



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

August 16, 2005

Ms. Penny Theodorellys
NYC Department of Environmental Protection
Bureau of Environmental Compliance
Asbestos and Lead Control Program
59-17 Junction Blvd. – 8th Floor
Elmhurst, N.Y. 11373

Re: 133-135 Greenwich Street/21-23 Thames Street Buildings, New York, New York

Dear Ms. Theodorellys:

The owner's environmental consultant, Airtek, has submitted a revised work plan for the 133 -135 Greenwich St. & 21-23 Thames St. buildings. Their submission is broken into four (4) parts:

- Part I: Project Work Plan
- Part II: Environmental Community Air Monitoring Plan
- Part III: Health & Safety Plan
- Part IV: Waste Management Plan

The submission was provided to us in an electronic format. On August 12, 2005, I forwarded the above-referenced documents electronically to our external partners for review. I received a message from our computer server that Parts II (Environmental Community Air Monitoring Plan) and III (Health & Safety Plan) were not transmitted to you due to the large size of the electronic file. Therefore, I am forwarding to you a hard-copy of Parts II and III for your review and comment.

Once again, thank you for your participation and assistance in this process. If you have any questions, please feel free to contact me at (212) 637-3459.

Sincerely,

A handwritten signature in black ink, which appears to read "Emmet C. Keveney".

Emmet C. Keveney
New York City Response and Recovery Operations
USEPA-Region 2

Enclosures

AIR TEST DATA TO BE
POSTED

TYPE -



AIRTEK ENVIRONMENTAL CORP.

39 WEST 38TH STREET, 12TH FLOOR, NEW YORK, NY 10018
PHONE (212) 768-0516 FAX (212) 768-0759
WWW.AIRTEKENV.COM

August 11, 2005

Mr. Pat Evangelista
WTC Coordinator
New York City Response and Recovery Operations
USEPA Region II
290 Broadway
New York, NY 10007-1866

Re: 133 -135 Greenwich & 21-23 Thames Street

Dear Mr. Evangelista:

Thank you for your August 4, 2005 letter transmitting USEPA comments on our submittals for the decontamination and deconstruction of the above-referenced buildings. The attached responses are ordered and numbered to match the comments you have provided. The attached re-submittal documents have been re-formatted into one document with four parts, as follows:

- Part I: Project Work Plan
- Part II: Environmental Community Air Monitoring Plan
- Part III: Health & Safety Plan
- Part IV: Waste Management Plan

From the outset of this process we have been cooperative, and in the instant case we have accepted every comment the USEPA has presented. It is our hope that our demonstration of good faith, and our willingness to address the needs of the Regulators and the community will be met by a prompt review and an "Approved as Noted" response.

Thank you again for your time and consideration.

Respectfully,

Benn Lewis

Benn Lewis
Vice President

BL:bl
Attachments

ENVIRONMENTAL CONSULTANTS

Mr. Pat Evangelista – Response to Comments
133-135 Greenwich Street/21-23 Thames Street
Airtek Project 05-0701 – August 11, 2005

**Responses to Comments on
Specifications for Environmental Air Monitoring
Dated June 27, 2005**

1. The attached re-submittal has been re-formatted as one document with four parts as follows:

Part I: Project Work Plan
Part II: Environmental Community Air Monitoring Plan
Part III: Health & Safety Plan
Part IV: Waste Management Plan
2. The Community Air Monitoring Plan is numbered and contains a table of contents.
3. Monitoring of potential impact to neighboring buildings is addressed in the revised Environmental Community Air Monitoring Plan in Section 1.3. Planning for specific mechanical adjustments to the school is addressed in the Attachment II to the Work Plan.
4. A Quality Assurance Project Plan is included in the Community Air Monitoring Plan (Attachment C).
5. Re-written as noted.
6. The following has been added to this subsection:

“All air monitoring conducted under this plan will be conducted by the Environmental Consultant’s New York State DOL certified air sample technicians under the supervision of the Environmental Consultant’s Certified Industrial Hygienist (CIH).”
7. Sentence added as noted.
8. Statement added as noted.
9. Replacement made as noted.
10. Statement added as noted.
11. Re-written as noted.
12. Sentence inserted.
13. Statement added to last sentence.

Mr. Pat Evangelista -- Response to Comments
133-135 Greenwich Street/21-23 Thames Street
Airtel Project 05-0701 -- August 11, 2005

14. Revised as noted.
15. The drawing in Attachment A is included.
16. The following was added:

“The locations include the roof of the school auditorium on Cedar Street, the top of the sidewalk bridge on Thames Street east of the site, and across Thames Street at ground level at the Greenwich Street intersection.”
17. Language added as noted.
18. Edited as noted.
19. Language added as noted.
20. Edited as noted.
21. Revised as noted.
22. The interpretation noted is correct.
23. Edited as noted.
24. Edited as noted.
25. Statement added.
26. Deleted as noted.
27. There will be three locations. The table section noting “three fixed locations” has been edited for clarity.
28. The intent here was to allow the FRM testing to be rotated among the three fixed locations if desirable. The Table has been edited for clarity.
29. Edited as noted.
30. Table modified.
31. Note 1 added.
32. So noted. Thank you.
33. Footnote added as noted.

Mr. Pat Evangelista – Response to Comments
133-135 Greenwich Street/21-23 Thames Street
Airtek Project 05-0701 – August 11, 2005

34. Yes.
35. Sample rates are determined by the published sampling methodology utilized. Modification was addressed in Comment #31 above.
36. Amended as noted.
37. Note added to ECAMP.
38. Sentence added.
39. Edited as noted.
40. Sentence added as noted.
41. Sentence added as noted.
42. Subsection edited as noted.
43. Re-written as noted
44. Footnote added as noted.
45. Footnote added as noted.
46. Footnote added as noted.
47. Table 3 does not apply to the demolition phase. A reference to Blanks has been added to Table 1, which applies to both Phases
48. There will be two Thames Street monitoring stations. One is intended to be up Thames Street down wind from the site, and on top of the Street bridge. The other is intended to be at street level at the intersection of Greenwich Street. It is our intent to be cooperative with EPA on exact locations.

Mr. Pat Evangelista – Response to Comments
133-135 Greenwich Street/21-23 Thames Street
Airtel Project 05-0701 – August 11, 2005

**Responses to Comments on
Revised Work Plan for
Abatement and Demolition of
133-135 Greenwich and 21-23 Thames Street
Dated June 30, 2005**

1. No hoists, cranes, or cement chutes are anticipated for this project. None are referenced in the work plan. Specific requirements of the NYCDEP variance approval process have been addressed directly with NYCDEP, and documentation of those communications are included in Attachment II to the Work Plan. As is stated in the work plan, all interior materials are to be removed from the building. Further detail on COPC abatement has been added to the work plan.
2. The work plan has been numbered, and includes a table of contents.
3. Details on water capture, storage, characterization and disposal have been included in the work plan, and the Waste Management Plan (7.1).
4. The requested information is included as Attachment II to the work plan.
5. The owner's Community Air Monitoring Plan has been presented to the NYC DOE. Any additional monitoring conducted by the NYC DOE within their own space for their own purposes has been agreed to be the responsibility of the NYC DOE. Additional information related to the monitoring of potential communicating openings the building at 125-129 Greenwich Street is included in Part II of the submittal (ECAMP).
6. Revision included in 3.5.
7. 5.0 Revised as noted.
8. Paragraphs added as noted in 6.0.
9. Paragraph added at end of 6.0
10. Ditto
11. Ditto
13. "Initialing" changed to "Initializing" in 7.1.

Mr. Pat Evangelista – Response to Comments
 133-135 Greenwich Street/21-23 Thames Street
 Airtek Project 05-0701 – August 11, 2005

14. Work Plan has been revised and re-formatted to state that the exterior low-pressure wash will occur as the first operation of the Abatement Phase. See 7.1
15. The Phase I Access Facility will no longer be used. Decons will be built on Thames Street outside the buildings. This section has been deleted.
16. Ditto.
17. Ditto.
18. In-Place ACM is abated last in the decontamination sequence per NYCDEP requirements. There is very little of this material on the interior of the building (50 linear feet), and its location is known. Care will be taken to prevent disturbance and/or damage to this material during the soft-strip that proceeds its abatement. Wording added at end of 7.3.
19. Section 7.0 has been edited.
20. Caulking has been sampled. Results Pending.
21. Subsection revised as noted.
22. 7.2 revised as noted.
23. 7.2 revised as noted.
24. 7.2 revised to refer to “WMP.”
25. 7.2 revised to refer to “ECAMP.”
26. Subsection revised as noted.
27. Subsection 7.4 revised to refer to “Waste Management Plan.”
28. Waste Management Plan submitted as Part IV of submittal.
29. Waste management discussion moved to Part IV WMP of submittal.
30. Requirement included in WMP.
31. A waste management plan has been attached as Part IV of the submittal.
32. Ditto
33. Ditto

Mr. Pat Evangelista – Response to Comments
133-135 Greenwich Street/21-23 Thames Street
Airtek Project 05-0701 – August 11, 2005

- 34. Sentence added to 8.2.
- 35. Subsection 8.4 revised to refer to WMP.
- 36. Sentence added to 8.5.
- 37. 8.5 edited as noted.

Mr. Pat Evangelista – Response to Comments
133-135 Greenwich Street/21-23 Thames Street
Airtek Project 05-0701 – August 11, 2005

**Response to Comments on
Health and Safety Plan
June 30, 2005**

1. Documents have been edited for consistency.
2. Attachments have been included in submittal.
3. Conventional Demolition Phase (Phase II) activities are the subject of a forthcoming document.
4. No crane is to be utilized. Section has been edited.
5. See Part IV of submittal – WMP
6. Due to the significant change in the nature of the project once decontamination is complete, we have elected to produce a second HASP to cover the Conventional Demolition Phase. We respectfully request that EPA review and approve the HASP for the Abatement Phase, as has been done at the neighboring sites.
7. Added as noted.
8. Included as noted.
9. Removed as noted.
10. Added as noted.
11. Removed as noted.
12. Added as noted
13. The scope consists of 3 tasks, not 4. Subsection edited.
14. Ditto.
15. Table 2.1 Edited.
16. No concrete chute is to be used. Subtasks 9 and 10 Edited.
17. Removed as noted.
18. Changed to CSO, and edited as noted.

