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**ADDENDUM NO. 1 TO PROJECT NO. 42070**

**ELECTRICAL WORK**

**PROVIDE ELECTRICAL UPGRADE  
MAIN COMPLEX AND BUILDING NO. 13  
FISHKILL CORRECTIONAL FACILITY  
PROSPECT STREET  
BEACON, NEW YORK**

March 18, 2013

**NOTE:** This Addendum forms a part of the Contract Documents. Insert it in the Project Manual. Acknowledge receipt of this Addendum in the space provided on the Bid Form.

**ELECTRICAL SPECIFICATIONS**

1. Page 000110-1, Bidding Requirements: Add 003126, Existing Hazardous Material Information.
2. Page 000110-2, FACILITY CONSTRUCTION SUBGROUP: Add DIVISION 02, EXISTING CONDITIONS.
3. Page 000110-2, FACILITY CONSTRUCTION SUBGROUP, DIVISION 02, EXISTING CONDITIONS: Add Specification 028213, Asbestos Abatement.
4. Page 000110-2, FACILITY CONSTRUCTION SUBGROUP, DIVISION 02, EXISTING CONDITIONS: Add Specification 028304, Handling of Lead Containing Materials.
5. Page 000110-2, APPENDIX: Add Asbestos Report.
6. Bidding Requirements: Add Specification 003126 "Existing Hazardous Material Information".
7. Bidding Requirements: Add Specification 028213, "Asbestos Abatement".
8. Bidding Requirements: Add Specification 028304, "Handling of Lead Containing Materials".
9. Appendix: Add Asbestos Report.

**ELECTRICAL WORK DRAWINGS:**

10. Drawing No. E-TO2:
  - a. Add "ASBESTOS NOTES" following ELECTRICAL GENERAL NOTES:
11. Drawing No. E-TO2:
  - a. Add the following notes to ASBESTOS NOTES:
    1. EXISTING SUSPECT BUILDING MATERIALS WERE TESTED FOR

ASBESTOS CONTENT. ASBESTOS IS PRESENT IN THE WALL MATERIAL AT BUILDING 13, BASEMENT, PANELBOARD LP-B2. SEE SURVEY REPORT IN SPECIFICATION MANUAL APPENDIX. SEE SPECIFICATION SECTION 028213.

2. DUE TO THE IMPRACTICALITY OF A POWER SHUT DOWN, NO SUSPECT PANELBOARD COMPONENTS HAS BEEN TESTED FOR ASBESTOS CONTENT. IT IS ASSUMED THAT COMPONENTS AND CONDUCTOR INSULATION CONTAINS ASBESTOS ONLY. CERTIFIED ASBESTOS WORKERS SHALL PERFORM REMOVAL WORK AND SPLICING OF EXISTING BRANCH CIRCUITS. SEE SPECIFICATION SECTION 028213.

12. Drawing No. E-TO2:
  - a. Add "LEAD PAINT NOTES" following added ASBESTOS NOTES:
13. Drawing No. E-TO2:
  - a. Add the following notes to LEAD PAINT NOTES:
    1. EXISTING SUSPECT PAINTED WALL SURFACES WERE NOT TESTED FOR LEAD CONTENT. IT IS ASSUMED THAT LEAD BASED PAINT IS PRESENT. ONLY EPA LEAD RENOVATION CERTIFIED WORKERS SHALL PERFORM LEAD HANDLING FOR POWER PANEL INSTALLATION WORK. SEE SPECIFICATION SECTION 028213.
14. Drawing No. E-2-S:
  - a. Delete "MLO" on Power Panel Schedule "LP-D2".
15. Drawing No. E-4-S:
  - a. Delete "MLO" on Power Panel Schedule "MDP".
16. Drawing No. E-7-S:
  - a. Delete "MLO" on Power Panel Schedule "LP-D3".
17. Drawing No. E-7-S:
  - a. Change Panel Name from "PL-1-1" to "LP-1-1".

**END OF ADDENDUM**

James Dirolf, P.E.  
Director of Design

**DOCUMENT 003126**

**EXISTING HAZARDOUS MATERIAL INFORMATION**

**1.01 ASBESTOS SURVEY REPORT**

Samples listed in the report were collected at the Project Site and tested for Asbestos Containing Materials (ACM). The report was compiled for New York State Office of General Services, Design and Construction Group by an ELAP certified laboratory. In order to determine the Asbestos content, samples were analyzed by polarized light microscopy (PLM) and/or transmission electron microscopy (TEM). The report is intended for the State design and estimate purposes only, and is included to provide bidders with that same information available to the State. The Bulk Samples are representative of Homogeneous Area (HA) and is defined as a suspect material of similar age, appearance, function and texture. All field information was organized in accordance with 40 CFR Part 763, Asbestos Hazard Emergency Response Act (AHERA). See the Asbestos Report included in the Appendix for type, condition, location and approximate quantity of ACM.

**END OF DOCUMENT**

## SECTION 028213

### ASBESTOS ABATEMENT

#### PART 1 GENERAL

##### 1.01 SUMMARY

- A. This Section specifies the procedures for disturbance and removal of existing asbestos-containing materials (ACM) and disposal of removed materials. The results of the testing for ACM are listed in the Building Asbestos Survey Report bound in the Appendix. Also see Document 003126.
  - 1. The Building Asbestos Survey report was compiled by an ELAP certified laboratory.
  - 2. In order to determine asbestos content, samples were analyzed by polarized light microscopy (PLM) and/or transmission electron microscopy (TEM).
  - 3. The report is intended for State Design and estimate purposes only, and is included to provide bidders with the same information available to the State.
  - 4. The Bulk Samples are representative of like materials in the Work area. All ACM may not have been sampled.
- B. Type of Asbestos Abatement Project:
  - 1. Minor Asbestos Abatement Project: An asbestos project involving the removal, disturbance, repair or handling of less than 10 square feet or 25 linear feet of ACM.

##### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Existing Hazardous Material Information: Document 003126.
- B. Summary of the Work: Section 011000.
- C. Construction Facilities and Temporary Controls: Section 015000.
- D. Removals, Cutting, and Patching: Section 017329.

##### 1.03 REFERENCES

- A. New York State Department of Environmental Conservation (DEC) 6NYCRR:
  - 1. Part 360 Solid Waste Management Facilities.
  - 2. Part 364 Waste Transporter Permits.
  - 3. Part 370 Hazardous Waste Management System-General.
  - 4. Part 371 Identification and Listing of Hazardous Wastes.
  - 5. Part 372 Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities.
  - 6. Part 373 Hazardous Waste Management Facilities.

- B. Occupational Safety and Health Administration (OSHA): Asbestos Regulations (29 CFR Part 1926.1101).
- C. U.S. Environmental Protection Agency (USEPA):
  - 1. National Emission Standards for Hazardous Air Pollutants; Asbestos NESHAP Revision; Final Rule.
  - 2. Asbestos Emergency Response Act (AHERA) (40 CFR Part 763, Subpart E).

