

October 31, 2019

John Gorham, PE
Jacobs Engineering Group Inc.
Project Manager
2 Executive Park Drive, Suite 205
Bedford, NH 03110

Re: Buildings 27, 28, 31, and 16
Connecticut Air National Guard, 100 Nicholson Road, East Granby, CT
Building Survey Findings
RPF File No. 199476

Dear Mr. Gorham:

On October 17, 2019 and October 18, 2019, RPF Environmental, Inc. (RPF) conducted a survey at the Connecticut Air National Guard located at 100 Nicholson Road in East Granby, CT. The survey was performed in the interior portions of the building, as designated by you or your site representative, for accessible hazardous building material as indicated herein. Below is a summary of findings, discussion of the results and preliminary recommendations for proper management of the identified hazardous building material. Attached to this report are the survey data tables, laboratory results, survey methodologies and limitations.

This report is not intended to be used as an abatement specification or work plan. To proceed with abatement work, the following important steps are necessary:

1. A work plan or project design documents must be prepared prior to abatement by a certified abatement project designer. As part of the design, additional site testing and analysis may be required as discussed in this report.
2. The abatement specification or work plan should then be used to solicit bids from qualified abatement contractors. Only properly licensed contractors should be used for asbestos abatement and disposal.
3. A qualified industrial hygiene/testing consultant should conduct sufficient testing and inspections of the work, independent of the abatement contractor. The consultant should also prepare final abatement reports for the work.

Summary of Findings

The scope of this survey included interior areas within buildings 27, 28, 16, and 31. Buildings 16 and 27 are 1-story, masonry structures that house various offices, common areas and garages. Building 28 is a 1-story, masonry and metal storage area that is used as an open garage. Building 31 is a 1-story, masonry building that is made up of five (5) garage bays. Accessible exterior portions of each building were inventoried only, sampling these materials and surveying the roofs of these buildings were outside the scope of this survey.

The scope of the survey included accessible asbestos-containing building material in accordance with the initial asbestos inspection requirements prior to renovation or demolition work as stated in the State regulations and applicable federal regulations. In addition, the survey included screening for lead paint (LP), polychlorinated biphenyls (PCB) light ballasts, mercury switches, refrigerants, suspect PCB caulking, universal wastes, building system hydraulics, and fluorescent light bulbs.

Asbestos

Several types of suspect asbestos-containing building material (ACBM) were observed by RPF, including friable and nonfriable suspect material. No asbestos was detected in the accessible materials sampled in buildings 27, 28, and 31. Based on the testing performed by RPF, asbestos was detected in the following materials collected in building 16:

- Tan 12" Floor Tile
- Black Floor Tile Mastic

Exterior portions of the buildings were inventoried only. Sampling was not performed of exterior suspect ACBM in order not to damage the integrity of the materials at this time. As such, the door caulking, window caulking, and built-up roofing material is assumed to be ACBM for the purposes of this inspection. When feasible and prior to demolition or disturbance, the door caulking, window caulking, and built-up roofing should be tested including representative core samples and analysis of the different suspect materials.

Lead Paint

Based on the year of construction and extent of renovation conducted over the years, it is reasonable to assume that some lead paint (LP) is present. RPF conducted limited spot testing of paint and LP was confirmed to be present on various interior building components in Buildings 27, 28, and 16. The intent of the lead testing was for potential lead hazardous waste disposal screening purposes only.

Polychlorinated Biphenyls, Mercury, Refrigerants, Building System Hydraulics, Universal Wastes

Based on the RPF visual observations, polychlorinated biphenyl (PCB) containing light ballasts, universal wastes, and fluorescent light bulbs are present throughout Buildings 27, 16, and 31. Mercury switches and building system hydraulics were not observed in any of the buildings surveyed. In addition, RPF observed refrigerators in Buildings 27 and 16 which are assumed to contain Freon or other CFCs.

PCB in Caulking

Based on the RPF visual observations, six (6) composite samples were collected of suspect PCB caulking present in Buildings 27, 16, and 31. Two samples were collected from Building 27, three samples were collected from Building 16, and one sample was collected from Building 31. PCBs were not detected in the composite samples collected during this site visit.

Depending on the extent of renovation and final construction plans, proper abatement and/or management of the materials will be required in accordance with applicable State and federal regulations. Renovation and demolition plans should be reviewed by a certified industrial hygienist and a licensed project designer for possible asbestos impact issues. Based on the impact assessment and planned usage, technical specifications should be prepared for abatement, as applicable. A management plan should also be prepared to address any asbestos or other hazardous material scheduled to remain after construction.

Discussion of Findings

Asbestos-Containing Building Material

Asbestos is the name for a group of naturally occurring minerals that separate into strong, very fine fibers. The adverse health effects associated with asbestos exposure have been extensively studied for many years. Results of these studies and epidemiological investigations have demonstrated that inhalation of asbestos fibers may lead to increased risk of developing one or more diseases. In all cases, extreme care must be used not to disturb asbestos-containing materials or to create fiber release episodes.

In the accessible locations surveyed, RPF identified eighty (80) homogeneous groups of accessible suspect asbestos-containing building material. Suspect materials were identified based on current industry standards, EPA, and other guideline listings of potential suspect ACBM.

The following is a summary list of the suspect ACBM identified and sampled during this survey:

Building 27

- *2x2 Pitted Suspended Ceiling Tile*
- *Yellow Carpet Adhesive*
- *Grey Cove Base with Yellow Adhesive*
- *White Door Caulking*
- *White Leveler*
- *Black Cove Base and Beige Adhesive*
- *Grey Laminate Countertop with Adhesive*
- *Black Window Caulking*
- *2x2 Spotted Suspended Ceiling Tile*
- *Gray Ceramic Floor Tile Grout and Mortar*
- *Gray Ceramic Wall Tile Grout and Yellow Mastic*
- *Grey Caulking*
- *2x4 Suspended Ceiling Tile*
- *White Caulking*
- *Tan 12" Floor Tile with Yellow Mastic*
- *Brown Laminate Countertop with Adhesive*
- *Gypsum Board and Joint Compound*
- *Grey Duct Caulking*
- *Brown Expansion Joint Filler*
- *White Expansion Joint Caulking*
- *Blue Putty*
- *Red Putty*
- *Grey Putty*
- *Brown Putty*
- *Grey Flue Cement*
- *Red Caulking*
- *Grey Building Seam Caulking*

Building 28

- *White Textured Paint*
- *Brown Caulking*
- *Blue Flue Cement*

Building 16

- *2x2 Dotted Suspended Ceiling Tile*
- *2x4 Grey Pitted Suspended Ceiling Tile*
- *2x4 Grey Squiggle Suspended Ceiling Tile*
- *2x4 White Dotted Suspended Ceiling Tile*
- *Black Cove base with Brown Mastic*
- *Grey Cove base with Yellow Mastic*
- *Tan 12" Floor Tile with Black Mastic*
- *White 12" Floor Tile with Black Mastic*
- *Gypsum board and Joint Compound*
- *White Sink Basin Undercoating*
- *Tan Granite Laminate Countertop with Adhesive*
- *Black Window Caulking*
- *White Building Seam Caulking*
- *White Door Caulking*
- *Grey Flue Cement*
- *White Ceramic Wall Tile Grout with Gray Mortar*
- *Gray Ceramic Floor Tile Grout and Mortar*
- *Solid White Suspended Ceiling Tile*
- *White Ceramic Cove base Grout with Gray Mortar*
- *Red Putty*
- *Brown Pegboard*
- *Blue Putty*
- *Grey Putty*
- *White Patch Caulking*
- *Grey Duct Tape*
- *White Ceramic Cove Base Grout with Brown Mortar*
- *White Ceramic Wall Tile Grout with Yellow Mortar*

Building 31

- *White Textured Surfacing*
- *Brown Expansion Joint Filler*
- *Grey Building Seam Caulking*
- *White Caulking*

A total of one hundred and sixty-seven (167) samples were extracted from the different groups of suspect material in accordance with EPA sampling protocols. Of the samples collected by RPF, asbestos was detected in three (3) groups of suspect ACBM.

Based on the survey findings, accessible ACBM was not identified in Buildings 27, 28, and 31. Care should be used during demolition to inspect for possible concealed suspect material that was not accessible at the time of this inspection.

Table 1 below includes a list of interior ACBM identified in building 16, EPA category listings, and asbestos content. A listing of the different homogenous groups of suspect material identified, samples collected, and analytical results is included in Appendix A.

TABLE 1

SUMMARY OF INTERIOR ACBM IDENTIFIED

Building Material	Location	Approximate Quantity	EPA Category	Asbestos Results
Tan 12" Floor Tile with Black Mastic	Building 16, Throughout Office area section of the building	1,300 square feet	Category I Nonfriable	3-6% Chrysotile
Black Mastic	Building 16, Break room, Under White 12" floor tile	35 square feet	Category I Nonfriable	6% Chrysotile

Notes: All quantities are approximate only and should be confirmed during abatement project design and abatement bidding.

The ACBM identified during this survey consists of nonfriable material. The nonfriable ACBM was observed to be in good to fair condition and, left undisturbed and properly managed, is unlikely to cause any major fiber release episodes.

Although the standard polarized light method of analysis was completed pursuant to current state and federal regulations, it is recommended that some of the 12" floor tile and mastic samples collected in buildings 16 and 27 that were found to be non-detect for asbestos, as detailed on the attached results, be confirmed using gravimetric preparation methods for nonfriable ACBM for more definitive results. If you would like to arrange for this additional lab work, please contact our office as soon as possible.

It should be noted that exploration of the masonry wall cavities for the presence of suspect vermiculite in each of the buildings was not part of the scope of work. The buildings were occupied at the time of the survey and it was not feasible to explore the walls without causing damage to the structure. The walls cavities in each of the buildings should be investigated prior to any demolition or renovation activities.

The exterior building materials of Buildings 16, 27, 28, and 31 were inventoried only at this time and sampling was outside the scope of work for this survey. As such, the exterior building materials are assumed to be ACBM for the purposes of this inspection. When feasible and prior to demolition or disturbance, the exterior building materials should be tested including representative core samples of the roofing and analysis of the different suspect materials. The following is a list of accessible suspect exterior building materials RPF observed and inventoried at each of the buildings.

Building 27

- *Rubber roof system*
- *Black seam sealant*
- *White roof caulking*
- *Black vibration cloth*
- *Black flashing*
- *Grey flashing*
- *White patch caulking*
- *Black pitch pocket sealer*
- *Brown window caulking*
- *Grey Building seam caulking*
- *Dark grey door caulking*
- *Hard grey caulking*
- *White caulking*
- *Light grey door caulking*
- *Red putty*

Building 28

- *Silver coating on metal roof*

Building 16

- *Rubber roof system on both the upper and lower roofs*
- *Silver roof coating*
- *White flashing*
- *White roof caulking*
- *Black roof caulking*
- *Black flashing*
- *Black pitch pocket sealer*
- *Grey roofing tar*
- *Light grey door caulking*
- *Light grey building seam caulking*
- *Dark grey caulking*
- *Brown window caulking*
- *Dark grey building seam caulking*

Building 31

- *Rubber roof system*
- *Black seam sealant*
- *Black adhesive around perimeter in spots*
- *Grey building seam caulking*
- *Brown expansion joint filler*
- *Electrical putty*
- *Textured surfacing*

The structures were in current use at the time of the survey and full destructive or exploratory survey methods were not feasible. Suspect materials encountered at the site subsequent to this survey, which are not included on the enclosed listings of suspect material sampled, should be assumed to be ACBM until proper testing proves otherwise (for example prior to any disturbance due to maintenance, renovation or demolition activity). Please notify RPF in this event to arrange for proper testing and assessments. Please reference the attached methodology and limitations.

