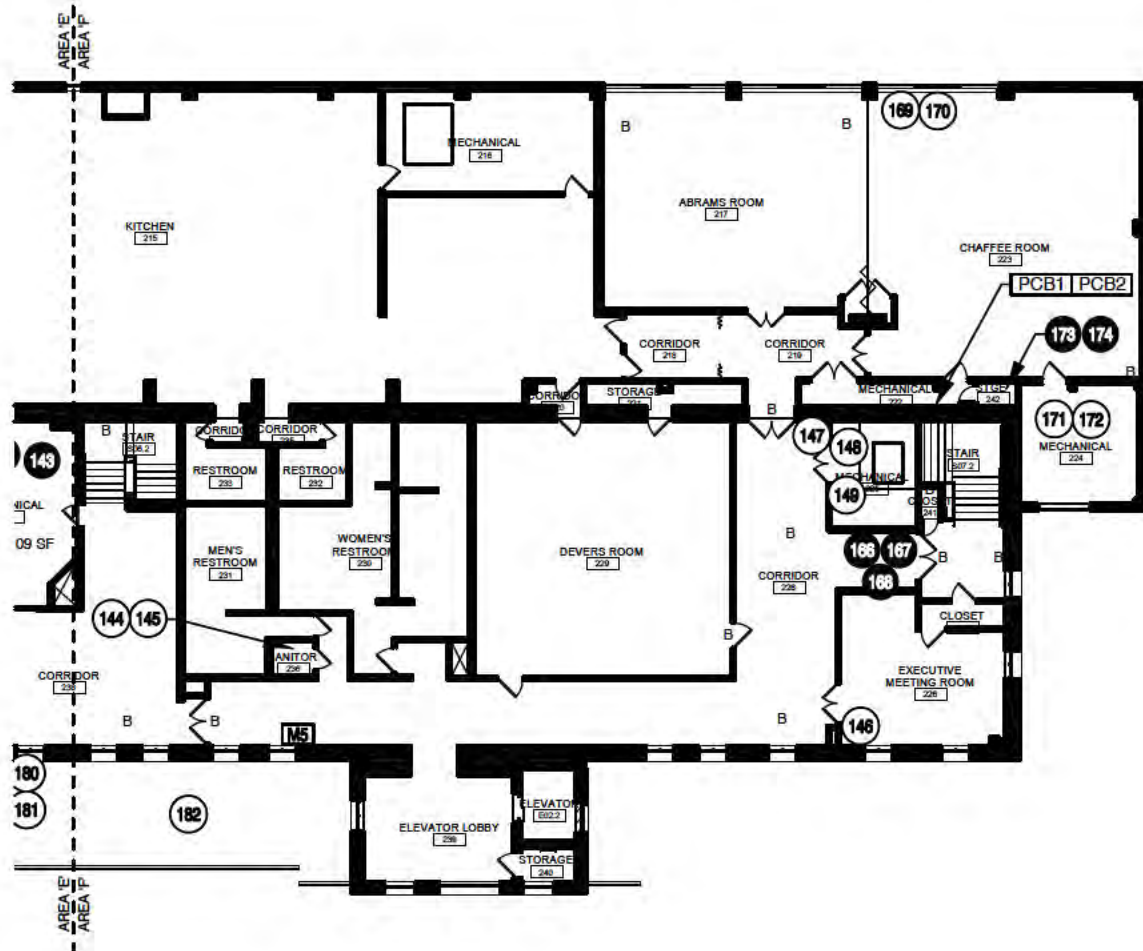


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HAZMAT SAMPLE LOCATION PLAN PATTON HALL FORT MYERS, ARLINGTON, VA

DRAWN BY	DATE	SIZE	PROJECT NO.	DWG NO.	REV
H. N. ADCOCK	8/25/2025	A	130-8310	6	
APPROVED BY	DATE	SCALE 1" = 24'-0"			SHEET 6 of 9
W. S. PINE	8/25/2025				



KEY TO SYMBOLS

-  POSITIVE SAMPLE LOCATION FOR ASBESTOS
-  NEGATIVE SAMPLE LOCATION FOR ASBESTOS
-  PAINT SAMPLE LOCATION

NOTE: THE LOCATION FROM WHICH THE SAMPLES WERE OBTAINED IS APPROXIMATE AND SHOULD NOT BE INTERPRETED AS THE ONLY LOCATION WHERE THE MATERIAL EXISTS.

PARTIAL SECOND FLOOR PLAN - AREA 'F'

1" = 24'-0"

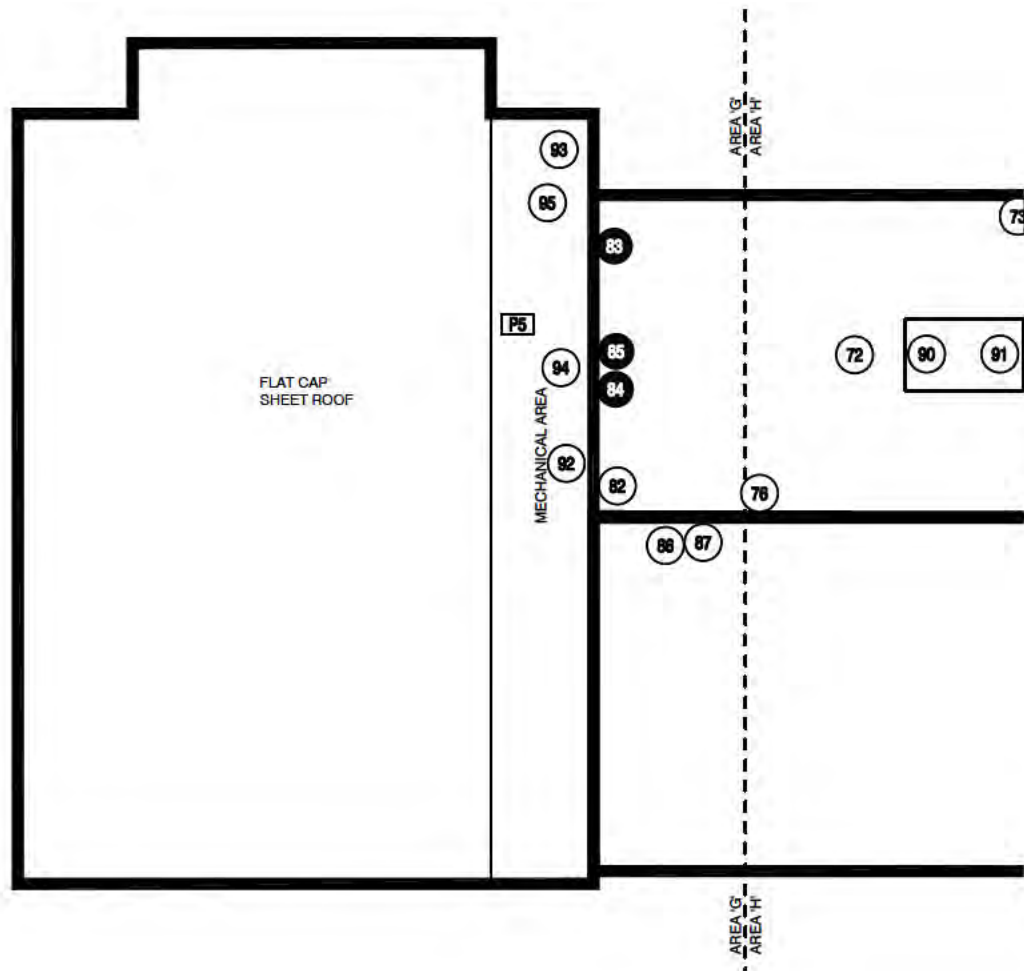


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HAZMAT SAMPLE LOCATION PLAN PATTON HALL FORT MYERS, ARLINGTON, VA

DRAWN BY	DATE	SIZE	PROJECT NO.	DWG NO.	REV
H. N. ADCOCK	8/25/2025	A	130-8310	7	-
APPROVED BY	DATE	SCALE 1" = 24'-0"			SHEET 7 of 9
W. S. PINE	8/25/2025				



KEY TO SYMBOLS

-  POSITIVE SAMPLE LOCATION FOR ASBESTOS
-  NEGATIVE SAMPLE LOCATION FOR ASBESTOS
-  PAINT SAMPLE LOCATION

NOTE: THE LOCATION FROM WHICH THE SAMPLES WERE OBTAINED IS APPROXIMATE AND SHOULD NOT BE INTERPRETED AS THE ONLY LOCATION WHERE THE MATERIAL EXISTS.

PARTIAL ROOF PLAN - AREA 'G'

1" = 24'-0"

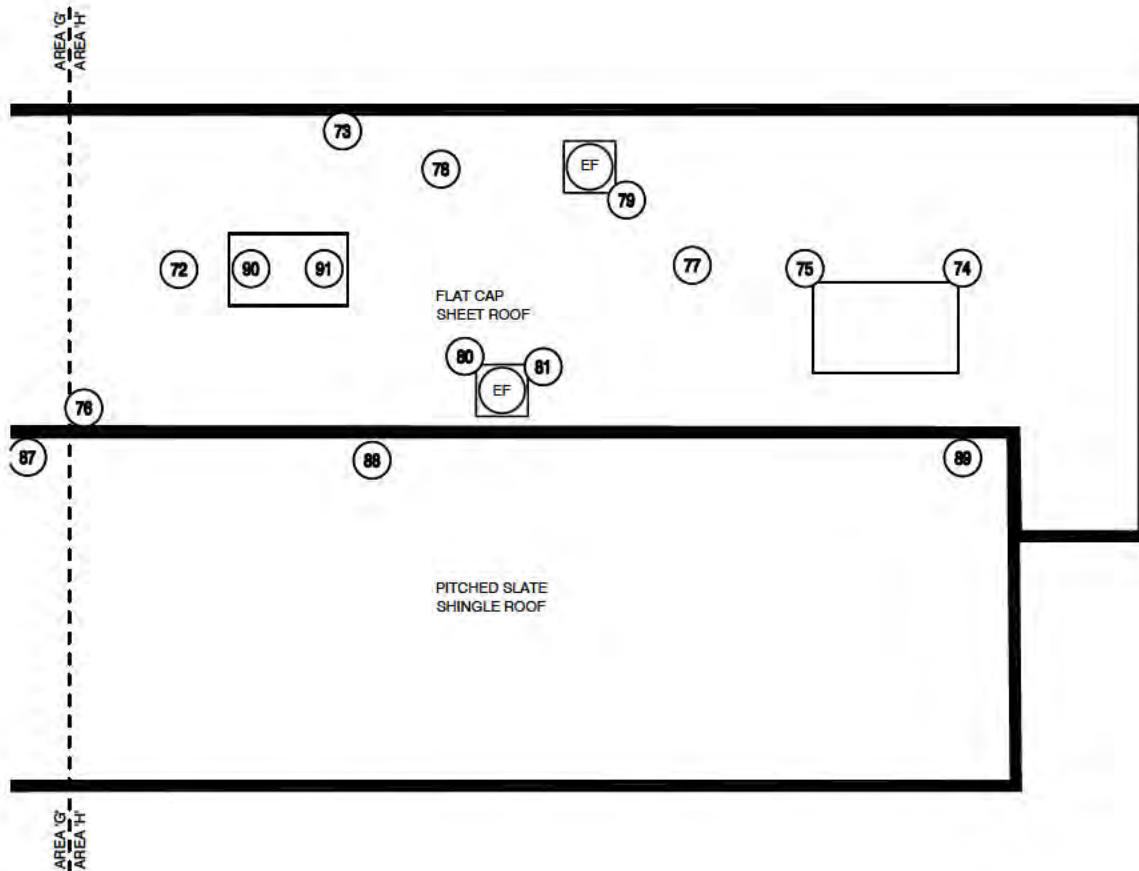


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HAZMAT SAMPLE LOCATION PLAN PATTON HALL FORT MYERS, ARLINGTON, VA

DRAWN BY	DATE	SIZE	PROJECT NO.	DWG NO.	REV
H. N. ADCOCK	8/25/2025	A	130-8310	8	-
APPROVED BY	DATE	SCALE 1" = 24'-0"			SHEET 8 of 9
W. S. PINE	8/25/2025				



KEY TO SYMBOLS

- 888 POSITIVE SAMPLE LOCATION FOR ASBESTOS
- 888 NEGATIVE SAMPLE LOCATION FOR ASBESTOS
- 111 PAINT SAMPLE LOCATION

NOTE: THE LOCATION FROM WHICH THE SAMPLES WERE OBTAINED IS APPROXIMATE AND SHOULD NOT BE INTERPRETED AS THE ONLY LOCATION WHERE THE MATERIAL EXISTS.

PARTIAL ROOF PLAN - AREA 'H'

1" = 24'-0"



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HAZMAT SAMPLE LOCATION PLAN PATTON HALL FORT MYERS, ARLINGTON, VA

DRAWN BY	DATE	SIZE	PROJECT NO.	DWG NO.	REV
H. N. ADCOCK	8/25/2025	A	130-8310	9	-
APPROVED BY	DATE	SCALE 1" = 24'-0"			SHEET 9 of 9
W. S. PINE	8/25/2025				

SECTION 4

PHOTOGRAPHS



Photo 1: North facing view of the main entrance to Patton Hall, Building 214.



Photo 2: White mastic on TSI in Mech. Room 034 (Sample #2).

Photographs

Project: Patton Hall, Building 214
Joint Base Fort Myer - Henderson Hall
Arlington, VA

Number: 130-8310

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Consulting Engineers

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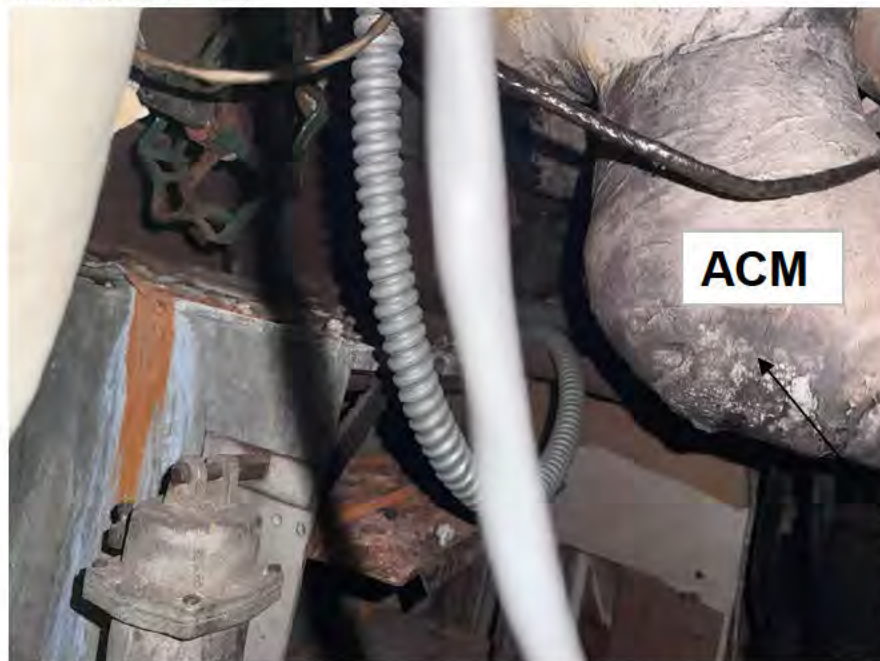
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Photo Sheet 1



ACM
BLACK
MASTIC

Photo 3: ACM black mastic observed at the base of the brick wall around the building (Sample #7).



ACM

ACM
MUDDIED
FITTING

Photo 4: ACM muddied fitting observed in Mech. Room 060 (Sample #14).

Photographs

Project: Patton Hall, Building 214
Joint Base Fort Myer - Henderson Hall
Arlington, VA

Number: 130-8310



Photo Sheet 2



ACM
FLOOR
TILE

Photo 5: Two layers of ACM floor tile in Basement Room 035A (Sample #17 & 18).



ACM
BLACK
MASTIC

Photo 6: Yellow mastic on fiberglass insulation on HVAC duct. The yellow mastic is ACM (Sample #40).

Photographs

Project: Patton Hall, Building 214
Joint Base Fort Myer - Henderson Hall
Arlington, VA

Number: 130-8310



Photo Sheet 3



Photo 7: ACM Transite panel observed on the ceiling of Basement Mech. Room 006 (Sample #50).



Photo 8: ACM Transite panel observed on the ceiling in Basement Mech. Room 004.

Photographs

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Number: 130-8310



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Photo Sheet 4



Photo 9: ACM brown adhesive pucks observed behind wood wainscoting in Dining Room 116 (Sample #61).

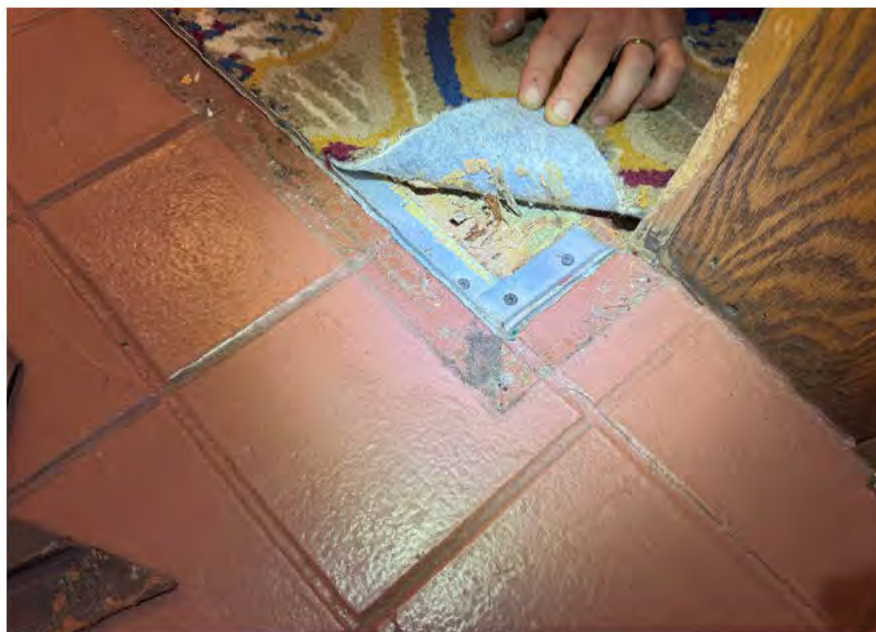


Photo 10: ACM yellow carpet mastic observed on the wood subfloor beneath the carpet in Dining Room 116 (Sample #63).