#### **1.04 DEFINITIONS**

- A. Authorized Personnel: Facility or the Director's Representative, and all other personnel who are authorized officials of any regulating agency, be it State, Local, Federal or Private entity who possess legal authority for enforcement or inspection of the work.
- B. Clearance Criteria: Shall be determined and established by a Certified Asbestos Project Monitor with an independent testing lab employed by the Director's Representative, conforming to all standards set forth by all authorities having jurisdiction, mentioned in the references, and issue the certification of cleaning.
- C. Site Specific Variance: Relief in accordance with section 30 of the Labor Law from specific sections of Industrial Code Rule 56 for a specific project.
- D. Phase I & II: Asbestos Project phases as defined and subcategorized in ICR 56-2.

#### **1.05 ABBREVIATIONS**

- A. ASTM: American Society for Testing and Materials  
1916 Race Street  
Philadelphia, PA 19103
- B. CFR: Code of Federal Regulations  
Government Printing Office  
Washington, DC 20402
- C. DOL: New York State Department of Labor  
Harriman State Office Building Campus  
Albany, NY 12240
- D. NIOSH: National Institute for Occupational Safety and Health  
Building J.N.E. Room 3007  
Atlanta, GA 30333
- E. OSHA: Occupational Safety and Health Administration  
200 Constitution Avenue  
Washington, DC 20210
- F. USEPA: United States Environmental Protection Agency  
401 M Street SW  
Washington, DC 20460

## **1.06 SUBMITTALS**

- B. Quality Control Submittals:
  - 1. Notification Compliance Data: Within 2 days after notification is sent to the regulatory agencies submit one copy of each notice sent to each regulatory agency (USEPA and DOL).
  - 2. Asbestos Removal Company Data: Name and address of proposed asbestos removal company and abatement contractor license issued by DOL.
  - 3. Asbestos Worker Certification Data: Name and address of proposed asbestos abatement workers and licenses issued by DOL.
  - 4. Work Plan: For information only, submit one copy of the work plan required under Quality Assurance Article.
  - 5. Waste Transporter Permit: One copy of transporter's current waste transporter permit from NYS DEC (NYS Part 364 Permit).
  - 6. Landfill: Landfill to be used for ACM disposal shall be licensed to receive asbestos waste by NYS DEC (NYS Part 360 Permit) and by USEPA. Out of state landfills shall provide licenses from local agencies having jurisdiction.
  - 7. Negative Air Pressure Equipment: Copy of manufacturer's and performance data of all units and HEPA filters used.
  
- C. Asbestos Work Closeout Submittals:
  - 1. Waste Shipment Records and Disposal Site Receipts: Copy of waste shipment record and disposal site receipt showing that the ACM has been properly disposed.
    - a. Waste shipment record and disposal site receipt must be received within 35 days of the ACM waste leaving the Site. If receipts are not received within the specified time period, the Director's Representative will notify USEPA in writing within 45 days of the ACM waste leaving the Site.
  
- D. Contract Closeout Submittals:
  - 1. Daily Log: Submit copy of Project Monitor's daily air sample log and a copy of Asbestos Abatement Contractor's Daily project log.
  - 2. Air Monitoring Data: Submit copy of air test results and chain of custody.

## **1.07 QUALITY ASSURANCE**

- A. Regulatory Requirements: Comply with the referenced standards.
  
- B. Pre-Work Conference: Before the Work of this Section is scheduled to commence, a conference will be held by the Director's Representative at the Site for the purpose of reviewing the Contract Documents, discussing requirements for the Work, and reviewing the Work procedures.
  - 1. The conference shall be attended by the Contractor, the asbestos removal subcontractor, and the testing laboratory employed by the Director.
  
- C. Work Plan: At the conclusion of the pre-work conference, before the physical abatement Work begins, prepare a detailed work plan.

1. The work plan shall include, but not be limited to, work procedures, types of equipment, details of equipment used, decontamination unit locations, crew size, and emergency procedures for fire and medical emergencies and for failure of containment barriers.
2. If a site specific variance is sought, do not finalize the work plan until the Department of Labor decision is received.

#### **1.08 PROJECT CONDITIONS**

- A. In addition to the postings required by law, post at the entrance to the abatement area the following documents:
  1. Copy of the printed Work plan.
  2. Copy of Industrial Code Rule 56.
- B. Shut-down of Air Handling System: Complete the Work of this Section within the time limitation allowed for shut-down of the air handling system serving the work area.
  1. The air handling system will not be restarted until approval of the air monitoring tests following the last cleaning.
  2. If total shut down of the system is not acceptable, follow all regulations for local isolation and provision for temporary HVAC as per DOL regulations.
- C. Maintain electric services to those portions of the building and remaining facility not a part of the asbestos abatement work area at all times. Follow all regulations for electric power shut down exemptions as per DOL regulations.
- D. Do not obstruct any aisle or passageway so as to reduce its required width as an exit.

#### **1.09 HEALTH AND SAFETY**

- A. Where in the performance of the work, workers, supervisory personnel or sub-contractors may encounter, disturb, or otherwise function in the immediate vicinity of contaminated items and materials, all personnel shall take appropriate continuous measures as necessary to protect all ancillary building occupants from the potential ACM exposure.
  1. Such measures shall include the procedures and methods described herein and shall be in compliance with all applicable regulations of Federal, State and Local agencies.

#### **1.10 FIRE PROTECTION, EMERGENCY EGRESS AND SECURITY**

- A. Establish emergency and fire exits from the work area containment. Provide first aid kits and two full sets of protective clothing and respirators for use by qualified emergency personnel outside of the work area.
- B. Provide a logbook throughout the entire term of the project. All persons who enter the regulated abatement work area or enclosure shall sign the logbook. Document any intrusion or incident in the log book.

## **1.11 PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT**

- A. Workers must wear personal protective equipment for all projects as per OSHA and DOL regulations. Provide respiratory protection in accordance with OSHA regulation 1910.134 and ANSI Z88.2.
- B. Workers must be trained as per OSHA and DOL requirements, have medical clearance and must have recently received pulmonary function test (PFT) and respirator fit tested by a trained professional.
  - 1. A personal air sampling program shall be in place as required by OSHA.
  - 2. The use of respirators must also follow a complete respiratory protection program as specified by OSHA.

## **PART 2 PRODUCTS**

### **2.01 DISPOSAL BAGS**

- A. Type: Minimum 6 mil thick, black, and preprinted with a Caution Label.

### **2.02 EQUIPMENT**

- A. Temporary lighting, heating, hot water heating units, ground fault interrupters, and all other equipment on site shall be UL listed.
- B. All electrical equipment shall be in compliance with the National Electric Code, Article 305 - Temporary Wiring.

### **2.03 GLOVE BAGS**

- A. Type: Minimum 6 mil thick, clear, fire retardant polyethylene. Select glove bag sizes appropriate for the size and location of the project.

### **2.04 NEGATIVE AIR PRESSURE UNITS**

- A. Type: Local exhaust system, capable of maintaining negative air pressure within the containment, and provides for HEPA filtration of efficiency not less than 99.97 percent with 0.3 micron particles. Equip the unit with filter alarms lights and operation time meter.

### **2.05 PLASTIC SHEETS**

- A. Type: Minimum 6 mil thick, clear, fire retardant polyethylene.

### **2.06 RESPIRATORS**

- A. Type: As approved by the Mine Safety and Health Administration (MSHA), Department of Labor, or the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services.

## **2.07 VACUUM CLEANERS**

- A. Type: Vacuums equipped with HEPA filters.