Lead Paint Screening

Based on the type and age of buildings construction, it is reasonable to assume that various painted surfaces contain some lead. It is not uncommon in buildings such as these and that have had various renovation and upgrades to have both lead containing paint and non-lead containing paint. Lead is a toxic metal that was used for many years in paint and other products found in and around buildings and homes. Exposure to lead may cause a range of health effects, from behavioral problems and learning disabilities, to seizures and death. Children six years old and under are most at risk; however, adults are also susceptible to the effects of lead over exposure.

For the purposes of this survey, RPF extracted a total of twenty-three (23) representative suspect paint samples from building components in these buildings. Six (6) samples were collected from Building 27, and lead was detected in 3 of the samples: in the mechanical room (black), room 9 (beige), and room G1 (beige and white). Five (5) samples were collected from Building 28, and lead was detected in one of the samples: white textured paint. Eight (8) samples were collected from Building 16, and lead was detected in 3 of the samples: rooms 003 and 009 (white) and room 016 (brown). Four (4) samples were collected from Building 31, and there was no lead detected. The results for the paint chip testing completed during this survey are included in Tables 6 through 9 of Appendix A. Based on this limited testing, it should be assumed that other painted surfaces at the site may also contain lead.

Current State of Connecticut Lead Poisoning regulations consider any paint that contains greater than 0.5 percent by weight to be lead-based paint. However, the intent of this survey was for construction purposes only and preliminary demolition waste stream implications, not for compliance with CT Lead Poisoning regulations, HUD, or any regulatory abatement order.

Any surfaces with lead present should be managed in accordance with current rules and guidelines, including but not limited to OSHA worker safety rules and State and EPA waste handling and disposal regulations. U.S. Occupational Safety and Health Administration (OSHA) construction rules do not specify any "safe" or acceptable levels of lead within paint for the purposes of occupational exposures. Therefore, construction work involving paint found to contain lead must be completed in accordance with OSHA regulations, not limited to the lead standard, 29 CFR 1926.62. Contractors completing work in areas found to contain lead, or where it is reasonable to assume lead may be present, should be notified of the presence (and potential presence) of lead and proper work protocols should be used.

As lead was found to be present in the screening, proper waste testing with TCLP extraction for lead and potentially other toxic materials should also be completed prior to disposal of any waste generated in accordance with current EPA requirements. Often times it is recommended that pre-demolition TCLP testing be completed such that waste can be segregated as required during demolition activity. Construction/demolition waste that is found to contain lead greater or equal to 5.0 milligrams per liter (mg/L) by TCLP analysis must be handled and treated as hazardous waste.

Please also note that construction and renovation work involving lead paint in housing and child-occupied facilities built before 1978 is also regulated under the EPA Renovation, Repair, and Painting (RRP) rule. Any contractors conducting such work must be properly certified and must use lead safe work methods pursuant to the EPA RRP rule. In addition, pursuant to Title X requirements landlords and sellers are required to disclose the results of lead inspections to tenants and purchasers, and to provide the warning notice and pamphlets in accordance with Title X and State requirements.

PCB Light Ballasts and Fluorescent Lamp Inventory

For this survey, RPF inventoried the fluorescent lamps throughout Buildings 27 and 16. Fluorescent lamps were not observed in Buildings 28 and 31. Visual spot checks of fixture ballasts could not be conducted during this preliminary survey due to the systems being energized. RPF observed approximately 68 fluorescent lamp fixtures in Building 27 and approximately 55 fixtures in Building 16.

During demolition of the lights, inspections should be performed to check ballasts for a “No PCBs” label and have any unmarked ballasts or ballasts without date stamp be assumed to be PCB containing. PCB and non-PCB ballasts should be segregated and packaged for waste disposal in accordance with State and federal requirements. There is a substantial cost difference for disposal of PCB ballasts versus non-PCB ballasts. It is also recommended that prior to proceeding with site work, it be requested that the Client or Building Owner provide documentation of PCB ballasts removed and replaced in the building, if available.

PCBs have been shown to cause chronic toxic effects and are a human carcinogen. PCBs are toxic according to the U.S. EPA and are a regulated material. The two primary federal laws that affect the handling of PCBs are the Toxic Substance Control Act and the Superfund Law (CERCLA). Other regulations include various State requirements, Department of Transportation, U.S. OSHA, and the Resource Conservation and Recovery Act. The regulations establish various requirements for the removal, handling, storage and disposal of PCBs.

With regard to light ballasts, approximately half were manufactured prior to 1979 and nearly all pre-1979 ballasts contain PCBs. Ballasts manufactured after July 1, 1978 and that do not contain PCBs are required to be clearly marked “No PCBs”. Please note that is possible that post 1979 ballasts may contain some PCBs in the capacitor oils and more information should be requested if needed for applicable State and federal agencies. PCBs may also be present in common household appliances with small capacitors and as dielectric fluids; other electric equipment such as transformers, switches and voltage regulators; and recent studies have shown PCB content in caulk and some paints. Documentation of current conditions and in-depth hazard assessments, and laboratory testing for these other PCB usages, is beyond the scope-of-work for this initial survey.

PCB in Caulking

A total of six (6) composite samples of building caulking were collected and submitted for analysis to determine PCB content. These samples were comprised of discrete caulking materials collected

from various interior window trim, door trim, building seams, expansion joints in Buildings 27, 16, and 31. No suspect PCB caulking was observed in Building 28.

The samples were analyzed by Eastern Analytical, Inc. using EPA Method 8082. No detectable concentrations of PCBs were present in the interior caulking samples collected. PCB-containing caulk is considered PCB bulk product waste if the concentration of PCBs in the caulk is greater than or equal to (\geq) 50 ppm pursuant to 40 CFR § 761.3. PCB bulk product waste includes waste derived from manufactured products containing PCBs in a non-liquid state where the concentration at the time of designation for disposal is \geq 50 ppm PCBs. The results of the PCB analysis are included in Appendix A. It should be noted that sampling of exterior caulking was outside the scope of work for this survey. Prior to any renovation or demolition activities in buildings 27, 28, 16, and 31, the exterior caulking should be sampled and analyzed for PCBs.

Visual Observations for Mercury Switches, Refrigerants, Building System Hydraulics, and Fluorescent Light Bulbs

Based on the spot checks by RPF, no mercury switches or thermostats were observed in Buildings 16, 27, 28, and 31. It is possible that additional switches, thermostats or heat detection devices may be encountered during renovation or demolition work and care should be used to properly handle such materials. In addition, fluorescent and high intensity discharge lamps contain a small quantity of mercury that may pose a hazard to human health or the environment if the materials are not managed properly. The lamps may also contain lead solder material. The following table depicts the approximate quantities of bulbs observed in each building.

Location	Fluorescent Bulbs	High Intensity Bulbs
Building 27	132	9
Building 28	0	0
Building 16	158	0
Building 31	0	10

Based on the visual observations performed, RPF did not identify any building system hydraulics in the buildings surveyed. RPF observed one refrigerator in Building 27 and one refrigerator in Building 16. It is possible that additional refrigeration, cooling units, and related equipment could be present in these buildings that may contain Freon or other CFCs. These units should be handled and disposed of properly by trained personnel.

Visual Observations of Universal Wastes

Based on the spot checks performed by RPF, containers of various chemicals were observed in Buildings 16, 27, and 31. Buildings 31 and 27 had a few garage bays devoted to storing drums and large containers of various chemicals and spill kits. Building 27 also has a portion of garage bay 1 that has a hazardous chemical closet with a safety data sheet (SDS) binder present. It should also be noted that containers of cleaning products and automotive supplies were present in Buildings 27 and 16. These two buildings are service garages that not only stores vehicles but also

perform routine maintenance and repairs on them. It is assumed that all these items would be removed from the buildings prior to demolition.

Conclusions

Based on the survey findings, the building was found to contain ACBM, LP and other hazardous building material.

In accordance with current regulatory requirements, ACBM that may be impacted or disturbed (such that asbestos fiber release occurs) by renovation, demolition or other such activity must be removed by qualified, licensed firms. Although regulations for removal of nonfriable ACBM are somewhat less stringent than the requirements for friable ACBM, it should be noted that nonfriable ACBM that is subjected to grinding, abrasion, and other forces, could be rendered friable. In this event, the nonfriable ACBM would be re-categorized friable ACBM.

ACBM that will not be impacted by renovation or demolition activity may be left in place if managed properly and if the materials are maintained in good condition. ACBM to remain in the building should be included in an asbestos management plan and operations and maintenance (O&M) program detailing the measures to be used to safely occupy the building until the ACBM is fully removed. An accredited Management Planner should prepare the O&M Program in accordance with the guidelines set forth in 40 CFR Part 763 (ASHERA).

Work impacting LP, fluorescent light bulbs, mercury (and potential PCB ballasts) must be performed in accordance with current State and federal standards, including but not limited safe work practices, engineering controls, proper waste packaging, and proper disposal. Work involving LP may require notification of tenants, if rented or leased space, prior to start of work.

Sufficiently in advance of the start of renovation and/or remediation work, abatement project design should be completed. As part the initial design steps any planned renovation and demolition activity should be reviewed for potential impact on ACBM. Asbestos removal is highly regulated at the State and federal level, and in some cases, at the local level also. Notification to CT Department of Public Health is required 10-days prior to the start of interior abatement work and demolition. Only qualified, trained, and licensed firms, as applicable, should be engaged to complete asbestos removal or other abatement activity. Asbestos abatement work must be designed (abatement specifications or work plan prepared) by accredited personnel.

All employees and contractors that may access or otherwise disturb areas with suspect ACBM present should be notified of the presence of ACBM and possible hidden ACBM, and the need to use caution when proceeding with work. Appropriate notifications, labeling and other hazard communications should be completed to all employees, contractors and others in accordance with US OSHA regulations and other applicable requirements (including asbestos labeling in accordance with 29 CFR Part 1926). The scope of RPF services for this survey did not include labeling of ACBM or hazard communications to other employees, building occupants, contractors, or subcontractors.

Documentation of current ACBM conditions and in-depth hazard assessment is beyond the scope-of-work for this initial survey. With the exception of the specific testing and analysis detailed herein, no other samples of materials, oil, water, ground water, air, or other suspect hazardous materials were collected in the course of this inspection that supports or denies these conclusions. No additional services beyond those explicitly stated herein were performed and none should be inferred or implied. The summary and conclusions are based on reasonably ascertainable information as described in this report. RPF Environmental, Inc. makes no guarantees, warranties, or references regarding this property or the condition of the property after the period of this report.

If you have any questions at this time, or if you would like to discuss the remediation process, please call our office.

Sincerely,
RPF ENVIRONMENTAL, INC.