Photographs

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Number: 130-8310

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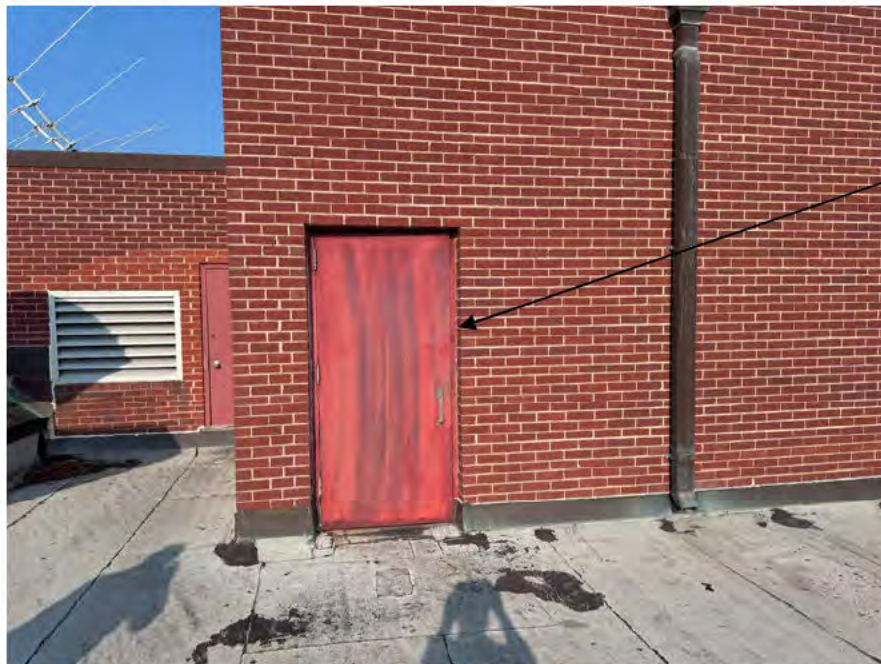
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Photo Sheet 5



ACM
WHITE
SEALANT

Photo 11: ACM white sealant observed on the base flashing on the roof (Sample #83).



ACM WHITE
DOOR
FRAME
SEALANT

Photo 12: ACM white door frame sealant on the roof access door (Sample #84 & #85).

Photographs

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Photo Sheet 6



Photo 13: Gypsum wallboard and joint compound observed in Coat Room 151. The joint compound contains <1% asbestos (Sample #103).



Photo 14: ACM black mastic observed on the CMU wall above the SACT in Kitchen Corridor 129 (Sample #132 & #133).

Photographs

Project: Patton Hall, Building 214
Joint Base Fort Myer - Henderson Hall
Arlington, VA

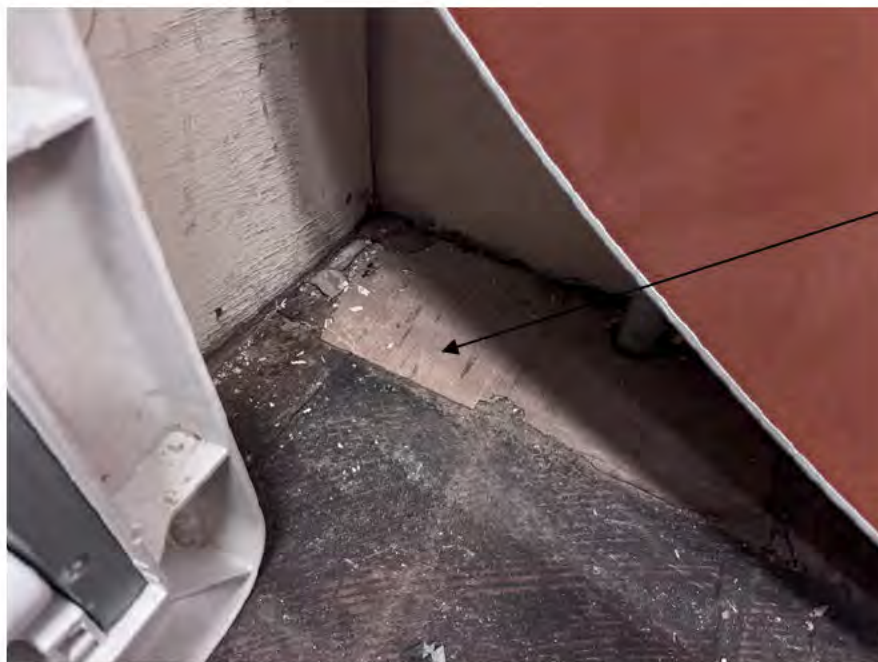
Number: 130-8310

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Photo Sheet 7



ACM
FLOOR
TILE

Photo 15: ACM brown 12-inch for tile observed in Mech. Room 237 (Sample #142 & 143).



Photo 16: Exterior vents on the building. The white sealant on the vents is ACM (Sample #154).

Photographs

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Number: 130-8310

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Photo Sheet 8



ACM GREY
FIREPROOFING

Photo 17: Typical view of paint storage, a flammable locker and a parts cleaner in the printing building.



ACM WHITE
SEALANT

Photo 18: ACM white window frame sealant observed on a former exterior window in Mech. Room 222 and Storage Room 242 (Sample #173 & 174).

Photographs

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Arlington, VA

Number: 130-8310

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Photo Sheet 9



ACM PLASTER
CEILING

Photo 19: ACM plaster ceiling observed above the entrance to Room 134 (Sample #187 & #188).



Photo 20: ACM white sealant was observed around the door frame (Sample #190).

Photographs

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Arlington, VA

Number: 130-8310



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Photo Sheet 10



VISIBLE MOLD
GROWTH ON
WOOD SOFFIT

Photo 21: Mold growth observed on a wood soffit in Basement Room 055 (Sample #M1).



VISIBLE MOLD
GROWTH ON
TSI

Photo 22: Mold growth observed on TSI in Basement Mech. Room 042 (Sample #M2).

Photographs

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Joint Base Fort Myer - Henderson Hall
Arlington, VA

Number: 130-8310



Photo Sheet 11



VISIBLE MOLD
GROWTH ON
BACKSIDE OF

Photo 23: Mold growth observed on the backside of wallpaper in Dining Room 130 (Sample #M3).



VISIBLE MOLD
GROWTH ON
SACT

Photo 24: Mold growth observed on SACT in Kitchen Corridor 129 (Sample #M4).

Photographs

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Arlington, VA

Number: 130-8310

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Photo Sheet 12



VISIBLE MOLD
GROWTH ON
BACKSIDE OF

Photo 25: Mold growth observed on the backside of wallpaper in Corridor Room 228 (Sample #M5).



BROWN
ADHESIVE
PUCKS FOR
CEILING TILE,
NO ACM.

Photo 26: Brown adhesive puck associated with ceiling tile in Vestibule Room 134 (Sample #10).

Photographs

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Arlington, VA

Number: 130-8310

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Photo Sheet 13



Photo 27: ACM mudded pipe fittings observed in Basement Vestibule 039.



Photo 28: ACM pipe insulation observed in Basement Mech. Room 012.

Photographs

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Joint Base Fort Myer - Henderson Hall
Arlington, VA

Number: 130-8310

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Photo Sheet 13

SECTION 5

LICENSES

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

09-30-2025

NUMBER

3303001776

BOARD FOR ASBESTOS, LEAD, AND HOME INSPECTORS ASBESTOS INSPECTOR LICENSE



HUGH NELSON ADCOCK JR
218 75TH ST
VIRGINIA BEACH, VA 23451



Brian F. Wolford
Brian F. Wolford, Director

Status can be verified at <http://www.dpor.virginia.gov>

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

04-30-2026

NUMBER

3305001175

BOARD FOR ASBESTOS, LEAD, AND HOME INSPECTORS ASBESTOS PROJECT DESIGNER LICENSE



HUGH NELSON ADCOCK JR
218 75TH ST
VIRGINIA BEACH, VA 23451



Brian F. Wolford
BRIAN WOLFORD, DIRECTOR

Status can be verified at <http://www.dpor.virginia.gov>

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DPOR-LIC (02/2017)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

05-31-2026

NUMBER

3357000280

BOARD FOR ASBESTOS, LEAD, AND HOME INSPECTORS LEAD PROJECT DESIGNER LICENSE



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DPOR-LIC (02/2017)

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US Army Corps
of Engineers
Baltimore District

ENVIRONMENTAL HEALTH FACILITY ASSESSMENT

**Ft. Myer Building 214
Joint Base Myer-Henderson Hall, VA**

Prepared: 15 MAR 2019

Executive Summary

Joint Base Myer-Henderson Hall (JBM-HH) recently identified mold in a number of their facilities. The Installation requested USACE perform a Hazardous Material (HAZMAT) survey and facility evaluation for all occupied facilities. The HAZMAT survey examined indoor air quality, including mold spore trap sampling; and asbestos, lead based paint, polychlorinated biphenyls (PCBs), and Mercury. High-priority facilities were identified by the Installation and are being surveyed by an in-house USACE team. This environmental health facility assessment is the product of a multi-disciplinary in-house USACE team that consisted of two components. The first component were the industrial hygienists from the Environmental and Munitions Design Center (EMDC) who were tasked with conducting the HAZMAT survey using non-destructive sampling techniques. The second team were architects and engineers from the Military Design Branch, tasked with evaluating the facility to determine which elements or systems are contributing to mold production by permitting water infiltration or uncontrolled humidity.

The team was able to identify mold growth and eight positive lead based paint results. Most of the rooms sampled were found to have levels of mold spore concentrations higher than the outdoor air. The primary cause of this mold growth is overall water infiltration into the building and an inadequately performing HVAC system. Additional causes may include issues with the roof and exterior walls, further inspection is recommended. This report describes the team's findings and offers several recommendations for both short-term and long-term solutions.

Building 214, Fort Myer
77,310 SQFT



CONTAMINANTS IDENTIFIED

☐ Rodents	☒ Mold	☒ Lead Paint
☐ PCBs	☐ Asbestos	☐ Sewer Gases
☐ Mercury	☐ Radon	☐ Radioactive Material

User-Level Recommendations Summary

- Unclog basement floor drain.
- Sanitize nonporous surfaces.
- Use dehumidifier in impacted areas.
- Clean air supplies and returns.

Short-Term Recommendations Summary

- Improve air circulation in food storage area.
- Stop water leaks into areas.
- Paint poor condition areas to make lead safe.
- Remove and replace damaged ceiling tiles.
- Purge inside air and provide conditioned air.
- Clear mulch at downspout & provide positive drainage.
- Remove all ivy from exterior walls.
- Repair electrical box to seal correctly.
- Inspect roof.
- Replace falling ceiling in kitchen area.
- Investigate peeling wall covering and replace.
- Ensure proper control system function.
- Install MERV 8 pre-filters on intake ducts.
- Install UV light air cleaners where possible.
- Repair duct work and remove flex ducts.
- Repair and/or replace pipe and duct insulation.
- Disable irrigation heads adjacent to air intakes.
- Repair and/or replace various HVAC items.

Total \$ 874K

Long-Term Recommendations Summary

- Address water infiltration into basement.
- Monitor for further water infiltration issues.
- Establish general maintenance plan.
- Replace flooring in soft spots.
- Replace roof if deemed necessary by inspection.
- Remove pneumatic controls and install new DDCs with electric actuators.
- Install low dew point AHUs to provide dehumidification and air pressure control for the facility.
- Replace HVAC system with new units; ensure adequate dehumidification controls.
- Relocate outside air intakes to a minimum of 10-ft. above finished grade.

Total \$ 5.7M

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 5.0 Mechanical 19

ATTACHMENTS

 A. Pictures

 B. Findings & Recommendations List

 C. Field Notes

 D. IAQ and HAZMAT Report

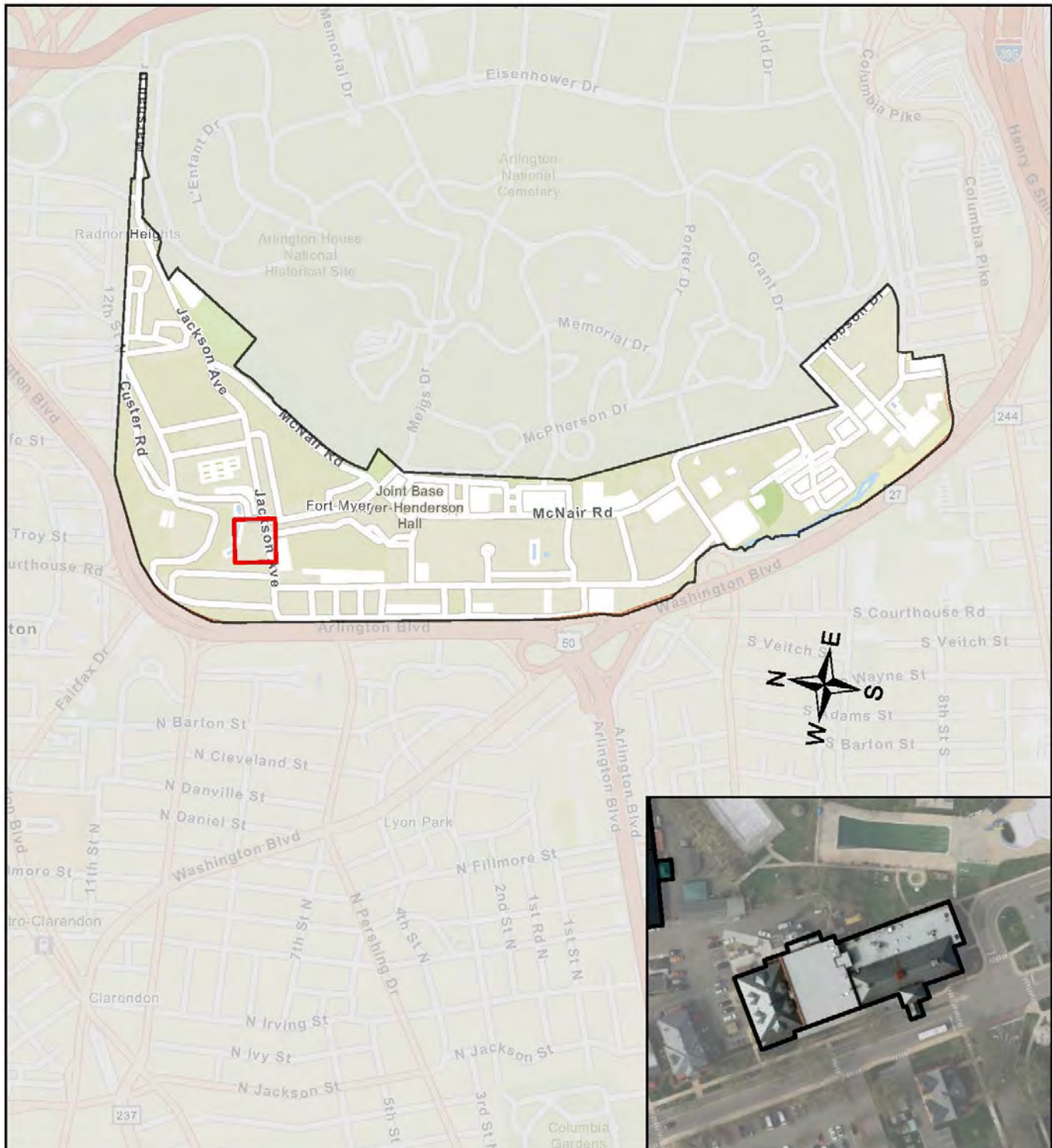
 E. Radon Report

USACE Project Delivery Team

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Clifford Weedman, Civil/Site Engineer	[REDACTED]	[REDACTED]

Site Location Map

Building 214, Fort Myer, VA (North is Left)



Report Narrative

1.0 GENERAL

1.1 Facility: Building 214 at Fort Myer, Virginia

1.2 General Facility Information:

Facility Total Occupied Square Footage: 77,310 sqft (does not include attic)

Number of Stories Below-Grade: 1 Basement

Number of Stories Above-Grade: 3

Approximate Date of Construction: 1967

Facility Use/Function: Officer's Club

Construction Type: IIB

Known Significant Recent Rehabilitation Projects:

- Major HVAC Renovation in 1994

1.3 General Facility Description:

Building 214 is a historic office building located on Fort Myer.

1.4 Environmental Health Contaminants Summary:

Lead Paint: Identified in eight samples.

Asbestos: Not found

Rodents: Not observed.

Mold: Located throughout.

Sewer Gases: Not observed.

1.5 Cost Estimating:

Long Term Solution: The Design Build fee is estimated **\$570,000**, or 10% of the ROM construction cost. PACES was used to calculate costs associated with all long term recommendations within the facility. This software is used to determine parametric level cost estimates based on building size and type and the level of work for various disciplines. Site improvements were estimated by developing quantities and using MII software. The cost estimate is parametric level and should be viewed as a rough order of magnitude. It is not possible to accurately estimate costs without a more definitive scope of work. The following assumptions were made in development of the IGE:

- About 70% of the HVAC system may need complete replacement. Work includes, but not limited to, replacing of some features of the HVAC system, upgrading controls, and adding dedicated outdoor air system infrastructure, re-insulating some elements (like piping and ductwork), re-balancing, and/or maybe some minor extensions or reconfigurations
- About 5% of plumbing may need repairs/replacement, including, but not limited to, addition of a drain at the loading dock roll up door plus piping, excavating, or pumping.
- About 10% of electrical system may need replacement, including but not limited to, power upgrades for new HVAC system.
- About 20% of ceiling finishes may need to be patched/replaced.
- About 10% of lighting and electrical fixtures may need replacement due to water/mold damage.
- About 10% of plumbing fixtures may need replacement, including but not limited to, some shower pans, sinks, and water fountains.
- About 10% of wall finishes may need patch/repair work.

