



**INSPECTION REPORT FOR
ASBESTOS CONTAINING MATERIALS,
LEAD CONTAINING PAINT, PCBs
AND UNIVERSAL/REGULATED MATERIAL**

Performed at:

**BUILDING 67N
HOWLAND HOOK MARINE TERMINAL
PORT IVORY
40 WESTERN AVE
STATEN ISLAND, NY**

Performed for:

The logo for The Port Authority of New York & New Jersey is a blue rectangular box with the words 'THE PORT AUTHORITY' in white, bold, sans-serif font on the top line, and 'OF NEW YORK & NEW JERSEY' in a smaller, white, sans-serif font on the bottom line.

**THE PORT AUTHORITY
OF NEW YORK & NEW JERSEY**

PANYNJ Contract # HH-934.900

Prepared by:

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ATC Project No: 15.14777-0536

November 16, 2010



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November 16, 2010

Mr. Robert Pruno, P.E.
Chief Environmental Engineer
Environmental Engineering Division
Port Authority of New York & New Jersey
2 Gateway Center, 14th floor
Newark, NJ 07102

Subject: Inspection Report for Asbestos Containing Materials, Lead Containing Paint, PCBs and Universal/ Regulated Material

Re: Building 67N - Howland Hook Marine Terminal, Port Ivory, Staten Island, NY

Dear Mr. Pruno:

ATC Associates Inc. (ATC) has completed the inspection for asbestos-containing materials (ACM), Polychlorinated Biphenyls-containing caulking (PCB-containing caulking) and universal/regulated material for the proposed work at the above referenced site. The inspection included visual observation, material sampling, and laboratory analysis of suspect ACM and PCB-containing caulking as well as a visual inventory of universal/regulated material. ATC also reviewed and incorporated the ACM and lead-containing paint (LCP) inspection data from previous Port Authority of New York and New Jersey (PANYNJ) survey reports.

The attached report presents our inspections procedures, findings, assessments and recommendations. ACM, LCP and PCB-containing caulking laboratory results, ACM and PCB-containing caulking sample location drawings, ACM location drawings, ACM and universal/regulated material photographic logs, universal/regulated material inventory, universal/regulated material drawings, laboratory accreditations, personnel certifications, and cost estimate are provided in the Appendices.

ATC appreciates this opportunity to be of service to you on this project. If you have any questions concerning this report or if we may be of further assistance to you, please contact us.

Sincerely,

Guillermo Solis
Asbestos Inspector

Gilbert Gedeon, P.E.
Operations Manager

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1.0 EXECUTIVE SUMMARY

ATC Associates Inc. has performed an inspection for asbestos-containing materials, (ACM), PCB-containing caulking and universal/regulated material at Building 67N located at Howland Hook Marine Terminal, Port Ivory, Staten Island, NY. The survey was conducted at the request of Port Authority of New York and New Jersey (PANYNJ). The intent of this survey was to locate and identify all accessible ACM, PCBs and universal/regulated material within the above referenced building and to provide a cost estimate for removal of the aforementioned items.

ATC's ACM and PCB-containing caulking survey was performed by Mr. Guillermo Solis and Mr. Gilbert Gedeon on August 20 2010 through September 10, 2010. Mr. Solis and Mr. Gedeon hold certifications from the New York State Department of Labor as Asbestos Inspectors (AH-06-00720 and AH-94-04294), accordingly. This survey was conducted to supplement previous asbestos inspection activities performed by PANYNJ. ATC reviewed and incorporated the ACM and LCP inspection results into this report. The universal/regulated material inventory was performed by Mr. John J. Mascioli, M.S. on August 24, 2010. ATC and PANYNJ asbestos bulk sample results are included in Appendices A and B, respectively. PCB sample results are included in Appendix F.

2.0 BUILDING DESCRIPTION

The date of construction of Building 67N is unknown. It is a single-story structure; approximately 61,515 square feet in size and constructed primarily of metal decking and cinder block/metal siding. The building is located north of the 60-series buildings and currently serves as a fully operational warehouse which is scheduled for complete demolition in the future.

3.0 FIELD SURVEY PROCEDURES AND SAMPLE ANALYSIS METHODS

Guidelines used for the inspection were established by the Environmental Protection Agency (EPA) in the Guidance for Controlling Asbestos Containing Materials in Buildings, Office of Pesticides and Toxic Substances, Doc 560/5-85-024, and 40 CFR Part 763, Asbestos Hazard Emergency Response Act (AHERA).

Field information was organized in accordance with the AHERA methodology of homogeneous area (HA). During the survey, reasonable effort was made to identify all locations and types of ACM materials associated with the scope of work. Sampling has included multiple samples of the same materials chosen at random. However, due to inconsistencies of a manufacturer's processes and the contractor's installation methods, materials of similar construction may contain various amounts of asbestos. Further, some materials that were not originally specified to contain asbestos may in fact contain this mineral. For example, cementitious pipe insulation and plaster were frequently mixed with asbestos at the construction site for ease of application. Locating all asbestos materials can only be definitively achieved by conducting exploratory demolition and sampling every section of pipe insulation, fitting or valve covering, fireproofing, and other suspect ACM.