Mr. Pat Evangelista – Response to Comments
133-135 Greenwich Street/21-23 Thames Street
Airtek Project 05-0701 – August 11, 2005

19. Added s noted.
20. No torching is to be conducted. References deleted.
21. Edited as noted.
22. Edited as noted.
23. No elevators exist, none to be utilized. Reference deleted.
24. A map showing routes to NY Downtown Hospital has been attached. Floor plans with emergency egress routes have been added. Section 2.8.3 describes topics to be discussed in Safety Meetings. Section has been updated to note that safety equipment will be stored in the CRZ.
25. The reference should be to Section 2 of this HASP, not Section 3 of the Work Plan. The HASP has been edited to reflect this. A contacts list has been added to the Appenices.
26. Revised as noted.
27. Revised as noted.
28. Edited as noted.
29. Deleted as noted.

Mr. Pat Evangelista – Response to Comments
133-135 Greenwich Street/21-23 Thames Street
Airtex Project 05-0701 – August 11, 2005

**Response to Comments on
June 10 Variance Requests**

1. The Work Plan (submittal Part I) has been revised to address this comment.
2. This part of the Work Plan has been deleted.
3. Ditto.
4. Ditto.
5. This comment is addressed in Section 7.0 of the Work Plan.
6. Ditto.
7. Ditto.
8. Ditto.
9. Ditto.
10. This comment is addressed in Section 6.0 of the Work Plan.
11. This comment is addressed in the WMP.
12. The exact project schedule and work shift schedule is as yet undetermined. This information will be provided under separate cover prior to project commencement.

Part I

**Revised Work Plan
for
Abatement and Demolition of
133-135 Greenwich Street and 21-23 Thames Street**

Prepared for:

The Greenwich Street Project, LLC
666 Fifth Avenue
New York, New York

Prepared by:

Airtek Environmental Corp.
39 West 38th Street
New York, NY 10018

212-768-0516

Original Submittal: June 9, 2005
Comments June 29, 2005
Re-submittal June 30, 2005
Additional Comments August 4, 2005
Re-Submittal August 11, 2005

Part I: Work Plan – Decontamination/Deconstruction
133-135 Greenwich Street and 21-23 Thames Street
Airtek Project 05-0701 – Rev 2 August 10, 2005

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Part I: Work Plan – Decontamination/Deconstruction
 133-135 Greenwich Street and 21-23 Thames Street
 Airtek Project 05-0701 – Rev 2 August 10, 2005

1.0 General

The Copper Group, Inc. has engaged Airtek Environmental Corp. (Airtek) to prepare the following project plan in support of the de-construction of the buildings located at 133-135 Greenwich Street and 21-23 Thames Street, New York, NY. This plan is in response to a request by the WTC Regulators for a documented approach to the project.

Though it sustained little physical damage, the buildings at 133-135 Greenwich Street and 21-23 Thames Street were impacted in places by fallout from the events of September 11, 2001. It is the Owner's intent to conduct abatement of in-place asbestos, and to effect a decontamination of the interior of the building so that conventional demolition activities can be completed.

2.0 Related Submittals

2.1 Community Air Monitoring Plan

Prior to initiation of any decontamination/deconstruction operations, an Environmental Community Air Monitoring Plan (ECAMP) developed by an Airtek CIH, and approved by the USEPA will be established and operational. The Program will consist of daily air monitoring at three points on the perimeter of the project site. Monitoring will be conducted in accordance with the attached Environmental Air Monitoring Specification. Community Monitoring will continue until building demolition is complete. The ECAMP is included as Part II of the submittal Package.

2.2 Health & Safety Plan

A Certified Industrial Hygienist (CIH) from Airtek has developed a site-specific HASP to be applied to all site decontamination operations. The HASP details requirements for access/egress and requirements for Personal Protective Equipment for workers at the site. The HASP is included as Part III of the submittal package.

2.3 Waste Management Plan

A Certified Industrial Hygienist (CIH) from Airtek has developed a site-specific Waste Management Plan (WMP) to be applied to all waste operations for the site. The WMP provides details on how, and by whom, waste determinations and categorizations will be made, and provides detail on sampling and analysis protocols. The WMP is included as Part IV of the submittal package.

3.0 Environmental Regulatory Submittals

3.1 Asbestos Survey

Airtek has undertaken an asbestos survey intended to coordinate and complete previous survey work that has been conducted at the site. All previous documentation was reviewed and a site survey and bulk sampling was conducted. Based on this survey work, an inventory of in-place asbestos has been developed. The results of the surveys are included in Attachment I “Variance Application” to this Work Plan.

3.2 Site Survey

A thorough inspection of the subject structures and the adjacent structures has been conducted. Communicating openings, air intakes, and other potential pathways of contamination have been identified for inclusion in the decontamination design. Facility managers for the adjacent structures have been contacted so that engineering controls may be implemented to protect occupants. Of particular concern are air intakes of the school building directly to the east of the project site. These concerns are being addressed cooperatively with the Department of Education. Details on these plans are included in Attachment II “Mechanical Controls” to this work plan.

3.3 NYC DEP Variance Application

In order to execute the particular requirements of this unique project, specific relief from RCNY Title 15 will be requested by the submittal to NYC DEP of an ACP-7 form with an accompanying ACP-8 Request for Variance form for each of the two structures involved in the project. Variances to be requested will be specific to the conditions in each building, and the variance request will also include the use of Attachment DW (Waste decontamination in Personnel Decon) during the initial lobby-cleaning phase. A copy of the variance request for each building is included in Attachment I “Variance Application.”

3.4 NYS DOL Notification

Due the fact that the decontamination will constitute a ‘Large Project’ according to Industrial Code Rule #56, notification of the project will be made to the NYS Department of Labor. A copy of the DOSH-486 form is included in Attachment I.

3.5 USEPA Notification

Due the fact that the decontamination will constitute a ‘Large Project’ according to EPA AHERA, notification of the project will be made to the USEPA. A copy of the USEPA notification is attached. In addition, if it is determine that greater than 100 kg of Hazardous Waste is to be generated from this site, RCRA notification will be required.

Part I: Work Plan – Decontamination/Deconstruction
133-135 Greenwich Street and 21-23 Thames Street
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4.0 Utilities - General:

Utility service is currently cut off to the building. All electricity and water required for the work will be drawn from sources outside the building.

5.0 Monitoring:

Community Monitoring will be conducted as detailed in submittal Part II – ECAMP.

Project Monitoring: Throughout the decontamination activities, project air monitoring will be conducted in addition to the Perimeter Monitoring described above. Project Monitoring will be conducted in strict accordance with RCNY Title 15 Chapter 1, Section 1-41 to 1-45, with the exception that all sample analyses will be by TEM. Project monitoring is detailed in submittal Part II - ECAMP.

Clearance Testing will be conducted as detailed in the “Clearance Criteria” section below, and as detailed in submittal Part II – ECAMP.

6.0 Clearance Criteria:

The site will be considered ready for the Conventional Building Demolition Phase when the buildings are visually clean of all dust, all interior surfaces have been encapsulated with a colored encapsulant, and when interior air clearance testing indicates that concentrations of the analytes listed below have been reduced to levels specified below. All visual clearance and air testing will be conducted by the environmental consultant. Where necessary a “White Glove Test” will be performed to determine visual clearance.

The buildings can be removed from containment and the abatement phase will be completed when area air measurements, performed using aggressive air sampling procedures which re-suspend residual settled dusts, are at or below each of the following airborne concentrations in every sample, respectively for the metals noted below and for asbestos. Air testing for asbestos shall be in accordance with applicable regulations and applicable permits and variances for this project. If any one sample is above any of these limits, then the abatement phase will be considered incomplete, and the effected areas shall be re-cleaned and re-tested until the airborne concentrations are at or below the levels noted for metals and asbestos.

Clearance testing for asbestos will be acceptable when all samples for a given work area meet the 70 structures per square millimeter TEM standard. Clearance testing for metals will be acceptable when all samples meet the following criteria:

Antimony	250 ug/m3
Barium	250 ug/m3
Beryllium	1.0 ug/m3
Cadmium	5.0 ug/m3
Chromium (III)	250 ug/m3

No scaffolding at site

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Copper	500 ug/m3
Lead	25 ug/m3
Manganese	100 ug/m3
Mercury	12.5 ug/m3
Nickel	50 ug/m3
Zinc	1,000 ug/m3

where?

5 inside work area (IWA) samples and 5 outside work area (OWA) for ACM will be collected from each floor of the subject buildings. In addition, 5 IWA samples for metals will be collected from each floor. All samples will be collected using aggressive sampling techniques. Upon completion of clearance sampling on the top floor, the floor will be sealed off, and sampling of the next floor down will commence. Details on sampling methodologies are included in the ECAMP document (submittal Part II).

7.0 Abatement Phase

7.1 Part I - Exterior Cleaning:

The exterior of the building was decontaminated as a part of the NYC DEP Building Exterior Cleaning Program following 9/11/01. Airtek's visual inspection of the façade indicates that it is advisable to conduct low-pressure power washing prior to initializing demolition activities. The exterior of the building will be cleaned in accordance with the NYC DEP WTC Dust/Residue Roof & Façade Cleaning Procedures included in Attachment I.