Brianna Ham, CMI
EH&S Consultant
CT Licensed Inspector

Enclosures:

- Appendix A: Data and Analytical Tables
- Appendix B: Laboratory Results
- Appendix C: Picture Form
- Appendix D: Floor Plans
- Appendix E: Summary of Methodology and Limitations

199476 CTANG 31, 28, 27, 16 Survey Report

APPENDIX A

TABLE 2

JACOBS ENGINEERING
Building 27, Connecticut Air National Guard
100 Nicholson Road, East Granby, CT

Polarized Light Microscopy – EPA 600/R-93/116 Method

Samples Collected: October 17, 2019

Sample ID	Description	Asbestos Content
101719-HG1a	Suspended Ceiling Tile, 2x2, Pitted - Women's Restroom	None Detected
101719-HG1b	Suspended Ceiling Tile, 2x2, Pitted - Main Entry	None Detected
101719-HG2a	Carpet Adhesive, Yellow - Hallway By Room 4	None Detected
101719-HG2b	Carpet Adhesive, Yellow - Room 3	None Detected
101719-HG3a - A	Cove base, Grey - Room 3	None Detected
101719-HG3a - B	Adhesive, Yellow - Room 3	None Detected
101719-HG3b - A	Cove base, Grey - Hallway	None Detected
101719-HG3b - B	Adhesive, Yellow - Hallway	None Detected
101719-HG4a	Door Caulking, White - Main Entry Door To Hallway 6b	None Detected
101719-HG4b	Door Caulking, White - Room 4	None Detected
101719-HG5a	Leveler, White - Room 10a/10b	None Detected
101719-HG5b	Leveler, White - Room 3	None Detected
101719-HG6a - A	Cove base, Black - Room 10a/10b	None Detected
101719-HG6a - B	Adhesive, Beige - Room 10a/10b	None Detected
101719-HG6a - A	Cove base, Black - Main Entry	None Detected
101719-HG6a - B	Adhesive, Beige - Main Entry	None Detected
101719-HG7a - A	Laminate Countertop, Grey - Main Entry Windowsill	None Detected
101719-HG7a - B	Mastic, yellow - Main Entry Windowsill	None Detected
101719-HG7b - A	Laminate Countertop, Grey - Room 2 Windowsill	None Detected
101719-HG7b - B	Mastic, yellow - Room 2 Windowsill	None Detected
101719-HG8a	Window Caulking, Black - Room 10a/10b	None Detected
101719-HG8b	Window Caulking, Black - Room 10a/10b	None Detected
101719-HG9a	Suspended Ceiling Tile, 2x2 Spotted - Room 10a/10b	None Detected
101719-HG9b	Suspended Ceiling Tile, 2x2 Spotted - Room 9	None Detected
101719-HG10a - A	Ceramic Floor Tile Grout, gray - Men's Restroom	None Detected
101719-HG10a - B	Ceramic Floor Tile Mortar, gray - Men's Restroom	None Detected
101719-HG10b - A	Ceramic Floor Tile Grout, gray - Women's Restroom	None Detected
101719-HG10b - B	Ceramic Floor Tile Mortar, gray - Women's Restroom	None Detected
101719-HG11a - A	Ceramic Wall Tile Grout, gray - Men's Restroom	None Detected
101719-HG11a - B	Ceramic Wall Tile Mastic, yellow - Men's Restroom	None Detected

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 2

JACOBS ENGINEERING
Building 27, Connecticut Air National Guard
100 Nicholson Road, East Granby, CT

Polarized Light Microscopy – EPA 600/R-93/116 Method

Samples Collected: October 17, 2019

Sample ID	Description	Asbestos Content
101719-HG11b - A	Ceramic Wall Tile Grout, gray - Women's Restroom	None Detected
101719-HG11b - B	Ceramic Wall Tile Mastic, yellow - Women's Restroom	None Detected
101719-HG12a	Caulking, Grey - Room 10a/10b	None Detected
101719-HG12b	Caulking, Grey - Room 10a/10b	None Detected
101719-HG13a	Suspended Ceiling Tile, 2x4 - Women's Restroom	None Detected
101719-HG13b	Suspended Ceiling Tile, 2x4 - Men's Restroom	None Detected
101719-HG14a	Caulking, White - Men's Restroom	None Detected
101719-HG14b	Caulking, White - Women's Restroom	None Detected
101719-HG15a - A	Floor Tile 12", White – Room 9	None Detected
101719-HG15a - B	Mastic, Yellow – Room 9	None Detected
101719-HG15b - A	Floor Tile 12", White - Hallway 6b	None Detected
101719-HG15b - B	Mastic, Yellow - Hallway 6b	None Detected
101719-HG16a - A	Laminate Countertop, Brown Granite - Room 9	None Detected
101719-HG16a - B	Mastic, yellow - Room 9	None Detected
101719-HG16b - A	Laminate Countertop, Brown Granite - Room 9	None Detected
101719-HG16b - B	Mastic, yellow - Room 9	None Detected
101719-HG17a	Gypsum and Joint Compound – Garage Bay G6, North wall By Filters	None Detected
101719-hG17b	Gypsum and Joint Compound - Women's Restroom, Ceiling Above Shower	None Detected
101719-HG17c	Gypsum and Joint Compound – Hallway 6B, By Room 9	None Detected
101719-HG18a	Duct Caulking, Grey – Garage Bay G5 On Air Duct	None Detected
101719-HG18b	Duct Caulking, Grey – Garage Bay G1	None Detected
101719-HG19a	Expansion Joint Filler, Brown - Garage Bay G1 By Door to Garage Bay G2, along east wall	None Detected
101719-HG19b	Expansion Joint Filler, Brown – Garage Bay G2 By Door to Garage Bay G1, along south wall	None Detected
101719-HG20a	Expansion Joint Caulking, White – Garage Bay G1 By Door to Garage Bay G2, along east wall	None Detected
101719-HG20b	Expansion Joint Caulking, White – Garage Bay G2 By Door to Garage Bay G1, along south wall	None Detected
101719-HG21a	Putty, Blue – Garage Bay G1, around pipe penetration	None Detected

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 2

JACOBS ENGINEERING
Building 27, Connecticut Air National Guard
100 Nicholson Road, East Granby, CT

Polarized Light Microscopy – EPA 600/R-93/116 Method

Samples Collected: October 17, 2019

Sample ID	Description	Asbestos Content
101719-HG21b	Putty, Blue – Garage Bay G2, around pipe penetration	None Detected
101719-HG22a	Putty, Red – Garage Bay G5, Around Pipe penetration	None Detected
101719-HG22b	Putty, Red – Garage Bay G1, around pipe penetration	None Detected
101719-HG23a	Cementitious Putty, Grey - Mechanical Room, Above Door, around pipe penetration	None Detected
101719-HG23b	Cementitious Putty, Grey – Garage Bay G1, around pipe penetration	None Detected
101719-HG24a	Putty, Brown – Garage Bay G3, around pipe penetration	None Detected
101719-HG24b	Putty, Brown – Garage Bay G3, around pipe penetration	None Detected
101719-HG25a	Flue Cement, Grey - Mechanical Room, around vent pipe penetration	None Detected
101719-HG25b	Flue Cement, Grey - Mechanical Room, around vent pipe penetration	None Detected
101719-HG26a	Caulk, Red – Mechanical Room, furnace, On Vent Pipe	None Detected
101719-HG26b	Caulk, Red – Mechanical Room, furnace, On Vent Pipe	None Detected
101719-HG27a	Building Seam Caulk, Grey - Main Entryway, by door to hallway 6B	None Detected
101719-HG27b	Building Seam Caulk, Grey - Main Entryway, by door to hallway 6B	None Detected

199476

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 3

**JACOBS ENGINEERING
Building 28, Connecticut Air National Guard
100 Nicholson Road, East Granby, CT**

Polarized Light Microscopy – EPA 600/R-93/116 Method

Samples Collected: October 17, 2019

Sample ID	Description	Asbestos Content
101719-HG101a	Textured Paint, White - Center Of North Wall	None Detected
101719-HG101b - A	Textured Paint, White - Center Of North Wall	None Detected
101719-HG101b - B	Textured Paint, Gray - Center Of North Wall	None Detected
101719-HG101c	Textured Paint, White - Center of North wall, West side	None Detected
101719-HG101d	Textured Paint, White - North Wall, East Side	None Detected
101719-HG101e	Textured Paint, White - North Wall, West Side	None Detected
101719-HG102a	Caulking, Brown – Floor, Center strip	None Detected
101719-HG102b	Caulking, Brown – Floor, west side strip	None Detected
101719-HG103a	Flue Cement, Blue – Exterior side, north wall West Side	None Detected
101719-HG103b	Flue Cement, Blue – Exterior site, north wall, Center East	None Detected

199476

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 4

JACOBS ENGINEERING
Building 16, Connecticut Air National Guard
100 Nicholson Road, East Granby, CT

Polarized Light Microscopy – EPA 600/R-93/116 Method

Samples Collected: October 18, 2019

Sample ID	Description	Asbestos Content
101819-HG201a	Suspended Ceiling Tile, 2x2 Dotted - Breakroom 003	None Detected
101819-HG201b	Suspended Ceiling Tile, 2x2 Dotted - Classroom 004	None Detected
101819-HG202a	Suspended Ceiling Tile, 2x4 Grey Pitted - Hallway 002	None Detected
101819-HG202b	Suspended Ceiling Tile, 2x4 Grey Pitted – Classroom 004	None Detected
101819-HG203a	Suspended Ceiling Tile, 2x4 Grey Squiggle – Hallway 002	None Detected
101819-HG203b	Suspended Ceiling Tile, 2x4 Grey Squiggle - Breakroom 003	None Detected
101819-HG204a	Suspended Ceiling Tile, 2x4, White Dotted – Hallway 002	None Detected
101819-HG204b	Suspended Ceiling Tie, 2x4, White Dotted – Breakroom 003	None Detected
101819-HG205a - A	Cove base, Black - Vestibule 001	None Detected
101819-HG205a - B	Mastic, Brown - Vestibule 001	None Detected
101819-HG205b - A	Cove base, Black - Hallway 010	None Detected
101819-HG205b - B	Mastic, Brown - Hallway 010	None Detected
101819-HG206a - A	Cove base, Grey – Breakroom 003	None Detected
101819-HG206a - B	Mastic, yellow – Breakroom 003	None Detected
101819-HG206b - A	Cove base, Grey - Main Control 007	None Detected
101819-HG206b - B	Mastic, yellow - Main Control 007	None Detected
101819-HG207a - A	Floor Tile, 12" Tan – Vestibule 006	3% Chrysotile
101819-HG207a - B	Mastic, Black - Vestibule 006	6% Chrysotile
101819-HG207b - A	Floor Tile, 12" Tan – Vestibule 001	*SFP
101819-HG207b - B	Mastic, Black - Vestibule 001	*SFP
101819-HG208a - A	Floor Tile, 12" White – Breakroom 003	None Detected
101819-HG208a - B	Mastic, Black - Breakroom 003	6% Chrysotile
101819-HG208b - A	Floor Tile, 12" White – Breakroom 003	None Detected
101819-HG208b - B	Mastic, Black - Breakroom 003	*SFP
101819-HG209a	Gypsum and Joint Compound – Hallway 002	None Detected
101819-HG209b	Gypsum and Joint Compound – Vestibule 001	None Detected
101819-HG209c	Gypsum and Joint Compound – Breakroom 003	None Detected