## **PART 3 EXECUTION**

### **3.01 ASBESTOS-CONTAINING MATERIAL HANDLING AND REMOVAL PROCEDURES**

- A. Comply with the standards referenced in Part 1 of this Section.

### **3.02 CLEAN UP PROCEDURES**

- A. Comply with the standards referenced in Part 1 of this Section.

### **3.03 PROJECT AIR SAMPLING, MONITORING AND ANALYSIS**

- A. Air Sampling and Analysis: The Director will employ the services of an independent testing laboratory to perform air sample monitoring. The laboratory shall use the methods described in standards referenced in Part 1 of this Section.
  - 1. The equipment, duration, flow rate, calibration of equipment, number and location of samples are as per ICR 56-4.
  - 2. Air sampling technician shall be on site to observe and maintain air sampling equipment for the duration of the air sampling collection.
  - 3. Period of time permitted between completion of air sample collection and receipt of results on the project site shall be equal or less than 48 hours.
- B. If air samples collected outside the regulated work area indicate airborne fiber concentrations at or above 0.01 fibers per cubic centimeter, or the established background level, whichever is greater, work shall stop immediately for inspection of barriers and negative air ventilation systems. Clean up surfaces outside the regulated work area using HEPA filter equipped vacuums and wet cleaning methods. Work methods shall be altered to reduce fiber concentrations to acceptable levels.
- C. Elevated air sample results, if any, along with background and all other air sample results collected during Phase IIA through Phase IIC shall be submitted to the Commissioner of appropriate Asbestos Control Bureau within the same business day of receipt of results.

### **3.04 FINAL CLEANING AND CLEARANCE PROCEDURES**

- A. Negative Pressure Ventilation: Negative air pressure machines if used, shall remain in continuous operation during the entire length of the project.
- B. Cleaning and Visual Inspection: After first, second, third cleaning and required waiting/settling and drying periods, perform a final visual inspection.
  - 1. Final clearance air sampling shall commence after the waiting/settling and drying time as per ICR 56 has elapsed.

- C. Project Monitor Visual Inspection: The Director will employ the services of a DOL certified asbestos project monitor employed by an independent testing laboratory to perform visual inspection as required by ICR 56.
  
- D. Final Clearance Air Sampling: The Director will employ the services of an independent testing laboratory to perform final air sampling.
  - 1. The laboratory shall use the methods described in standards referenced in Part 1 of this Section.
  - 2. The equipment, duration, flow rate, calibration of equipment, number and location of samples are as per ICR 56-4.
  - 3. If initial Post-Abatement (Clearance Air) Monitoring results do not comply with the standards referenced in Part 1 of this Section the Contractor shall either re-clean or order a full set of TEM analysis.
    - a. Results of the TEM analysis will be conclusive, and if the results do not comply with the standards referenced in Part 1 of this Section, the Contractor shall re-clean and additional full set of air samples will be collected and analyzed until the standards are met.
    - b. All satisfactory PCM clearance air sample results along with background air sample results, if they are greater than or equal to 0.01 fibers per cubic centimeter, shall be submitted to the Commissioner of appropriate Asbestos Control Bureau within two business days of receipt of satisfactory clearance air results.
    - c. All satisfactory TEM results of previously unsatisfactory PCM clearance air sample results, along with the unsatisfactory PCM results shall be submitted to the Commissioner of appropriate Asbestos Control Bureau within two business days of receipt of satisfactory clearance air results.
  - 4. Prior to removal of isolation barriers the Director's Representative at the site will receive an affidavit from the air monitoring laboratory certifying the final air samples comply with the standards referenced in Part 1 of this Section.
  
- E. Dismantling of Regulated Abatement Work Area:
  - 1. Remove all tools and equipment after proper decontamination as per Part 1 of this section.
  - 2. Dismantle and remove each tent enclosure and air lock and any barriers only after final clearance air monitoring has been performed and satisfactory results obtained.
  - 3. All remaining polyethylene, duct tape, expandable foam and other barrier materials shall be bagged, wrapped, containerized and labeled as asbestos waste.
  - 4. Remove all temporary hard walled barriers from site.
  - 5. Dismantle any remote decontamination units and plastic sheeting shall be disposed as asbestos waste.
  - 6. Remove all waste generated to the holding area, lockable trailer or dumpster.
  - 7. Contractor's Supervisor shall certify in writing to the Director that abatement work is complete and no debris/residue remains.

**3.05 DISPOSAL OF ASBESTOS-CONTAINING MATERIAL AND RELATED DEBRIS**

- A. Remove all waste generated as part of the asbestos project from the project site within ten calendar days from the site after completion of Phase IIC of the project or within one day of the waste disposal container/trailer becomes full, whichever occurs first.
- B. Transport and dispose of all the asbestos-containing waste, related debris, and waste water to the approved disposal site.
- C. All generated waste removed from the site must be documented, accounted for and disposed of in compliance with the requirements of USEPA NESHAP.
- D. Comply also with the standards referenced in Part 1 of this Section.

**3.06 RESTORATION**

- A. Remove temporary decontamination facilities and restore area designated for these facilities to its original condition or better.
- B. Where existing work is damaged or contaminated, restore work to its original condition or better.

**END OF SECTION**

## SECTION 028304

### HANDLING OF LEAD CONTAINING MATERIALS

#### PART 1 GENERAL

##### 1.01 SUMMARY

- A. This Section specifies the requirements for the detection and prevention of lead dust, paint chips, or debris contamination of lead dust control work areas and areas adjacent to them, protection of workers, post-work cleaning, predisposal testing and appropriate disposal of removed material. The results of the testing for lead-containing materials are listed in the appendix.

##### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Existing Hazardous Material Information: Document 003126.
- B. Summary of the Work: Section 011000.
- C. Construction Facilities and Temporary Controls: Section 015000.
- D. Removals Cutting and Patching: Section 017329.

##### 1.03 REFERENCES

- A. New York State Department of Environmental Conservation (DEC) 6NYCRR:
  - 1. Part 360 Solid Waste Management Facilities.
  - 2. Part 364 Waste Transporter Permits.
  - 3. Part 370 Hazardous Waste Management System-General.
  - 4. Part 371 Identification and Listing of Hazardous Wastes.
  - 5. Part 372 Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities.
  - 6. Part 373 Hazardous Waste Management Facilities.
- B. New York State Department of Transportation (DOT): Follow all regulations of 49CFR Part 100 through 199.
- C. Occupational Safety and Health Administration (OSHA): Lead Exposure in Construction: Interim Final Rule 29 CFR 1926.62.
- D. U.S. Department of Housing and Urban Development (HUD): Guidelines for evaluation and control of Lead based paint hazards: Title Ten of Housing and Community Act of 1992.
- E. U.S. Environmental Protection Agency (EPA): Resource Conservation and Recovery Act (RCRA) Section 3004 Hazardous and Solid Waste Amendments.
- F. U.S. Environmental Protection Agency (EPA): Toxicity Characteristics Leaching Procedure EPA Method 1311.