Building façade clean-up via low pressure washing:

1. At grade level, a work place/restricted area shall be established. This area shall be plasticized with one (1) layer of 6-mil plastic from one (1) foot up the building exterior wall to the edge of the sidewalk. At the edge of the sidewalk, wood shall be placed under the plastic to create a large catch basin for the water run-off. It shall be cordoned off with clearly identifiable asbestos hazard tape.
2. A low pressure washing technique, moving from top to bottom, shall be employed to minimize water bounce-back. The façade shall be washed with a low pressure wash not to exceed 250 psi.
3. The collected water run-off shall be pumped to 55-gallon drums. The first drum of water generated will be TCLP sampled for RCRA characteristics. If the water is not regulated under RCRA, it will be filtered through a 5 micron filter prior to disposal to the NYC sewer system per NYC Title 15, Part 1-82 (b) 1. ~~This was the procedure used at 4 Albany Street.~~ If testing indicates the water is regulated under RCRA, it will be handled, package, stored and disposed in strict accordance with its categorization.

*using a bucket truck??
something else??
boom lift*

✓ Add VAR
Reference

will be exposing spaces.
Why the distinction?

This should have been done
with the set up of full container

and prior to facade
washdown.
See *

Part I: Work Plan – Decontamination/Deconstruction
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7.2 Part II - Soft Strip:

The Soft-Strip will be conducted in negative air full-containment as an asbestos project. Dust suppression will be conducted according to the stringent rules and regulations governing asbestos projects

**Put in exterior isolation using var language*

All interior materials, including moveable objects, will be subject to abatement and removal, and will be bagged and disposed of as ACM waste at a minimum. Certain stainless steel kitchen fixtures and other impermeable materials may be decontaminated by HEPA-vacuum and wet wiping. Efficacy of this decontamination will be determined by the Environmental Consultant as described in the Waste Management Plan (Submittal Part IV). All ceiling systems (plaster, tiles, sheetrock, etc.), wall systems (plaster, wall board, etc.), and floor systems, (tiles, carpet, etc.) will be removed and bagged for disposal as ACM waste at a minimum. Waste characterization testing as described in the WMP (submittal Part IV) will be used to make final waste determinations. Remaining structural members will be wet-wiped, HEPA vacuumed, and encapsulated with a penetrating encapsulant. All accessible interstitial spaces will be wet-wiped, HEPA-vacuumed, and encapsulated. Operable windows will be articulated, wet wiped, HEPA-vacuumed, and encapsulated.

Following 2nd and 3rd cleanings and the settling periods, final air testing will be conducted as detailed in "Clearance Criteria" above. Upon successful clearance air testing, the building will be turned over to the demolition contractor for conventional demolition.

7.3 Part III - In Place ACM:

In-place ACM has been identified as follows:

133-135 Greenwich Street:

- a. Roof Flashing – 35sf
- b. Bulkhead Tar – 10sf

21-23 Thames Street:

- a. Roof Membrane – 350sf
- b. Flashing – 100sf
- c. Tar – 20sf
- d. Window Caulk – 9sf
- e. Coping Stone Caulk – 1sf
- f. Pipe Insulation – 50 lf

Typos | | | | | | |

Does EFB set any
requirements? | |

Part I: Work Plan – Decontamination/Deconstruction
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Per the requirements of the NYCDEP, these materials will be abated last in the decontamination sequence. As such, care will be taken to protect these materials from disturbance and/or damage during the soft-strip phase. For detailed information on the asbestos survey conducted, please refer to the Airtek Asbestos Survey Reports dated May 31, 2005 (Attachment I).

7.4 Structural Framing/Masonry Façade

Due to the impossibility of removing structural framing without the risk of building collapse, all structural framing, and exposed masonry façade will be wet-wiped, HEPA vacuumed, and encapsulated with penetrating encapsulant. Prior to commencement of conventional demolition, the remaining building components (anticipated to be principally wood framing and masonry façade) will be tested by the Environmental Consultant for ACM content and RCRA characteristics, as noted in the WMP (Part IV of the submittal). These materials will be handled and disposed of as appropriate based on the test results.

8.0 Conventional Building Demolition:

8.1 Permits:

Contractor will obtain all governmental permits necessary to perform the work including, but not limited to sidewalk bridges, D.O.T., etc.

Contractor will comply with requirements of any city, state or federal agencies (including OSHA) relating to the demolition work, including the requirements of the New York City Environmental Control Board and the New York City Building Enforcement Safety Team ("BEST Squad"). Contractor will comply with all provisions of the New York City Building Code.

8.2 Dust Suppression:

The Contractor will be responsible to take precautions to prevent fugitive dust from escaping the site. As noted in the Project HASP, the Contractor has the responsibility to monitor for visible emissions. Dust suppression engineering controls will be the responsibility of the Contractor, and may include, but not be limited to the following:

- Wet suppression: The use of water and/or amended water
- Site housekeeping via vacuum sweeping
- Limitation of free-fall of demolition debris
- Limitation of freefall during waste loading
- Sealed and/or covered transport

Just formal. | | | |

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The listed controls are intended as a guideline. It is the responsibility of the Contractor to implement whatever engineering control is required (whether above-listed or not) to prevent fugitive dust.

Failure to suppress dust that results in visible fugitive emissions from the site will result in a work stoppage. Work will not be re-started until adequate corrective measures have been implemented to the satisfaction of the Site Hygienist. The procedures to be followed with regards to visible emissions are specified in the Environmental Air Monitoring Specifications.

8.3 Site Protection:

A sidewalk bridge exists along Greenwich and Thames Streets and will remain in place for the duration of Contractor's work. The sidewalk bridges have been installed and are maintained by the LMDC, not the owner of the site. Contractor is responsible to protect the sidewalk bridge during demolition. In the event a portion or section of the bridge needs to be removed and/or relocated, contractor will coordinate this work with the owner.

The Contractor will be responsible for all temporary protection to any adjacent buildings and/or lots. Contractor will include roof top protection, sidewalk bridges as required to perform this work.

Contractor will maintain the project site, adjacent sidewalks and streets free from debris and garbage, including daily sweeping of sidewalks for the duration of contractor's work.

Contractor will provide and maintain a plywood fence along Greenwich and Thames Streets with gates along the front and side of the property. All work to be coordinated with NYC DOB temporary fence permit. Upon completion of the Contractor's work, the fence and gates will be left in an acceptable condition, with gates in locations approved by, and coordinated with, the General Contractor. General Contractor will obtain fence permit(s) and maintain permit(s) for the duration of the project. Fence will comply with NYC Department of Building requirements and will be constructed of minimum 5/8" exterior grade plywood (good one side) on two by four frames. Fence will be painted Dark Blue and will have "Post No Bills" painted a maximum of 10 feet on center. Fence will be constructed with wood or metal posts at regular intervals. Post will be sunk into the ground as required to make them free standing without bracing or outriggers. Fence will be constructed such that sections of it are easily removable without disturbing remaining sections. ~~Do not create~~ blind spots on sidewalk. shall not be created.

8.4 Waste Management – Conventional Demolition:

Conventional demolition will involve only the remaining wood structure and masonry exterior of the buildings. As detailed in the WMP (submittal Part IV),

Didn't see a reference
to Phase III above

Explain. has engineer
examined wall stability
of 120 Cedar St be affected

2 | | | | | | |

Part I: Work Plan – Decontamination/Deconstruction
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representative waste will be collected by the Environmental Consultant for analysis by Full TCLP and RCRA characteristics. Based on the results of TCLP testing, the waste will be characterized according to any RCRA exceedances. Disposal will be only to facilities licensed to accept the waste so characterized.

Transportation and Disposal will be as noted above.

8.5 Site Work:

Contractor will perform proper dust control during any demolition or removal work. The procedures to be followed with regards to visible emissions are specified in the ECAMP.

The Contractor will comply with all federal and local laws regarding noise control.

All work will be done by appropriately qualified labor. The Contractor will be responsible for employing qualified tradesmen for the duration of Contractor's contract work on this project.

All work is to be performed in accordance with the latest standards as established by OSHA.

Demolition of a 2-story brick structure, and 5-story brick structure:

- a. All existing interior garbage, furniture, fixtures, equipment and surfacing materials (plaster/wallboard/ceiling systems, etc.) will have been removed under Phase III above.
- b. Remove and dispose of existing brick party wall attached to the South side of 120 Cedar Street. Work includes patching holes after demolition. Work does not include waterproofing.
- c. Complete demolition of above grade structures and ground level framing. Existing foundation wall, vaults and sidewalk will remain.
- d. Remaining exposed cellar slab will be left free from demolition debris.
- e. All utilities serving the buildings will be disconnected as required before any removal and/or demolition is started.
- f. Removal and dispose of roof, flashing and associated roofing material.
- g. Obtain and secure all required permits to complete demolition work, including but not limited to demolition permit, fence permit, sidewalk closing permit, etc. Cost for obtaining permits is the responsibility of this trade contractor.
- h. Upon completion of demolition work, demolition contractor will provide a "berm" along the foundation walls around the perimeter of the site. The berm will be used to temporarily support the foundation walls until the excavation / foundation contractor starts work. The berm will be set on a 45 degree angle and start from the top of existing foundation wall to the cellar slab,

Part I: Work Plan -- Decontamination/Deconstruction
133-135 Greenwich Street and 21-23 Thames Street
Airtek Project 05-0701 -- Rev 2 August 10, 2005

End

Part I: Work Plan – Decontamination/Deconstruction
133-135 Greenwich Street and 21-23 Thames Street
Airtek Project 05-0701 – Rev 2 August 10, 2005

Attachment I



AIRTEK ENVIRONMENTAL CORP.