Total ROM for construction cost (including 25% Design Contingency) is **\$5.7 million**.

Short Term Solution: MII software was used to estimate the costs based on site survey and visual inspections. The following assumptions were made in developing the costs for short term solution:

- Seal Electrical Box \$2000
- Clear debris, adjust splash blocks and regrade to provide positive drainage \$800
- Remove ivy growing up the wall \$300
- Replace Interior Ceiling \$26,000
- Inspect Roof \$5000
- Investigate wall covering issue and replace it \$11,800
- Examine control system and make corrections \$384,800
- Install MERV 8 pre-filters on OA intake ducts and install MERV 13 filters \$2000
- Install UV light cleaners \$11,800
- Clean mold from ductwork, air devices, coils \$22,300
- Remove flex ducts and replace with new flex ducts \$34,000
- Provide vents for air circulation in the Basement Food Storage Area \$8000

- Unclog floor drain \$3,500
- Sanitize all nonporous surfaces \$122,500
- Purge inside air with mini HEPA units \$144,800
- Collecting and testing spore trap samples \$94,500

Total ROM cost of short term solution is **\$874,000**

2.0 Industrial Hygiene: Indoor Air Quality (IAQ) and Hazardous Material (HAZMAT)

NOTE: This narrative is a summary of the IAQ and HAZMAT Report contained in Attachment D, which was written by USACE in-house industrial hygienists.

2.1 Indoor Air Quality Assessment

2.1.1 Ventilation, Humidity, and Temperature Measurements

Methods: A calibrated IAQ monitor was used to measure temperature, relative humidity (rH), carbon monoxide (CO), and carbon dioxide (CO₂) levels inside of Building 214. These measurements were made in each area where spore trap samples were collected (see section 2.1.2 below).

Temperature and Humidity: On November 7, 2018 the temperature from readings from Building 214 ranged from 68.6 deg-F to 74.5 deg-F. The indoor relative humidity ranged from 36.0% to 43.6% (refer to Attachment D Table 1). Humidity readings also showed that the elevated temperature and relative humidity are conducive of condensation in cool surface area and uninsulated pipes above suspended ceiling. The areas exposed to condensation and excessive moisture are susceptible to mold growth which was evident in various areas throughout Building 214.

Carbon Monoxide (CO): Direct reading instruments showed CO levels measured in the various spaces to be between 0.0 and 0.3 parts per million (ppm) with the majority at 0.1 ppm. No specific CO sources were identified and these levels were well below the indoor CO concentration of nine (9) ppm adopted by ASHRAE from the EPA National Ambient Air Quality Standard (NAAQS) outdoor air standards (refer to Attachment D Table 1).

Carbon Dioxide (CO₂): Levels of CO₂ ranged from 435 to 556 parts per million (ppm) with many readings similar to outdoor levels (i.e., ~443 ppm). Humans are the primary source of CO₂ in the indoor environment and when they are not present indoor levels can approach outdoor levels. The ASHRAE standard recommends maintaining a CO₂ concentration no greater than 700 ppm above outside air (OA) levels. Outside air level during the site visit was 414 ppm; this means that indoor levels should be maintained below ~1143 ppm. Measurements were not taken overnight during periods of typical occupancy.

2.1.2 Mold Visual Inspection and Spore Trap Samples

Methods: This survey consisted of spore trap sampling. Spore trap sampling was used to determine the ambient airborne concentration of viable and nonviable mold spores. Each sample was run for 5 minutes at 15 L/min for a total air volume of 75 liters. Outdoor background samples were also collected at the end of indoor air sampling. Including the background outdoor sample, a total of six (6) spore trap air samples were collected during the assessment of the Building 214 to capture a representative picture of possible fungal and/or particulate contamination within the building. All indoor samples were collected 4–5 feet above the ground and no closer than 3 feet to any vertical obstructions such as walls or room dividers.

Spore Trap Sampling Results:

- On November 7, 2018 the total viable and non-viable fungal spore concentration in Building 214 ranged from 5,520 counts/m³ to 6,780 counts/m³. Out of the five (5) rooms sampled, all were found to be below the background/outdoor concentration of 40,690 counts/m³. Indoor spore count of specific species was found to be elevated above the background in five (5) rooms.

- The overall composition and diversity of fungi in these rooms was similar to that of the outdoor air; species identified in some of the indoor samples but not outdoors were *Aspergillus/Penicillium*, *Cladosporium*, *Basidiospores*, *Myxomycetes*, and *Rust*. Some of the spores identified indoors do have the potential to cause allergies, hay fever, asthma, and hypersensitivity pneumonitis in individuals and could have originated from outdoor sources. *Stachybotrys*, *Memoniella*, and *Myxomycetes* were also found inside some areas of the the building.

Discussion:

- In Building 214, the spore levels measured indoors were recorded in elevated numbers for the *Aspergillus/Penicillium*, *Stachybotrys*, *Memoniella*, and *Myxomycetes* which can causes allergic reactions, respiratory infections, asthma, and hypersensitivity pneumonitis, an inflammation of the lungs.
- There was little to no ventilation in the basement food storage area. Due to the poor ventilation in the building and inadequate exhaust, the moisture generated in this areas has no proper way to be exhausted and eliminated from the building.

2.2 HAZMAT Survey

2.2.1 Asbestos

Survey:

- A non-destructive asbestos survey inspection was conducted of suspected asbestos containing material (ACM) inside Office Areas, Sleeping Quarters, Hall Passageways, Mechanical Room, pipe chases, above the suspended ceiling, and inside any void where suspected ACM may be found.
- Ten (10) confirmatory bulk samples were collected and submitted for analysis.

Results:

- The results for the material collected and sampled for Building 214 were “No Asbestos Detected” (NAD).
- Refer to Attachment D “Asbestos Sample Laboratory Results” which also contains a summary table of the results and the description and quantity of the material.

2.2.2 Lead Paint

Survey:

- Survey was done by a lead inspector licensed in the State of Virginia on November 7, 2018.
- An XRF Analyzer was used for this effort. 55 XRF readings were taken in the building.

Results:

- Eight (8) component types were found to be positive according to standard regulatory requirements. Positive component types were: wood window casing, wood window sill, wood door frame, wood walls, and metal columns.
- Component types identified in this report found to be positive for lead based paint and noted to be in poor condition should be repainted to be made lead safe.
- Refer to Attachment D "Lead XRF Data" for results.
- The XRF sampling data provided here is representative, but not necessarily comprehensive. Paint surfaces not inspected should be assumed to contain lead-based paint unless the data presented in this report or other data concludes that lead-based paint is not present.

2.2.3 Polychlorinated Biphenyls (PCBs)

Survey:

- A survey/inspection of light fixtures for polychlorinated biphenyls (PCBs) containing ballast inside Building 214 was conducted.

Results:

- During the random survey/inspection no PCB ballasts were observed in the existing light fixtures of accessible Office Areas, Storage Rooms, Hall Passageway, and Mechanical Rooms.

2.2.4 Mercury

Survey:

- Mercury is used in several building components, including fluorescent lamps and liquid thermometers. In fluorescent lighting, mercury-containing dust forms from the mercury vapor found within the lamps.

Results:

- Numerous fluorescent lamps were observed during the building inspection in the aforementioned Building 214. The approximate number of fluorescent bulbs in the building is 800 bulbs. It is recommended that fluorescent lamps be removed and recycled before renovation or demolition of the building. These materials can be managed in place if they will not be disturbed during renovation activities.
- No mercury Thermostat or exit signs were observed or identified.

2.2.5 Radioactive Material

Survey:

- Radioactive material is sometimes found in smoke detectors and exit signs. These elements were visually inspected during the site survey.

Results:

- No smoke detectors containing radioactive material were observed.
- No exit signs containing radioactive material were observed.

2.2.5 Radon

A Health Physicist review of available 1989 radon data for numerous facilities located on the installation indicates that the majority of the test results are well below the EPA Guidelines of 4pCi/L. Given the upcoming maintenance and renovation of the buildings assigned for assessment, coupled with the historic testing results, there is no imminent need for additional testing. See Attachment E for available data.

USACE recommends that post maintenance/renovation radon testing be included in respective scopes of work to be performed. Further, recommend that every effort be made to recover all radon records for all installation facilities and that an installation Toxic Management Team be established per TB 200-1-244 guidance.

2.2.6 Pest Control

- No signs of pest or vermin infestation.

2.3 User-Level Recommendations:

2.3.1	Unclog basement food storage area floor drain.
2.3.2	Sanitize nonporous surfaces.
2.3.3	Use a dehumidifier inside affected areas (Note: Additional individual dehumidifying units will increase the temperature and increase nuisance noise pollution in the spaces.)

2.4 Short-Term Recommendations (See IH Report for Additional Details):

2.4.1	Provide vents for air circulation in basement food storage area.
2.4.2	Stop water leaks into areas.
2.4.3	Replace all damaged ceiling tiles.
2.4.4	Provide air conditioning in required areas and purge air.

2.5 Long-Term Recommendations:

2.5.1	Address water infiltration into the basement.
2.5.2	Conduct periodic surveillance to monitor further water infiltration issues. Address any problems within 24-48 hours to help prevent further mold growth.
2.5.3	Establish general maintenance plan that would sustain the upkeep, health, and infrastructure of the building to ensure durability.

3.0 Site

3.1 Description

Building 214, Patton Hall, fronts to Jackson Avenue on its South exposure. There is a sidewalk and bushes in front of the building with a covered drop off drive at the main entrance. It is bordered on its East side by Custer Road, on its West side by a small parking lot, and on its North side by a set of community swimming pools. The building has progressively been added onto over time and is now shaped like 4 rectangles grouped together.

3.2 Observations and Discussion:

1. Electrical Box: There is an open, exposed electrical / cable box on the South-Southwest side of the building.
2. Mulch Covering Splash Block: Mulch is covering the end of a downspout splash block, prohibiting storm water from properly flowing to the curb line, and creating a ponded area against the exterior wall.
3. Splash Block Flowing Backward: There is a downspout splash block on the South side of the building that is graded backwards. This is preventing storm water from properly draining to the curb line and causing water to pond against the exterior wall.
4. Ivy on Wall: Ivy is growing up the exterior wall on the West side of the building. This may cause root damage to the wall.

3.3 User Level Recommendations:

None.

3.4 Short-Term Recommendations:

3.4.1	Electrical Box: Fix the top of the box so it will seal correctly.
3.4.2	Mulch Covering Splash Block: Clear the mulch from the end of the downspout and provide positive drainage to the road curb line.
3.4.3	Splash Block Flowing Backward: Adjust the splash block. Provide positive drainage away from the building and to the road curb line.
3.4.4	Ivy on Wall: Remove all ivy from the exterior walls.

3.5 Long-Term Recommendations:

None.

Building 214

4.0 Architecture

4.1 Description

Building 214 is an Officer's Club located on Jackson Avenue. The building is 3 stories above grade and contains multiple formal dining areas, kitchens, and office space for a catering business.

4.2 Observations and Discussion:

Roof: The roof condition of the built up roofing was not observed due to a lack of access during the visit. The slate appeared to be in fair condition when viewed from the ground.

Gutters, Downspouts, and Roof Drains: Gutters, downspouts, and roof drains appeared to be in fair condition.

Windows and Doors: Windows and doors were in fair to good condition. The windows in the dining room were replaced in 2015. The occupant mentioned that the windows fog in the summer when the A/C is on.

Indoor Air Quality: Indoor air quality seemed good during the visit. The day of the visit was a mild winter day.

Finishes: There were multiple soft spots in the floor, staining and mold on ceilings in multiple locations across all floors. Wall coverings are peeling away from the wall in a few locations, it's likely that water is between the wall and water covering, possibly through a crack in the exterior wall or water infiltrating/condensating in wall cavity. Evidence of standing water in some locations in the basement.

4.3 User Level Recommendations:

4.3.1	Clean air returns and supplies
4.3.2	Check above ceiling tiles for source of staining

4.4 Short-Term Recommendations:

4.4.1	Replace stained ceiling tiles after source of staining is remedied
4.4.2	Have a roof inspection performed
4.4.3	Replace falling ceiling in kitchen area

4.4.4	Investigate behind peeling wall covering. Replace covering once issue is corrected.
-------	---

4.5 Long-Term Recommendations:

4.5.1	Replace flooring where there are soft spots
4.5.2	Replace roof if deemed necessary from inspection

5.0 Mechanical

5.1 Description

A visual inspection was made of the heating, ventilating, and air conditioning (HVAC) systems of Building 214 as well as observable portions of the plumbing system. Due to the size of the facility, the quantity of mechanical spaces, and time constraints, a full inspection of the systems was not possible particularly of infrastructure above ceilings. A lack of mechanical as-built drawings hindered the team from more effectively inspecting the systems (unless it was obvious from visual inspection, the inspection team was not able to determine which spaces were served by which air handling units) and documenting the results thereof. Room names and numbers are referenced to building floor plans that the team photographed while on site.

Ventilation and Exhaust: Building 214 has numerous air handling units (AHUs), exhaust fans (EF), and heating and ventilating (HV) units. Due to the lack of as-built drawings, the team is unable to quantify the exact number of each. Each unit, or combination of units, serves a specific area (or portion of an area) within the facility (e.g. AHU-5 provides conditioned air to the Fife & Drum Dining Room and AC-22 serves 5-Star Catering's offices).

Temperature Control: Temperature control in each zone is achieved by its respective AHU. Most of the observed AHUs are equipped with variable speed drives to vary airflow to their spaces. The majority of the AHUs have low pressure steam heating coils and chilled water coils.

Automatic Controls: Controls are a pneumatic/electrical hybrid. Honeywell control panels are located throughout the facility with pneumatic actuators at control devices such as dampers and valves. The control air compressor is located in the basement in Mechanical Room 2.

Local Cooling Plant: The facility is served by two water cooled chillers that are located in Mechanical Room #2 in the facility's basement. Two cooling towers are located at the north face of the facility near the loading dock; one larger than the other. There also appears to be a waterside economizer integrated with the cooling plant which utilizes a plate and frame heat exchanger.

Local Heating Hot Water Plant: Heating hot water is produced with a single Thermal Solutions Evolution Boiler.

Local Low Pressure Steam Plant: Low Pressure Steam is produced by a single Weil-McLain Model 88 Series 2 boiler. Condensate return is pumped back to boiler.

Domestic Hot Water: Domestic Hot water is produced with a Lochinvar Copper-Fin II Water Heater. The boiler circulator pump circulates water from the boiler to an adjacent domestic hot water storage tank. The near boiler piping is badly corroded and is leaking water on to the floor.

5.2 Observations and Discussion:

The inspection revealed many problems in the mechanical systems which are documented via photos, videos, and field notes; however, only those that directly impact indoor air quality or health shall be mentioned in the following paragraphs.

1. Basement

- a. Employee Lounge Mechanical Room has a low pressure condensate (LPC) pump that is leaking onto the floor. The leak is ponding on the floor. The mechanical room floor drain is clogged by debris which is slowing the drainage of the LPC leak.
- b. AC-12 (supplies Employee Lounge) has damaged insulation and facing, both of which contribute to condensation.
- c. The employee lounge has mold on the ceiling tiles and air devices.
- d. Boiler Room 3 has rodent activity. Feces were observed in the space.
- e. Black Mold exists on the ceiling of the dry storage room and possibly exists at the base of a wall in a cold room antechamber (though it could be glue from previously removed wall base).
- f. Air handling unit in Room 00045 is off at the disconnect switch. A note on the unit casing states that it feeds the 1st floor kitchen. Discoloration of the pipe insulation indicates a moist environment exists in the mechanical room.
- g. HV-1 (feeds the first floor kitchen) was observed to be running at 15-Hz. A duct temperature sensor indicates a supply air temperature of 150-deg F. An assessment needs to be performed to ensure an adequate amount of ventilation air is being provided to the kitchen at this low speed. The fan motor is in the air stream and is being exposed to excessively high temperatures which will lead to a motor failure which will cause a failure in ventilation air supply to the kitchen. The fan motor should also not be run at a speed lower than 20-Hz unless otherwise permitted by the manufacturer.
- h. An LPC return passes through the outside air intake of HV-1. The OA duct does not have exterior insulation. It should be determined if the duct is internally insulated, and if not, the duct should be wrapped with external insulation to prevent condensation.
- i. HV-2 drives are reading 0-Hz. This unit serves the employee locker room, Mechanical Room 1, and storage spaces. This area has an offensive odor (not from dirty laundry) and needs to have its ventilation system corrected to provide adequate fresh air. The operational status of HV-2's corresponding exhaust fan (located in the attic of 5-Star Catering's Office) should be confirmed by DPW. Per code, the locker room area should be negatively pressurized relative to adjacent spaces to prevent migration of odors thereto.
- j. Mechanical Room 2 has an active water leak through a foundation wall penetration near air handling unit AH-17. Pipe insulation exhibits mold, mildew, and moisture damage. Adjacent mechanical rooms and boiler rooms exhibit poor air quality and do not have any indication of proper ventilation/exhaust. Mech Room 4 has a pipe leak.
- k. The air in the corridor leading to the employee locker room is moist and musty.
- l. Mechanical Room 00016 contains AHU-5 which serves the Fife & Drum dining room. The team observed that the outside air damper was in the closed position even though we were visiting during occupied hours.
- m. Mechanical Room 00016 is used as a return air plenum; however, there are rat traps in the space plus a leaking LPC lift station which are not conducive to acceptable IAQ.

2. First Floor

- a. Many outside air intake louvers are located at grade level. Many of those have rat traps and irrigation sprinklers located in front or near to them. The intake locations pose a health hazard and potentially a life hazard due to AT/FP concerns.
- b. 5-Star Catering's office area has varying IAQ. During the inspection, the air would vary from comfortably warm to moist and muggy. The user says that the system does not

keep the space comfortable. The team observed mold and water stains on ceiling tiles and air devices. The air handler that serves the office is variable air volume (VAV) and contains a chilled water coil and steam heating coil. The system does not have variable air volume terminal units, but branch ducts have steam reheat coils.