#### **1.04 DEFINITIONS**

- A. Authorized Personnel: Facility or the Director's Representative, and all other personnel who are authorized officials of any regulating agency, be it State, Local, Federal or Private entity who possess legal authority for enforcement or inspection of the work.
- B. Containment: The enclosure within the building which establishes a contaminated area and surrounds the location where lead remediation is taking place and establishes a Lead Control Work Area.
- C. Floor Surface Clearance Criteria: Shall be determined and established by an independent testing lab hired by the Director's Representative, conforming to all standards set forth by all authorities having jurisdiction, mentioned in the references, and issue the certification of cleaning. At a minimum no single post work lead wipe sample test values shall have reading levels greater than the levels established by pre-work wipe sampling test values, or greater than 40 mg/ft<sup>2</sup>. Record levels in mg/ft<sup>2</sup>.
- D. Fixed Object: Mechanical equipment, electrical equipment, fire detection systems, alarms, and all other fixed equipment, furniture, fixtures or other items which cannot be removed from the work area.
- E. HEPA: High Efficiency Particulate Absolute filtration efficiency of 99.97 percent down to 0.3 microns. Filtration provided on specialized vacuums and air filtration devices to trap particles.
- F. Lead Based Paint (LBP): Paints or other surface coatings that contain lead equal to or greater than 1.0 milligrams per square centimeter or 0.5 percent of lead by weight.
- G. Lead Dust Control Work Area: A cordoned off area with drop clothes or an enclosed area or structure with containment to prevent the spread of lead dust, paint chips, or debris from lead-containing paint disturbance operations.
- H. PPE: Personal Protective Equipment.

#### **1.05 ABBREVIATIONS**

- A. ASTM: American Society for Testing and Materials  
1916 Race Street  
Philadelphia, PA 19103
- B. CFR: Code of Federal Regulations  
Government Printing Office  
Washington, DC 20402
- C. DOT: Department of Transportation  
Main Office, 50 Wolf Road  
Albany, NY 12232
- D. NIOSH: National Institute for Occupational Safety and Health

Building J, N.E. Room 3007  
Atlanta, Georgia 30333

- E. OSHA: Occupational Safety and Health Administration  
200 Constitution Avenue  
Washington, DC 20210
- F. USEPA: United States Environmental Protection Agency  
401 M Street SW  
Washington, DC 20460

#### **1.06 SUBMITTALS**

- A. Quality Control Submittals: Submit the entire Lead Abatement submittal package at the same time.
  - 1. Worker' Qualifications: The persons removing lead containing/coated material and their Supervisors shall be personally experienced in this type of work and shall have been employed by a company with a minimum of one year experience in this type of work. Submit a copy of documentation of completion of the EPA lead renovators training program.
    - a. Name of lead supervisor on site during the work.
  - 2. Detailed Work Plan: Submit one copy of the work plan required under Quality Assurance Article.
  - 3. Waste Transporter Permit: One copy of transporter's current NYS DEC waste transporter permit.
- B. Operation and Maintenance Data: Submit air filtration unit operation and maintenance data and manufacturer's catalog sheets for the HEPA filter.
  - 1. Provide an affidavit stating that the HEPA filters to be used for this project are new and unused.
- C. Contract Closeout Submittals:
  - 1. Assessment Report compiled by a testing lab certifying that the work area has lead concentrations below the levels specified under the cleaning criteria.
  - 2. Disposal Site Receipts: Copy of waste shipment record and disposal site receipt showing that the lead-containing materials have been properly disposed.

#### **1.07 QUALITY ASSURANCE**

- A. Regulatory Requirements: Comply with the referenced standards.
- B. Pre-Work Conference: Before the Work of this Section is scheduled to commence, a conference will be held by the Director's Representative at the Site with the contractor and the lead handling subcontractor (if any) for the purpose of reviewing the Contract Documents, discussing requirements for the Work, and reviewing the Work procedures.
- C. Detailed Lead-Containing Material Removal Work Plan: Before the physical Work begins, prepare a detailed lead-containing material removal work plan.

1. The work plan shall include, but not be limited to, the location, size, and details of lead dust control work areas, containment, sequencing of lead containing material handling, work procedures, types of equipment, crew size, and emergency procedures for fire and medical emergencies.

## **1.08 PROJECT CONDITIONS**

- A. Shut-down of Air Handling System: Complete the Work of this Section within the time limitation allowed for shutdown of the air handling system serving the work area.
  1. The air handling system will not be restarted until approval of the post-work dust-wipe testing following the last cleaning.
- B. Cover and seal all fin-tube radiator covers, diffusers, duplex outlets, speakers, smoke and heat detectors, etc. Use temporary plasticized partitions as required.
  1. Prevent lead containing dust from entering hard to clean areas within the dust containment area.
  2. Items judged to be too difficult to protect may be disconnected, removed and replaced at contractor's option.
- C. Remove or encase all movable equipment in the work area with two layers of six mil fire retardant polyethylene sheeting.
- D. Cut and altar existing materials as required to perform the work. Limit cutting to the smallest amount necessary. Core drill round holes and saw cut other openings where possible for removal work. Flame cutting, high speed grinding or welding is prohibited on lead painted surfaces.

## **1.09 HEALTH AND SAFETY**

- A. Where in the performance of the work, workers, supervisory personnel or sub-contractors may encounter, disturb, or otherwise function in the immediate vicinity of contaminated items and materials, all personnel shall take appropriate continuous measures as necessary to protect all ancillary building occupants from the potential lead exposure.
  1. Such measures shall include the procedures and methods described herein and shall be in compliance with all applicable regulations of Federal, State and Local agencies.

## **1.10 FIRE PROTECTION, EMERGENCY EGRESS AND SECURITY**

- A. Establish emergency and fire exits from the lead dust control work area containment. Provide first aid kits and two full sets of protective clothing and respirators for use by qualified emergency personnel outside of the work area.
- B. Provide a logbook throughout the entire term of the project. All persons who enter the regulated lead dust control work area or containment shall sign the logbook. Document any intrusion or incident in the log book.

## **1.11 PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT**

- A. Workers must wear protective suits, protective gloves, eye protection and a minimum of half-face respirator with new HEPA filter cartridge for all projects. Respiratory protection shall be in accordance with OSHA regulation 1910.134 and ANSI Z88.2.
- B. Workers must be trained per EPA, have medical clearance and must have recently received pulmonary function test (PFT) and respirator fit tested by a trained professional.
  - 1. A personal air sampling program shall be in place as required by OSHA.
  - 2. The use of respirators must also follow a complete respiratory protection program as specified by OSHA.

## **PART 2 PRODUCTS**

### **2.01 RESPIRATORS**

- A. Type: Approved by the Mine Safety and Health Administration (MSHA), Department of Labor, or the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services.

### **2.02 VACUUM CLEANERS**

- A. Type: Vacuums equipped with new HEPA filters.

### **2.03 PLASTIC SHEETS**

- A. Type: Minimum 6 mil., clear, fire retardant polyethylene sheets.
- B. Floor Protective Layer: Minimum 10 mil., reinforced polyethylene sheets.

### **2.04 DISPOSAL BAGS**

- A. Type: Minimum 6 mil thick, clear polyethylene bags with preprinted Caution Label. Properly containerize/drum prior to disposal.