39 WEST 38TH STREET, 12TH FLOOR, NEW YORK, NY 10018
PHONE (212) 768-0516 FAX (212) 768-0759
WWW.AIRTEKENV.COM

August 11, 2005

Mr. Rajappan Radhakrishnan, Director
New York City Department of Environmental Protection
Bureau of Air, Noise and Hazardous Materials
59-17 Junction Blvd., 8th Floor
Jamaica, NY 11373

Re: Variance Request – 133-135 Greenwich Street
Building Decontamination and De-construction

Dear Mr. Radhakrishnan:

The Copper Group, Inc. has engaged Airtek Environmental Corp. (Airtek) to prepare the following Variance Request in support of the decontamination and de-construction of the building located at 133-135 Greenwich Street, New York, NY.

Though it sustained little physical damage, the building at 133-135 Greenwich Street was impacted in places by fallout from the events of September 11, 2001. It is the Owner's intent to conduct abatement of in-place asbestos, and to effect a decontamination of the interior of the building so that conventional demolition activities can be completed.

Asbestos Survey:

Airtek has undertaken an asbestos survey intended to coordinate and complete previous survey work that has been conducted at the site. All previous documentation was reviewed and a site survey and bulk sampling was conducted. Based on this survey work, an inventory of in-place asbestos has been developed. The results of this survey are attached.

Health & Safety Plan:

A Certified Industrial Hygienist (CIH) from Airtek has developed a site-specific HASP to be applied to all site decontamination operations. The HASP details requirements for access/egress and requirements for Personal Protective Equipment for workers at the site. The HASP is attached.

NYC DEP Variance Application:

In order to execute the particular requirements of this unique project, specific relief from RCNY Title 15 is requested as follows:

ENVIRONMENTAL CONSULTANTS

when are windows
being removed from structure

Windows should have
been "articulated" w/ exterior

will be done inside w/a
instead of outside w/a

Mr Rajappan Radhakrishnan – NYC DEP
133-135 Greenwich Street Variance Request
Airtek Project 05-0701 – August 11, 2005

Exterior:

We are requesting a variance from the following subsections to facilitate the decontamination of the facade:

Section 1-81(j)	No pre-cleaning of the work area(s)
Section 1-81(m)	Partial plasticization of the work area(s)
Section 1-82(a) & 1-83(a)	Remote decontamination facilities
Section 1-91	No negative air
Section 1-112(d) & 1-112(e)	No 1 st & 2 nd settling period and no 2 nd & 3 rd cleaning

The exterior of the building was decontaminated as a part of the NYC DEP Building Exterior Cleaning Program following 9/11/01. Airtek's visual inspection of the façade indicates that it is advisable to conduct low-pressure power washing prior to initialing demolition activities. The exterior of the building will be cleaned in accordance with the NYC DEP WTC Dust/Residue Roof & Façade Cleaning Procedures.

Interior:

Phase 1 – Soft Strip:

We are requesting a variance from the following subsections:

Section 1-125(i)	Isolation Barriers
------------------	--------------------

We request relief from 1-125(i): Isolation Barriers. It is the intent of the project to seal all windows and communicating openings to the outside of the building from the outside with two layers of 6-mil poly and plywood barriers. The intent of this action is to create a sealed structure that will allow decontamination activities within the building while reducing the possibility of migration of dust to the outside of the structure.

All interior materials, including moveable objects, will be subject to decontamination and removal or, if porous, will be bagged and disposed of as ACM waste. All ceiling systems (plaster, tiles, sheetrock, etc.), wall systems (plaster, wall board, etc.), and floor systems, (tiles, carpet, etc.) will be removed and bagged for disposal as ACM waste. Remaining structural members, pipes, boiler, freezer boxes and roof mounted HVAC units will be wet-wiped, HEPA vacuumed, and encapsulated with a penetrating encapsulant. All accessible interstitial spaces will be wet-wiped, HEPA-vacuumed, and encapsulated. Operable windows will be articulated, wet wiped, HEPA-vacuumed, and encapsulated. Full worker and waste decontamination facilities will be attached to the entrance on Thames Street. The decontamination facilities will comply with NYC DEP Title 15 §1-82 & §1-83.

Phase II - In Place Exterior ACM:

We are requesting a variance from the following subsections for the roofing materials:

Section 1-41(c)	During abatement air sampling inside the work area
Section 1-41(d)	No post abatement clearance air monitoring
Section 1-102(b)	Not to fully saturate ACRM with amended water

← ?

and approved
Variance application

Mr Rajappan Radhakrishnan – NYC DEP
133-135 Greenwich Street Variance Request
Airtek Project 05-0701 – August 11, 2005

We proposed to use Attachment FR - Procedures for use of Foam or Similar Viscous Liquid in Removal of Asbestos Containing Roofing (ACRM) in New York City

In-place ACM has been identified as follows:

1. Bulkhead Tar – 10 sf
2. Roof Flashing – 35 sf

These materials will be abated last in the decontamination sequence. For detailed information on the asbestos survey conducted, please refer to the Airtek Asbestos Survey Report dated May 31, 2005 (Attached).

Utilities - General:

Utility service is currently cut off to the building. All electricity and water required for the work will be drawn from sources outside the building.

Project Monitoring:

Project Monitoring: Throughout the decontamination activities, project air monitoring will be conducted in addition to the Perimeter Monitoring described above. Project Monitoring will be conducted in strict accordance with RCNY Title 15 Chapter 1, Section 1-41 to 1-45, with the exception that all sample analyses will be by TEM.

Clearance Testing: Aggressive area clearance testing for asbestos will be conducted for all work areas by TEM. Aggressive clearance testing for metals will be conducted by NIOSH 7300.

Clearance Criteria:

Clearance testing for asbestos will be acceptable when all samples for a given work area meet the 70 structures per square millimeter TEM standard. Clearance testing for metals will be acceptable when all samples meet the following criteria:

Antimony	250 ug/m3
Barium	250 ug/m3
Beryllium	1.0 ug/m3
Cadmium	5.0 ug/m3
Chromium (III)	250 ug/m3
Copper	500 ug/m3
Lead	25 ug/m3
Manganese	100 ug/m3
Mercury	12.5 ug/m3
Nickel	50 ug/m3
Zinc	1,000 ug/m3

Mr Rajappan Radhakrishnan -- NYC DEP
133-135 Greenwich Street Variance Request
Airtek Project 05-0701 -- August 11, 2005

Structural Framing:

Due to the impossibility of removing structural framing without the risk of building collapse, all structural framing will be wet-wiped, HEPA vacuumed, and encapsulated with penetrating encapsulant. As a part of the conventional demolition that will follow the decontamination, these materials will be characterized for asbestos content and RCRA characteristics, and will be disposed of as appropriate based on the test results.

Thank you for your time and consideration,

Sincerely,

Michael Porter

Michael Porter
Senior Project Manager

MP:mtf

7624206030

NYC DEPARTMENT OF ENVIRONMENTAL PROTECTION
Asbestos Control Program
17 Junction Boulevard, 32nd Floor, Flushing, NY 11355-1000

ONLY
TYPEWRITTEN
FORMS WILL BE
ACCEPTED



ASBESTOS PROJECT NOTIFICATION
(ASBESTOS INSPECTION REPORT)

Asbestos Control Program FOR OFFICIAL USE ONLY									

When submitting this form to the NYC Department of Buildings, the original form and three (3) copies with original signatures are required. Submit to the NY CDEP request one copy of the form with original signatures. This form must be submitted to the NYC DEP not less than one week in advance of the start of abatement activities.

1. S1200

File for reference

I. FACILITY

2. Address 133 Greenwich Street Borough Manhattan Zip 10006
Private Street Street Name

AXA 25-29 Thames Street 3. Block 52 4. Lot 8

5. Type of Facility Commercial 6. Name of Building _____

II. BUILDING OWNER

7. Name Greenwich Street Project, LLC 8. Contact Person Chenao Rezenbaton

9. Tel. # (347) 645-9960 Fax # (212) 208-4614

10. Address 665 Fifth Avenue City New York State NY Zip 10103

III. GENERAL CONTRACTOR

11. Name _____ Tel. # _____

IV. ASBESTOS ABATEMENT CONTRACTOR

12. Name Hazardous Elimination Corp. 13. Contact Person Brian Carranza

14. Federal Employer ID # PII 15. Tel. # (611) 752-2696 Fax # (611) 752-2910

16. Address 195 H Central Avenue City Farmingdale State NY Zip 11735

V. THIRD PARTY AIR MONITOR

17. Name Airtex Environmental Corp. 18. Contact Person Brian Lewis

19. Federal Employer ID # PII 20. Tel. # (212) 763-0515 Fax # (212) 768-0759

21. Address 35 West 38th Street City New York State NY Zip 10013

22. Sample Analysis Laboratory Airtex / ATC Associates 23. NYS DOH ELAP # 11040/10879

VI. PROJECT INFORMATION

24. Starting date for this portion of work _____ Project completion date _____

Asbestos work schedule: ☒ Monday ☒ Tuesday ☒ Wednesday ☒ Thursday ☒ Friday ☒ Saturday ☒ Sunday

Shift From: _____ ☐ am ☐ pm to _____ ☐ am ☐ pm

If other,
specify _____

Access to inspect the premises must be provided during the work schedule indicated in this form.