- c. The western exposure has a steam vent outlet approximately one foot above grade and less than one hand from the building wall. The condensing steam is wetting the surface of the building and is likely the major contributor to the deterioration of the adjacent windows. The window deterioration could lead to access points for vermin or other pests. The vent also poses a health issue to anyone that inhales it (if the steam has been treated with chemicals).
- d. Corridor 0035 shows water stains on ceiling tiles and wall. Based on the water stains on the wall, the leak may be coming from a mechanical system pipe located above the ceiling.
- e. Mold observed on air devices in the Lamplighter Inn.
- f. Mold observed on air devices in the corridor behind the Lamplighter Inn.
- g. Kitchen dishwashing area is not exhausted and should be in order to improve the IAQ in this area, as well as prevent damage to equipment and finishes. It will also improve worker safety (reduce chances of there being a slip and fall injury).
- h. Bathhouse AHU utilizes its room as an air plenum which is an IAQ hazard due to the rodent problem.
- i. Bathhouse lobby has an exposed broken sanitary and vent pipe that leaking onto furnishings below it.

3. Second Floor

- a. Kitchen dishwashing area is not exhausted which will lead to moisture related problems (evidenced by nearby mold and moisture damage on finishes).
- b. The Abrams and Chaffee Rooms are very musty.
- c. Mech Room 00012 AHU (which serves the Campaign Room) has peeling supply air duct insulation. Moisture problems are evident on the floor boards at the duct penetration. The AHU's plywood base also shows signs of moisture exposure/damage.
- d. The majority of the upstairs spaces exhibit poor IAQ. Most spaces are musty and muggy due to poor moisture control. This statement applies to the dining rooms (Abrams & Chaffee, Devers, and Koran) and corridors. Poor moisture control is also evidenced via peeling wall paper and moldy ceiling tiles.
- e. The Koran Room's AHU (which is located in an old coat check room) has an active LPC leak which is contributing to mold growth under the AHU.

4. Roof

- a. Flat roof membrane appeared to be in good shape. The upper roof northeast hip rafter is missing slate shingles which leaves the substrate exposed to the elements.
- b. HVAC terminations on upper roof have missing or poor flashing and sealing which likely contribute to the moisture/IAQ issues.
- c. A refrigerated equipment condenser is located immediately adjacent to an outside air intake. This poses a health hazard should the refrigerant charge be lost.
- d. Roof mechanical room suffers from rodent problems (the team observed a dead rat near AHU-3).

- e. Kitchen exhaust fan goosenecks down towards flat roof surface. This may pose an IAQ issue for other spaces whose AHUs obtain outside air at this level of the facility.
- f. Elevator Machine room door is locked with a note to keep the door closed because of rat problem.

5.3 User-Level Recommendations:

5.3.1	Repair sections of damaged or missing pipe insulation.
5.3.2	Repair sections of damaged or missing duct insulation.
5.3.3	Determine and correct the cause of AHU-5's OA damper to be closed during occupied hours.
5.3.4	Disable irrigation heads adjacent to air intakes.
5.3.5	Provide insect screens on OA intakes
5.3.6	Determine reason that room 00045 AHU is turned off via the Safety Disconnect Switch. Remedy the situation.
5.3.7	Determine and correct the cause of HV-2 (employee locker room heating and ventilating unit) is at 0-Hz.
5.3.8	Repair broken sanitary and vent pipe in Bath House lobby.
5.3.9	Repair LPC leak at coat check mechanical room (Koran Room's AHU) and remediate space
5.3.10	Ensure that HV-1's fan speed does not decrease below 20-Hz and ensure that the steam coil leaving air temperature does not exceed the insulation rating of the motor (typically 40-deg C).
5.3.11	Repair seal at pipe wall penetration in Mechanical Room 2 adjacent to AH-17.
5.3.12	Repair leaking LPC lift stations.

5.5 Short Term Recommendations:

5.5.1	Examine control system (pneumatics, electronics, and programs) and make corrections to ensure proper system function (e.g. OA dampers should be open during the occupied mode).
5.5.2	Install MERV 8 pre-filters on OA intake ducts whose intakes are located at grade and install MERV 13 filters in place of the existing filters.
5.5.3	Install UV light air cleaners (where possible) at AHUs.
5.5.4	Remediate and clean all mold from all hard ductwork, air devices, coils, etc. Remove flex ducts and replace with new flex ducts.

5.6 Long Term Recommendations:

5.6.1	Remove pneumatic controls and install new Direct Digital Controls with electric actuators.
5.6.2	Install dedicated low dew point outdoor air handling unit(s) to provide dehumidification and air pressure control for the facility.
5.6.3	Replace HVAC systems with new units with adequate dehumidification controls
5.6.4	Relocate outside air intakes to a minimum of 10-ft above finished grade.

END OF REPORT



US Army Corps
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Baltimore District

ENVIRONMENTAL HEALTH FACILITY ASSESSMENT

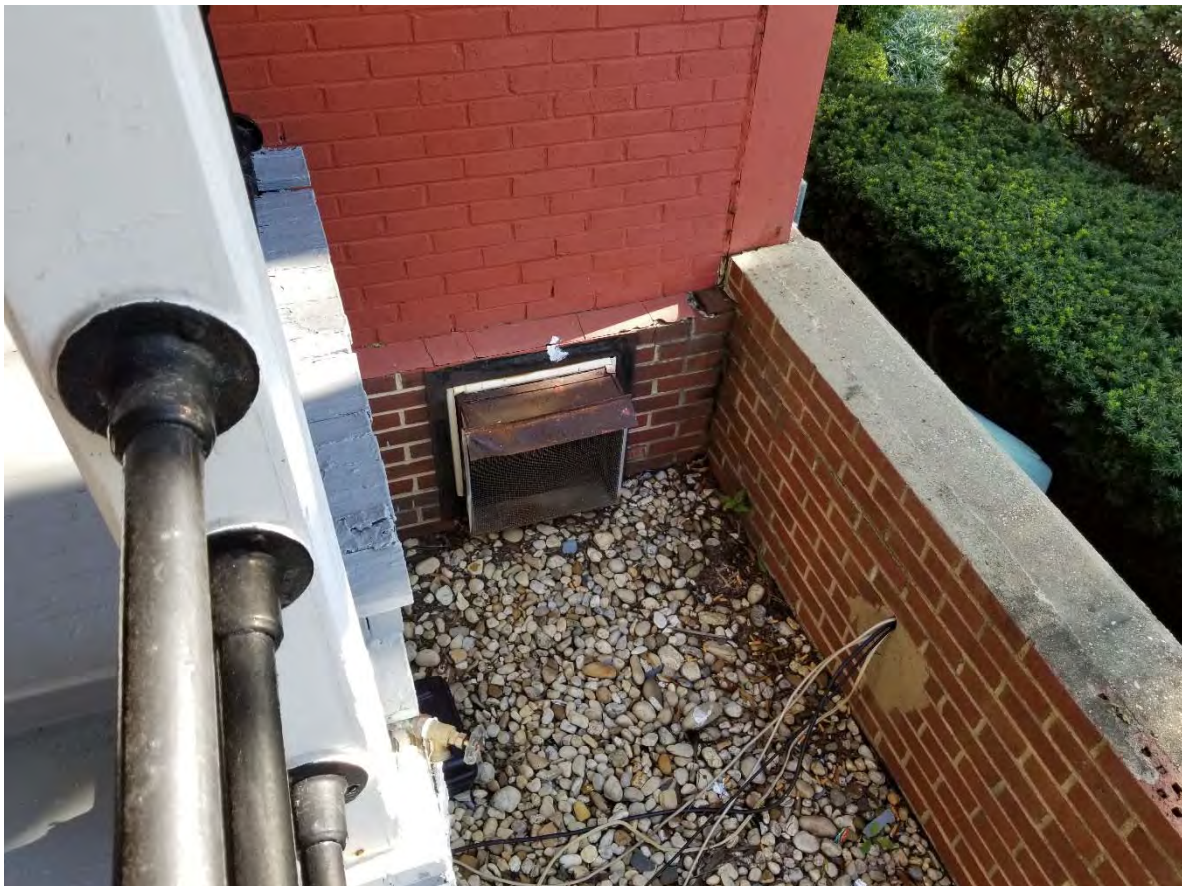
Ft. Myer Building 214

Joint Base Myer-Henderson Hall, VA

Attachment A: Photographs



Myer 214



Low air intake/relief



214 Myer Grade



Hedges blocking access to roof drains



Rat trap at Low Air Intake



Low air intakes



Air intake at grade adjacent to downspout



Irrigation spout in hedges at grade near facility



Low air intake



Low window



Ceiling water damage



Ceiling water damage



Ceiling water damage



Ceiling water damage



Ceiling/Wall water damage



Water damaged wall behind textile



Standing water in mech room



Mold on fiberglass pipe insulation



Water damaged ceiling



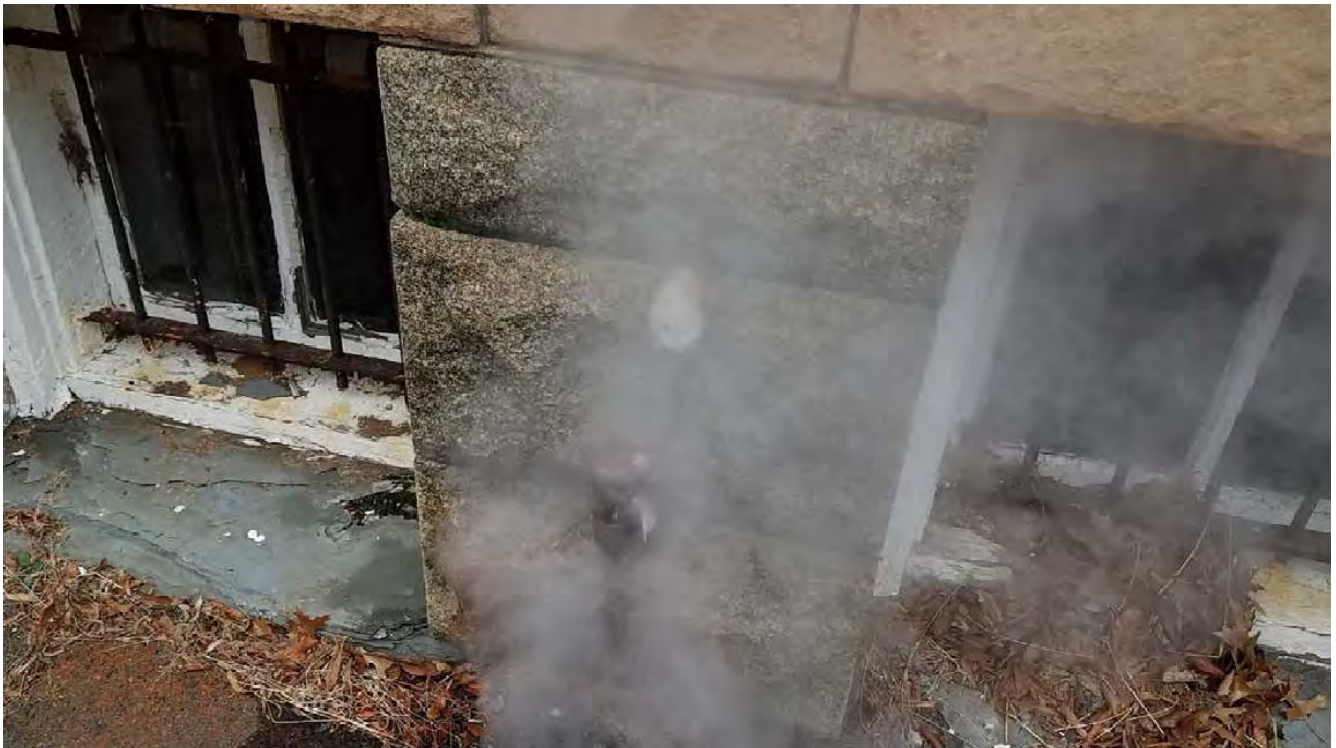
Outside Air Intake at Grade with Rat Trap In Front of It



Outside Air Intake at Grade with Irrigation Head in Front of It



Mechanical Room 1 LPC Lift Station Vent



Mechanical Room 1 LPC Lift Station Vent and Window Deterioration



Water Leak Through Mechanical Room 2 Foundation Wall Pipe Penetration



Water Leak Through Mechanical Room 2 Foundation Wall Pipe Penetration



AHU-5 Low Pressure Condensate Lift Station Leaking



AHU-5 OA Damper in the Closed Position During Occupied Hours



Lamplighter Dining Room Air Diffuser



First Floor Kitchen Condensation on Dishwasher Duct – Inadequate Exhaust in Space



Bathroom Leaking Pipe



Bathroom AHU Pipe Chase and Mixed Air Plenum



Bathhouse Women's Room Water Heater with Rodent Feces



Bathhouse HVAC Louver – Possible Point of Entry for Rodents



Coat Check Mechanical Room Mold Growth on Floor



Leaking Low Pressure Condensate Pipe Contributing to Mold Garden in Coat Check Mechanical Room



Open Hub P-Trap in Second Floor Kitchen



Moisture Laden Insulation at Duct Penetration in Second Floor Kitchen Dishwashing Area



US Army Corps
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Baltimore District

ENVIRONMENTAL HEALTH FACILITY ASSESSMENT

Ft. Myer Building 214

Joint Base Myer-Henderson Hall, VA

Attachment B: Findings & Recommendations

User-Level Recommendations:

Industrial Hygiene	
2.3.1	Unclog basement food storage area floor drain.
2.3.2	Sanitize nonporous surfaces.
2.3.3	Use a dehumidifier inside affected areas (Note: Additional individual dehumidifying units will increase the temperature and increase nuisance noise pollution in the spaces.)
Architectural	
4.3.1	Clean air returns and supplies
4.3.2	Check above ceiling tiles for source of staining
HVAC/Mechanical	
5.3.1	Repair sections of damaged or missing pipe insulation.
5.3.2	Repair sections of damaged or missing duct insulation.
5.3.3	Determine and correct the cause of AHU-5's OA damper to be closed during occupied hours.
5.3.4	Disable irrigation heads adjacent to air intakes.
5.3.5	Provide insect screens on OA intakes
5.3.6	Determine reason that room 00045 AHU is turned off via the Safety Disconnect Switch. Remedy the situation.
5.3.7	Determine and correct the cause of HV-2 (employee locker room heating and ventilating unit) is at 0-Hz.
5.3.8	Repair broken sanitary and vent pipe in Bath House lobby.
5.3.9	Repair LPC leak at coat check mechanical room (Koran Room's AHU) and remediate space
5.3.10	Ensure that HV-1's fan speed does not decrease below 20-Hz and ensure that the steam coil leaving air temperature does not exceed the insulation rating of the motor (typically 40-deg C).
5.3.11	Repair seal at pipe wall penetration in Mechanical Room 2 adjacent to AH-17.
5.3.12	Repair leaking LPC lift stations.

Short-Term Recommendations:

Industrial Hygiene	
2.4.1	Provide vents for air circulation in basement food storage area.
2.4.2	Stop water leaks into areas.
2.4.3	Replace all damaged ceiling tiles.
2.4.4	Provide air conditioning in required areas and purge air.
Site	
3.4.1	Electrical Box: Fix the top of the box so it will seal correctly.
3.4.2	Mulch Covering Splash Block: Clear the mulch from the end of the downspout and provide positive drainage to the road curb line.
3.4.3	Splash Block Flowing Backward: Adjust the splash block. Provide positive drainage away from the building and to the road curb line.
3.4.4	Ivy on Wall: Remove all ivy from the exterior walls.
Architectural	
4.4.1	Replace stained ceiling tiles after source of staining is remedied
4.4.2	Have a roof inspection performed
4.4.3	Replace falling ceiling in kitchen area
4.4.4	Investigate behind peeling wall covering. Replace covering once issue is corrected.
HVAC/Mechanical	
5.5.1	Examine control system (pneumatics, electronics, and programs) and make corrections to ensure proper system function (e.g. OA dampers should be open during the occupied mode).
5.5.2	Install MERV 8 pre-filters on OA intake ducts whose intakes are located at grade and install MERV 13 filters in place of the existing filters.
5.5.3	Install UV light air cleaners (where possible) at AHUs.
5.5.4	Remediate and clean all mold from all hard ductwork, air devices, coils, etc. Remove flex ducts and replace with new flex ducts.

Long-Term Recommendations:

Industrial Hygiene	
2.5.1	Address water infiltration into the basement.
2.5.2	Conduct periodic surveillance to monitor further water infiltration issues. Address any problems within 24-48 hours to help prevent further mold growth.
2.5.3	Establish general maintenance plan that would sustain the upkeep, health, and infrastructure of the building to ensure durability.
Architectural	
4.5.1	Replace flooring where there are soft spots
4.5.2	Replace roof if deemed necessary from inspection
HVAC/Mechanical	
5.6.1	Remove pneumatic controls and install new Direct Digital Controls with electric actuators.
5.6.2	Install dedicated low dew point outdoor air handling unit(s) to provide dehumidification and air pressure control for the facility.
5.6.3	Replace HVAC systems with new units with adequate dehumidification controls
5.6.4	Relocate outside air intakes to a minimum of 10-ft above finished grade.