### **2.05 EQUIPMENT**

- A. Temporary lighting, heating, hot water heating units, ground fault interrupters, and all other equipment on site shall be UL listed and shall be safe, proper, and sufficient for the purpose intended.
- B. All electrical equipment shall be in compliance with the National Electric Code, Article 305 - Temporary Wiring.

## **PART 3 EXECUTION**

### **3.01 PRE-WORK WIPE TESTING**

- A. Testing: The Director's Representative will employ the services of an independent testing laboratory to perform the pre-work testing within the lead dust control work area and the areas adjacent to the lead dust control work area.
  - 1. The testing lab will be New York State Department of Health, Environmental Laboratory Accreditation Program (NYS ELAP).

### **3.02 EMPLOYEE PROTECTION**

- A. Comply with all applicable Occupational Safety and Health Administration (OSHA) Requirements.

### **3.03 LEAD-CONTAINING/COATED MATERIAL HANDLING AND DISPOSAL**

- A. Handle and dispose of lead-containing materials in accordance with OSHA 1926.62 and the approved lead-containing material work plan. Use procedures and equipment required to limit occupational and environmental exposure to lead when material containing or coated with lead containing paint is handled and disposed of in accordance with referenced standards.

### **3.04 POST-WORK WIPE TESTING**

- A. Testing: The Director will employ the services of an independent testing laboratory to perform the post-work testing within the lead dust control work area and the areas adjacent to the lead dust control work area.
  - 1. The testing lab will be New York State Department of Health, Environmental Laboratory Accreditation Program (NYS ELAP).

### **3.05 MULTIPLE WORK LOCATIONS**

- A. The first work locations encountered shall be utilized to develop a method for an acceptable baseline approach for the lead dust control area, pre work wipe samples, employee protection, work method, post work wipe samples, cleaning criteria and disposal.
  - 1. Once an acceptable method is developed and verified by the independent testing lab employed by the Director, subsequent testing shall not be required.

### **3.06 CLEANING CRITERIA**

- A. Cleaning criteria is separated into two categories; areas within the lead dust control work area, and areas adjacent to the lead dust control work area:
  - 1. The Director's Representative shall have final determination of an acceptable clearance level.

### **3.07 CERTIFICATION OF CLEANING**

- A. Schedule dust inspection with the Director's Representative at the site, when work area is ready for clearance inspection.
  - 1. Schedule a walk-through inspection with the Director's Representative and obtain his written approval.
- B. The Director's Representative shall have final determination of an acceptable

clearance level.

### **3.08 PRE-DISPOSAL TESTING**

- A. Prior to disposal, the Director's Representative will employ the services of an independent testing lab to perform clearance testing of the removed materials for toxicity in accordance with EPA Method 1311, Toxicity Characteristic Leaching Procedure (TCLP).
  - 1. Test results indicating a value greater than 5 ppm lead or 5mg/L classifies the removed material as Hazardous Waste.

### **3.09 DISPOSAL OF LEAD-CONTAINING/COATED MATERIAL AND RELATED DEBRIS**

- A. Transport and dispose of lead-containing material classified as Hazardous Waste in accordance with the standards referenced in Part 1 of this Section.
- B. Transport and dispose of lead-containing material classified as Non- Hazardous Waste in accordance with the standards referenced in Part 1 of this Section.

### **3.10 RESTORATION**

- A. Remove temporary decontamination facilities and restore area designated for these facilities to its original condition or better.
- B. Where existing construction is damaged or contaminated during the course of performing this project, restore area to its condition or better.

**END OF SECTION**

**LIMITED ASBESTOS CONTAINING  
MATERIAL (ACM) SURVEY REPORT**

**OF:**

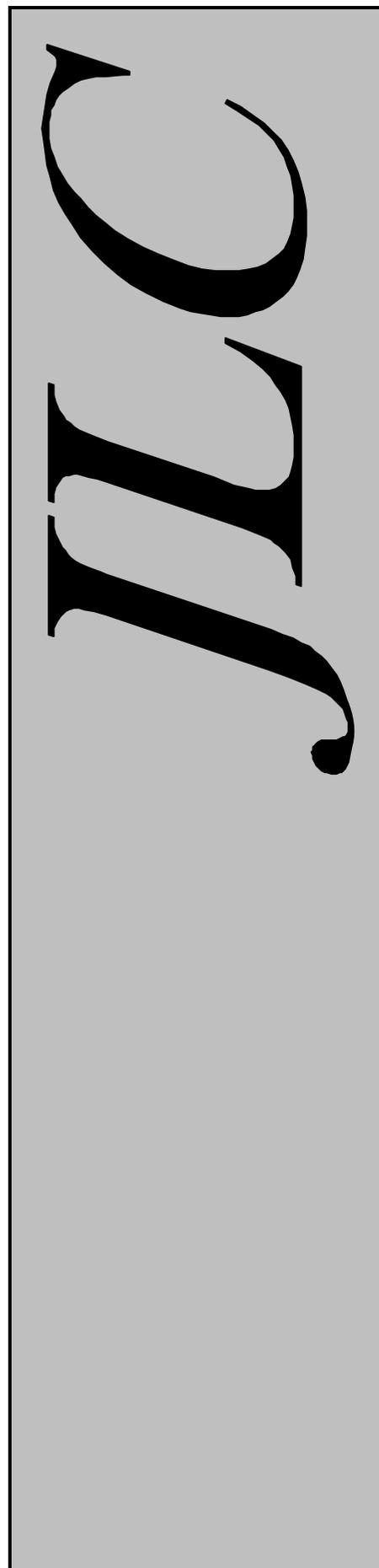
**Fishkill Correctional Facility  
Beacon, NY**

**FOR:**

**Greenman-Pederson, Inc.  
400 Rella Boulevard, Suite 207  
Montebello, New York, 10901**

**JLC PROJECT No.: 05-4079**

**December 28<sup>th</sup>, 2005**



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## **SECTION I**

# **INTRODUCTION AND BACKGROUND INFORMATION**

## **1.1 RECORD OF CERTIFICATION:**

This is to certify that this report was prepared by JLC Environmental Consultants, Inc. (JLC) under contract with Greenman-Pederson, Inc. for the limited survey for Asbestos Containing Materials (ACM) conducted at Fishkill Correctional Facility. The inspection was completed utilizing applicable Federal and New York State regulations pertaining to ACM including Federal OSHA (29 CFR 1910.1001, 29 CFR 1926.1101 and 29 CFR 1926.62), EPA (40 CFR Part 61 and 40 CFR Part 745), and TSCA Title II AHERA/ASHARA (40 CFR Part 763) Asbestos Regulations. The findings in this report are consistent with principles and practices established and prescribed by the EPA and AHERA.

This report, and the supporting data, findings, conclusions, opinions, and the recommendations it contains, represents the result of JLC's efforts on behalf of your firm. This report is not an asbestos abatement specification and should not be used for specifying removal methods or techniques.

The results, assessments, conclusions and recommendations stated in this report are factually representative of the conditions and circumstances observed at this location on the date(s) of the inspection. We cannot assume responsibility for any change in conditions or circumstances that occurred after the inspection.

This report and its findings and recommendations, if implemented by your firm, should not be construed as an assurance or implied warranty for the continuing safety, performance, or cost-effectiveness of any equipment, product, system, facility, procedure, or policy discussed or recommended herein.