Bulk samples of suspect ACM were analyzed using Polarized Light Microscopy (PLM) coupled

with dispersion staining, as described in 40 CFR Part 763 and the National Emissions Standard for Hazardous Air Pollutants (NESHAP). NESHAP is the standard industry protocol for the determination of asbestos in building materials. A suspect material is immersed in a solution of known refractive index and subjected to illumination by polarized light. The color displays that results are compared to a standardized atlas whereby the specific variety of asbestos is determined. It should also be recognized that PLM is primarily a qualitative identification method whereby asbestos percentage, if any, is estimated.

The New York State Department of Health has revised the PLM Stratified Point Counting Method. The new method, "Polarized Light Microscopy Methods for Identifying and Quantifying Asbestos in Bulk Samples" can be found as method 198.1 in the Environmental Laboratory Approval program (ELAP) Certification manual. The method specifies a procedure of analysis for bulk samples that fall into the category of "Non-friable Organically Bound" (NOB). This category includes any sample in a flexible to rigid asphalt or vinyl matrix (floor tiles, mastic, roofing shingles, roofing felt, etc.). Additional materials that may fall into this category are textured paints and stucco, pipe valve and joint packing, and a variety of other applications. These samples must be "ashed" in a muffle furnace at 4-degrees Celsius (to remove organic matrix), treated with acid (to remove any mineral carbonate), and filtered through a 0.4-micron filter before being analyzed by PLM Method 198.6. The sample must be weighted between each of these steps to track the percent loss of organic matrix.

ELAP has determined that analysis of NOB materials is not reliably performed by PLM. Therefore, if PLM yields results of 1-percent asbestos or less, the result must be confirmed by TEM method 198.4. Bulk samples that undergo TEM analysis use the sample reduction methodology stated above for NOB analysis by PLM. ELAP certified laboratories must include the following statement with their PLM analysis results for each "negative" (1-percent or less asbestos) NOB sample: "Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-ACM, confirmation must be made by quantitative transmission electron microscopy".

All samples were initially analyzed by Polarized Light Microscopy. Samples which yielded a negative PLM result and which are classified as a "non-friable" material were then re-analyzed utilizing Transmission Electron Microscopy methodology described above. The laboratory performing both these analysis procedures was ATC Associates Inc., located at 104 East 25th Street, New York, New York. The laboratory has received accreditation from the following agencies:

- National Voluntary Laboratory Accreditation Program (Lab Code 101187-0)
- New York State Environmental Laboratory Approval Program (Lab No. 10879)
- American Industrial Hygiene Association Accredited Laboratory (Lab No. 100229)

4.0 ACM INSPECTION SCOPE AND FINDINGS

The intent of this survey was to locate and identify all accessible ACM. As part of the inspection, ATC reviewed the previous PANYNJ inspection report and conducted the initial walkthrough of the building. Based on the review and walkthrough, ATC conducted an asbestos inspection and collected suspect ACM samples. ATC performed limited intrusive/destructive sampling as this

building is occupied. The areas inspected included the main roof, building exterior, and interior warehouse areas.

The materials examined and sampled for ACM during the inspections were:

- Roof - Main Membrane
- Roof - Perimeter Flashing
- Roof - Vent Flashing
- Roof - Pitch Pocket Flashing
- Roof - Pipe Tar Insulation over Foam
- Exterior Louver Caulking - Beige
- Exterior Foundation Coating - Green
- Exterior Foundation Flashing - Black
- Exterior Coating on Cinder Block Wall - White/Green
- Exterior Expansion Joint on Cinder Block Wall - Light Gray
- Exterior Expansion Joint between Buildings 67N and 60 - Black
- 1st Floor - Plaster on Columns - White
- 1st Floor - Felt Paper behind Columns - Dark Gray
- 1st Floor - Foundation Joint Tar - Black
- 1st Floor - Wall Joint Caulking - Yellow
- 1st Floor - Caulking on Columns - White
- 1st Floor - Corrugated Paper at Columns - Gray
- 1st Floor - Fire Door Insulation - Brown Paper

The entire built-up roofing system including main membrane, flashing, and pitch pockets was found to contain asbestos.

The white/green coating was observed on the exterior of the cinder block wall located on the northwest side of the building and was found to contain asbestos.

The dark gray felt paper, which was found to contain asbestos, was observed between the interior perimeter columns and building walls in many locations, and therefore, was assumed to exist behind all interior perimeter columns.

The gray corrugated paper, which was found to contain asbestos, was only observed on Column B1 only. This material does not appear to be part of the original construction.

5.0 ACM INSPECTION RESULTS

Based upon visual inspection and analytical results of bulk samples collected, **the following materials contain asbestos (> 1%)**.