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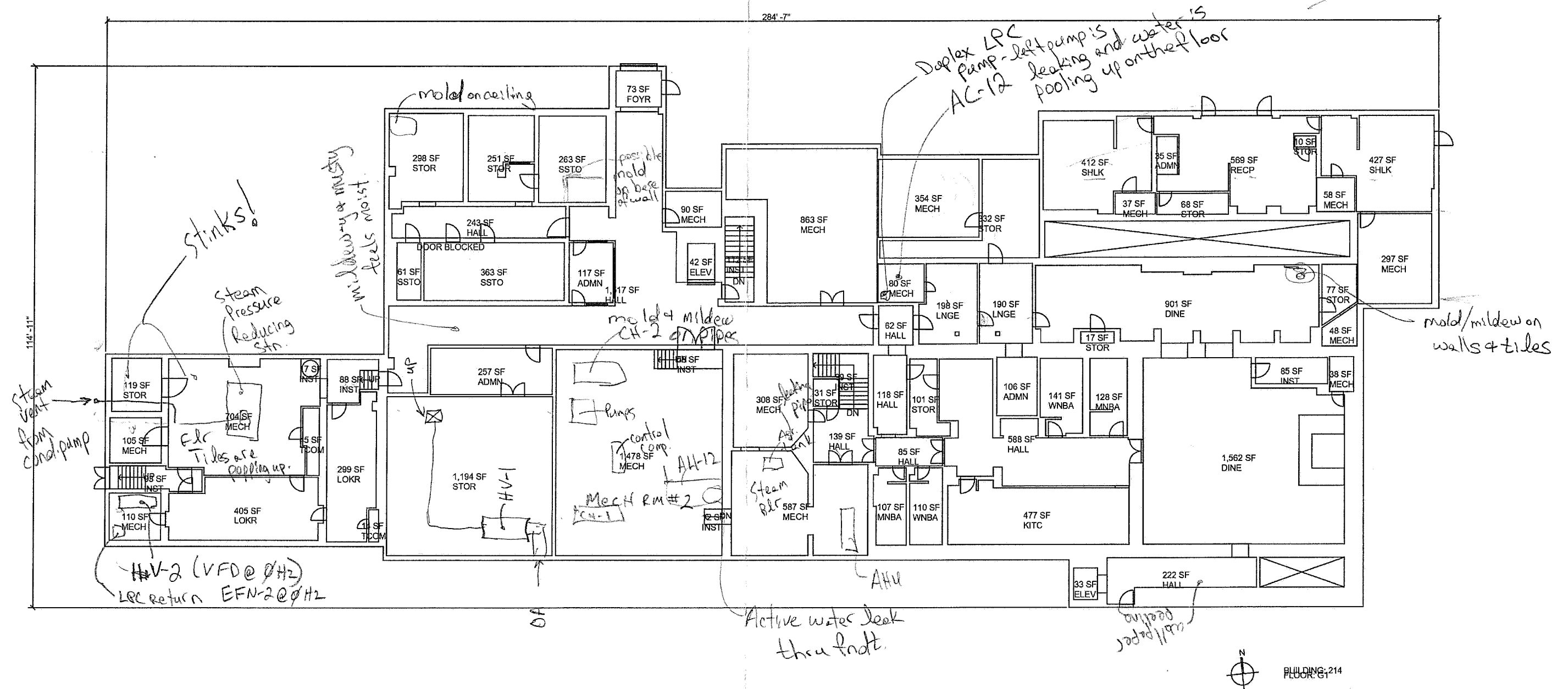
ENVIRONMENTAL HEALTH FACILITY ASSESSMENT

Ft. Myer Building 214

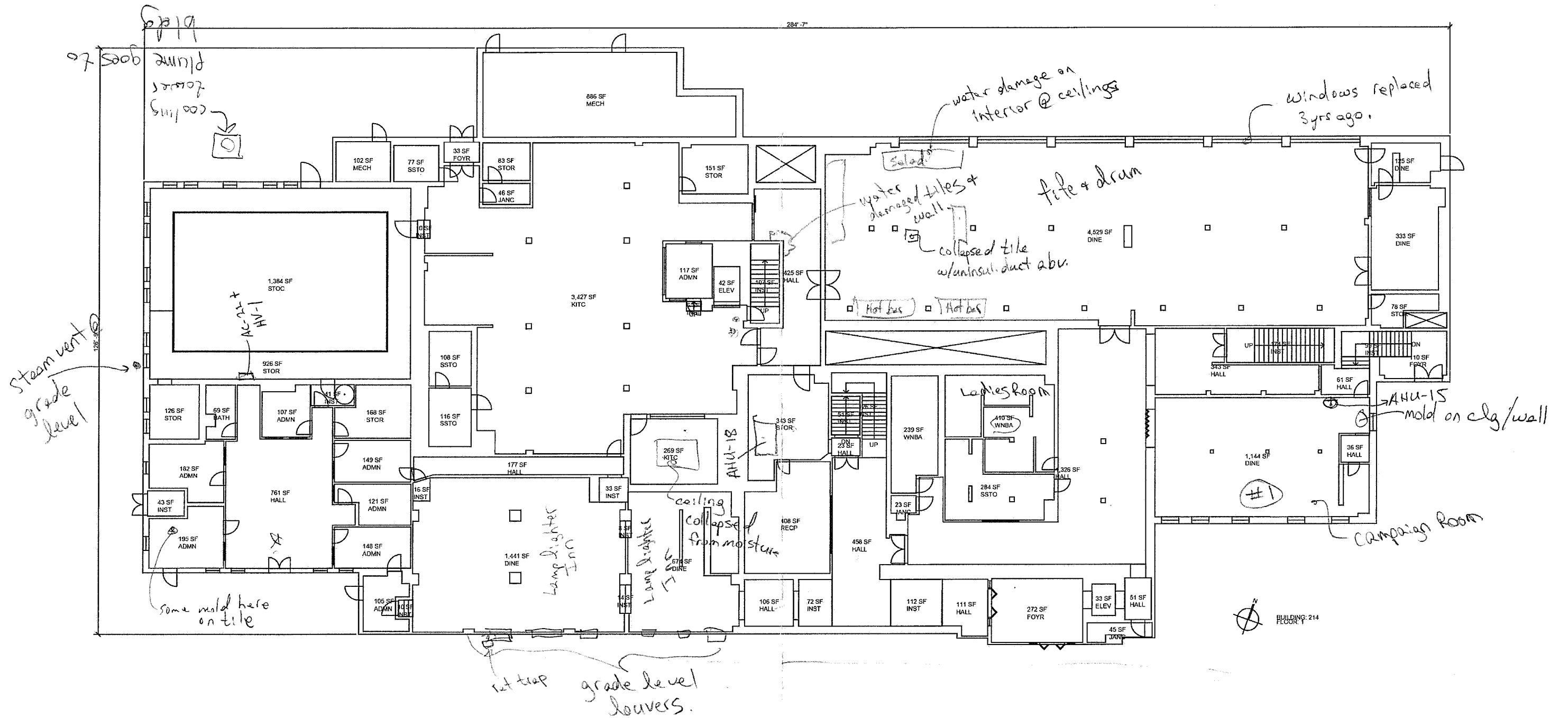
Joint Base Myer-Henderson Hall, VA

Attachment C: Field Notes

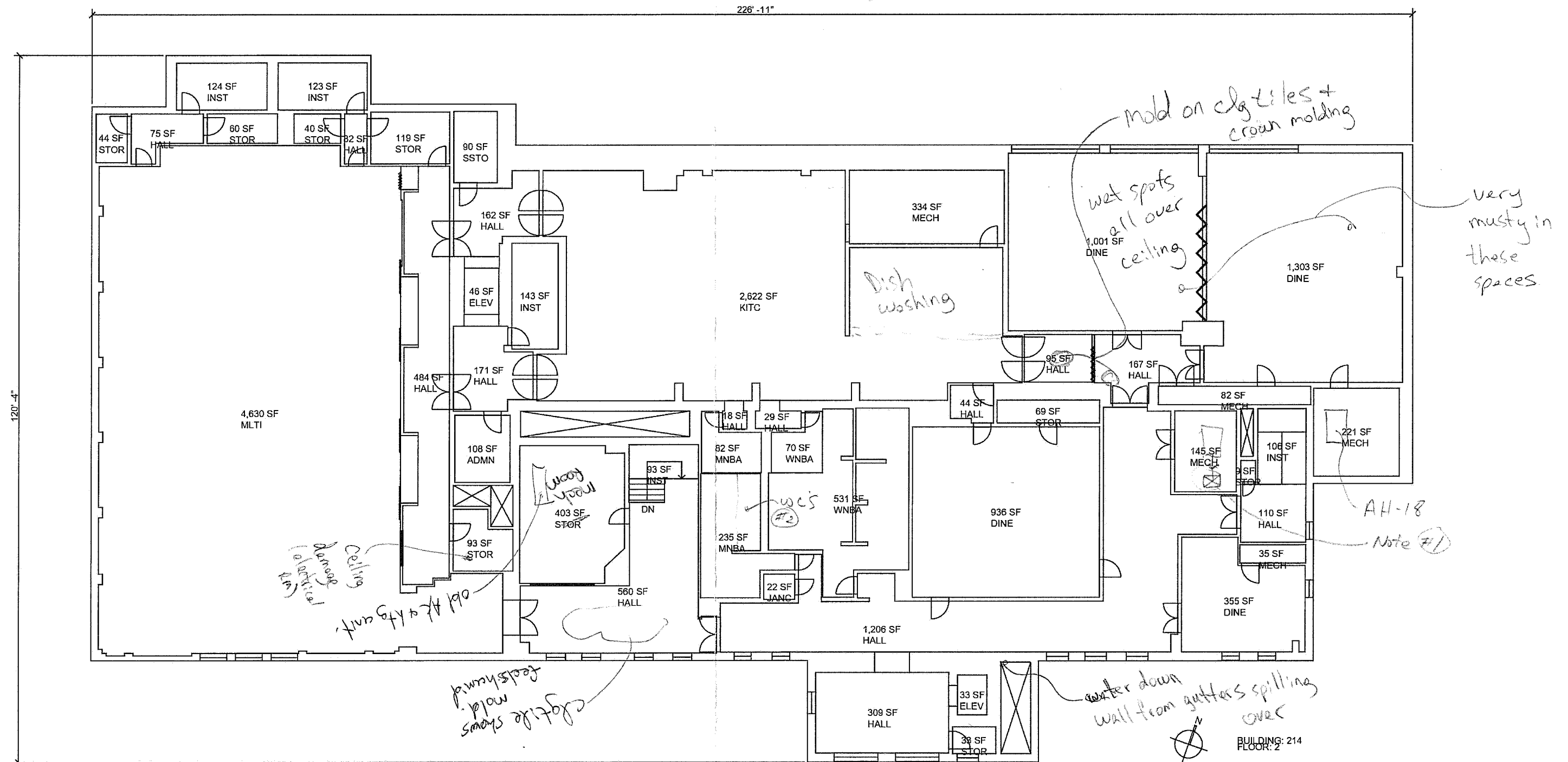
Fort Myer 214 Floor G1



Fort Myer 214 Floor 01



Fort Myer 214 Floor 02



original HVAC system

JBMH-H Mold and Mildew Facility Survey

Checklist and Field Notes

Mechanical Systems (HVAC & Plumbing)

Building Number: 214 (Myer / McNair)

Date & Time: 12/20/18

Surveying Engineer: Daniel Edwards

Weather: Rainy + mild.

GENERAL

Approximate Date of Construction: 1896

X2.2 Are there any existing or historic moisture, condensation, and/or high humidity problems within or exterior to the building?

☒ Y ☐ N Other:

X2.3 Has there been any flooding within the building, basement, cellar, or crawl spaces?

Y ☐ N Other:

X2.4 Are you aware of any visual mold within the building? If so, what is the extent and location?

☒ Y ☐ N Other: Some ceiling tiles, some on floors, + some mechanical spaces

X2.5 Have there been any fires extinguished by water?

Y ☐ N Other:

X2.6 Have there been any discharge or leaks from a sprinkler system?

☒ Y ☐ N Other: But a long time ago. a pipe burst.

X2.7 Have any window or roof leaks or other water damage occurred in any part of the commercial building? If so, when and what measures were taken, if any, to address the leaks?

☒ Y ☐ N Other: Ceiling tiles take on moisture & are replaced periodically. Mr. Syed believes water is coming in @ Roof.

X2.8 Are there any sumps, perimeter channels, or interior drains?

Y ☒ N Other:

X2.9 Has there been any overflow from sinks, sumps, or sewers?

Y ☐ N Other: N/A

X2.10 Are there any wet or damp basement, cellar, or crawl space areas?

☒ Y ☐ N Other: musty/damp bsmt (not all the time though)

X2.11 Are there any dirt floor basement or crawl spaces?

Y ☒ N Other:

X2.12 Are there any areas with extensive amounts of indoor plants or greenhouses?

Y ☒ N Other:

X2.13 Are there any areas where landscaping irrigation sprinklers have water contact with the building's sidewalls?

Y ☐ N Other: There are sprinklers, but uncertain of functionality

X2.14 Are there any areas of known or suspected mold on or in the building or on any furnishing (for example, carpet, books, papers, wallpaper, insulation, drywall, plaster, and so forth) within the building?

☒ Y ☐ N Other:

X2.15 Are there any areas of currently or formerly damp materials in the building or any such furnishing (for example, carpet, books, papers, wallpaper, insulation, drywall, plaster, and so forth) within the building?

☒ Y ☐ N Other: In bsmt.

X2.16 Have building occupants reported any moldy odors or musty odors?	Y ☒ N Other:
X2.17 Are there any hidden sources of water or high humidity?	Y ☒ N Other:
X2.18 Are there any areas of high humidity (for example, kitchens, indoor pools, spas, whirlpools, saunas, steam baths, decorative fountains, and so forth)?	☒ Y N Other: Kitchens
X2.19 Are there any humidifiers?	Y ☒ N Other:
X2.20 Are there any dehumidifiers? If yes, why and what is the method of discharging the collected water?	Y ☒ N Other:
X2.21 Are there any HVAC cooling towers?	☒ Y N Other: Two out back
X2.22 Does the HVAC system have any drip pans or other open discharge of condensate water, steam or other moisture?	☒ Y N Other: Pepco/DPW.
X2.23 Are there any HVAC maintenance program(s) in place for the commercial building?	☒ Y N Other: Pepco.
X2.24 Are there any gas-fired or oil-fired hot water, pool water, or other types of water heaters? Do any exhaust within the building?	☒ Y N Other:
X2.25 Are there any visually water damaged or water stained building materials such as ceilings, walls, and so forth?	☒ Y N Other:
X2.26 Are there any areas of exterior standing water or inadequate drains?	☒ Y N Other: Main entrance is not sloped properly & water accumulates
X2.27 Are there any sewer ejector pumps? If so, are they working properly?	Y ☒ N Other:
X2.28 Have any plumbing leaks or excessive piping condensation occurred in any part of the commercial building? If so, when and what measures were taken, if any, to address the leaks?	☒ Y N Other: Condensation from HVAC (insulation problems) - call DPW to fix. Plumbing piping is uninsulated.
X2.29 Are there any building envelope leaks: roofs, sidewalls, flashing, windows, eaves, sliders, and so forth?	☒ Y N Other: likely @ roof + side walls.
X2.30 Are there are there any clothes dryers? Are dryers vented to the outside?	Y ☒ N Other:
X2.31 Are there any interior wet areas such as areas of condensation?	☒ Y N Other:
X2.32 Are there any attics or other locations with resident or seasonal birds, bats, or other animals?	☒ Y N Other: some rodents
X2.33 Are there any attics that have toilet room exhaust ducts discharging directly into the attic area?	Y ☒ N Other:

X2.34 Are there any areas with chronic condensation such as inadequately insulated cold water supply, condensate, or chilled water piping, exterior walls, windows, doors, sliders, or other cool surfaces?	☒ Y ☐ N Other:
X2.35 Has the building been partially or fully re-sided? If yes, with what material?	Y ☒ N Other:
X2.36 Have there been any obvious repairs to the partial or full re-siding? Is it applied over any wood framing?	Y ☒ N Other:
X2.37 Are there any animal confinement operations on-site, within or exterior to the building?	☒ Y ☐ N Other: Rat boxes ext. to bldg. & inside bldg.
X2.38 Are there any firewood storage areas within or exterior to the building?	Y ☒ N Other:
X2.39 Have there been any water damage and/or mold related insurance claims?	Y ☒ N Other: There is a claim to the exterior's office for an HVAC pipe bursting.
X2.40 Have there been any violation notices regarding IAQ, odors, moisture, mold, fungi, or related issues received from any regulatory body?	Y ☒ N Other:

CRAWL SPACES

X3.2.4 Are crawlspace vents blocked?	Y ☒ N Other:
X3.2.6 Are there side wall penetrations?	☒ Y ☐ N Other:

ROOF & ATTIC

X3.3.4 Are plumbing stacks at least 10 ft away from air intakes?	☒ Y ☐ N Other:
X3.3.5 Are exhaust fans present?	☒ Y ☐ N Other:
X3.3.6 If exhaust fans are present, are they operating with air flowing out?	☒ Y ☐ N Other:
X3.3.7 Are any exhaust fans within 10 ft of air intakes?	Y ☒ N Other:
X3.3.8 Are roof vents blocked?	☒ Y ☐ N Other: One appears to be capped
X3.3.10 Are interior rain leaders present and in good repair?	Y ☐ N Other: N/A

HVAC SYSTEMS

X3.4.1 Are ventilation units on with air flowing into out-door air intakes?	Y ☒ N Other:
X3.4.2 Is there visual evidence of suspect fungal growth on or around the air intake?	Y ☒ N Other:
X3.4.3 Is there standing water near the air intake?	Y ☒ N Other:

X3.4.4 Is there any accumulation of organic materials near the air intake?	☒ Y ☐ N Other:
X3.4.5 Is the air intake screened?	Y ☐ N Other: <i>Depends</i>
X3.4.6 Is the air intake blocked?	Y ☒ N Other:
X3.4.7 Are condensation pans clean and unobstructed?	☒ Y ☐ N Other:
X3.4.8 Are drain lines unobstructed?	Y ☐ N Other: <i>u/k</i>
X3.4.9 Is there a cooling tower within 25 ft from the air intake?	Y ☒ N Other:
X3.4.10 Is there visual evidence of suspect fungal growth in, on, or around an air handling unit?	Y ☐ N Other: <i>Depends on which AHU.</i>
X3.4.11 Are return air filters dirty or blocked?	Y ☒ N Other: <i>For the unit inspected, filters showed use, but were not terrible</i>
X3.4.12 Is there visual evidence of suspect fungal growth in the return air filters?	Y ☒ N Other:
X3.4.13 Is there standing water in or around the air handling units?	☒ Y ☐ N Other:
X3.4.14 Is the outdoor air damper operating properly?	Y ☒ N Other: <i>Not on AHU-5</i>
X3.4.15 Are supply and return air ducts clean?	Y ☐ N Other: <i>u/k</i>
X3.4.16 Is the plenum clean?	Y ☐ N Other: <i>u/k</i>
X3.4.17 Is there visual evidence of suspect fungal growth in the supply air ducts?	Y ☐ N Other: <i>u/k</i>
X3.4.18 Is there visual evidence of suspect fungal growth in the return air ducts?	Y ☐ N Other: <i>u/k</i>
X3.4.19 Is there visual evidence of suspect fungal growth in the plenum?	Y ☐ N Other: <i>u/k</i>
X3.4.20 Is there a musty odor?	Y ☐ N Other: <i>In certain areas.</i>

BUILDING INTERIOR	
X3.5.1 Is there visual evidence of suspect fungal growth within the building?	☒ Y ☐ N Other:
X3.5.3 Does the building seem to have excessive humidity?	☒ Y ☐ N Other:
X3.5.4 Does the building have humidifiers? Are they properly working?	Y ☒ N Other:
X3.5.5 Does the building have dehumidifiers? What is the method for discharging the collected water?	Y ☒ N Other:
X3.5.6 Do the toilet rooms or bathrooms have operating exhaust fans?	☒ Y ☐ N Other:
X3.5.7 Does the kitchen have an operating exhaust fan?	☒ Y ☐ N Other:

X3.5.8 Are dryer vents properly connected and discharging to the outside?	Y ☒ N Other:
X3.5.19 Is there condensate on cold surface (such as piping, exterior walls, roof, exterior doorframes, windows, or floor)?	☒ Y ☐ N Other:
X3.5.20 Are sewer injectors located within the building?	Y ☒ N Other:
X3.5.21 If sewer injectors are present, do they appear to be working properly?	Y ☐ N Other: N/A
X3.5.23 If the building has a basement, was visual evidence of suspect fungal growth or significant water intrusion observed? Any sumps, perimeter channels, or other areas of open water?	☒ Y ☐ N Other: In Boiler Room / Mech Room # 2.
X3.5.24 Is there any exposed plumbing? If yes, any water leaks or condensation?	☒ Y ☐ N Other:
X3.5.26 Any observable mold or water intrusion on the attic insulation?	Y ☒ N Other:
X3.5.27 Any spas, whirlpools, swimming pools, decorative fountains, saunas, steam baths, or other such areas with open water?	☒ Y ☐ N Other: Pools are outside & have been drained for the season.
X3.5.28 Are there any gas-fired or oil-fired heaters (such as hot water heaters or pool water heaters)?	☒ Y ☐ N Other:

Date:

Building Number: 214 (Myer) McNair)

Survey Engineer: D. Edwards

Date: 12/25/18

OBSERVATION	RECOMMENDATION; UL=USER LEVEL, ST=SHORT-TERM, LT=LONG-TERM
Louvers @ grade level along front of bldg, plus irrigation sprinklers in front of them. Some are intake & some are exhaust.	
AC-12 mechr m (next to employee lounge in BSMT) has a duplex LPC return. Left pump is leaking & water is pooling on the floor. Floor drain is cluttered & preventing good drainage.	
- Boiler Rm 3 (see photos) - Mech Room (863 st in BSMT) is being used for storage. • Rat droppings observed • Boiler pipes leaking near bks in/bat • Electrical panels & SSS do not have 3-ft clearance.	
• mold in dry food storage room	
• Mech Rm near receiving has an M-series climate changer w/a steam coil. unit is off (@ disconnects)	
• Mech Rm #2 is used for storage & is missing some PPE (earplugs & eye wash)	

OBSERVATION	RECOMMENDATION; UL=USER LEVEL, ST=SHORT-TERM, LT=LONG-TERM
<u>Mech Rm #2</u>: Insulation w/ moldy moisture damage; active water leak thru penetration; clearance to panel boards; pneumatic controls; two water-cooled chillers w/ PdF HX for condenser water/water side economizer; some ACM ^{border water} steam feed union is leaking.	
Admin area has ceiling missing. Structural joists have rotted/crusted in spots.	
- Kitchen H-V-1 unit has condenser return piped thru OA intake (intake is @ grade level) - H-V-1 SA ducts are wide enough that sprinklers should be provided - VFD for fan @ 15 Hz. SA-T indicating 150°F ↳ fan should not run so low speed + Steam valve should be serviced.	
Sprinkles pipe used as clothes hanger in men's locker Room (near H-V-2)	
First floor, dining room #1: wet spot on ceiling tiles & air devices.	

OBSERVATION	RECOMMENDATION; UL=USER LEVEL, ST=SHORT-TERM, LT=LONG-TERM
• Lower roof outside of Dining Room #1 has its scupper inlet blocked w/debris.	
• Room #0027 has ceiling damage.	
• Fire & Drum has many instances of wtr stained tiles one tile near the hot food bar collapsed from moisture. Bill suggested that steam could be condensing on uninsulated supply duct work (VAVS)	
• Peeling wall paper in Fire & drum	
• Kitchen scullery sinks have hose threaded faucets but do not have vacuum breakers Air gap is sufficient, but threads defeat air gap.	
• Dishwashing area lacks exhaust + has excess condensation on ceiling tiles, ducts, floors, etc	ST = install exhaust fan to sufficiently evacuate moist air.
• Kitchen cool room (cool food prep area) had clog save in from moisture buildup. (ca. 3 mos ago) Two duct systems are over head to either side of the room. Cannot readily tell where the issue originated. Room kept @ 40°F.	

Building Number: 214 Myer (McNair)

Survey Engineer: D. Edwards

Date: 12/21/18

OBSERVATION	RECOMMENDATION; UL=USER LEVEL, ST=SHORT-TERM, LT=LONG-TERM
- Refrigeration Condensers located @ OA intake louvers. - Vines/vegetation growing on exterior wall which should be removed - EF may be closer than 10-ft from OA goose-neck - Second floor kitchen dishwashing area is not exhausted which will lead to moisture problems - Insulation at dishwasher duct penetration is moisture laden. - Kitchen area Sanitary drainage needs to be reviewed for code compliance (e.g. if sinks need to be indirectly drained) - AH-18's mech room has deteriorating chilled water + steam pipe insulation - CHW insul. shows signs of moisture issues/damage	

Building Number: 2114 (Myer / McNair)

Survey Engineer: D. Edwards

Date: 12/21/18

OBSERVATION

RECOMMENDATION; UL=USER LEVEL, ST=SHORT-TERM, LT=LONG-TERM

#1 Insulation on supply air duct is pulling away from duct work. Moisture damage/stains exist @ duct floor penetration. (Unit serves Campaign Room which shows moisture damage).

* Typical problem throughout building is that mech rooms are being used for storage. Also, most electr. devices do not have 3-ft clearance.

* No Arc flash hazard stickers on any electrical panel / safety DS.

* most upper rooms have mold/moisture problems.

* #2 Men's room near Abrams/cholee/Devers Room - W.C. flush valves may not have 6" under vacuum breakers.

* Coat check/mech room AHU appears that the LPC drain line is what is leaking. Drp is warm

OBSERVATION

- AHU-5 feeds Filter Drum. Its mech room is used as a return air plenum. The OA duct is insulated but the SA duct is not.
- Rust has washed down the OA duct for AHU-5 + the nearby RA duct shows water damage to the galvanization.
- Floor pan (cool room) is rusted in these areas indicating a humidity issue

- AHU-5's OA damper is nearly shut. Any OA coming in could jet/c/c the damper seals are poor.
- Mr. Syed reports that the dining room is always hot + humid in summer.

- Refrigerant Alarm going off in Chiller/Bk Room

- AHU near Old Guard Bar is shoe-horned in. Steam pipe insulation is missing/deteriorated. Condensate lift station is accessible by children only.

RECOMMENDATION: UL=USER LEVEL, ST=SHORT-TERM, LT=LONG-TERM

ST= Insulate ductwork.

LT= Replace AHU + configure such that RA is ducted.

UL= Have DPW investigate/troubleshoot controls to admit OA during occupied hours.

ST= Review controls + tune loops

LT= Remove pneumatics + replace w/DDC

UL= Investigate + Repair

(Myer / McNair)

Edwards

2/2/23

OBSERVATION

* Pipe leaking in reception area of
Pool Bathroom

- Bathroom AHU mech room is used as a plenum. ~~Also~~ Potential IAQ Hazard.

- Moist/humid in office area (Caterer's office). Perhaps it is economizing.

RECOMMENDATION; UL=USER LEVEL, ST=SHORT-TERM, LT=LONG-TERM

UL = Have DPW repair

LT = Provide OA + RA deducting to unit.

ST = Install Enthalpy economizer control



Project: _____

Subject: # 214 Notes _____

Author: WFG Date: 12/20/18 Sheet No. 1 Of _____

pump in mech room serving employee break rooms leaks all over floor

piping insulation for CW / steam pipe in poor condition showing signs of mold

① very corroded pipes leaking water onto floor

② duct with damaged insulation

③ Pipes with damaged insulation / water damage

④ ceiling mold in corner of food storage

⑤ water damage on ceiling around pipe and down wall

⑥ significant leak where pipe penetrates foundation, large pool of water on the floor

⑦ Discharge from pumps ~~not~~ pooling around Drain

⑧ Pipe ~~leak~~ dripping / damaged insulation / mold

⑨ leaking pipe dripping onto floor

⑩ ceiling partially collapsed / joists rusted through

⑪ Musty / Mildew smell

⑫ water drip + foul smell

⑬ Peeling wallpaper / possible water damage



Project: _____

Subject: 214 Notes

Author: WFC Date: 12/20/18 Sheet No 2 Of _____

- (14) Mold on ceiling and wall paper
- (15) water damage on ceiling
- (16) mold on ceiling
- (17) water damage on ceiling / return grilles rusted / peeling wall paper
w mold
- (18) water damage on ceiling near fire sprinkler
- (19) water damage on ceiling and walls
- (20) water damage on ceiling - mold
- (21) water damage on ceiling
- (22) steam from Hot food trays condensing on cold air duct
- (23) Dirt/mold on ceiling diffusers
- (24) corrosion above ceiling
- (25) condensate forming on duct and ceiling / rust
- (26) ceiling collapsed
- (27) Black mold on ceiling near diffusers
- (28) ceiling peeling
- (29) Roof has pooling rain water / gutters full of water, plugged with leaves
- (30) Roof mech room has insulation peeling from ceiling / possible water damage



Project: _____

Subject: 214 Notes

Author: VFG Date: 12/21/18 Sheet No. 3 Of _____

- 31 Air intake on Roof has water pooling next to intake
- 32 water pooling under condensing unit next to intake lower
- 33 2nd floor dishwashing area has no ventilation/exhaust very moist
- 34 Black mold on ceiling
- 35 water damage + mold on ceiling
- 36 water damage + mold on ceiling
- 37 water damage on ceiling + musty smell
- 38 steam pipe w/ damaged insulation
- 39 damaged insulation on pipe (possibly ~~low~~) steam
- 40 Diffusers have rust
- 41 Black stuff around diffusers (maybe mold)
- 42 water damage on ceiling
- 43 supply duct insulation peeling
- 44 wall paper peeling
- 45 rust on floor mold on wall around window
- 46 water damage + mold + rust
- 47 water dripping from pipes
(low) pipe is condensing



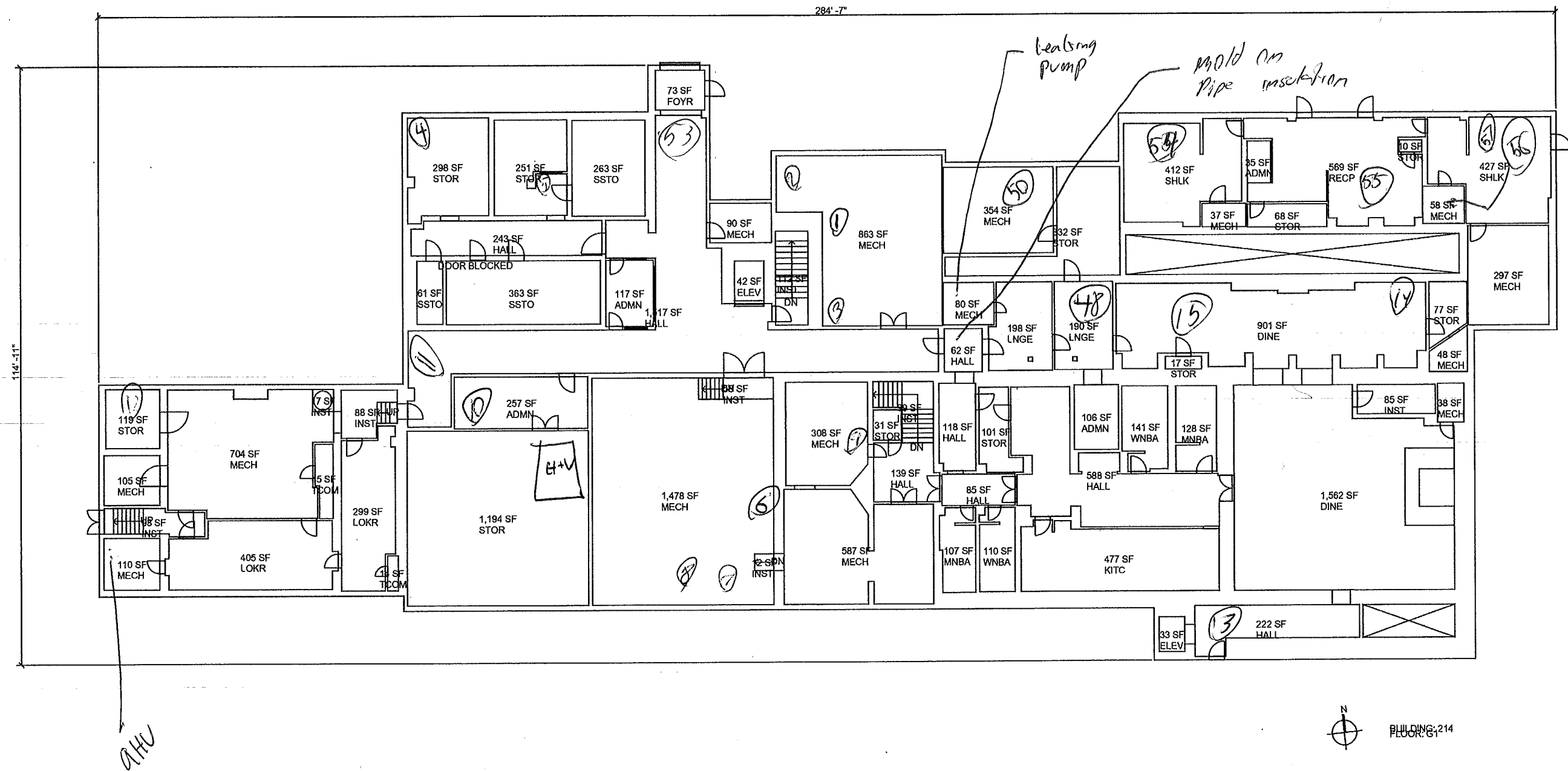
Project: _____

Subject: Z/H Notes

Author: WFG Date: 12/21/18 Sheet No. 4 Of _____

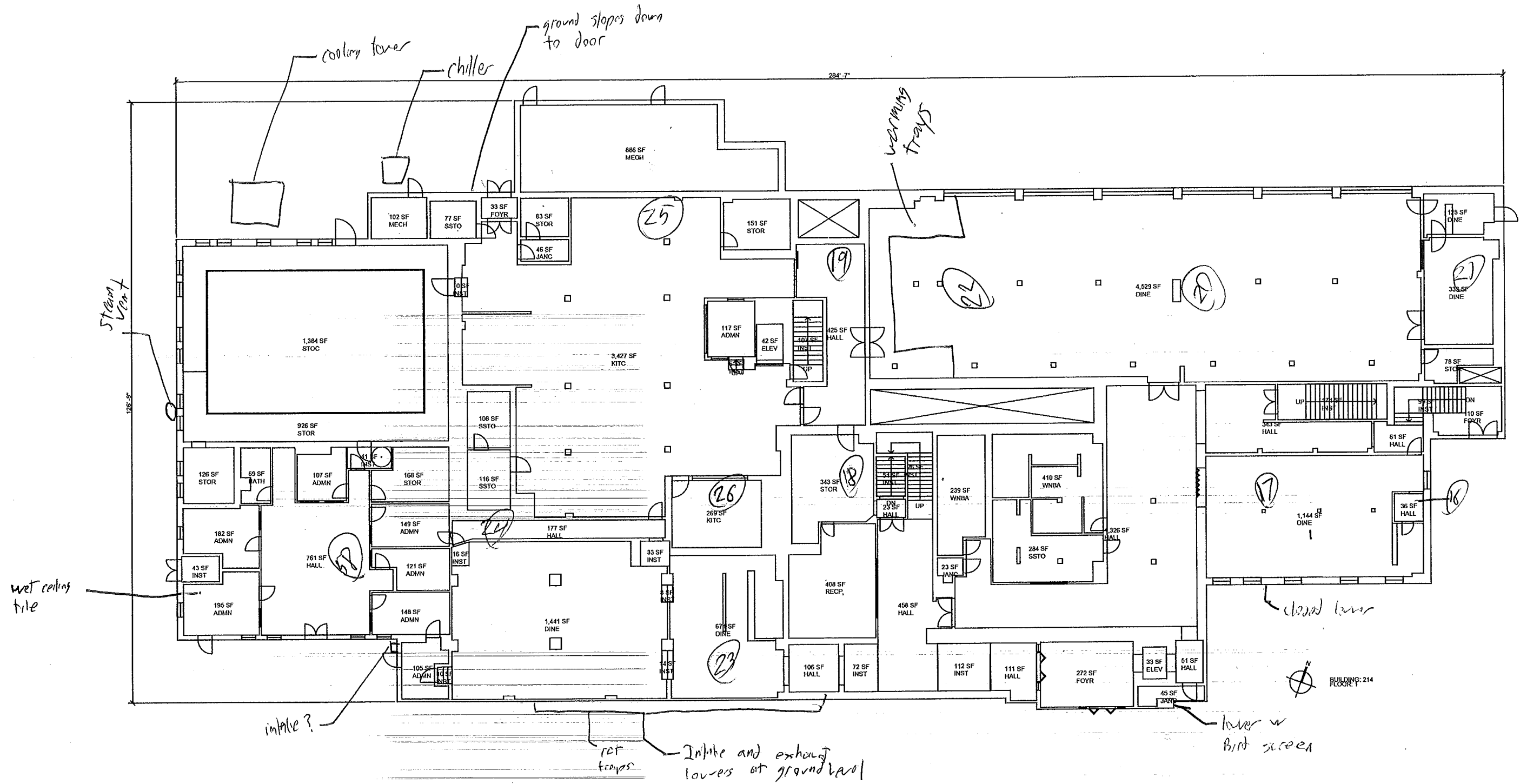
- (48) Black mold around sprinkler Head
- (49) ceiling rusted badly / looks wet in spots
- (50) supply duct uninsulated / rust forming on surfaces
- (51) NO outside air to file and Drum
- (52) HOT in file and Drum in Summer
- (53) water from rain infiltrating
- (54) rust on ceiling very Humid
- (55) sen ppe leaking down wall
- (56) ~~area~~ freezer running w cracked pipes insulation
- (57) rust on floor / very Dusty
- (58) Humid