This report may contain sensitive information about your firm, your staff, equipment, operations, or policies. It may also contain confidential or proprietary information about specific equipment or products, which have been provided to JLC by the manufacturers or other sources. Therefore, we consider this report confidential and ask that you do the same. This report should not be transmitted to third parties without the written permission of JLC and an authorized agent of your firm.

Report Prepared By:

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Evan Browne  
Assistant Project Manager

Report Reviewed By:

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Peter Ludwig  
QA/QC Manager

## **1.2 INTRODUCTION:**

Client: Greenman-Pederson, Inc.  
400 Rella Boulevard, Suite 207  
Montebello, New York, 10901

Project Site: Fishkill Correctional Facility  
Beacon, NY

Scope of Work: Limited ACM Survey

Dates of ACM Inspection: December 1<sup>st</sup>, 2<sup>nd</sup>, and 22<sup>nd</sup> 2005

The asbestos survey was performed by New York State Department of Labor (NYSDOL) Certified Asbestos Inspector Evan Browne.

All work was performed under the direct supervision of JLC Project Manager, NYC DEP Asbestos Investigator and NYS DOL Asbestos Inspector and Project Designer Peter Ludwig. The scope of the inspection consisted of determining the locations, quantity and condition of the suspect materials present at the time of the inspection.

## **1.3 QUALITY CONTROL PROCEDURES:**

JLC has integrated resources, technologies, and discipline to conduct the inspection and analysis based on the following principles:

- i. All applicable regulations are addressed in order to assure that our field inspectors and lab personnel meet their responsibilities, do so cost-effectively, and are equipped with the practical knowledge they need in order to understand and comply with regulations that affect them.
- ii. Care is taken to make certain that the information provided and actions recommended are practical and cost effective in achieving regulatory compliance.

The 'management' approach utilized assured that for this project all work performed received the highest quality service. All project results, reports and recommendations are reviewed for accuracy, content and quality prior to presentation. We recognize that the information in each assignment we undertake, that the information we develop, and the conclusions and advice we provide will be used to support important management decisions.

JLC's Quality Assurance Program requires that all personnel:

- i. Provide specific objectives so that project activities can be evaluated with regards to precision, accuracy, reproducibility, completeness, and comparability.
- ii. Provide specific guidance on the proper methodology for all activities.
- iii. Be provided with ongoing training to enhance their technical skills.
- iv. Be trained in QA/QC procedures and QC activities.
- v. Review all reports until they are acceptable in terms of technical and editorial quality and all quality assurance activities have been successfully performed.

#### **1.4 AREAS NOT ACCESSIBLE:**

JLC inspected and sampled all materials present at the site of electrical box renovations for buildings 2, 3, 4, 4a, 5, 7, 7a, 8, 9, 10, and 13 that were observable and accessible to the survey team.

No interior or exterior demolition was done for sampling purposes. Suspect materials that may be present inside wall cavities, electrical wiring or which were otherwise inaccessible were not included in the scope of findings for this inspection. JLC recommends that prior to actual renovation activities, selective exploratory demolition be performed to locate any suspect ACM or LBP that may be present behind partitions, in columns, etc.

## **SECTION 2**

# **ASBESTOS SURVEY REPORT**

## 2.1 **ASBESTOS INSPECTION & BULK SAMPLING PROCEDURES:**

The asbestos inspection procedures were based on the guidelines established by the Asbestos Hazardous Emergency Response Act (AHERA), as set forth in 40 CFR Part 763 of October 30, 1987. The AHERA guidelines represent the most up-to-date inspection and sampling protocol available and as such were utilized during the inspection and sampling. For the purposes of this inspection, suspect ACM has been placed in three (3) material categories: Thermal Systems Insulation (TSI), Surfacing Materials and Miscellaneous Materials.

All accessible electrical panels scheduled for repair/replacement in buildings 2-10, and 13 at Fishkill Correctional Facility, Beacon, NY were inspected physically, functional space by functional space and homogeneous area-by-homogeneous area to determine the presence or absence of asbestos-containing materials. Core samples of friable and non-friable suspect materials were collected by penetrating the suspect material to its substrate. The bulk samples collected were placed in sealed containers, labeled with an identifying code and a sample log was kept. Representative samples of each sampling area were then submitted to the laboratory to be analyzed for asbestos content. The inspection involved the following tasks:

1. A visual determination as to the extent of visible and accessible suspect materials and conditions of the material.
2. Collection of suspect building materials for asbestos content.
3. All suspect friable and non-friable materials were quantified in their respective locations.
6. All suspect materials sampled were identified on the appropriate building floor plan diagram with an identifying sample number.
7. A Chain of Custody record was prepared to accompany bulk samples to the laboratory.

The assessment process includes classifying the material as Friable ACM or Non-Friable ACM. Friability refers to any material that contains more than one percent (1%) asbestos by weight and can be crumbled, pulverized, or reduced to powder by hand or mechanical pressure. The word "Friability" refers to a material's likeliness to release airborne fibers when in situ, or under mechanical pressure. There is a greater possibility that a friable material will release fibers into the air when disturbed than will a non-friable material (i.e., floor tiles, roofing materials, etc.) thereby causing a potential hazard.

## **2.2 ASBESTOS BULK SAMPLE ANALYSIS AND METHODOLOGY:**

The bulk samples of the suspect asbestos-containing materials collected were analyzed using Polarized Light Microscopy (PLM) in accordance with EPA 600/M4-82-021 by JLC Environmental Consultants, Inc. (JLC). The analysis involves microscopically observing the suspect asbestos containing materials with a low power stereo-scopic microscope to determine the homogeneity of the material. Forceps samples are then immersed in a refractive index solution, placed on a microscope slide, teased apart, covered with a cover slip, and observed with a polarized light microscope.

JLC's Laboratory is accredited by the New York State Department of Health Environmental Laboratory Approval Program (NYS DOH ELAP #11029) and by the National Institute of Standards and Technology under their National Voluntary Laboratory Accreditation Program (NVLAP #101953). Polarized light microscopy with dispersion staining (PLM-DS) is the most efficient method for detecting asbestos in bulk samples. It is this method that the JLC lab uses during bulk building material analyses.

A chain of custody is kept for each sample to ensure proper handling and delivery to the JLC lab prior to analysis. To avoid any possible contamination, all sample and slide preparation is carried out in a ventilated, HEPA-filter hood with continuous airflow. Sample analysis is performed using PLM-DS in accordance with the USEPA, "Method for the Determination of Asbestos in Bulk Building Materials," EPA 600 R-93 116, July 1993, and NYDOH-ELAP certification manual, "Polarized Light Microscope Methods for Identifying and Quantitating Asbestos in Bulk Samples," ELAP 198.1, October 1993.

All samples are subject to preliminary visual stereomicroscopic examination. During this step, a homogeneity assessment, fiber identification, and semi-quantitation of constituents were performed. Samples lacking uniformity of composition and/or distribution of component materials then undergo homogenization. Some non-friable organically bound (NOB) samples such as floor tiles and roofing materials may require additional steps to dislodge problem matrices (i.e. ashing, extractions, and TEM).

Identification of suspect fibers is made by PLM analysis of subsamples. A microscope equipped with dual polarizing filters enables the observation of specific optical characteristics of each sample. Positive identification of asbestos requires determination of the following optical properties: morphology, color and pleochroism, refractive indices, birefringence, extinction characteristics, and signs of elongation.