ATC Sample Number	Sampling Date	Material Description	Asbestos Content	Approximate Quantity
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ATC Sample Number	Sampling Date	Material Description	Asbestos Content	Approximate Quantity
PI-67N-3	8/20/10	Bottom layer of Brown Roof Membrane collected from Main Roof on West side near Columns L1,16	5.6% Chrysotile	61,538 SF
PI-67N-5	8/20/10	Bottom layer of Black Pitch Pocket Flashing collected from Main Roof on West side near Columns M,15	7.5% Chrysotile	
PI-67N-9	8/20/10	Bottom layer of Black Vent Flashing collected from center of Main Roof near Columns J,14	4.3% Chrysotile	
PI-67N-27	8/20/10	White/Green Coating from Exterior Cinder Block Wall collected on NW corner near Columns M, 20	14.2% Chrysotile	1540 SF
PI-67N-34	8/20/10	Dark Gray Felt Paper collected behind Column L9 on South wall -1st floor	15% Chrysotile	1925 SF
PI-67N-42	8/20/10	Gray Corrugated Paper collected at Column B1 on South wall- 1st floor	8% Chrysotile	55 SF

Port Authority Sample Results Summary:

Based on the review of the sample data and survey report provided by PANYNJ, no samples were collected by PANYNJ. Materials assumed to contain asbestos by PANYNJ were sampled by ATC accordingly.

6.0 LEAD CONTAINING PAINT (LCP) RESULTS

ATC has reviewed and incorporated the LCP sample results provided by the PANYNJ into this report under Appendix B. The following samples were confirmed by the PANYNJ to be lead-containing:

- Yellow paint on upper part of support beam at center of building 67N
- Red paint on lower part of support beam at center of building 67N
- Gray paint on stairs along North wall between buildings 60 and 67N.
- Beige paint on stairwell along North wall between buildings 60 and 67N upper level of wall
- White paint on stairwell along North wall between buildings 60 and 67N lower level of wall

7.0 PCB-CONTAINING CAULKING INSPECTION FINDINGS

ATC Associates Inc. (ATC) collected five (5) samples from suspect PCB-containing caulking and submitted to a third party laboratory for analysis. The suspect PCB-containing caulking samples collected were based on building component, application type as well as color and texture. Caulking and expansion joint materials with similar characteristics were assumed to be homogenous materials.

- Beige exterior louver caulking (east wall between Columns 19 and 20)
- Gray exterior expansion joint (west wall between Columns 17 and 18)
- Yellow interior wall joint caulking (south wall at Column C)
- White interior column caulking (east wall at Column 15)
- White expansion joint caulk between Buildings 67N and Building 60 extension

Based on laboratory analysis and results provided by New York Environmental & Analytical Laboratories Inc, PCB levels are below the report limit (mg/kg). Corresponding laboratory results are attached in Appendix F

8.0 UNIVERSAL/REGULATED MATERIAL INVENTORY

ATC conducted a limited visual inspection on August 24, 2010 to identify and document universal/regulated materials at the site in order to prepare an inventory of these materials for the planned demolition and renovation activities. Materials inspected included but not limited to lamps, ballasts, capacitors, mercury containing equipment, transformers, batteries, hydro fluorocarbons and miscellaneous oils and chemicals.

Based on the age of the building, it was assumed that lamp ballasts/capacitors contain Polychlorinated Biphenyls (PCBs) and/or di (2) ethylhexyl phthalate (DEHP). A tabulation of the inventory is summarized in the tables below. Drawings with the locations of the observed materials are attached in Appendix G.

Lighting Fixtures:

Bulb Type	Fixture height from floor (Ft.)	No. of Fixtures	No. of Bulbs	No. of Ballasts or Capacitors	Bulb Size (Length in Ft)
Fluorescent (Interior)	~20	133	141	127	8
HID (Interior)	~20	7	7	7	NA
HID (Exterior)	~30	3	3	3	NA
Incandescent (Interior)	~20	44	44	NA	NA
TOTALS		187	195	137	NA

Miscellaneous Equipment:

Equipment Type	Location	Quantity	Notes
Fire Extinguisher (Interior)	Located throughout the floor at various columns	6	Nitrogen Type
Vented Transformers (Interior)	Located along the south wall (approx. 15' from ground surface)	2	Assumed to be dry type transformers (non-PCB containing)

9.0 CONCLUSIONS AND RECOMMENDATIONS

Various types of ACM and universal/regulated material have been identified in our survey effort that may be impacted as part of the proposed demolition work at Building 67N. The materials reported in Section 5.0 of this report would require complete abatement prior to the start of any work that may impact the ACM.

10.0 ASSUMPTIONS AND LIMITATIONS

The results, findings, conclusions, and recommendations expressed in this report are based only on conditions that were noted at the time of the inspection.

The report is designed to aid the PANYNJ in identifying and locating ACM, LCP, PCB-containing caulking, and universal/regulated material. Under no circumstances is the report to be utilized as a bidding document or as a project specification document since it does not have all the components required to serve as an environmental abatement/remediation work plan.

If questions arise regarding asbestos content in building materials that were not tested by ATC, additional testing services should be procured to test those areas.

This report is intended for the sole use of the PANYNJ. The scope of services performed in execution of this evaluation may not be appropriate to satisfy the needs of other users, and use or re-use of this document or the findings, conclusions, or recommendations contained herein is at the risk of said user.