Fort Myer 214 Floor G1

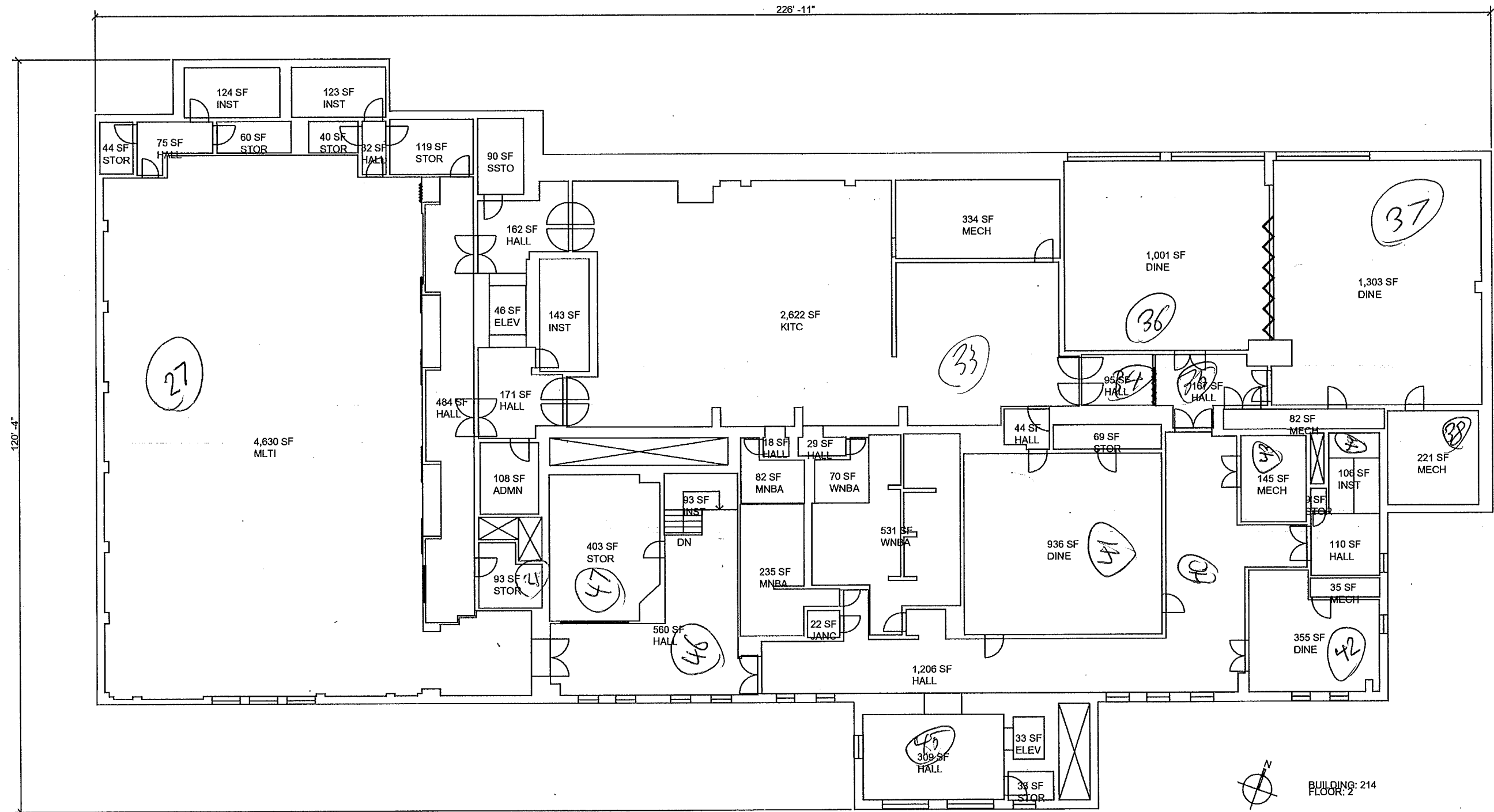


P 60V manages HVAC equip

Fort Myer 214 Floor 01



Fort Myer 214 Floor 02



Mold and Mildew Walk Through Survey Summary Checklist

Building Name: 214 **Date:** 10/16/18

☒ Site Problems

☒ Topography

☒ Stormwater Drainage

☐ Marshes, Bogs, and Open Water

☐ Exterior Problems

☐ Exterior Building Walls

☐ Cooling Towers

☐ Roofs

☐ Air Intakes

☐ Air Handling Units

☐ Interior Problems

☐ Interior Areas Near Visible Exterior Mold

☐ Interior Areas Near Exterior Swales and/or Drainage Systems

☐ Interior Areas Near Below Grade Exterior Walls

☐ Toilet Rooms and Bathrooms

☐ Kitchens

☐ Humidifiers

☐ Condensation/Drip Pans

☐ Crawl Spaces

☐ Basements and Cellars

☐ Plumbing

☐ Fire Suppression Systems

☐ Windows and Sliding Doors

☐ Attic Spaces

☐ Interior Areas With Open Water or High Humidity

☐ Reservoir Mistors

☐ Gas-fired and Oil-fired Heaters

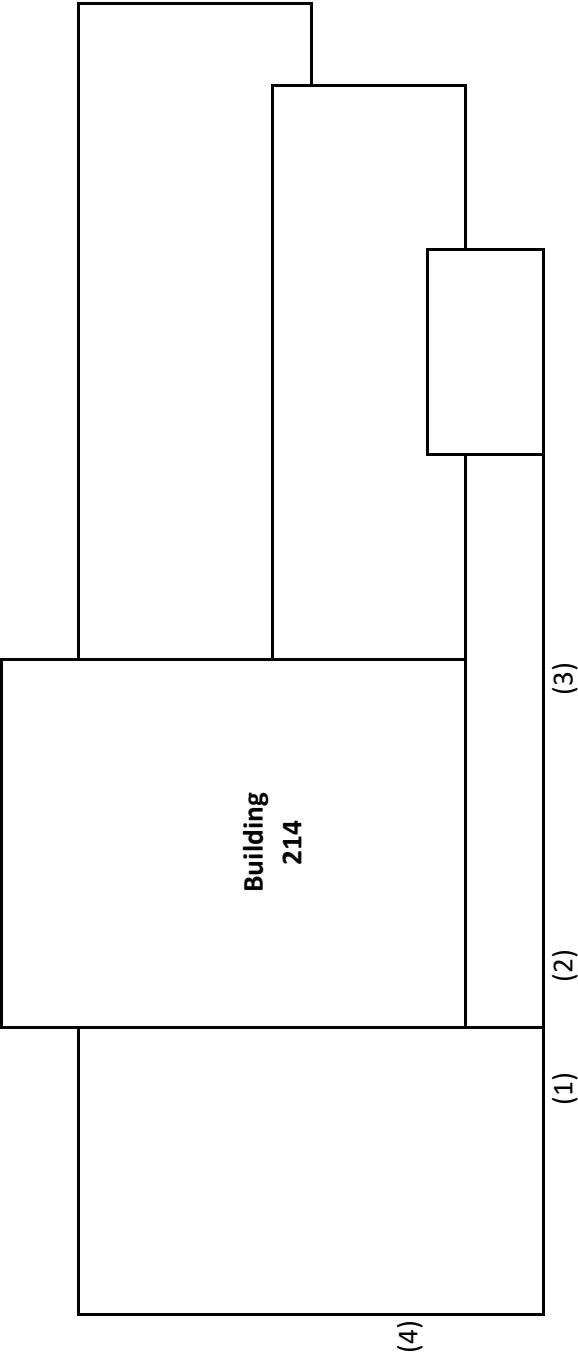
Mold and Mildew Walk Through Survey Summary Checklist

Building Name: 214 Date: 10/16/18

Observations	Short Term Recommendations	Long Term Recommendations
(1) Open electrical / cable box next to downspout.	Fix the top of the box so that it seals correctly.	
(2) Downspout splash block is covered and blocked by mulch, causing water to pond next to building.	Clear the mulch from the end of the downspout and provide a positive drainage to the curb.	
(3) Downspout splash block is flowing backward toward the building and causing water to pond next to the building.	Adjust the splashblock and provide positive drainage to the curb.	
(4) Ivy is growing up the wall. The roots could cause damage to the wall.	Remove all ivy from the walls.	

Mold and Mildew Walk Through Survey Summary Checklist

Building Name: 214 Date: 10/16/18



Mold and Mildew Walk Through Survey Summary Checklist

Building Name: 214 Date: 10/16/18



Observation

(1) Open electrical / cable box next to downspout.

Number of Times Observed

One

User Level Recommendation

None

Short Term Recommendation

Fix the top of the box so that it seals correctly.

Long Term Recommendation

None

Mold and Mildew Walk Through Survey Summary Checklist

Building Name: 214 Date: 10/16/18



Observation

(2) Downspout splash block is covered and blocked by mulch, causing water to pond next to building.

Number of Times Observed

One

User Level Recommendation

None

Short Term Recommendation

Clear the mulch from the end of the downspout and provide a positive drainage to the curb.

Long Term Recommendation

None

Mold and Mildew Walk Through Survey Summary Checklist

Building Name: 214 Date: 10/16/18



Observation

(3) Downspout splash block is flowing backward toward the building and causing water to pond next to the building.

Number of Times Observed

One

User Level Recommendation

None

Short Term Recommendation

Adjust the splashblock and provide positive drainage to the curb.

Long Term Recommendation

None

Mold and Mildew Walk Through Survey Summary Checklist

Building Name: 214 Date: 10/16/18



Observation

(4) Ivy is growing up the wall. The roots could cause damage to the wall.

Number of Times Observed

One

User Level Recommendation

None

Short Term Recommendation

Remove all ivy from the walls.

Long Term Recommendation

None



US Army Corps
of Engineers
Baltimore District

ENVIRONMENTAL HEALTH FACILITY ASSESSMENT

Ft. Myer Building 214

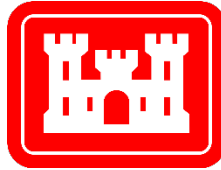
Joint Base Myer-Henderson Hall, VA

Attachment D:
IAQ & HAZMAT Report

**INDOOR AIR QUALITY STUDY
AND HAZARDOUS MATERIAL SURVEY FOR BUILDING 214
AT
JOINT BASE FORT MYER - HENDERSON HALL
FORT MYER, VIRGINIA**

Revision 0

March 2019



Prepared by

US ARMY CORPS OF ENGINEERS, BALTIMORE DISTRICT
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INTRODUCTION

U.S. Army Corps of Engineers (USACE), Baltimore District's Environmental and Explosives Safety Section (EESS) was retained by USACE Programs and Project Management Division (PPMD), to conduct a Hazardous Material (Hazmat) Survey for Building 214 in Joint Base Myer Henderson Hall (JBM-HH), Washington D.C. as a response to health concerns and upcoming renovations.

BACKGROUND

Most of the buildings at the north end of Fort Myer were built between 1895 and 1908. Many of those still standing have been designated historic landmarks by the U.S. Department of the Interior and the state of Virginia. Additional buildings were added to the footprint with the expansion of the installation in successive years.

Building 214 serves as Officers Club for the soldiers attached to the Old Guard (TOG) and military personnel from all branches of the service. Building 214 located on Jackson Avenue and located close to the installation's horse stables.

PREFACE

On November 7, 2018, a visual walk through inspection of areas and rooms of Building 214 was conducted and the following conditions were observed or reported by the staff personnel:

1. Basement Food Storage Area had no vents for air circulation and dramatic temperature and humidity change was noted in the area. In addition, there was reports of water infiltration into the area doing heavy rains, floor drain in this area was clogged which leads to puddles on the floor in this area during heavy rain.
2. Visible water stained ceiling tile on the Basement and 1st Floor of the building was an indication of water infiltration or condensation issues in the area. These conditions appear to be prevalent in many rooms of the Basement and 1st Floor this building.
3. Visible mold, dust and debris on light fixtures as well as vents and diffusers throughout the building.

INVOLVED PARTIES

Mr. Stephen Epps, the lead Industrial Hygienist with EESS was tasked by PPMD with the hazardous survey for this project and preformed the field observation. Ms. Eleonor Gordon, an Industrial Hygienist and Project Manager with EESS assisted in performing field observations and reviewing the final report, conducted data analysis and reporting and coordinated the logistics of the project.

PURPOSE

An Indoor Air Quality (IAQ)/ Hazmat Survey was conducted in in order to identify and address concerns in Building 214. The data collected captures all the accessible hazmat material observed and confirmed through laboratory analysis of samples collected during the field

observation. The HAZMAT survey will identify the following: Asbestos, Lead Based Paint, and Universal Waste Items.

STANDARDS

The *ANSI/ASHRAE Standard 55-2013: Thermal Environmental Conditions for Human Occupancy* specifies the combinations of indoor environmental and personal factors that produce acceptable thermal conditions to a majority of occupants within a space. Assuming slow air movement (less than 40 feet per minute) and 50% indoor relative humidity, the operative temperatures recommended by American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) range from 68.5°F to 75°F in the winter, and from 75°F to 80.5°F in the summer. The difference in temperature ranges between the seasons is largely due to clothing selection. ASHRAE also recommends that indoor relative humidity be maintained at or below 65%.

Carbon dioxide (CO₂) is a normal constituent of exhaled breath; thus, CO₂ will also increase during building occupancy. CO₂ levels are routinely collected in air quality studies because they can indicate whether a sufficient quantity of outdoor air is being introduced to an occupied space for acceptable odor control. The American National Standards Institute (ANSI) and ASHRAE have developed consensus standards and guidelines for HVAC systems, *ANSI/ASHRAE Standard 62.1-2013: Ventilation for Acceptable Indoor Air Quality*. In this standard, indoor CO₂ concentrations no greater than 700 parts per million (ppm) above outdoor CO₂ concentrations will satisfy a substantial majority (about 80%) of occupants. This would typically correspond to indoor concentrations below 1143 ppm since outdoor CO₂ concentrations usually range between 375 to 500 ppm.

Carbon Monoxide (CO) is an odorless, colorless, toxic gas. Various health organizations have established CO limits. The United States Environmental Protection Agency (USEPA) has set National Ambient Air Quality Standards (NAAQS) for Outdoor Air to be used in locating ventilation sources for buildings. In this standard, the exposure limits established for Carbon Monoxide is at a maximum of 35 ppm for one hour, not more than one time per year, or 9 ppm over any eight-hour period. The American Conference of Governmental Industrial Hygienist (ACGIH) and U.S. Occupational Safety and Health Administration (OSHA) have set Permissible Exposure Limits (PEL), Time Weighted Average (TWA) (ACGIH) and Permissible Exposure Limit (PEL) (OSHA), for CO at 25 ppm and 50 ppm respectively.

METHODS

Ventilation Assessment

To evaluate IAQ a calibrated Q-TRAK Indoor Air Quality Monitor produced by TSI instruments and obtained from Pine Environmental Services (SN# 0746007) was used to measure temperature, relative humidity (rH), carbon monoxide (CO), and carbon dioxide (CO₂) levels. Temperature and rH were assessed within Building 214 to determine if the air quality parameters fall outside recommended ASHRAE ranges. Measurement of these parameters outside of recommended ranges can sometime be indicative of problems with building design or

maintenance. These measurements were made in each area where spore trap samples were collected.

Spore Trap Sampling

Spore trap sampling is used to determine the ambient airborne concentration of viable and nonviable mold spores. Air-O-Cell cassettes, manufactured by Zefon Analytical and obtained from EMSL Analytical, Inc., were used to quantify the total viable and non-viable spores, pollen, animal- and insect-based particles, and other non-biological particles (e.g. Fiberglass).

The Spore Trap samples were collected by first calibrating a SKC QuikTake 30™ obtained from Pine Environmental (SN # 867741 and 867675) to a 15 Liter per minute (L/min) flow rate, using the Zefon Analytical rotameter provided with the pump. Then the tape seal from the Air-O-Cell™ cassette inlet and outlet were removed and the cassette was placed in the cassette housing of the pump. Each sample was run for 5 minutes at 15 L/min for a total air volume of 75 liters. The cassettes were removed from the pump, the tape placed back on the outlet and inlet. Outdoor background sample was also collected at either the beginning or end of indoor air sampling.