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 4

**JACOBS ENGINEERING
 Building 16, Connecticut Air National Guard
 100 Nicholson Road, East Granby, CT**

Polarized Light Microscopy – EPA 600/R-93/116 Method

Samples Collected: October 18, 2019

Sample ID	Description	Asbestos Content
101819-HG209d	Gypsum and Joint Compound – Vestibule 006	None Detected
101819-HG209e	Gypsum and Joint Compound - Main Control 007	None Detected
101819-HG-210a	Sink Basin Undercoating, White – Breakroom 003	None Detected
101819-HG-210b	Sink Basin Undercoating, White – Breakroom 003	None Detected
101819-HG211a - A	Laminate Countertop, Tan Granite – Breakroom 003	None Detected
101819-HG211a - B	Laminate Countertop Mastic, yellow – Breakroom 003	None Detected
101819-HG211b - A	Laminate Countertop, Tan Granite – Breakroom 003	None Detected
101819-HG211b - B	Laminate Countertop Mastic, yellow – Breakroom 003	None Detected
101819-HG212a	Window Caulk, Black – Breakroom 003	None Detected
101819-HG212b	Window Caulk, Black – Classroom 004	None Detected
101819-HG213a	Building Seam Caulk, White – Hallway 002	None Detected
101819-HG213b	Building Seam Caulk, White – Breakroom 003	None Detected
101819-HG214a	Building Seam Caulk, White - Vestibule 001	None Detected
101819-HG214b	Building Seam Caulk, White - Vestibule 006	None Detected
101819-HG215a	Door Caulking, White - Men's Restroom 013	None Detected
101819-HG215b	Door Caulking, White - 002 Hallway by door to Classroom 004	None Detected
101819-HG216a	Flue Cement, Grey - Janitor's Closet 009	None Detected
101819-HG216b	Flue Cement, Grey - Janitor's Closet 009	None Detected
101819-HG217a - A	Ceramic Wall Tile Grout, 4" tile, white - Men's Restroom 013	None Detected
101819-HG217a - B	Ceramic Wall Tile Mortar, 4" tile, gray - Men's Restroom 013	None Detected
101819-HG217b - A	Ceramic Wall Tile Grout, 4" tile, white - Men's Restroom 013	None Detected
101819-HG217b - B	Ceramic Wall Tile Mortar, 4" tile, gray - Men's Restroom 013	None Detected
101819-HG218a - A	Ceramic Floor Tile Grout + Mortar, 1" Tile, gray - Men's Restroom 013	None Detected
101819-HG218a - B	Ceramic Floor Tile Grout + Mortar, 1" Tile, gray - Men's Restroom 013	None Detected

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 4

JACOBS ENGINEERING
Building 16, Connecticut Air National Guard
100 Nicholson Road, East Granby, CT

Polarized Light Microscopy – EPA 600/R-93/116 Method

Samples Collected: October 18, 2019

Sample ID	Description	Asbestos Content
101819-HG218b - A	Ceramic Floor Tile Grout + Mortar, 1" Tile, gray - Women's Restroom 011	None Detected
101819-HG218b - B	Ceramic Floor Tile Grout + Mortar, 1" Tile, gray - Women's Restroom 011	None Detected
101819-HG219a	Suspended Ceiling Tile, Solid White - Men's Restroom 013	None Detected
101819-HG219b	Suspended Ceiling Tile, Solid White - Women's Restroom 011	None Detected
101819-HG220a - A	Ceramic Cove base Grout, 5" tile, white - Men's Restroom 013	None Detected
101819-HG220a - B	Ceramic Cove base Mortar, 5" tile, gray - Men's Restroom 013	None Detected
101819-HG220b - A	Ceramic Cove base Grout, 5" tile, white - Men's Restroom 013	None Detected
101819-HG220b - B	Ceramic Cove base Mortar, 5" tile, gray - Men's Restroom 013	None Detected
101819-HG221a	Putty, Red – Parts and Issue Room 015, around pipe penetration	None Detected
101819-HG221b	Putty, Red – Shop area 016, around pipe penetration	None Detected
101819-HG222a	Pegboard, Brown – Shop area 016, north wall	None Detected
101819-HG222b	Pegboard, Brown – Shop area 016, north wall	None Detected
101819-HG223a	Putty, Blue - Maintenance area 017, around red electrical box	None Detected
101819-HG223b	Putty, Blue – Wash/Paint Bay 019, around red electrical box	None Detected
101819-HG224a	Putty, Grey – Maintenance area 017, around pipe penetration	None Detected
101819-HG224b	Putty, Grey - Maintenance area 017, around pipe penetration	None Detected
101819-HG225a	Caulk, Patch White - Maintenance area 017, on north wall by door to hallway 010	None Detected
101819-HG225b	Caulk, Patch White - Maintenance area 017, on north wall by door to hallway 010	None Detected
101819-HG226a	Duct Tape, Grey – Refueling Vehicle Bay 018, on exhaust pipe along south wall	None Detected

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 4

**JACOBS ENGINEERING
 Building 16, Connecticut Air National Guard
 100 Nicholson Road, East Granby, CT**

Polarized Light Microscopy – EPA 600/R-93/116 Method

Samples Collected: October 18, 2019

Sample ID	Description	Asbestos Content
101819-HG226b	Duct Tape, Grey - Refueling Vehicle Bay 018, on exhaust pipe along south wall	None Detected
101819-HG227a - A	Ceramic Cove base Grout, 5" tile, white - Women's Restroom 011	None Detected
101819-HG227a - B	Ceramic Cove base Mortar, 5" tile, Brown - Women's Restroom 011	None Detected
101819-HG227b - A	Ceramic Cove base Grout, 5" tile, white - Women's Restroom 011	None Detected
101819-HG227b - B	Ceramic Cove base Mortar, 5" tile, Brown - Women's Restroom 011	None Detected
101819-HG228a - A	Ceramic Wall Tile Grout, 4" tile, white - Women's Restroom 011	None Detected
101819-HG228a - B	Ceramic Wall Tile Mortar, 4" tile, Yellow - Women's Restroom 011	None Detected
101819-HG228b - A	Ceramic Wall Tile Grout, 4" tile, white - Women's Restroom 011	None Detected
101819-HG228b - B	Ceramic Wall Tile Mortar, 4" tile, Yellow - Women's Restroom 011	None Detected

199476

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 5

**JACOBS ENGINEERING
 Building 31, Connecticut Air National Guard
 100 Nicholson Road, East Granby, CT**

Polarized Light Microscopy – EPA 600/R-93/116 Method

Samples Collected: October 18, 2019

Sample ID	Description	Asbestos Status
101819-HG301a	Textured Surfacing, White – Garage Bay 1	None Detected
101819-HG301b	Textured Surfacing, White – Garage Bay 1	None Detected
101819-HG301c	Textured Surfacing, White – Garage Bay 1	None Detected
101819-HG302a	Expansion Joint Filler, Brown – Garage Bay 2	None Detected
101819-HG302b	Expansion Joint Filler, Brown – Garage Bay 4	None Detected
101819-HG303a	Building Seam Caulk, Grey – Garage Bay 5	None Detected
101819-HG303b	Building Seam Caulk, Grey – Garage Bay 1	None Detected
101819-HG304a	Caulking, White – Garage Bay 1, Around Electrical Box	None Detected
101819-HG304b	Caulking, White – Garage Bay 1, Around Electrical Box	None Detected

199476

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 6**JACOBS ENGINEERING**
Building 27, Connecticut Air National Guard
100 Nicholson Road, East Granby, CT**SUMMARY OF BULK SAMPLE RESULTS**
Lead Analysis in Paint by Flame AAS (SW 846 3050B and 7420)**Sample Collected: October 17, 2019**

Sample ID	Description	Lead Result (Concentration % by weight)
101719-LP1	Black, Plywood - Mechanical Room	0.0099
101719-LP2	White, Concrete Block & Gypsum - Room G6	<0.0068
101719-LP3	Beige, Concrete Block & Brick - Main Office	<0.0070
101719-LP4	Beige, Concrete Block & Brick - Room 9	0.012
101719-LP5	Beige & White, Concrete Block & Brick - Room G1	0.0052
101719-LP7	Blue Speckle, Concrete Floor - Room G1	<0.0047

199476

Note: OSHA does not currently establish an acceptable concentration of lead in paint.
The purposes of this test is for construction/demolition waste only and does not include LBP inspection or risk assessment.

TABLE 7**JACOBS ENGINEERING
Building 28, Connecticut Air National Guard
100 Nicholson Road, East Granby, CT****SUMMARY OF BULK SAMPLE RESULTS
Lead Analysis in Paint by Flame AAS (SW 846 3050B and 7420)****Sample Collected: October 17, 2019**

Sample ID	Description	Lead Result (Concentration % by weight)
101719-LP101	White, Textured Paint – North wall, west side	<0.0070
101719-LP102	White, Textured Paint – North wall, west side	0.0045
101719-LP103	White, Flat Wall – North wall, east side	<0.0065
101719-LP104	White, Flat Wall – North wall, east side	<0.0038
101719-LP105	Red, Metal Speed Bump – Center of floor	<0.0047

199476

Note: OSHA does not currently establish an acceptable concentration of lead in paint.
The purposes of this test is for construction/demolition waste only and does not include LBP inspection or risk assessment.

TABLE 8

JACOBS ENGINEERING
Building 16, Connecticut Air National Guard
100 Nicholson Road, East Granby, CT

SUMMARY OF BULK SAMPLE RESULTS
Lead Analysis in Paint by Flame AAS (SW 846 3050B and 7420)

Sample Collected: October 18, 2019

Sample ID	Description	Lead Result (Concentration % by weight)
101819-LP201	White, Concrete Block – Men's Restroom 013/Locker room 014	<0.0071
101819-LP202	White, Concrete Block – Breakroom 003	0.0099
101819-LP203	White/Blue, Gypsum - Classroom 004	<0.0069
101819-LP205	White, Concrete Block – Janitor's Closet 009	0.0045
101819-LP207	Black, Wood – Mechanical Room 012	<0.0056
101819-LP208	Beige, Concrete – Parts and Issue room 015	<0.0058
101819-LP209	Brown, Concrete – Shop area 016	0.0079
101819-LP210	Brown, Cove Base – Wash/paint Bay 019	<0.0044

199476

Note: OSHA does not currently establish an acceptable concentration of lead in paint.
 The purposes of this test is for construction/demolition waste only and does not include LBP inspection or risk assessment.

TABLE 9**JACOBS ENGINEERING**
Building 31, Connecticut Air National Guard
100 Nicholson Road, East Granby, CT**SUMMARY OF BULK SAMPLE RESULTS**
Lead Analysis in Paint by Flame AAS (SW 846 3050B and 7420)**Sample Collected: October 18, 2019**

Sample ID	Description	Lead Result (Concentration % by weight)
101819-LP301	White, On Concrete Block Wall – Garage Bay 1	<0.0070
101819-LP302	White, On Foundation – Garage Bay 1	<0.0079
101819-LP303	White, On Concrete Block – Garage Bay 3	<0.0043
101819-LP304	White, On Lights – Garage Bay 5	<0.0071

199476

Note: OSHA does not currently establish an acceptable concentration of lead in paint.
The purposes of this test is for construction/demolition waste only and does not include LBP inspection or risk assessment.

APPENDIX B



Eastern Analytical, Inc.

professional laboratory and drilling services

Brianna Ham
RPF Environmental, Inc.
320 First NH Turnpike
Northwood, NH 03261



Subject: Laboratory Report

Eastern Analytical, Inc. ID: 202105

Client Identification: 199476 / Jacobs Engineering CTANG

Date Received: 10/21/2019

Dear Ms. Ham :

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.easternanalytical.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:

Solid samples are reported on a dry weight basis, unless otherwise noted

< : "less than" followed by the reporting limit

> : "greater than" followed by the reporting limit

%R : % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269), Vermont (VT1012) and New York (12072).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample (s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw, Lab Director

10.29.19

Date

4

of pages (excluding cover letter)

Client: RPF Environmental, Inc.