25. Total amount of asbestos-containing material to be abated during this work:

42,433 Square Feet, and/or 0 Linear Feet

NYC
12/20/02

6426206039 ASBESTOS INSPECTION REPORT (continued)

26. Asbestos Handler QJM Co., Inc. NYS DEC Permit # HS-344 Tel: (973) 451-0006Class of Site(s) Landfill Landfill, Bridgeport NY & Cumberland Landfill Shippensburg, PA

27. This asbestos abatement is part of a () item a through a requires filing of this form with the NYC Department of Buildings

- a) ☒ Demolition b) ☐ Boiler Replacement c) ☐ Sprinkler Replacement d) ☐ Renovation/Alteration
 e) ☐ Preexisting Replacement f) ☒ Other (Describe) Asbestos Abatement/WTC Dust Remediation

28. TYPE OF ABATEMENT (Check all appropriate boxes)

- ☒ Removal ☐ Enclosure ☐ Encapsulation ☐ Repair ☐ Clean up

29. ABATEMENT PROCEDURE (Check all appropriate boxes)

- ☒ Full Containment ☐ Glovebag ☐ Tent ☒ DEP Variance Application

30. LOCATIONS OF ABATEMENT

Floor(s)	SECTION OF FLOOR (e.g. office, hall, wing, room, etc.)	AFFECTED SURFACES CONTAINING ACM (e.g. Pop ceiling, ceiling, plaster, duct, storage tank, siding, etc.)	AMOUNT OF ACM SQUARE FEET	LINEAR FEET	DESCRIPTION OF WORK BEING PERFORMED (e.g. removal, encapsulation, enclosure, etc.)
Basement	Entire	WTC Dust	12,000		Sub-Chapter G
1	Entire	WTC Dust	12,000		Sub-Chapter G
2	Entire	WTC Dust	12,000		Sub-Chapter G
Roof	Entire	Flashing	10		Asbestos Abatement
Roof	Bulkhead	Tar	10		Asbestos Abatement
B-2, R	Roofside	WTC Dust	6,378		WTC "Bldg. Ext. Cleanup"

Additional pages attached 3

31. I hereby declare that the information provided herein is true and complete to the best of my knowledge. I am familiar with Federal, State and NYC laws and regulations applicable to asbestos-related work.

Airtex Environmental Print Name of Air Monitor	Hazardous Elimination Print Name of Asbestos Contractor	Airtex Environmental Print Name of Applicant
Signature	Signature	Signature
Date	Date	Date

32. I understand that as the owner of a building where asbestos abatement activity occurs, I am responsible for the performance of the asbestos abatement activities in accordance with the Asbestos Control Program Rules. I have contracted the third party air monitor who is completely independent of all parties involved in the asbestos project. I hereby declare that I have authorized the filing of this notification for the work specified herein.

Greenwich Street Project, LLC.

Print Name of Owner

Signature

Date

A STAMPED COPY OF THIS FORM INCLUDING AMENDMENTS MUST BE AVAILABLE AT THE WORK SITE.

Any modification of information provided on this form must be reported immediately in writing directly to the NYC DEP ACP.

The requirements of the Asbestos Control Program Rules may not be lawfully avoided or lessened through the performance of work in incremental or piecemeal fashion.

ONLY
TYPEWRITTEN
FORMS WILL BE
ACCEPTED



NYC DEPARTMENT OF ENVIRONMENTAL PROTECTION
Asbestos Control Program
59-17 Junction Boulevard, 8th Floor, Corona, NY 11368-5107
Asbestos Variance Application

FOR OFFICIAL USE ONLY

Variance # _____
Fee Paid _____
Notification # _____

I. FACILITY

Address 133-135 Greenwich Street Borough Manhattan Zip 10006

Application must be
made at least 2
weeks prior to the
start of work.

II. APPLICANT

Name Airtek Environmental Corp. Tel # (212) 768-0516

Address 39 West 38th Street City New York State NY Zip 10018

Capacity: ☐ Contractor ☒ Consultant ☐ Owner ☐ Other _____ Contact Person Benn Lewis

III. SPECIFY ALL NYC DEP OR NYS DOL (ICR56) ASBESTOS RULE PROVISIONS FROM WHICH A VARIANCE IS REQUESTED

1-11(c), 1-11(d), 1-81(g), 1-81(m), 1-83(b)(2), 1-91, 1-102(b), 1-112(d), 1-112(e), 1-125(f)

SPECIFY FLOORS AND/OR AREAS WHERE WORK INVOLVING THIS VARIANCE IS TO OCCUR

Basement, 1st, 2nd & Roof

REASONS FOR REQUEST AND DESCRIPTION FOR PROPOSED ACTION (Attachment(s) shall be submitted in TRIPLICATE)

Explain why the procedures required by Title 15, Chapter 1 of the Rules of the City of New York (RCNY) and/or Part 56 of Title 12 of New York Codes, Rules and Regulations (Subparts 56-4 through 56-17) cannot be used. (Attach Additional Sheets)

State the alternative procedures that will be employed to satisfy each requirement as modified. (Attach Additional Sheets)

Provide color coded drawings identifying work area(s) and location of decontamination enclosure system(s).

IV. FEE SCHEDULE

Amount of ACM affected by this variance: 42,423 square feet + _____ linear feet = Total Amount of ACM 42,423 feet

	If total amount of ACM is less than 5000 feet:	If total amount of ACM is 5000 feet or more:
Seven day notification period waiver	\$300	\$400
First sub-section (per category)	\$400	\$600
Each additional sub-section (per category)	\$200	\$300
Maximum fee	\$1200	\$1800

See Section 1-03(e)
of the NYCDEP
Asbestos Rules for
category definitions.

Enter applicable fee based on schedule above

Total Fees \$ _____

V. I hereby declare that the information provided herein and in any and all accompanying attachments is true and complete to the best of my knowledge. I understand that failure to comply with conditions set forth by the Department in an approval of the application shall render this variance null and void.

Greenwich Street Project, LLC.
Print Name of Owner

Airtek Environmental Corp.
Print Name of Applicant (If not owner)

Signature of Owner Date

Signature of Applicant Date

Work involving a variance may not commence prior to the receipt of the Department's approval of the application. Any violation of the terms of any variance issued pursuant to Title 15, Chapter 1 of the RCNY Section 1-03 is considered a violation of the lettered subdivision modified by the variance.

ACPB
2/2001

A. TYPE OF NOTIFICATION

Check only one type of notification below.

- ☒ Initial _____ Complete all sections and submit 10 calendar days prior to starting date.
- ☐ Amended _____ Submit amended notification with all sections completed and amended items circled.
- ☐ Cancelled _____ Complete Section G and attach copy of initial notification or complete all sections.
- ☐ Emergency _____ You must first call the Program Manager's office of the Asbestos Control Bureau at 518-457-1255 for prior approval of emergency status, then complete and return this form including:
 Date (____/____/____) Time (____) Emergency Status Granted
 Authorized by: _____ (From Asbestos Control Bureau)

B. CONTRACTOR INFORMATION

Provide all information requested below.

1. FEIN PII
2. Asbestos Lic. No. 99-0148
3. Contractor Name and Address
Hazardous Elimination Corp.
195H Central Avenue
Farmingdale, New York 11735
4. Mailing Address (if different)
Same
5. Duly Authorized Representative
 Name Dennis Gaid
 Title Vice President
 Phone No. (631) 752-2898
6. Will Sub-Contractor(s) be used
☒ No ☐ Yes (if yes, complete lines below)
 Name _____
 Asbestos Lic. No. -
 Name _____
 Asbestos Lic. No. -
7. Party for Whom Work is Being Performed: Name The Cooper Group, Inc.
 Address 666 Fifth Avenue, New York, NY 10103

C. PROJECT SITE INFORMATION

Provide all information requested below for the building/site at which the asbestos project will be conducted.

8. Project Location: County New York
- Name of building _____
 Room or other specific location Entire Basement, 1st and 2nd floors, roof and B-2 facade
 Street address 133 Greenwich Street aka 25-29 Thames Street
 City, town or village New York, New York 10006
9. Building Information
 Current use Commercial Building age _____
 Prior Use Commercial Building size _____ sq. ft.
10. Building Representative/Site Contact: Name Chanan Rozenbaum Phone No. (212) 208-4614



D. PROJECT DETAILS

Provide all information requested below relating to specifics of asbestos removal.

11. Project Dates: Starting date _____ Completion date _____

If amended: Starting date _____ Completion date _____

Is this a phased project: ☒ No ☐ Yes (If yes, list scope, location, and starting and completion dates for each phase in Section F. Remarks)

12. Do You Anticipate Doing: ☐ Night work ☐ Weekend work ☒ Shift work
(Provide details in Section F.)

13. Dollar Amount of Contract Between Parties Named in Item 3 and Item 7 \$ _____

14. If work is being conducted under a variance, check appropriate box and supply variance number.

☐ Applicable Variance No. _____ ☐ Individual Variance Petition No. _____

15. Asbestos Dissemination Prevention Methods (use Section F. Remarks, and attach additional sheets if necessary)

a) Type of equipment & ventilation systems used

Equipment:	Manufacturer:	Model Number:	Quantities:
HEPA Vacuums	N/A	N/A	2
Portable Decon Unit	N/A	N/A	1
Respirators	Various	N/A	8
Negative Air Unit	Various	N/A	1

b) Name of air monitoring firm Airtek Environmental Corp. Asbestos Lic. No. 99 - 0589