Asbestos quantitation is performed by the point-counting procedure, a standard technique in petrography for determining the relative areas occupied by separate minerals in rock. An ocular reticle superimposes a point or points over the microscope's field of view. The number of points positioned directly above each kind of particle or fiber is recorded. A total of 400 points must be counted over at least eight different representative subsamples to complete analysis.

JLC uses an Olympus BHT-P Polarizing Microscope complete with polarizer, analyzer, port for wave retardation plate, 360 degree graduated rotating stage, substage condenser, lamp and lamp iris, eyepiece reticle, and 25-point Chalkley Point Array. Plane polarized light allows for the determination of refraction indices relative to specific crystallographic orientations. Morphology and color can also be observed under plane polarized light.

NYS DOH ELAP states that Polarized Light Microscopy is not consistently reliable and conclusive in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before these materials can be considered or treated as non-asbestos-containing, Transmission Electron Microscopy must make confirmation.

Transmission Electron Microscopy (TEM) analysis of non-friable, organically bound (NOB's) materials was performed by EMSL Analytical, Inc. located at 307 West 38<sup>th</sup> Street, New York, NY 10018. (ELAP#11506, NVLAP# 101048-9).

### **2.3 SCOPE OF WORK FOR ASBESTOS CONTAINING MATERIALS:**

The inspection for asbestos containing materials for Fishkill Correctional Facility included the following locations:

\* Building numbers are based upon the architectural drawings provided by the client.

1. Building 2, basement, first and second floors
2. Building 3, floor 1
3. Building 4, basement, first and second floors
4. Building 4a, basement, first and second floors
5. Building 5, basement, first and second floors
6. Building 7, basement, first and second floors
7. Building 7a, basement, first and second floors
8. Building 8, basement, first floor, and shop
9. Building 9, basement, first and second floors
10. Building 10, basement and first floor
11. Building 13, basement, first and second floors

The asbestos inspection involved a thorough visual examination of all areas and sampling of suspect materials that would be impacted during the proposed renovation. The following suspect materials were visually inspected and/or sampled during the field inspection:

1. Wall Plaster
2. Ceiling Plaster
3. Brick and Mortar
4. Wall Cement

5. Fire Brick
6. Dust on Electrical Boxes and In Area of Work
7. Wall Tile Mastic/Grout
8. Wall Cladding

## **2.4 SUMMARY OF FINDINGS FOR ACM:**

Bulk samples of suspect materials were collected and analyzed using Polarized Light Microscopy (PLM) and/or Transmission Electron Microscopy (TEM) Methods. The following materials were confirmed, or assumed, to contain greater than one percent (1%) asbestos and are therefore classified as ACM.

1. Wall material at panel LP-B2 in the basement of Building 13

## **2.5 RECOMMENDATIONS FOR ACM:**

All ACM that will be impacted by the renovation should be removed prior to work. Section 56-1.9 (e) of the New York State Department of Labor Industrial Code Rule 56 Asbestos Regulations states that:

“If a building survey finds that a building to be demolished contains asbestos or asbestos containing material as defined in section 56-1.4 of this Subpart, no bids shall be advertised nor contracts awarded nor demolition work commenced by any owner or agent prior to completion of an asbestos remediation contract performed by a licensed asbestos contractor, in conformance with all standards set forth in this Part (rule)”.

Abatement activities must be conducted in compliance with all applicable regulations, standards and generally accepted environmental and safety practices including Federal OSHA (29 CFR 1926.58), EPA NESHAPS (40 CFR Part 61), and TSCA Title II AHERA/ASHARA (40 CFR Part 763) Asbestos Regulations and the New York State Department of Labor Industrial Code Rule 56.

## 2.6 SCHEDULE OF JLC INSPECTION RESULTS FOR ACM:

The following table presents inspection results, by homogeneous area.

SPECIFIC LOCATION	HA <sup>1</sup>	SUSPECT ACM <sup>2</sup>	SAMPLE # (s)	PLM RESULTS	TEM RESULTS	ACM QUANTITY	NOTES/CONDITION
Building 3 / Floor 1 / Panel AP-A8	A	Plaster White Coat ( <b>PWC</b> )	001	Non-ACM	-	0 SF	Confirmed Non-ACM
Building 4 / Floor 1 / Panel LP1-1	B	PWC	002	Non-ACM	-	0 SF	
	C	Plaster Brown Coat ( <b>PBC</b> )	003	Non-ACM	-	0 SF	
Building 4 / Floor 1 / Panel 1-96	D	Tile Mastic	004	Non-ACM	Non-ACM	0 SF	
Building 4 / Panel 2 / Panel LP2-1	E	PWC	005	Non-ACM	-	0 SF	
	F	PBC	006	Non-ACM	-	0 SF	
Building 4 / Floor 2 / Panel 2-73	G	PWC	007	Non-ACM	-	0 SF	
Building 7 / Floor 2 / Panel LP-2-73	H	PWC	008	Non-ACM	-	0 SF	
	I	PBC	009	Non-ACM	-	0 SF	
Building 7 / Floor 1 / Panel LP-1-1	J	Tile Grout	010	Non-ACM	-	0 SF	
Building 7 / Floor 1 / AP- 11A	K	PWC	011	Non-ACM	-	0 SF	
	L	PBC	012	Non-ACM	-	0 SF	
	M	Tile Mastic	013	Non-ACM	Non-ACM	0 SF	

SPECIFIC LOCATION	HA <sup>1</sup>	SUSPECT ACM <sup>2</sup>	SAMPLE # (s)	PLM RESULTS	TEM RESULTS	ACM QUANTITY	NOTES/CONDITION
Building 2 / Floor 1 Box LP2-A	N	PWC	014	Non-ACM	-	0 SF	Confirmed Non-ACM
	O	PBC	015	Non-ACM	-	0 SF	
Building 5 / Floor 1 / Panel KE-2	P	PWC	016	Non-ACM	-	0 SF	
	Q	PBC	017	Non-ACM	-	0 SF	
	R	Cement Wall	018	Non-ACM	-	0 SF	
	S	Tile Grout	019	Non-ACM	-	0 SF	
Building 5 / Floor 2 / Panel LP2-A	T	PWC	020	Non-ACM	-	0 SF	
	U	PBC	021	Non-ACM	-	0 SF	
Building 8 / Floor 1 / Panel LP-2	V	PWC	022	Non-ACM	-	0 SF	
	W	PBC	023	Non-ACM	-	0 SF	
	X	Wall Cladding – Lower Half	024	Non-ACM	-	0 SF	
Building 4 / Basement / Panel LPB-1	Y	PWC	025	Non-ACM	-	0 SF	
	Z	PBC	026	Non-ACM	-	0 SF	
	AA	Dust Wipe	027	Non-ACM	-	0 SF	
Building 4 / Basement / Panel LP4-B5	BB	Brick Mortar	028	Non-ACM	-	0 SF	
Building 4 / Basement / Panel LP4-B2	CC	Dust Wipe	029	Non-ACM	-	0 SF	
Building 2 / Basement / Panel LP-B2	DD	Dust Wipe	030	Non-ACM	-	0 SF	
Building 2/ Floor 2 / Panel LP-B4	EE	Dust Wipe	031	Non-ACM	-	0 SF	