Including the background outdoor sample, a total of six (6) spore trap air samples were collected during the assessment of the Building 214 to capture a representative picture of possible fungal and/or particulate contamination within the building. The samples were collected and submitted to the contracted laboratory, EMSL Analytical, Inc in Beltsville, MD for analysis by Phase Contrast Microscopy. EMSL is accredited by Environmental Microbiology laboratory Accreditation Program (EMLAP) of the American Industrial Hygiene Association (AIHA) for providing analysis of Mold, IAQ, Microbiological, and other analytical testing (Accreditation # 102891). All indoor samples were collected 4–5 feet above the ground and no closer than 3 feet to any vertical obstructions, such as walls or room dividers.

RESULTS

Ventilation Assessment Results

The assessment for Building 214 registered ambient readings for temperature, relative humidity (rH), carbon dioxide (CO₂), and carbon monoxide (CO). On November 7, 2018 the temperature from readings from Building 214 ranged from 68.6 to 74.5 degrees Fahrenheit (°F). The indoor relative humidity ranged from 36.0 to 43.6 % (refer to Table 1). Guidelines from ASHRAE Standard 55 indicate an acceptable temperature range of 68 to 75°F in winter and 73 to 79°F in summer with the rH level being kept below 65%. However, other factors such as clothing and air movement can impact occupant comfort. EPA recommends maintaining RH below 60% which minimizes the potential for mold growth and ideally, levels should be maintained between 30% and 50%. The UFC 3-410-01 specifies a maximum dew point of 55°F. Temperature and relative Humidity readings are not conducive based on the cold season and the mechanical issues; however, the elevated temperature and relative humidity in the building are conducive of condensation in cool surface area and uninsulated pipes above suspended ceiling. The areas exposed to condensation and excessive moisture are susceptible to mold growth which was evident in water staining of ceiling tile various areas of the Basement and 1st Floors of Building 214.

Direct reading instruments showed CO levels measured in the various spaces to be between 0.0 and 0.3 parts per million (ppm) with the majority at 0.1 ppm. No specific source was identified

were identified and these levels were well below the indoor CO concentration of nine (9) ppm adopted by ASHRAE from the EPA National Ambient Air Quality Standard (NAAQS) outdoor air standards (See Table 1). Levels of CO₂ ranged from 435 to 556 parts per million (ppm) with many readings similar to outdoor levels (i.e., ~ 443 ppm). Humans are the primary source of CO₂ in the indoor environment and when they are not present, indoor levels can approach outdoor levels. The ASHRAE standard recommends maintaining a CO₂ concentration no greater than 700 ppm above outside air (OA) levels. This concentration is not based upon health risk but is an indicator for human comfort (odor and stuffiness) and accumulation of other indoor generated contaminants. Outside air level during the site visit was 443 ppm; this means that indoor levels should be maintained below ~1143 ppm. Measurements were not taken overnight during periods of typical unoccupancy.

Spore Trap Sample Results

While there is no precise formula to distinguish “normal” or “typical” background levels or types of fungal spores from increased levels or an atypical mix of types. The evaluation of air sampling results is based on the comparison of the types and levels of fungi detected indoors versus those detected outdoors. Differences between indoor and outdoor results suggest, but do not confirm, that mold growth is present indoors. Currently, there are no EPA regulations, Threshold Limit Values (TLVs), or standards for airborne mold contaminants.

On November 7, 2018 the total viable and non-viable fungal spore concentration in Building 214 ranged from 5520 counts/m³ to 6780 counts/m³. Out of the five (5) rooms sampled, all were found to be below the total background/ outdoor concentration of 40,690 counts/m³. On the other hand, indoor spore count were found to be elevated in five (5) rooms above the background for several spore species.

The overall composition and diversity of fungi in these rooms were similar to that of the outdoor air. Specifically, *Aspergillus/Penicillium*, *Cladosporium*, *Basidiospores*, *Myxomycetes* and *Rusts* species were identified in some of the samples indoors and outdoors. Some of the spores identified indoors do have the potential to cause allergies, hay fever, asthma, and hypersensitivity pneumonitis in individuals and could have originated from outdoor sources. Fungal spores that are good indicators of water damage in buildings and most dominant spore type found throughout the building such as *Aspergillus/Penicillium* /*Stachybotrys*/ *Memmoniella* and *Myxomycetes* were also found inside some of the areas of the building. (see Table 2 and Attachment 1).

The overall dust loading on the spore trap samples was not heavy, background dust and particulate matter was 1 (on a scale of 1-4). Skin fragment or cells made up 1 (on a scale of 1-4) of the total background, which is a typical result of human occupancy.

DISCUSSION

Fungal spores are found everywhere. Whether or not symptoms develop in people exposed to fungi depends on the nature of the fungal material (e.g., allergenic, toxic, or infectious), the exposure level, and the susceptibility of exposed persons. Susceptibility varies with the genetic predisposition (e.g., allergic reactions do not always occur in all individuals), age, pre-existing

medical conditions (e.g., diabetes, cancer, or chronic lung conditions), use of immunosuppressive drugs, and concurrent exposures. These reasons make it difficult to identify dose/response relationships that are required to establish safe” or “unsafe” levels (i.e., permissible exposure limits). It is generally accepted in the industry that indoor fungal growth is undesirable and inappropriate, necessitating removal or other appropriate remedial actions.

Molds are quantified as total non-viable and viable, and culturable. Viable spores are analogous to seeds used to plant flowers in a garden; they are living and growing organisms. Non-viable spores will not germinate or grow. Culturable spores are a subset of the viable molds that may begin to grow when a source of moisture and appropriate food is available. Both types of spores may contain allergens that can cause respiratory and skin reactions in allergic individuals. Generally, an area is considered to be normal or typical when the total quantity of spores/m³ inside is less than the total quantity of spores/m³ outside.

Generally, the types and amounts of mold spores indoors will be similar to that found outdoors. Low levels of certain mold species (one or two raw spore counts) found indoors but not outdoors are commonly seen and should not pose a reason for heightened concern. Depending on the species identified and absent a moisture source, species found outdoors are generally expected to be found indoors but in lesser quantities. This is because people enter buildings carrying the naturally occurring mold spores on them. Rooms with exterior doors that are opened frequently during the day will have higher mold spore levels than interior rooms.

Common marker species found indoors and outdoors in dry (non-moist) environments include *Alternaria*, *Basidiospores* (mushrooms), *Cladosporium*, *Curvularia*, *Drechslera/Bipolaris* group, *Epicoccum*, and *Torula*. These molds grow on a wide variety of indoor materials specific to the genus. Common marker species found indoors and outdoors in damp, wet, or water-damaged environments include *Acremonium*, *Ascospores*, *Aspergillus*, *Aureobasidium* (mildew), *Chaetomium*, *Fusarium*, *Penicillium*, *Sporobolomyces*, *Stachybotrys*, and *Ulocladium*. These species require more than a basic moisture source to thrive. The moisture source is usually waterlogged/water-damaged material, prolonged dampness, or prolonged wetness. Generally, eliminating the moisture source, cleaning up the visible mold growth, and treating with a biocide can prevent reoccurrence. *Myxomycetes*, *Rusts* and *Smuts* are common plant parasites, which cannot exist without the host plant. Airborne levels generally indicate that a plant in the area is diseased. Elimination of the diseased plants in an area with airborne rusts and smuts will eliminate the source and potential reoccurrence.

In Building 214, the spore levels measured indoor were recorded in elevated numbers for the species *Aspergillus/Penicillium* /*Stachybotrys*/ *Memnoniella* and *Myxomycetes*, which can causes allergic reactions, respiratory infections, and have been reported to trigger allergies, asthma and hypersensitivity pneumonitis.

With regards to the building ventilation, there was little to no ventilation in the Basement Food Storage Area of the building. Due to the poor ventilation in the building and inadequate exhaust,

the moisture generated for this area has no proper way to be exhausted and eliminated from the building thus, elevating moisture and humidity in the building.

RECOMMENDATIONS

In Building 214, for the affected areas, the following recommendation are based on spore trap sample result found to be elevated for certain species above outside background results:

1. Short Term-

- a. Provide vents for air circulation in the Basement Food Storage Area. In addition, unclog the floor drain in this area.
- b. Stop water leaks into the areas, and where water infiltrates and condensation above the suspended ceiling tile is an issue, followed by replacing all water stained/damaged ceiling tile.
- c. Sanitize all nonporous surfaces, remove and replace all water damaged ceiling tiles, use a dehumidifier inside affected areas, provide air conditioning for areas that need cooling, purge air inside the area with mini HEPA negative air unit for 24-48 hours followed by collecting spore trap air samples inside the affected areas and outside the building.

2. Long Term-

- a. Address water infiltration into the Basement of the building near Food Storage Area.
- b. Conduct periodic surveillance to check for further water infiltration issues. Should there be any additional water infiltration issues in the building they should be addressed within the 24 – 48 hour time frame to help prevent mold growth in the building and potential mold exposure to personnel in the building.
- c. General maintenance plan that would sustain the general upkeep and general health and infrastructure of the building to ensure durability.

Note: Additional individual dehumidifying units will increase the temperature and increase nuisance noise pollution in the spaces. Such limitations for short term solutions must be taken into consideration as they add additional impact to the existing condition.

LIMITATIONS

Air sampling results are limited, in that they represent airborne concentrations at the time of sample collection only. Changes in weather, operating procedures, ventilation, temperature, humidity, practices and other conditions, including the inappropriate introduction of moisture, may cause variations in anticipated airborne chemical concentrations.

While this assessment was relatively comprehensive, it was non-intrusive and was limited to accessible areas. This survey did not include, interstitial wall cavities, examining behind wall

covering material, or above suspended ceiling. At the time of the survey the building was occupied and samples were collected during working hours. It is possible that airborne contaminants may still be present that facilitate a faint, unpleasant odor, or an adverse reaction in some individuals. There is no universal reaction to a measured amount of a particular material. People simply have different tolerance levels, therefore it is difficult to assign standards or even guidelines to set acceptable versus unacceptable levels of literally thousands of airborne pollutants present in indoor environments. Undetected contaminants could be present in differing amounts that hyper-sensitive individuals will find irritating or otherwise unpleasant.

The idea of comparing outdoor with indoor air samples is controversial. However, this comparison gives an indication as to whether the spores recovered from indoor environment originated from indoor sources. During winter, this comparison serves only as a snap shot in time and cannot be extrapolated to represent spore counts during other seasons of the year.

It should be noted that air samples for Volatile Organic Compounds (VOC) were not conducted because they were not associated with the initial assessment. Air sampling for specific pollutant concentrations is expensive and might seem to be the logical response to occupant complaints; it seldom provides information about possible causes and can even be misleading. However, certain basic measurements, (e.g., temperature, relative humidity, CO₂, and air movement), can provide a useful “snapshot” of current building conditions and these measurements have indicated that they do not fall outside of the previously listed standards, nor do they pose any significance hazard to the average worker.

HAZMAT SURVEY

PURPOSE

A Hazmat Survey was conducted in preparation of upcoming scheduled renovations for Building 214. The data collected captures all the hazmat material observed and confirmed through laboratory analysis of conspicuous samples collected during the field observation. The HAZMAT survey will identify the following: Asbestos, Lead Based Paint, and Universal Waste Items.

ASBESTOS

An asbestos survey inspection of suspected asbestos containing material (ACM) inside Office Areas, Sleeping Quarters, Hall Passageways, Mechanical Room, pipe chases, above the suspended ceiling, inside any void where suspected ACM may be found. During EESS HazMat for Asbestos, ten (10) confirmatory bulk samples were collected and submitted to AMA Analytical Services Inc. for analysis. Samples were analyzed by Polarized Light Microscopy/Dispersion Staining (PLM). Nondestructive sampling methods were employed in the performance of the building survey of Building 214. Tested material confirmed the presence or absence of Asbestos material as can be seen in Attachment 3 – “Asbestos Laboratory Results,” which also contains a summary table of the results and the description and quantity of the material (see Table 3). The results for the material collected and sampled for Building 214 was “No Asbestos Detected” (NAD) material.

LEAD BASED PAINT

Lead survey was conducted on November 7, 2018 by Stephen Epps (Virginia Licensed Lead Inspector # 3342000916), using the Innov-X Systems, Inc. Innov-X 600 Alpha Series XRF Analyzer (SN# 11762). The XRF was rented from Pine Environmental, whom maintains the Maryland Radioactive Material License and obtained reciprocity for the equipment to be transported to and utilized in the state of Virginia for this project.

Prior to and subsequent to each inspection event and at least every four hours, “standardization tests” and “calibration checks” were performed to ensure that the XRF measurements taken during an inspection truly reflect lead levels at the inspection sample points. Standardization tests calibration check measurements on the National Institute of Standards and Technology (NIST) Standard Reference Material using the nominal 1.0 mg/cm² (NIST 2573 - RED) and blank 0.0 mg/cm² paint films (NIST 2570 - WHITE). The certified values for lead for the standard reference material SRM 2570 is lead concentration of < 0.001 mg/cm². The certified values for lead for the standard reference material NIST 2573 is lead concentration of 1.040 ± 0.064 mg/cm². In accordance with the Manufacturer’s recommendations, each calibration check is for 20 nominal second sample of the NIST Standard Reference Material. Calibration checks limits are 1.0 mg/cm² to 1.1 mg/cm² in the inclusive range. The calibration check is considered out of range, if the average of three readings (rounded to 1 decimal place) is outside the acceptable calibration check range.

Readings equal to or greater than 1 mg/cm² are considered “positive”. When an inconclusive range is obtained, XRF results are classified as positive if they are greater than the upper boundary of the inconclusive range, negative if they are less than the lower boundary of the inconclusive range, or inconclusive if in between. The inconclusive range includes both its upper and lower bounds. If the instrument reads “> x mg/cm²”, the value “x” is used for classification purposes, ignoring the “>”. For example, a reading reported as “>1.0 mg/cm²” is classified as 1.0 mg/cm².

A total of 55 XRF readings were taken in this building. All XRF readings are provided (see Table 4 – Lead). There was eight (8) component types found to be positive during this survey. The XRF sampling data provided here is “representative” but not necessarily comprehensive.

Paint surfaces not inspected should be assumed to contain lead-based paint unless the data presented in this report or other data concludes that lead-based paint is not present.

The following component types were found to be positive for Lead: wood window casing, wood window sill, wood door frame, wood walls, and metal columns. The area component types identified in this report found to be positive for lead based paint and noted to be in poor condition should be repainted to be made lead safe for Building 214.

POLYCHLORINATED BIPHENYLS (PCB)

A survey/inspection of light fixtures for polychlorinated biphenyls (PCB) containing ballast, inside the aforementioned Building 214 was conducted. Light ballasts are the electrical components at the end of fluorescent light fixtures under a metal over-plate. Prior to 1978, ballast were commonly manufactured with PCB's and used in fluorescent light ballast because of their good electrical insulating capabilities. Ballast made after 1978 are usually marked "Non-PCB". As a result of the random survey/inspection no PCB's ballast were observed in the existing light fixtures of accessible Office Areas, Storage Rooms, Hall Passageway, and Mechanical Rooms.

MERCURY

Mercury is used in several building components including fluorescent lamps and liquid thermometers. In fluorescent lighting, mercury-containing dust forms from the mercury vapor found within the lamps. Numerous fluorescent lamps were observed during the building inspection in the aforementioned Building 214. The approximate number of fluorescent bulbs in the building is 800 bulbs. No mercury Thermostat or exit signs were observed or identified.

Recommendation:

These fluorescent lamps should be removed and recycled before renovation or demolition of the building. The existing thermostats did not contain liquid mercury thermometers. It should be noted that if these materials are not going to be disturbed during the renovation activities they can be managed in place.

SMOKE DETECTORS

There were no smoke detectors containing possible radioactive material observed inside of Building 214. Also, no fire exit signs containing possible radioactive material were not observed during the walk through visual inspection in the building.

REFERENCES

29 Code of Federal Regulations Part 1910. Occupational Safety and Health Standards.

40 Code of Federal Regulations Part 50. National Primary and Secondary Ambient Air Quality Standards.

American Conference of Government Industrial Hygienists (ACGIH), TLV, BEI, Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices. 2016 Cincinnati, OH, ACGIH

ANSI/ASHRAE (2013). Ventilation for acceptable indoor air quality, standard 62.1-2013. Atlanta, GA: American Society of Heating, Refrigeration, and Air-Conditioning Engineers.

ANSI/ASHRAE (2013). Thermal Environmental Conditions for Human Occupancy, Standard 55- 2013. Atlanta, GA: American Society of Heating, Refrigeration, and Air-Conditioning Engineers.

United Facilities Criteria (UFC) 3-410-01, *Heating, Ventilating, and Air Conditioning Systems, Change 3*, 25 January 2017.

TABLE 1- INDOOR AIR QUALITY MEASUREMENTS

Building 214

Spore Trap Sample #	Sample Location (Room #)	Relative Humidity (% rH)	Temperature (°F)	CO (ppm)	CO₂ (ppm)
214 ST- 1 T 1005	OUTSIDE	32.2	68.9	0.3	443
	Lobby	36.3	71.2	0.2	435
	GM Office	37.9	72.0	0.0	452
	Conference Room	36.8	72.5	0.0	448
	AGN Room	36.0	72.4	0.1	453
	Storage Room	36.3	72.2	0.1	452
214 ST – 2 T 1026	Acct Room	36.9	72.8	0.1	478
	Locker Room	37.1	73.1	0.0	474
	General Area	39.4	73.4	0.1	444
	Basement Storage	40.7	73.9	0.1	497
	Food Storage	46.0	68.6	0.1	626
	Boiler/Mechanical Room	43.1	69.8	0.0	556
214 ST – 3 T 1103	Break Room	40.6	71.8	0.0	493
	Salad Bar Area	44.3	74.5	0.3	477
	Bar Area	42.7	74.1	0.1	487
214 ST- 4 T 1114	1 st Floor Reception	43.6	71.9	0.2	545
214 ST- 5 T 1121	1 st Floor Receptionist Room	36.0	72.4	0.0	460
214 ST- 6 T 1128	2 nd Floor Lobby	42.1	71.0	0.0	508