Client Designation: 199476 / Jacobs Engineering CTANG

Temperature upon receipt (°C): 24.5

Received on ice or cold packs (Yes/No): N

Acceptable temperature range (°C): 0-6

Lab ID	Sample ID	Date	Date	Sample	% Dry	Exceptions/Comments (other than thermal preservation)
		Received	Sampled	Matrix	Weight	
202105.01	101719-PCB1	10/21/19	10/17/19	solid	98.8	Adheres to Sample Acceptance Policy
202105.02	101719-PCB2	10/21/19	10/17/19	solid	97.6	Adheres to Sample Acceptance Policy
202105.03	101819-PCB201	10/21/19	10/18/19	solid	99.0	Adheres to Sample Acceptance Policy
202105.04	101819-PCB202	10/21/19	10/18/19	solid	99.3	Adheres to Sample Acceptance Policy
202105.05	101819-PCB203	10/21/19	10/18/19	solid	98.3	Adheres to Sample Acceptance Policy
202105.06	101819-PCB301	10/21/19	10/18/19	solid	99.4	Adheres to Sample Acceptance Policy

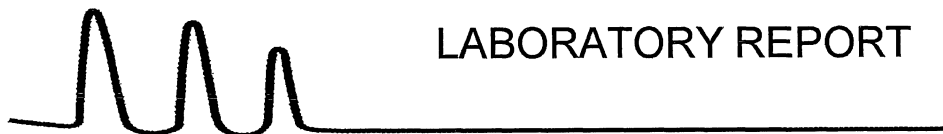
Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitability, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis.

Immediate analyses, pH, Total Residual Chlorine, Dissolved Oxygen and Sulfite, performed at the laboratory were run outside of the recommended 15 minute hold time.

All results contained in this report relate only to the above listed samples.

References include:

- 1) EPA 600/4-79-020, 1983
- 2) Standard Methods for Examination of Water and Wastewater, 20th, 21st, 22nd & 23rd Edition or noted Revision year.
- 3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
- 4) Hach Water Analysis Handbook, 4th edition, 1992



LABORATORY REPORT

EAI ID#: **202105**

Client: **RPF Environmental, Inc.**

Client Designation: **199476 / Jacobs Engineering CTANG**

Sample ID:	101719-PCB1	101719-PCB2	101819-PCB201	101819-PCB202	101819-PCB203	101819-PCB301
Lab Sample ID:	202105.01	202105.02	202105.03	202105.04	202105.05	202105.06
Matrix:	solid	solid	solid	solid	solid	solid
Date Sampled:	10/17/19	10/17/19	10/18/19	10/18/19	10/18/19	10/18/19
Date Received:	10/21/19	10/21/19	10/21/19	10/21/19	10/21/19	10/21/19
% Solid:	98.8	97.6	99	99.3	98.3	99.4
Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Date of Extraction/Prep:	10/22/19	10/22/19	10/22/19	10/22/19	10/22/19	10/22/19
Date of Analysis:	10/23/19	10/23/19	10/23/19	10/23/19	10/23/19	10/23/19
Analyst:	SG	SG	SG	SG	SG	SG
Extraction Method:	3540C	3540C	3540C	3540C	3540C	3540C
Analysis Method:	8082A	8082A	8082A	8082A	8082A	8082A
Dilution Factor:	15	15	14	15	12	13
PCB-1016	< 0.3	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
PCB-1221	< 0.3	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
PCB-1232	< 0.3	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
PCB-1242	< 0.3	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
PCB-1248	< 0.3	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
PCB-1254	< 0.3	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
PCB-1260	< 0.3	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
PCB-1262	< 0.3	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
PCB-1268	< 0.3	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
TMX (surr)	80 %R	46 %R	67 %R	44 %R	67 %R	64 %R
DCB (surr)	60 %R	66 %R	57 %R	34 %R	57 %R	31 %R

Acid clean-up was performed on the samples and associated batch QC.
Detection limits elevated in response to the lower initial mass used for analysis.



QC REPORT

EAI ID#: 202105

Client: RPF Environmental, Inc.

Batch ID: 637073-39344/S102219PCB1

Client Designation: 199476 / Jacobs Engineering CTANG

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
PCB-1016	< 0.02	0.13 (100 %R)	0.13 (99 %R) (1 RPD)	10/23/2019	mg/kg	40 - 140	30	8082A
PCB-1221	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	10/23/2019	mg/kg			8082A
PCB-1232	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	10/23/2019	mg/kg			8082A
PCB-1242	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	10/23/2019	mg/kg			8082A
PCB-1248	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	10/23/2019	mg/kg			8082A
PCB-1254	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	10/23/2019	mg/kg			8082A
PCB-1260	< 0.02	0.12 (87 %R)	0.12 (86 %R) (1 RPD)	10/23/2019	mg/kg	40 - 140	30	8082A
PCB-1262	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	10/23/2019	mg/kg			8082A
PCB-1268	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	10/23/2019	mg/kg			8082A
TMX (surr)	82 %R	90 %R	88 %R	10/23/2019	% Rec	30 - 150	30	8082A
DCB (surr)	76 %R	85 %R	84 %R	10/23/2019	% Rec	30 - 150	30	8082A

Samples were extracted and analyzed within holding time limits.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

Sample surrogate recoveries met the above stated criteria.

The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.

There were no exceptions in the analyses, unless noted.

*!! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.

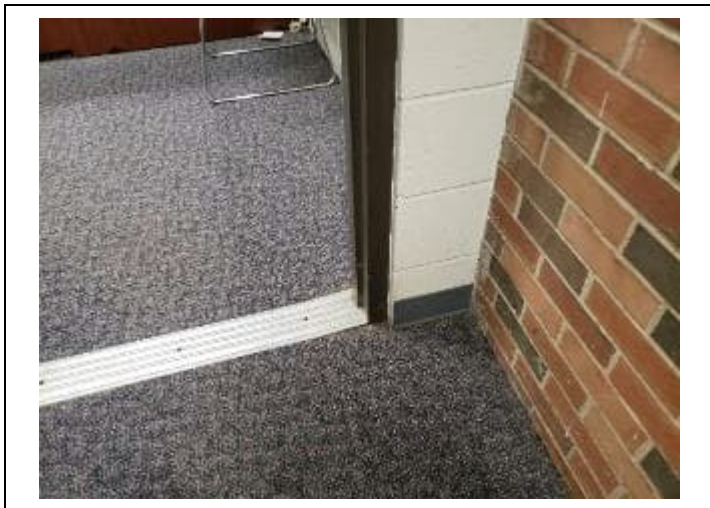
APPENDIX C



1. Building 27, CTANG, East Granby CT.



2. Building seam caulking present in the main entry area, no asbestos detected.



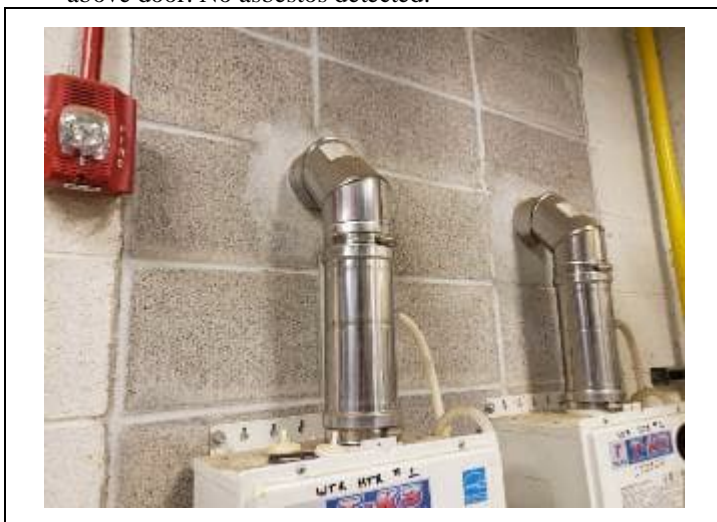
3. Main entry and hallway 6b in building 27.



4. Mechanical Room, grey putty around pipe penetration above door. No asbestos detected.



5. Mechanical Room, red caulking on furnace vent pipe. No asbestos detected.



6. Mechanical Room, grey flue cement around vent penetrations. No asbestos detected.

EXAMPLE PICTURES

Site Address: Connecticut Air National Guard
100 Nicholson Road
East Granby, CT

RPF Environmental
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File No. 199476



7. Garage Bay G5, red putty around pipe penetration. No asbestos detected.



8. Garage Bay G1, grey duct caulking. No asbestos detected.



9. Building 27 roof, exterior portions of the buildings were not included in the scope of this survey.



10. Building 28, textured paint and caulking, no asbestos detected.



11. Building 28, blue flue cement, no asbestos detected.



12. Building 28, silver compound present on the roof. Exterior building materials was outside the scope of work.

EXAMPLE PICTURES

Site Address: Connecticut Air National Guard
100 Nicholson Road
East Granby, CT

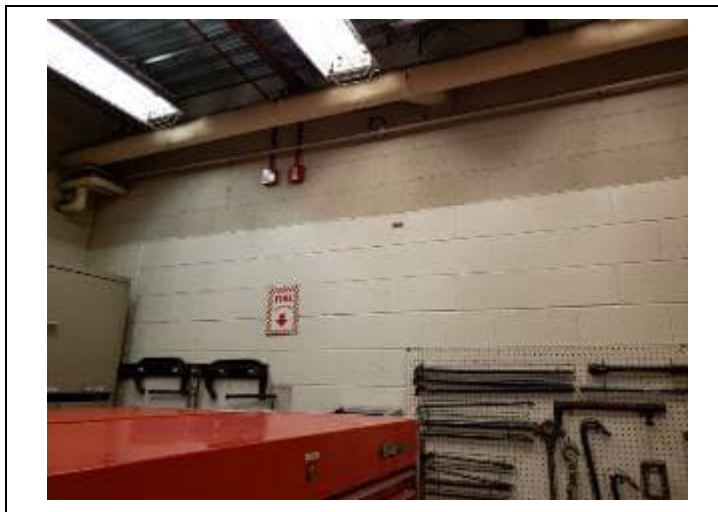


www.airpf.com
888-SAFE AIR

File No. 199476



13. Building 16, CTANG, East Granby, CT.



14. Building 16, room 016, example of a garage room.



15. ACBM tan 12" floor tile on ACBM black mastic in breakroom 003.



16. Breakroom 003, brown window caulking. No asbestos detected.



17. Breakroom 003, various types of suspended ceiling tiles present. No asbestos detected.



18. Men's Restroom 013, various grouts, mortars, and mastics around ceramic tile. No asbestos detected.

EXAMPLE PICTURES

Site Address: Connecticut Air National Guard
100 Nicholson Road
East Granby, CT

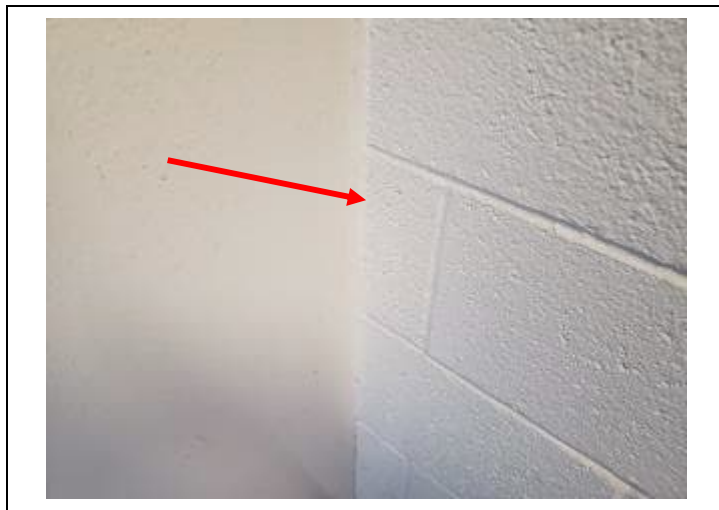
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File No. 199476