c) Laboratory performing the analysis

Name Airtek / ATC Associates ELAP Registration No. 11040 / 10879

16. Type of Asbestos Work (check all that apply)

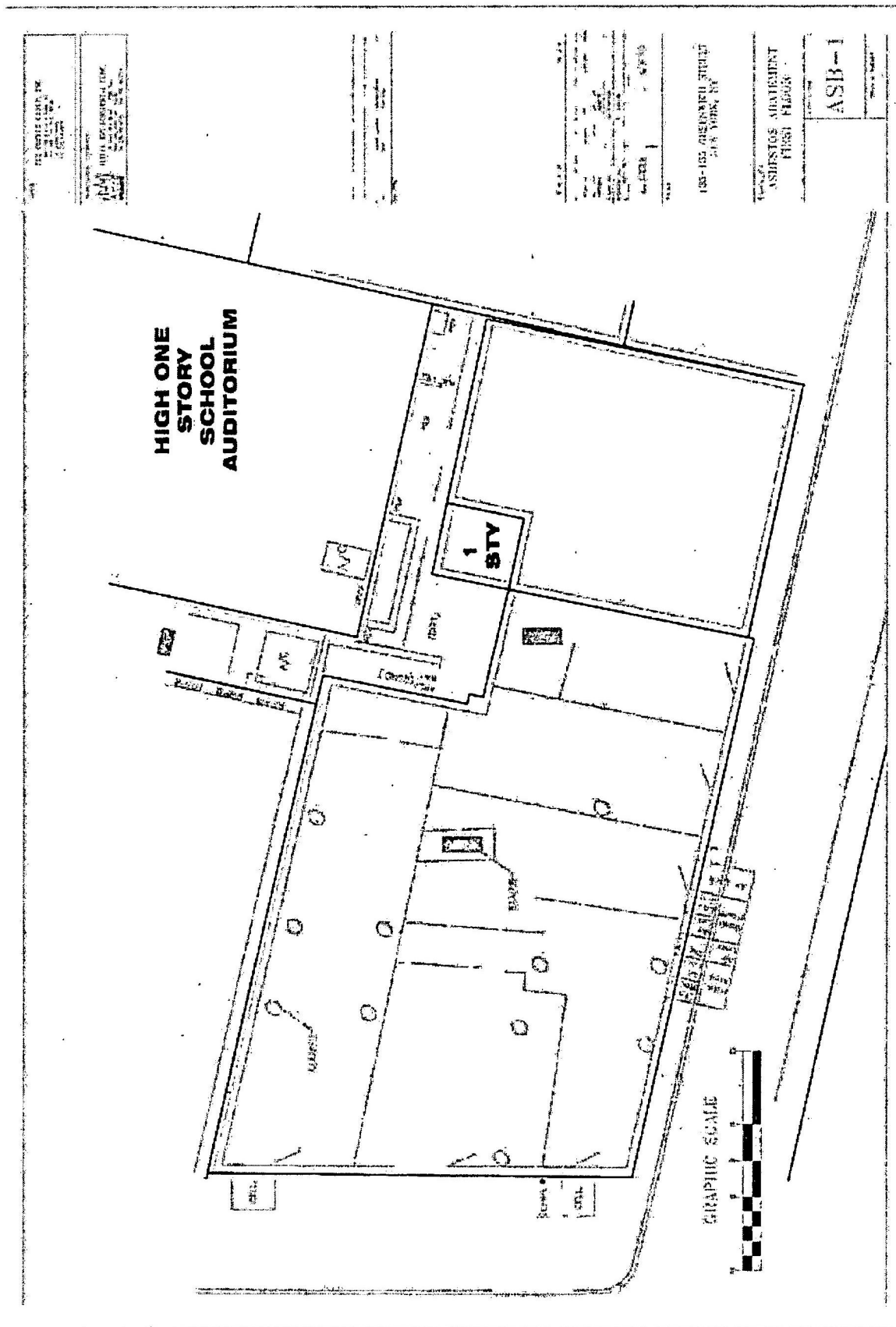
☐ Pipe related ☒ Roofing/flashings ☐ Caulking/mastic ☐ Clean-up
☐ Vessel covering ☐ Siding ☐ VAT ☐ Sprayed-on insulation
☐ Demolition - if site survey was previously submitted, provide Reference No. _____
☒ Other (specify) WTC Dust and Tar

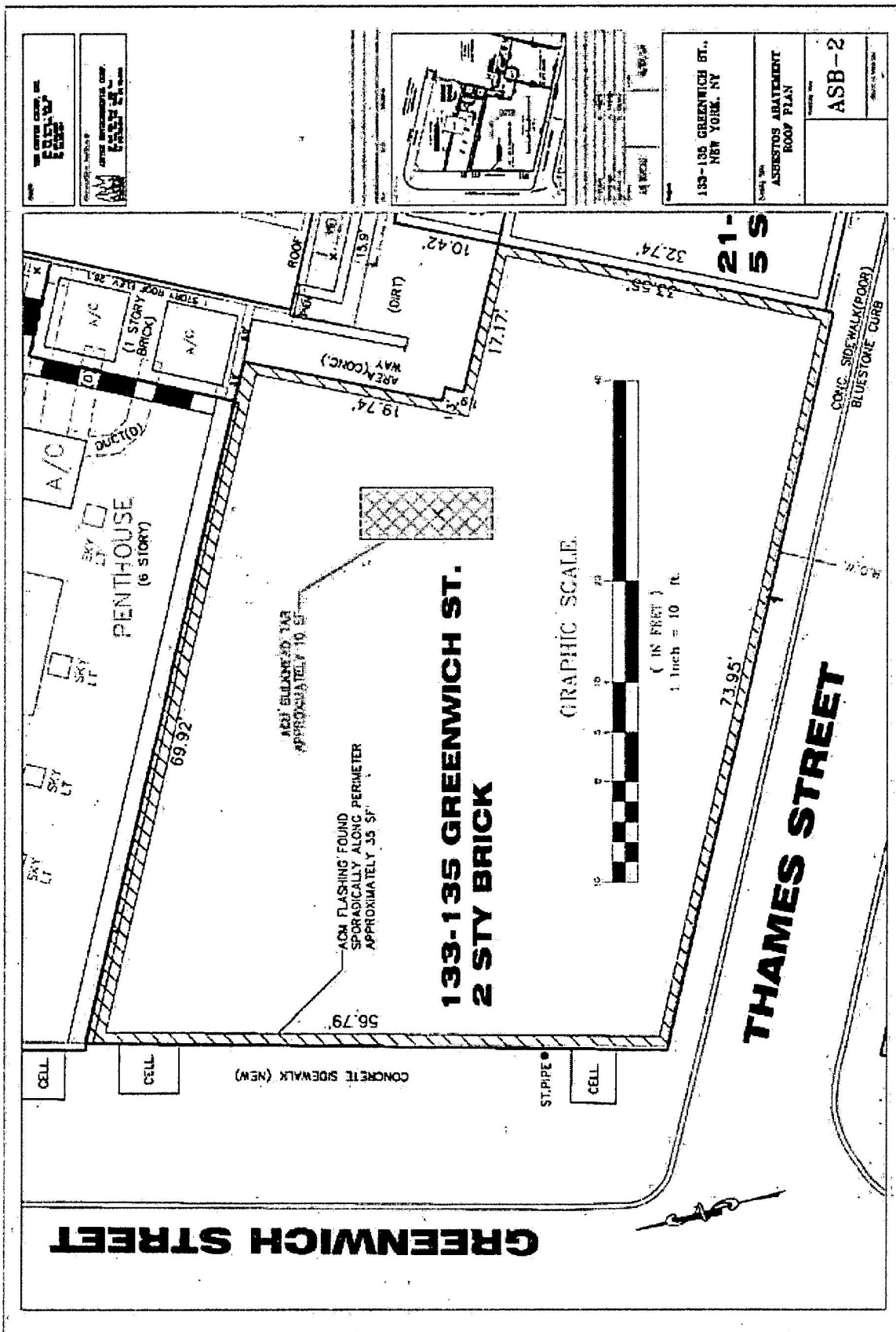
17. Type and Amount of Asbestos-Containing Material Involved

Friable linear feet	_____	Friable square feet	<u>42,378</u>
Non-friable linear feet	+ _____	Non-friable square feet	+ <u>45</u>
Total linear feet	= _____	Total square feet	= <u>42,423</u>

NOTIFICATION OF DEMOLITION AND RENOVATION				
Operator Project #	Postmark	Date Received	Notification	
I. TYPE OF NOTIFICATION (O = Original/ R = Revised) : O				
II. FACILITY INFORMATION (Identify owner, removal contractor, and other operator)				
OWNER Greenwich Street Project, LLC.				
Address: 666 Fifth Ave.				
City: New York	State: NY	ZIP: 10103		
Contact: Chanan Rozenbaum		Tel: (347) 643-9960		
REMOVAL CONTRACTOR:				
Owner: Hazardous Elimination Corp.				
Address: 195 H Central Ave.				
City: Farmingdale	State: NY	ZIP: 11735		
Contact: Donald Gold		Tel: 631-752-2898		
OTHER OPERATOR:				
Address:				
City:	State:	ZIP:		
Contact:				
III. TYPE OF OPERATION (D = Demolition/R = Renovation):				
IV. IS ASBESTOS PRESENT? (YES/NO) Yes				
V. FACILITY DESCRIPTION (include building name, number, and floor or room number):				
Building name:				
Address: 133 Greenwich St.				
Address:				
City: New York	State: NY	County: Manhattan		
Site Location: Entire				
Building Size:	Sq. meter:	SqFt:	# of Floors	Age in Yrs.
Present Use: Commercial		Prior Use: Same		
VI. PROCEDURE, INCLUDING ANALYTICAL METHOD, IF APPROPRIATE, USED TO DETECT THE PRESENCE OF ASBESTOS MATERIAL:				
Bulk Sampling to analyze PLM.				
VII. APPROXIMATE OF RACM TO BE REMOVED AND NON-FRIABLE ASBESTOS MATERIAL THAT WILL BE REMOVED. SPECIFY THE AMOUNT OF ASBESTOS BELOW:				
	RACM to be Removed	non-friable Asbestos Material to be removed Category I Category II		
Linear feet Cable wrap insulation, cable insulation	0			
window caulking/glazing. Transite conduit.				
Surface Area- Square Feet WTC Dust	36,000			
Roof flashing/tar, window/coping stone caulk		45		
Surface Area- Square Feet Façade WTC Dust	6,378			
Volume RACM off Facility Component-Cubic Feet				
VIII. SCHEDULE DATES OF ASBESTOS REMOVAL (MM/DD/YY)		Start:	Completion:	
IX. SCHEDULED DATES OF DEMOLITION/RENOVATION: (MM/DD/YY)		Start:	Completion:	