Building 7 / Basement / Panel LP-B5	FF	Brick Mortar	032	Non-ACM	-	0 SF	Confirmed Non-ACM
Building 7 / Basement / Panel LP-B5	GG	Dust Wipe	033	Non-ACM	-	0 SF	
Buildings 2-7 Basement	HH	PWC	034-038	Non-ACM	-	0 SF	
Building 10 / Panel By Interior Door	II	PWC	039	Non-ACM	-	0 SF	
	JJ	PBC	040	Non-ACM	-	0 SF	
Building 13 / Floor 1 / Panel 1-DB	KK	PWC	041	Non-ACM	-	0 SF	
	LL	PBC	042	Non-ACM	-	0 SF	
Building 13 / Floor 1 / Panel LPD-1	MM	PWC	043	Non-ACM	-	0 SF	
	NN	PBC	044	Non-ACM	-	0 SF	
<b>Building 13 / Basement Box LP-B2</b>	<b>OO</b>	<b>Wall Material</b>	<b>045, 051, 052, 061</b>	<b>ACM</b>	-	<b>50 SF in area of panel</b>	
Building 13 / Basement / Panel LP-B5	PP	Dust Wipe	046	Non-ACM	-	0 SF	Confirmed Non-ACM
Building 13 / Basement / Panel LP-B-95	QQ	Dust Wipe	047	Non-ACM	-	0 SF	
Building 13 / Basement / Panel LP-B5	RR	Fire Brick	048	Non-ACM	-	0 SF	
Building 13 / Floor 1 / Panel LP-1-88	SS	Cement Wall	049	Non-ACM	-	0 SF	

Building 13 / Floor 2 / Panel LP-2-F	TT	PWC	050	Non-ACM	-	0 SF	Confirmed Non-ACM
	UU	PBC	051	Non-ACM	-	0 SF	
Building 13 / Basement / Box LP-B2	V V	Wall Cement	052, 053, 061	Non-ACM	-	50 SF in area of panel	Assumed ACM
Building 13 / Basement / Panel L-B5	WW	Yellow Mortar	054	Non-ACM	-	0 SF	Confirmed Non-ACM
Building 13 / Panel L-B5 / Basement	XX	Brick	055	Non-ACM	-	0 SF	
Building 13 / Floor 1 Panel 1-74-1B	YY	PWC	056	Non-ACM	-	0 SF	
	ZZ	PBC	057	Non-ACM	-	0 SF	
Building 13 / Floor 1 / Panel LP1-88	A3	Cement Wall	058	Non-ACM	-	0 SF	
Building 13 / Floor 1 / Panel LP-E3	B3	Cement Wall	059	Non-ACM	-	0 SF	
Building 13 / Floor 1 / Panel 1-DA	C3	Cement Board	060	Non-ACM	-	0 SF	

1) **HA:** homogenous area (The HA is designated by the field inspector and describes the extent of a homogenous material. Homogeneity is based on similar date of installation, color, texture, appearance, composition, etc. )

2) **ACM:** Asbestos Containing Material (refers to a material having greater than 1% asbestos by weight)

**Non-ACM:** A material containing less than 1% asbestos by weight

3) **SF:** Square Feet

4) **LF:** Linear Feet

5) **MO:** Masonry Opening

## 2.6 ASBESTOS QUANTITIY SCHEDULE:

The following table shows all ACM materials in each building area and their respective quantities and locations:

LOCATION		ACM TYPE	ACM QUANTITY	NOTES
FLOOR	AREA			
Building 13, Basement	Wall by Box LP-B2	Wall Material	50 SF in area of panel	Remove ACM before installing or removing electrical panels.

## 2.7 ASBESTOS GLOSSARY:

**ABATEMENT:** Removal, repair, encapsulation or enclosure of an asbestos-containing material to prevent fiber release.

**ASBESTOS:** The asbestiform varieties of chrysotile, amosite, crocidolite, anthophyllite, tremolite and actinolite.

**ASBESTOS INSPECTOR:** A person who successfully completed the appropriate course requirements and works under the direction of a licensed asbestos consultant, or is a Certified Asbestos Inspector and engages in the survey and assessment of asbestos-containing materials.

**ASBESTOS CONTAINING MATERIAL:** Any material that contains more than one percent by weight of asbestos.

**BUILDING ASBESTOS CONTACT PERSON:** A competent person appointed by an agency head, or higher authority, to manage and coordinate all asbestos-related activities for a specific state-owned building. This person shall be capable of identifying existing and potential asbestos hazards in the building, and have the authority to take prompt corrective action.

**ENCAPSULATION:** The application of a coating to asbestos-containing material to prevent fiber release.

**ENCLOSURE:** Construction of an airtight barrier around asbestos-containing material to prevent fiber release.

**FRIABLE:** A condition wherein the material, when dry, can be crumbled by hand pressure.

**FUNCTIONAL SPACE:** A room or specific area such as a classroom, hallway, stairwell, elevator shaft, portico or covered walkway, office, auditorium, cafeteria, gymnasium, locker room, closet, storage area, dormitory room, break room, lounge, rest room, mechanical room, electrical equipment room, boiler or furnace room, penthouse, pipe chase, basement, crawl space (including soil when appropriate), steam or utility tunnel, attic, roof, siding and the space above ceilings, between walls or below floors.

**HOMOGENEOUS AREA:** The extent of a homogeneous material.

**HOMOGENEOUS MATERIAL:** A material which may or may not extend through many functional spaces; is uniform in color, texture and relative date of installation, and appears to be the same identical material.

**INSPECTOR:** A person who has successfully completed the appropriate course requirements and works under the direction of a licensed asbestos consultant, or is a Certified Asbestos Inspector and engages in the survey and assessment of asbestos-containing materials.

**MISCELLANEOUS MATERIALS:** Interior or exterior material components such as wallboard, linoleum, floor and ceiling tiles, fire doors, roofing, siding and other materials that are not integral building components, such as stage curtains, protective clothing, laboratory apparatus and equipment and other materials considered to be part of the real estate.

**RESPONSE ACTION:** A method such as removal, encapsulation, enclosure, repair or attention under an operation and maintenance management plan that protects human health and the environment from ACM.

**SALIENT:** A small section or area of damaged asbestos-containing material the condition of which is significantly different from the rest of the otherwise homogeneous area.

**SURFACING MATERIALS:** Materials that are sprayed-on, troweled-on or otherwise applied to surfaces; including sealer, paint, stucco or materials applied to surfaces for acoustical, fireproofing or other purposes.

**SURVEY:** The room-by-room physical inspection of a building and related activities conducted to document the presence, location and condition of ACM.

**THERMAL SYSTEM INSULATION:** Materials in a building or distribution system applied to pipes, fittings, boilers, breaching, tanks, ducts or other system components to prevent heat loss or gain, water condensation or for other purposes.



## **APPENDIX A: ASBESTOS ANALYTICAL REPORTS:**

**ASBESTOS CERTIFICATES OF ANALYSIS BY PLM  
METHOD**

**ASBESTOS CERTIFICATES OF ANALYSIS BY TEM  
METHOD**

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