19. Maintenance area 017, white patch caulking along north wall. No asbestos detected.



20. Vestibule 006, building seam caulking between gypsum wall and CMU block. No asbestos detected.



21. Maintenance area 017, grey putty around pipe penetrations. No asbestos detected.



22. Maintenance area 017, blue putty around red electrical boxes. No asbestos detected.



23. Building 16, sampling the roof was outside the scope of work for this survey.



24. Building 31, CTANG, East Granby, CT.

EXAMPLE PICTURES

Site Address: Connecticut Air National Guard
100 Nicholson Road
East Granby, CT



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File No. 199476



25. Building 31, exterior view of the platform and ramp.
Exterior materials were inventoried only.



26. Building 31 includes 5 garage bays that open on either side.
One of the bays was used to store chemicals.



27. The other four bays were empty for the most part.

EXAMPLE PICTURES

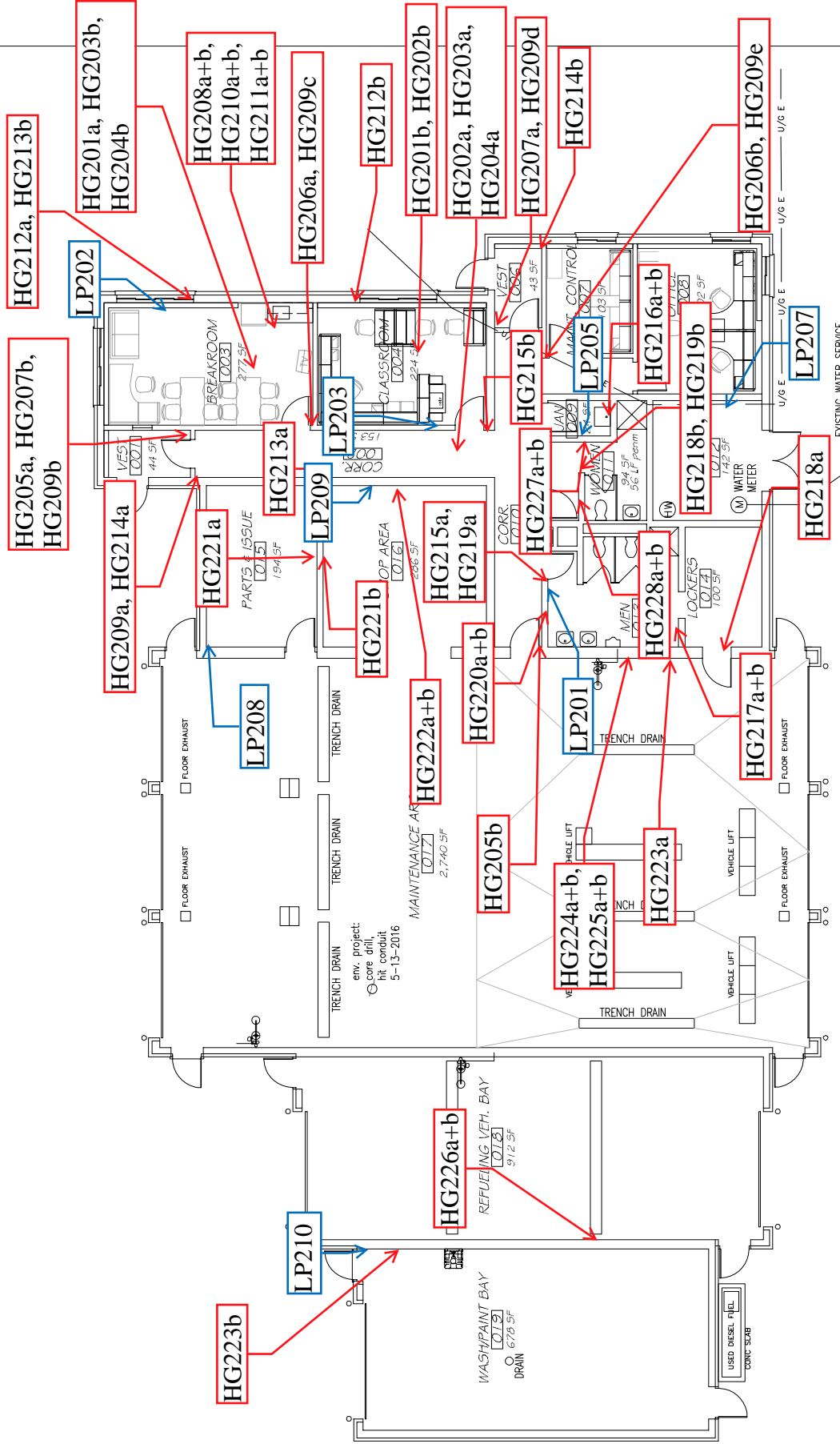
Site Address: Connecticut Air National Guard
100 Nicholson Road
East Granby, CT



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888-SAFE AIR

File No. 199476

APPENDIX D



7,365 building footprint sf

0 16' 32'

" = 16'-0"



BRADLEY AIR NATIONAL GUARD BASE

CONNECTICUT ANG
EAST GRANBY, CONN.
06026-5000

COORDINATION

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PROJECT TITLE

CECT 903758

ADDITIONS & ALTERATIONS

MUNITIONS MAINTENANCE &

STORAGE COMPLEX

SHEET TITLE

ADMIN/MUNITIONS SHOP

FLOOR PLAN AND

REFLECTED CEILING PLAN

DATE

DESIGNED

REDA

5/93

DRAWN

REDA

5/93

CHECKED

GGK

8/93

NO SCALE

A-1

SCALE

1/8" = 1'-0"

1/8" = 1'-0"

GENERAL NOTES

1. All work shall be in accordance with the drawings and specifications.

2. All materials shall be of the highest quality and shall be subject to inspection and approval by the Engineer.

3. All work shall be completed within the specified time schedule.

4. All work shall be done in accordance with the latest edition of the National Electrical Code.

5. All work shall be done in accordance with the latest edition of the International Building Code.

6. All work shall be done in accordance with the latest edition of the International Mechanical Code.

7. All work shall be done in accordance with the latest edition of the International Plumbing Code.

8. All work shall be done in accordance with the latest edition of the International Fire Code.

9. All work shall be done in accordance with the latest edition of the International Energy Conservation Code.

10. All work shall be done in accordance with the latest edition of the International Green Building Code.

11. All work shall be done in accordance with the latest edition of the International Sustainable Building Code.

12. All work shall be done in accordance with the latest edition of the International Health, Safety and Environment Code.

13. All work shall be done in accordance with the latest edition of the International Quality Management Code.

14. All work shall be done in accordance with the latest edition of the International Risk Management Code.

15. All work shall be done in accordance with the latest edition of the International Security Code.

16. All work shall be done in accordance with the latest edition of the International Privacy Code.

17. All work shall be done in accordance with the latest edition of the International Access Code.

18. All work shall be done in accordance with the latest edition of the International Non-Discrimination Code.

19. All work shall be done in accordance with the latest edition of the International Harassment Code.

20. All work shall be done in accordance with the latest edition of the International Retaliation Code.

21. All work shall be done in accordance with the latest edition of the International Whistleblowing Code.

22. All work shall be done in accordance with the latest edition of the International Fraud Code.

23. All work shall be done in accordance with the latest edition of the International Bribery Code.

24. All work shall be done in accordance with the latest edition of the International Corruption Code.

25. All work shall be done in accordance with the latest edition of the International Money Laundering Code.

26. All work shall be done in accordance with the latest edition of the International Tax Evasion Code.

27. All work shall be done in accordance with the latest edition of the International Securities Fraud Code.

28. All work shall be done in accordance with the latest edition of the International Bank Fraud Code.

29. All work shall be done in accordance with the latest edition of the International Insurance Fraud Code.

30. All work shall be done in accordance with the latest edition of the International Credit Card Fraud Code.

31. All work shall be done in accordance with the latest edition of the International Identity Theft Code.

32. All work shall be done in accordance with the latest edition of the International Stolen Identity Code.

33. All work shall be done in accordance with the latest edition of the International Social Security Number Fraud Code.

34. All work shall be done in accordance with the latest edition of the International Driver's License Fraud Code.

35. All work shall be done in accordance with the latest edition of the International Passport Fraud Code.

36. All work shall be done in accordance with the latest edition of the International Visa Fraud Code.

37. All work shall be done in accordance with the latest edition of the International Travel Document Fraud Code.

38. All work shall be done in accordance with the latest edition of the International Border Crossing Fraud Code.

39. All work shall be done in accordance with the latest edition of the International Customs Fraud Code.

40. All work shall be done in accordance with the latest edition of the International Tax Fraud Code.

41. All work shall be done in accordance with the latest edition of the International Money Laundering Code.

42. All work shall be done in accordance with the latest edition of the International Securities Fraud Code.

43. All work shall be done in accordance with the latest edition of the International Bank Fraud Code.

44. All work shall be done in accordance with the latest edition of the International Insurance Fraud Code.

45. All work shall be done in accordance with the latest edition of the International Credit Card Fraud Code.

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69. All work shall be done in accordance with the latest edition of the International Customs Fraud Code.

WALL TYPES LEGEND

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ADMIN/MUNITIONS SHOP - FLOOR PLAN

SCALE: 1/8" = 1'-0"