NOTIFICATION OF DEMOLITION AND RENOVATION (continued)	
X. DESCRIPTION OF PLANNED DEMOLITION OR RENOVATION WORK, AND METHOD(S) TO BE USED:	
All work to be done in accordance with the applicable New York State Industrial Code Rule 56, NYC-DEP Sub-Chapter G utilizing a site specific variance.	
XI. DESCRIPTION OF WORK PRACTICES AND ENGINEERING CONTROLS TO BE USED TO PREVENT EMISSIONS OF ASBESTOS AT THE DEMOLITION AND RENOVATION SITE:	
A HEPA Vacuum shall be kept on site at all times.	
WASTE TRANSPORTER #1 DJM	
Address: 109-113 Jacobus Avenue	
City: Kearny	State: NJ ZIP: 07032
Contact: Vito Pesce	Telephone: 201-997-8870
XIII. WASTE DISPOSAL SITE Meadowfill Landfill Corp.	
Address: Rt. 2 Box 68 Dawson Drive	
City: Bridgeport	State: WVA ZIP: 26330
Contact: John McGarvey	Telephone: 304-842-2784
XIII. WASTE DISPOSAL SITE Cumberland County Landfill	
Address: 620 Newville Road	
City: Newburgh	State: PA ZIP: 17242
Contact:	Telephone:
XIII. WASTE DISPOSAL SITE	
Address:	
City:	State:
Contact:	Telephone:
XIV. IF DEMOLITION IS ORDERED BY A GOVERNMENT AGENCY, PLEASE IDENTIFY THE AGENCY BELOW	
Name:	Title:
Authority:	
Date if Order (MM/DD/YY):	Date Ordered to Begin (MM/DD/YY)
XV. FOR EMERGENCY RENOVATIONS	
Date and Hour of Emergency (MM/DD/YY):	
Description of the Sudden , Unexpected Event:	
Explanation of How the Event caused Unsafe Conditions or Serious Disruption of Industrial Operation:	
XVI. DESCRIPTION OF PROCEDURE TO FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR PREVIOUSLY NON-FRIABLE ASBESTOS BECOMES CRUMBLED, PULVERIZED, OR REDUCED TO POWDER:	
WORK WILL BE STOPPED IMMEDIATELY, NEW ENGINEERING CONTROL AND CLEAN-UP AS PER ICR-56 WILL BE IMPLEMENTED IMMEDIATELY, NEW ABATEMENT METHOD WILL BE EVALUATED TO ADDRESS NEW SITUATION PROPERLY.	
XVII. I CERTIFY THAT AN INDIVIDUAL TRAINED IN THE PROVISIONS OF THE REGULATION (40CR PART 61 SUBPART M) WILL BE ON-SITE DURING THE DEMOLITION OR RENOVATION AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON WILL BE AVAILABLE FOR INSPECTION DURING NORMAL BUSINESS HOURS. (Required 1 year after promulgation).	
Signature of Owner /Operator	Date
XVIII. I CERTIFY THAT THE ABOVE MENTIONED INFORMATION IS CORRECT.	
Signature of Owner /Operator	Date







AIRTEK ENVIRONMENTAL CORP.

39 WEST 38TH STREET, 12TH FLOOR, NEW YORK, NY 10018
 PHONE (212) 768-0516 FAX (212) 768-0759
 WWW.AIRTEKENV.COM

August 11, 2005

Mr. Rajappan Radhakrishnan, Director
 New York City Department of Environmental Protection
 Bureau of Air, Noise and Hazardous Materials
 59-17 Junction Blvd., 8th Floor
 Jamaica, NY 11373

Re: Variance Request – 21-23 Thames Street
 Building Decontamination and De-construction

Dear Mr. Radhakrishnan:

The Copper Group, Inc. has engaged Airtek Environmental Corp. (Airtek) to prepare the following Variance Request in support of the decontamination and de-construction of the building located at 21-23 Thames Street, New York, NY.

Though it sustained little physical damage, the building at 21-23 Thames Street was impacted in places by fallout from the events of September 11, 2001. It is the Owner's intent to conduct abatement of in-place asbestos, and to effect a decontamination of the interior of the building so that conventional demolition activities can be completed.

Asbestos Survey:

Airtek has undertaken an asbestos survey intended to coordinate and complete previous survey work that has been conducted at the site. All previous documentation was reviewed and a site survey and bulk sampling was conducted. Based on this survey work, an inventory of in-place asbestos has been developed. The results of this survey are attached.

Health & Safety Plan:

A Certified Industrial Hygienist (CIH) from Airtek has developed a site-specific HASP to be applied to all site decontamination operations. The HASP details requirements for access/egress and requirements for Personal Protective Equipment for workers at the site. The HASP is attached.

NYC DEP Variance Application:

In order to execute the particular requirements of this unique project, specific relief from RCNY Title 15 is requested as follows:

ENVIRONMENTAL CONSULTANTS

TYPE | | | | |

METHOD? | | | |

Exterior:

We are requesting a variance from the following subsections to facilitate the decontamination of the facade:

Section 1-81(j)	No pre-cleaning of the work area(s)
Section 1-81(m)	Partial plasticization of the work area(s)
Section 1-82(a) & 1-83(a)	Remote decontamination facilities
Section 1-91	No negative air
Section 1-112(d) & 1-112(e)	No 1 st & 2 nd settling period and no 2 nd & 3 rd cleaning

The exterior of the building was decontaminated as a part of the NYC DEP Building Exterior Cleaning Program following 9/11/01. Airtek's visual inspection of the façade indicates that it is advisable to conduct low-pressure power washing prior to initialing demolition activities. The exterior of the building will be cleaned in accordance with the NYC DEP WTC Dust/Residue Roof & Façade Cleaning Procedures.

Interior:

Phase 1 –Soft Strip:

We are requesting a variance from the following subsections:

Section 1-125(i)	Isolation Barriers
------------------	--------------------

We request relief from 1-125(i): Isolation Barriers. It is the intent of the project to seal all windows and communicating openings to the outside of the building from the outside with two layers of 6-mil poly and plywood barriers. The intent of this action is to create a sealed structure that will allow decontamination activities within the building while reducing the possibility of migration of dust to the outside of the structure.

All interior materials, including moveable objects, will be subject to decontamination and removal or, if porous, will be bagged and disposed of as ACM waste. All ceiling systems (plaster, tiles, sheetrock, etc.), wall systems (plaster, wall board, etc.), and floor systems, (tiles, carpet, etc.) will be removed and bagged for disposal as ACM waste. Remaining structural members, pipes, boiler and freezer boxes will be wet-wiped, HEPA vacuumed, and encapsulated with a penetrating encapsulant. All accessible interstitial spaces will be wet-wiped, HEPA-vacuumed, and encapsulated. Operable windows will be articulated, wet wiped, HEPA-vacuumed, and encapsulated. Full worker and waste decontamination facilities will be attached to the entrance on Thames Street. The decontamination facilities will comply with NYC DEP Title 15 §1-82 & §1-83.

Phase II – In Place Interior Friable ACM:

Upon completion of the soft strip phase, interior friable ACM will be abated.

1. Pipe Insulation – 50 lf

Following 2nd and 3rd cleanings and the settling periods, final air testing will be conducted by TEM. Upon successful clearance air testing, the building will be turned over to the demolition contractor for conventional demolition.

Phase III - In Place Exterior ACM:

We are requesting a variance from the following subsections for the roofing materials:

will perform inside w/ a scaffolding.
will saturate w/ layer of foam

Need to attach
to plan

Scaffold or
bucket?

Section 1-41(c)	During abatement air sampling inside the work area
Section 1-41(d)	No post abatement clearance air monitoring
Section 1-81(j)	No pre-cleaning of the work area(s)
Section 1-81(m)	Partial plasticization of the work area(s)
Section 1-82(a) & 1-83(a)	Remote decontamination facilities
Section 1-91	No negative air
Section 1-102(b)	Not to fully saturate ACRM with amended water
Section 1-112(d) & 1-112(e)	No 1 st & 2 nd settling period and no 2 nd & 3 rd cleaning

We proposed to use Attachment FR - Procedures for use of Foam or Similar Viscous Liquid in Removal of Asbestos Containing Roofing (ACRM) in New York City

In-place ACM has been identified as follows:

1. Roof Membrane – 350 sf
2. Roof Flashing – 100 sf
3. Bulkhead Tar – 20 sf

We are requesting a variance from the following subsections for the coping stone caulk:

Section 1-41(c)	During abatement air sampling inside the work area
Section 1-41(d)	No post abatement clearance air monitoring
Section 1-106(b)	To use partial tents

1. Coping Stone Caulk – 1 sf

We proposed to use Attachment IC – ACM caulking material from the top of the parapet wall(s) on the roof.

We are requesting a variance from the following subsections for the exterior window caulk:

Section 1-41(c)	During abatement air sampling inside the work area
Section 1-41(d)	No post abatement clearance air monitoring
Section 1-106(b)	To use partial tents

1. Window Caulk – 9 sf (210 lf)

We proposed to use Attachment EC – ACM caulking materials from building facades.

These materials will be abated last in the decontamination sequence. For detailed information on the asbestos survey conducted, please refer to the Airtek Asbestos Survey Report dated May 31, 2005 (Attached).

Utilities - General:

Utility service is currently cut off to the building. All electricity and water required for the work will be drawn from sources outside the building.

and approved
VAR application

Project Monitoring:

Project Monitoring: Throughout the decontamination activities, project air monitoring will be conducted in addition to the Perimeter Monitoring described above. Project Monitoring will be conducted in strict accordance with RCNY Title 15 Chapter 1, Section 1-41 to 1-45, with the exception that all sample analyses will be by TEM.

Clearance Testing: Aggressive area clearance testing for asbestos will be conducted for all work areas by TEM. Aggressive clearance testing for metals will be conducted by NIOSH 7300.