1. 1/2" Gypsum Board

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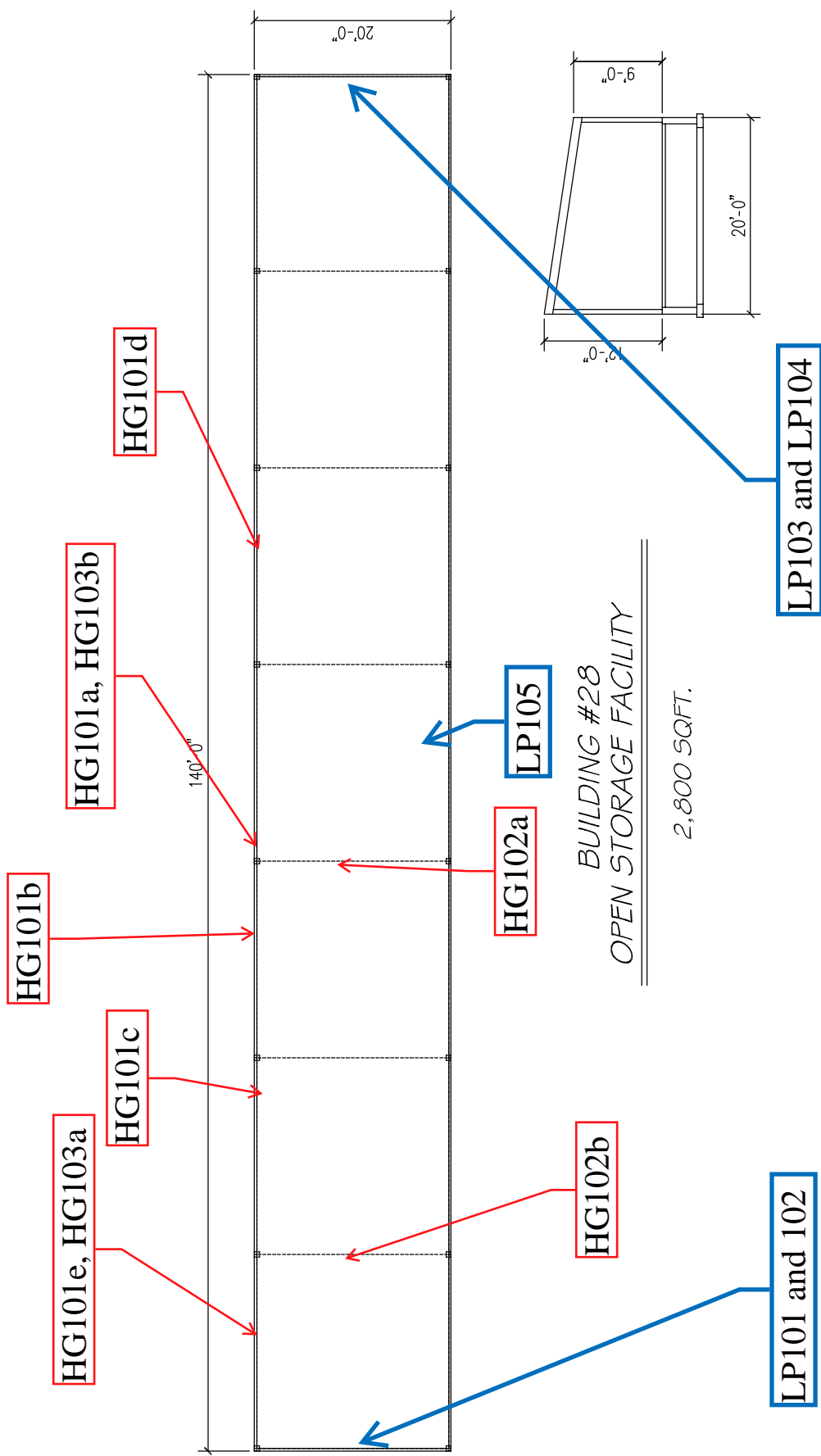
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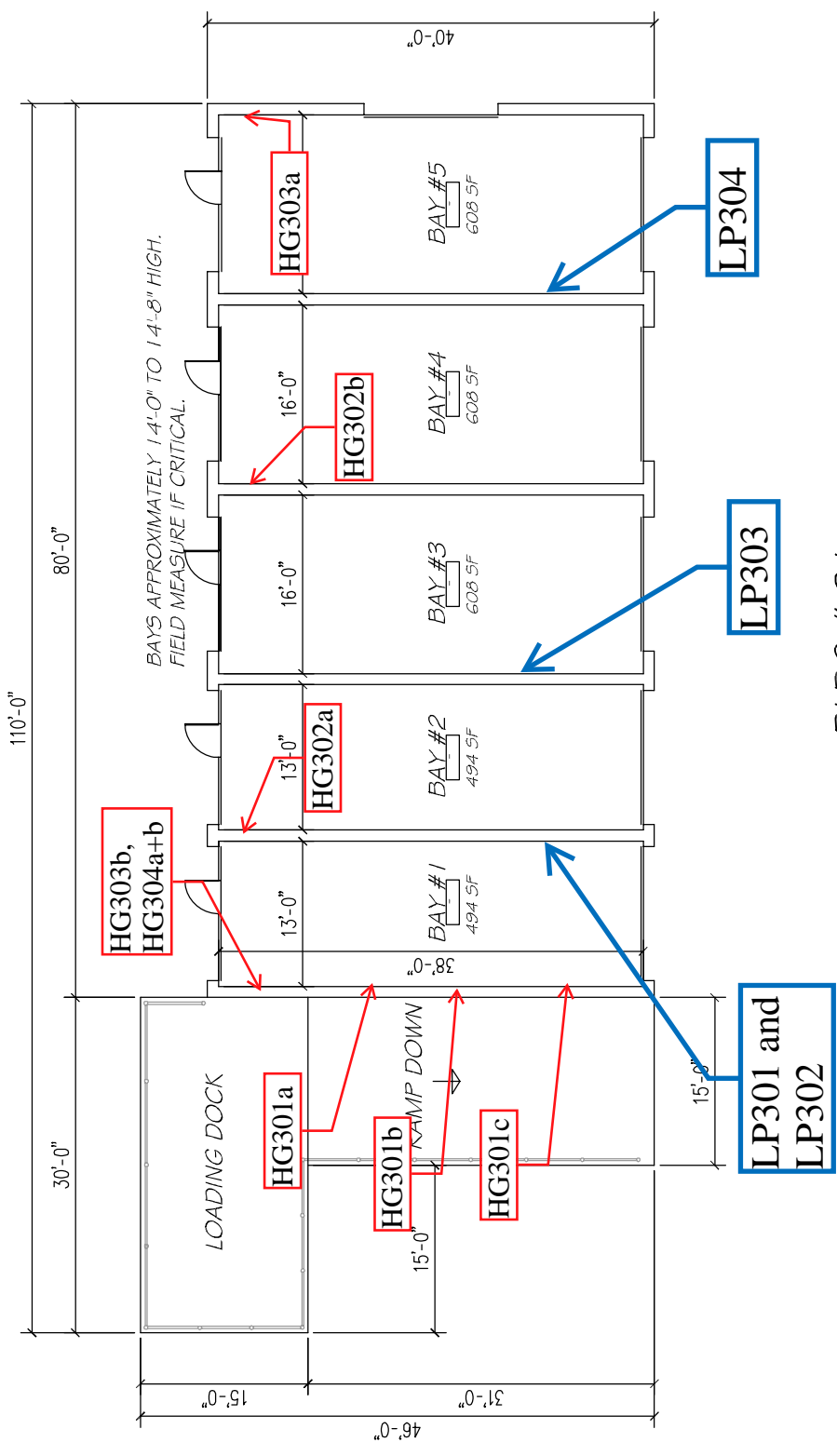
10. 1/2" Gypsum Board

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BLDG # 31
SEGREGATED MAGAZINE

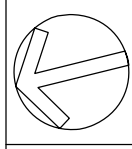
2812 SQFT. - INTERIOR
 3200 SQFT. - BUILDING



BRADLEY
AIR NATIONAL GUARD
BASE

CONNECTICUT ANG
 100 NICHOLSON ROAD
 EAST GRANBY, CT
 06026-9309

SHEET TITLE
BUILDING 31
FIRST FLOOR PLAN



SCALE
 1" = 16'-0"

DATE
 DEC 6, 2010

APPENDIX E

Summary of Methodology: Asbestos-Containing Building Materials Survey

EPA accredited inspector(s) surveyed accessible space in the building or site areas included within the RPF Scope of Work (SOW) to identify suspect asbestos-containing building material (ACBM). Suspect ACBM was inventoried and categorized into homogeneous groups of materials. To the extent indicated in the report, samples were then extracted from the different groups of homogeneous materials in accordance with applicable State and federal rules and regulations. For surveys in which the SOW included full inspections of the affect space, sampling methodologies were based on the requirements set forth in 40 CFR Part 763 (EPA) and 29 CFR Part 1926.1101 (OSHA). For preliminary or limited surveys, findings apply to only the affected material or space as indicated in the RPF SOW and Report and additional inspection and testing will be required to satisfy regulatory obligations associated with renovation, demolition, maintenance and other occupational safety and health requirements. Sampling methodologies used are as set forth in 40 CFR Part 763 (EPA):

- Surfacing Material: 3 bulk samples from each homogenous area and/or material that is 1,000 square feet or less. 5 bulk samples from each homogenous area that is greater than 1,000 square feet but less than or equal to 5000 square feet. 7 bulk samples from each homogenous area that is greater than 5,000 square feet.
- Thermal System Insulation: 3 bulk samples from each homogenous area. 1 bulk sample from each homogenous area of patched thermal system insulation if the patched section is less than 6 linear or square feet. Samples sufficient to determine whether the material is ACM from each insulated mechanical system where cement is utilized on tees, elbows, or valves.
- Miscellaneous ACM: 3 samples from each miscellaneous material. 1 sample if the amount of miscellaneous material is less than 6 square or linear feet.

Collected samples were individually placed into sealed containers, labeled, and submitted with proper chain of custody forms to the RPF NVLAP-accredited vendor laboratory. Sample containers and tools were cleaned after each sample was collected. Samples were analyzed for asbestos content using polarized light microscopy (PLM). Although PLM is the method currently recognized in State and federal regulations for asbestos identification in bulk samples, PLM may not be sensitive enough to detect all of the asbestos fibers in certain types of materials, such as floor tile and other nonfriable ACBM. In the event that more definitive results are requested in cases of with negative or trace results of asbestos are detected, RPF recommends that confirmation testing be completed using transmission electron microscopy.

For each homogeneous group of suspect material, a “stop at first positive” (SFP) method may have been employed during the analysis. The SFP method is based on current EPA sampling protocols and means that if one sample within a homogeneous group of suspect material is found to contain >1% asbestos, then further analysis of that specific homogenous group samples is terminated and the entire homogeneous group of material is considered to be ACBM regardless of the other sample results. This is based on the potential for inconsistent mix of asbestos in the product yielding varying findings across the different individual samples collected from the same homogeneous group. Unless otherwise noted in the report, sample groups found to have 1% to <10% asbestos content are assumed to be ACBM; to rebut this assumption further analysis with point count methods are required.

Inaccessible and hidden areas, including but not limited to wall/floor/ceiling cavity space, space with obstructed access (such as fiberglass insulation above suspended ceilings), sub floors, interiors of mechanical and process equipment, and similar spaces were not included in the inspection and care should be used when accessing these areas in the future. Unless otherwise noted in the RPF Report, destructive survey techniques were not employed during this survey.

In the event that additional suspect materials are encountered that are not addressed in this report, the materials should be properly tested by an accredited inspector. For example, during renovation and demolition it is likely that additional suspect material will be encountered and such suspect materials should be assumed to be hazardous until proper inspection and testing occurs.

RPF followed applicable industry standards; however, various assumptions and limitations of the methods can result in missed materials or misidentification of materials due several factors including but not limited to: inaccessible space due to physical or safety constraints, space that is difficult to reach to fully inspect, assumptions regarding the determination of homogenous groups of suspect material, assumptions regarding attempts to conduct representative sampling, and potential for varying mixtures and layers of material sampled not being representative of all areas of similar material. Also reference the Limitations document attached to the report.

Summary of Methodology: Lead in Paint Survey

Screening for lead in paint (LP) was performed using bulk sampling of paint or using an X-Ray Fluorescence (XRF) meter for in situ measurements of various painted surfaces. For bulk sampling, samples for determinations were collected by scraping lead paint chips from the substrate. The surveyor attempted to sample layers of paint down to the substrate surface at each sample location. Samples were placed into proper sample containers, the containers were then sealed, labeled and shipped with chain of custody to the RPF AIHA accredited vendor laboratory. The samples were analyzed for total lead content using SW 846 3050B - NIOSH Method 7420. For XRF screening, the device was used and calibrated in accordance with the equipment and industry guidelines applicable for the specific testing performed.

Unless specific TCLP waste characterizations were included in the RPF Scope of Work (SOW), further analysis of waste streams for toxicity characteristics including, but not necessarily limited to lead, may be required prior to disposal of the waste stream. Other toxics may also be present including other heavy metals and PCBs and it may also be necessary to conduct waste characterization for these materials.

Sampling was limited to the specific components as listed in the RPF Report and testing and survey was not completed on every different surface in every room or area in the building. In addition unless otherwise noted in the RPF Report, surface dust, air and soil testing were not conducted during this survey. In order to conduct thorough hazard assessments for lead exposures, representative surface dust testing and air monitoring throughout the building, LBP testing of all surfaces in the building, and representative soil testing in the exterior areas should be completed. This type of testing and analysis was beyond the SOW for the initial survey

The intent of this survey is for lead in construction purposes, not for lead abatement, lead inspections, or lead hazard assessments in residential situations. Specific survey and inspection protocols are required for residential lead-based paint inspections that were not included in the RPF SOW.

RPF followed applicable industry standards for construction related identification in nonresidential settings; however, RPF does not warrant or certify that all lead or other hazardous materials in or on the building has been identified and included in this report. Various assumptions and limitations of the methods can result in missed materials or misidentification of materials due several factors including but not limited to: inaccessible space due to physical or safety constraints, space that is difficult to reach to inspect of sample, assumptions regarding the determination of homogenous or like types of paint, assumptions regarding attempts to conduct representative sampling, and potential for varying mixtures and layers of material sampled not being representative of all areas of similar appearing material. Also reference the Limitations document attached to the report.

Summary of Methodology: Polychlorinated Biphenyls, Mercury and Refrigerants

Various, accessible fluorescent light fixtures were inspected to determine if the ballasts contain a “No PCBs” label. Ballasts that do not have the “No PCBs” label are assumed to contain PCB.

Only limited fixtures were checked based on accessibility and safety concerns. Further inspection will be required during the course of construction, maintenance, renovation and demolition.

Various equipment and machinery within the building may also contain PCB oils. Specific findings relating to such equipment and machinery were not included in the RPF SOW.

It is common to find fluorescent light bulbs, thermostats and switches are present in buildings. RPF performed a visual inspection of specific areas included in the RPF SOW in an attempt to identify such materials. Findings are limited to the specific accessible space accessed by RPF.

Various compressor and refrigerant equipment may be present and is should be assumed that such equipment contains Freon or other chlorofluorocarbons unless otherwise tested or documented. Although general comment may be provided in the RPF Report, the specific identification of all potential Freon and CFCs is not included in the RPF SOW.

The findings may or may not be fully representative of all of the entire building. Confirmation testing and analysis of PCB, refrigerants and mercury was not included in the RPF SOW.

RPF followed applicable industry standards; however, RPF does not warrant or certify that all hazardous material in or on the building has been identified and included in this report. Various assumptions and limitations of the methods can result in missed materials or misidentification of materials due several factors including but not limited to: inaccessible space due to physical or safety constraints, space that is difficult to reach to fully inspection, electrical safety considerations, and assumptions relating to areas or material being representative of other locations which in fact may not be representative. Also reference the Limitations document attached to the report.

LIMITATIONS

1. The observations and conclusions presented in the Report were based solely upon the services described herein, and not on scientific tasks or procedures beyond the RPF Environmental, Inc. Scope of Work (SOW) as discussed in the proposal and/or agreement. The conclusions and recommendations are based on visual observations and testing, limited as indicated in the Report, and were arrived at in accordance with generally accepted standards of industrial hygiene practice and asbestos professionals. The nature of this survey or monitoring service was limited as indicated herein and in the report or letter of findings. Further testing, survey, and analysis is required to provide more definitive results and findings.
2. For site survey work, observations were made of the designated accessible areas of the site as indicated in the Report. While it was the intent of RPF to conduct a survey to the degree indicated, it is important to note that not all suspect ACM material in the designated areas were specifically assessed and visibility was limited, as indicated, due to the presence of furnishings, equipment, solid walls and solid or suspended ceilings throughout the facility and/or other site conditions. Asbestos or hazardous material may have been used and may be present in areas where detection and assessment is difficult until renovation and/or demolition proceeds. Access and observations relating to electrical and mechanical systems within the building were restricted or not feasible to prevent damage to the systems and minimize safety hazards to the survey team.
3. Although assumptions may have been stated regarding the potential presence of inaccessible or concealed asbestos and other hazardous material, full inspection findings for all asbestos and other hazardous material requires the use of full destructive survey methods to identify possible inaccessible suspect material and this level of survey was not included in the SOW for this project. For preliminary survey work, sampling and analysis as applicable was limited and a full survey throughout the site was not performed. Only the specific areas and /or materials indicated in the report were included in the SOW. This inspection did not include a full hazard assessment survey, full testing or bulk material, or testing to determine current dust concentrations of asbestos in and around the building. Inspection results should not be used for compliance with current EPA and State asbestos in renovation/demolition requirements unless specifically stated as intended for this use in the RPF report and considering the limitations as stated therein and within this limitations document.
4. Where access to portions of the surveyed area was unavailable or limited, RPF renders no opinion of the condition and assessment of these areas. The survey results only apply to areas specifically accessed by RPF during the survey. Interiors of mechanical equipment and other building or process equipment may also have asbestos and other hazardous material present and were not included in this inspection. For renovation and demolition work, further inspection by qualified personnel will be required during the course of construction activity to identify suspect material not previously documented at the site or in this survey report. Bordering properties were not investigated and comprehensive file review and research was not performed.
5. For lead in paint, observations were made of the designated accessible areas of the site as indicated in the Report. Limited testing may have been performed to the extent indicated in the text of the report. In order to conduct thorough hazard assessments for lead exposures, representative surface dust testing, air monitoring and other related testing throughout the building, should be completed. This type of in depth testing and analysis was beyond the scope of services for the initial inspection. For lead surveys with XRF readings, it is recommended that surfaces found to have LBP or trace amount of lead detected with readings of less than 4 mg/cm² be confirmed using laboratory analysis if more definitive results are required. Substrate corrections involving destructive sampling or damage to existing surfaces (to minimize XRF read-through) were not completed. In some instances, destructive testing may be required for more accurate results. In addition, depending on the specific thickness of the paint films on different areas of a building component, differing amounts of wear, and other factors, XRF readings can vary slightly, even on the same building component. Unless otherwise specifically stated in the scope of services and final report, lead testing performed is not intended to comply with other state and federal regulations pertaining to childhood lead poisoning regulations.

6. Air testing is to be considered a “snap shot” of conditions present on the day of the survey with the understanding that conditions may differ at other times or dates or operational conditions for the facility. Results are also limited based on the specific analytical methods utilized. For phase contrast microscopy (PCM) total airborne fiber testing, more sensitive asbestos-specific analysis using transmission electron microscopy (TEM) can be performed upon request.
7. For asbestos bulk and dust testing, although polarize light microscopy (PLM) is the method currently recognized in State and federal regulations for asbestos identification in bulk samples, some industry studies have found that PLM may not be sensitive enough to detect all of the asbestos fibers in certain nonfriable material, vermiculate type insulation, soils, surface dust, and other materials requiring more sensitive analysis to identify possible asbestos fibers. In the event that more definitive results are requested, RPF recommends that confirmation testing be completed using TEM methods or other analytical methods as may be applicable to the material. Detection of possible asbestos fibers may be made more difficult by the presence of other non-asbestos fibrous components such as cellulose, fiber glass, etc., by binder/matrix materials which may mask or obscure fibrous components, and/or by exposure to conditions capable of altering or transforming asbestos. PLM can show significant bias leading to false negatives and false positives for certain types of materials. PLM is limited by the visibility of the asbestos fibers. In some samples the fibers may be reduced to a diameter so small or masked by coatings to such an extent that they cannot be reliably observed or identified using PLM.
8. For hazardous building material inspection or survey work, RPF followed applicable industry standards; however, RPF does not warrant or certify that all asbestos or other hazardous materials in or on the building has been identified and included in this report. Various assumptions and limitations of the methods can result in missed materials or misidentification of materials due to several factors including but not limited to: inaccessible space due to physical or safety constraints, space that is difficult to reach to fully inspect, assumptions regarding the determination of homogenous groups of suspect material, assumptions regarding attempts to conduct representative sampling, and potential for varying mixtures and layers of material sampled not being representative of all areas of similar material.
9. Full assessments often requires multiple rounds of sampling over a period of time for air, bulk material, surface dust and water. Such comprehensive testing was beyond the scope of RPF services. In addition clearance testing for abatement, as applicable, was based on the visual observations and limited ambient area air testing as indicated in the report and in accordance with applicable state and federal regulations. The potential exists that microscopic surface dust remains with contaminant present even in the event that the clearance testing meets the state and federal requirements. Likewise for building surveys, visual observations are not sufficient alone to detect possible contaminant in settled dust. Unless otherwise specifically indicated in the report, surface dust testing was not included in the scope of the RPF services.
10. For abatement or remediation monitoring services: RPF is not responsible for observations and test for specific periods of work that RPF did not perform full shift monitoring of construction, abatement or remediation activity. In the event that problems occurred or concerns arouse regarding contamination, safety or health hazards during periods RPF was not onsite, RPF is not responsible to provide documentation or assurances regarding conditions, safety, air testing results and other compliance issues. RPF may have provided recommendations to the Client, as needed, pertaining to the Client’s Contractor compliance with the technical specifications, schedules, and other project related issues as agreed and based on results of RPF monitoring work. However, actual enforcement, or waiving of, contract provisions and requirements as well as regulatory liabilities shall be the responsibility of Client and Client’s Contractor(s). Off-site abatement activities, such as waste transportation and disposal, were not monitored or inspected by RPF.
11. For services limited to clearance testing following abatement or remediation work by other parties: The testing was limited to clearance testing only and as indicated in the report and a site assessment for possible environmental health and safety hazards was not performed as part of the scope of this testing. Client, or Client’s abatement contractor as applicable, was responsible for performing visual inspections

of the work area to determine completeness of work prior to air clearance testing by RPF.

12. For site work, including but not limited to air clearance testing services, in which RPF did not provide full site safety and health oversight, abatement design, full shift monitoring of all site activity, RPF expresses no warranties, guarantees or certifications of the abatement work conducted by the Client or other employers at the job site(s), conditions during the work, or regulatory compliance, with the exception of the specific airborne concentrations as indicated by the air clearance test performed by RPF during the conditions present for the clearance testing. Unless otherwise specifically noted in the RPF Report, visual inspections and air clearance testing results apply only to the specific work area and conditions present during the testing. RPF did not perform visual inspections of surfaces not accessible in the work area due to the presence of containment barriers or other obstructions. In these instances, some contamination may be present following RPF clearance testing and such contamination may be exposed during and after removal of the containment barriers or other obstructions following RPF testing services. Client or Client's Contractor is responsible for using appropriate care and inspection to identify potential hazards and to remediate such hazards as necessary to ensure compliance and a safe environment.
13. The survey was limited to the material and/or areas as specifically designated in the report and a site assessment for other possible environmental health and safety hazards or subsurface pollution was not performed as part of the scope of this site inspection. Typically, hazardous building materials such as asbestos, lead paint, PCBs, mercury, refrigerants, hydraulic fluids and other hazardous product and materials may be present in buildings. The survey performed by RPF only addresses the specific items as indicated in the Report.
14. For mold and moisture survey services, RPF services did not include design or remediation of moisture intrusion. Some level of mold will remain at the site regardless of RPF testing and Contractor or Client cleaning efforts. RPF testing associated with mold remediation and assessments is limited and may or may not be representative of other surfaces and locations at the site. Mold growth will occur if moisture intrusion deficiencies have not been fully remedied and if the site or work areas are not maintained in a sufficiently dry state. Porous surfaces in mold contaminated areas which are not removed and disposed of will likely result in future spore release, allergen sources, or mold contamination.
15. Existing reports, drawings, and analytical results provided by the Client to RPF, as applicable, were not verified and, as such, RPF has relied upon the data provided as indicated, and has not conducted an independent evaluation of the reliability of these data.
16. Where sample analyses were conducted by an outside laboratory, RPF has relied upon the data provided, and has not conducted an independent evaluation of the reliability of this data.
17. All hazard communication and notification requirements, as required by U.S. OSHA regulation 29 CFR Part 1926, 29 CFR Part 1910, and other applicable rules and regulations, by and between the Client, general contractors, subcontractors, building occupants, employees and other affected persons were the responsibility of the Client and are not part of the RPF SOW.
18. The applicability of the observations and recommendations presented in this report to other portions of the site was not determined. Many accidents, injuries and exposures and environmental conditions are a result of individual employee/employer actions and behaviors, which will vary from day to day, and with operations being conducted. Changes to the site and work conditions that occur subsequent to the RPF inspection may result in conditions which differ from those present during the survey and presented in the findings of the report.