Clearance Criteria:

Clearance testing for asbestos will be acceptable when all samples for a given work area meet the 70 structures per square millimeter TEM standard. Clearance testing for metals will be acceptable when all samples meet the following criteria:

Antimony	250 ug/m3
Barium	250 ug/m3
Beryllium	1.0 ug/m3
Cadmium	5.0 ug/m3
Chromium (III)	250 ug/m3
Copper	500 ug/m3
Lead	25 ug/m3
Manganese	100 ug/m3
Mercury	12.5 ug/m3
Nickel	50 ug/m3
Zinc	1,000 ug/m3

Structural Framing:

Due to the impossibility of removing structural framing without the risk of building collapse, all structural framing will be wet-wiped, HEPA vacuumed, and encapsulated with penetrating encapsulant. As a part of the conventional demolition that will follow the decontamination, these materials will be characterized for asbestos content and RCRA characteristics, and will be disposed of as appropriate based on the test results.

Thank you for your time and consideration,

Sincerely,

Michael Porter

Michael Porter
Senior Project Manager

MP:mtf

7624206030

NYC DEPARTMENT OF ENVIRONMENTAL PROTECTION
Asbestos Control Program
59-17 Junction Boulevard, 8th Floor, Flushing, NY 11373-5108

ONLY
TYPEWRITTEN
FORMS WILL BE
ACCEPTED



ASBESTOS PROJECT NOTIFICATION
(ASBESTOS INSPECTION REPORT)

Building Dept. or EPH Use For OFFICIAL USE ONLY									

When submitting this form at the NYC Department of Buildings, the original form and three (3) copies with original signatures are required. Submittal at the NYCDEP requires one copy of the form with original signatures. This form must be submitted to the NYC DEP not less than one week in advance of the start of abatement activities.

1. \$1200
(See Fee Schedule)

I. FACILITY

2. Address 23 Thames Street Borough Manhattan Zip 10006
Premise # Prefix Street Name

AKA 21 Thames Street 3. Block 52 4. Lot 8

5. Type of Facility Commercial 6. Name of Building _____

II. BUILDING OWNER

7. Name Greenwich Street Project, LLC. 8. Contact Person Chanan Rozenbaum

9. Tel. # (347) 643-9960 Fax # (212) 208-4614

10. Address 666 Fifth Avenue City New York State NY Zip 10103

III. GENERAL CONTRACTOR

11. Name _____ Tel. # _____

IV. ASBESTOS ABATEMENT CONTRACTOR

12. Name Hazardous Elimination Corp. 13. Contact Person Ernie Carranza

14. Federal Employer ID. # P11 15. Tel. # (631) 752-2898 Fax # (631) 752-2910

16. Address 195 H Central Avenue City Farmingdale State NY Zip 11735

V. THIRD PARTY AIR MONITOR

17. Name Airtek Environmental Corp. 18. Contact Person Benn Lewis

19. Federal Employer ID. # P11 20. Tel. # (212) 768-0516 Fax # (212) 768-0759

21. Address 39 West 38th Street City New York State NY Zip 10018

22. Sample Analysis Laboratory Airtek / ATC Associates 23. NYS DOH ELAP # 11040/10879

VI. PROJECT INFORMATION

24. Starting date for this portion of work _____ Projected completion date _____

Asbestos work schedule: ☒ Monday ☒ Tuesday ☒ Wednesday ☒ Thursday ☒ Friday ☒ Saturday ☒ Sunday

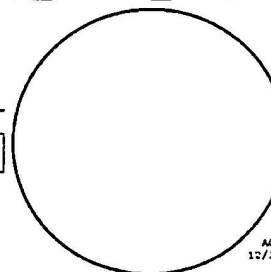
Shift From: _____ ☐ am ☐ pm to _____ ☐ am ☐ pm

If other,
specify _____

Access to inspect the premises must be provided during the work schedule indicated in this item.

25. Total amount of asbestos-containing material to be abated during this work

18,322 Square Feet, and/or 57 Linear Feet



ACP-1
12/20/02

5426206039 ASBESTOS INSPECTION REPORT (continued)

28. Asbestos Handler DJM Co., Inc. NYS DEC Permit # NJ-346 Tel. # (973) 491-0006Disposal Site(s) Meadow Hill Landfill, Bridgeport WV & Cumberland Landfill, Shippberg, PA

27. This asbestos abatement is part of a (turn a through e requires filing of this form with the NYC Department of Buildings)

- a) ☒ Demolition b) ☐ Boiler Replacement c) ☐ Sparkler Replacement d) ☐ Renovation/Alteration
 e) ☐ Fireproofing Replacement f) ☒ Other (Describe) Asbestos Abatement/WTC Dust Remediation

28. TYPE OF ABATEMENT (Check all appropriate boxes)

- ☒ Removal ☐ Enclosure ☐ Encapsulation ☐ Repair ☐ Clean up

29. ABATEMENT PROCEDURE (Check all appropriate boxes)

- ☒ Full Containment ☐ Glovebag ☐ Tent ☒ OEP Variance Application

30. LOCATIONS OF ABATEMENT

Floor(s)	SECTION OF FLOOR (e.g. entire, east wing, north of entrance lobby, etc.)	AFFECTED SURFACES CONTAINING ACM (e.g. Particling, ceiling, plenum, duct, penetration, etc.)	AMOUNT OF ACM SQUARE FEET	WHEN FEET	DESCRIPTION OF WORK BEING PERFORMED (e.g. remove, encapsulate, etc.)
Basement	Entire	WTC Dust	9,064		Sub-Chapter G
Basement	Entire	Pipe Insulation		32	Asbestos Abatement
1	Entire	Pipe Insulation		15	Asbestos Abatement
2	Entire	Pipe Insulation		10	Asbestos Abatement
Roof	1st Floor Roof	Roof & Flashing	146		Asbestos Abatement
Roof	5th Floor Roof	Roof, Flashing & Tar	525		Asbestos Abatement
1-5	Facade	Window Caulk	10		Asbestos Abatement
1-5	Facade	WTC Dust	8,576		WTC Bldg Ext. Cleanup
Roof	5th Floor Roof	Coping Stone Caulk	1		Asbestos Abatement

Additional copies attached ☐

31. I hereby declare that the information provided herein is true and complete to the best of my knowledge. I am familiar with Federal, State, and NYC laws and regulations applicable to asbestos related work.

Airtek Environmental Print Name of Air Monitor	Hazardous Elimination Print Name of Asbestos Contractor	Airtek Environmental Print Name of Applicant
Signature	Signature	Signature
Date	Date	Date

32. I understand that as the owner of a building where asbestos abatement activity occurs, I am responsible for the performance of the asbestos abatement activities in accordance with the Asbestos Control Program Rules. I have contacted the third party air monitor who is completely independent of all parties involved in the asbestos project. I hereby declare that I have authorized the filing of this notification for the work specified herein.

Greenwich Street Project, LLC

Print Name of Owner

Signature

Date

A STAMPED COPY OF THIS FORM INCLUDING AMENDMENTS MUST BE AVAILABLE AT THE WORK SITE.

(Any modification of information provided on this form must be reported immediately in writing directly to the NYC DEP ACP.)

The requirements of the Asbestos Control Program Rules may not be totally complied or lessened through the performance of work in increments or discrete fashion.

ONLY
TYPEWRITTEN
FORMS WILL BE
ACCEPTED



NYC DEPARTMENT OF ENVIRONMENTAL PROTECTION
Asbestos Control Program
59-17 Junction Boulevard, 8th Floor, Corona, NY 11368-5107
Asbestos Variance Application

FOR OFFICIAL USE ONLY

Variance # _____
Fee Paid _____
Notification # _____

I. FACILITY

Address 21-23 Thames Street Borough Manhattan Zip 10006

Application must be
made at least 2
weeks prior to the
start of work.

II. APPLICANT

Name Airtek Environmental Corp. Tel # (212) 768-0516

Address 39 West 38th Street City New York State NY Zip 10018

Capacity: ☐ Contractor ☒ Consultant ☐ Owner ☐ Other _____ Contact Person Benn Lewis

III. SPECIFY ALL NYC DEP OR NYS DOL (ICR56) ASBESTOS RULE PROVISIONS FROM WHICH A VARIANCE IS REQUESTED

1-11(c), 1-11(d), 1-81(j), 1-81(m), 1-82(a), 1-83(a), 1-83(b)2, 1-91, 1-102(b), 1-112(d), 1-112(e), 1-125(d)

SPECIFY FLOORS AND/OR AREAS WHERE WORK INVOLVING THIS VARIANCE IS TO OCCUR

Basement, 1st, 2nd, 3rd, 4th, 5th & Roof

REASONS FOR REQUEST AND DESCRIPTION FOR PROPOSED ACTION (Attachment(s) shall be submitted in TRIPLICATE)

Explain why the procedures required by Title 15, Chapter 1 of the Rules of the City of New York (RCNY) and/or Part 56 of Title 12 of New York Codes, Rules and Regulations (Subparts 56-4 through 56-17) cannot be used. (Attach Additional Sheets)

State the alternative procedures that will be employed to satisfy each requirement as modified. (Attach Additional Sheets)

Provide color coded drawings identifying work area(s) and location of decontamination enclosure system(s).

IV. FEE SCHEDULE

Amount of ACM affected by this variance: 18,322 square feet + 57 linear feet = Total Amount of ACM 18,379 feet

	If total amount of ACM is less than 5000 feet:	If total amount of ACM is 5000 feet or more:
Seven day notification period waiver	\$300	\$400
First sub-section (per category)	\$400	\$600
Each additional sub-section (per category)	\$200	\$300
Maximum fee	\$1200	\$1800

See Section 1-03(e)
of the NYCDEP
Asbestos Rules for
category definitions.

Enter applicable fee based on schedule above

Total Fees \$ _____

V. I hereby declare that the information provided herein and in any and all accompanying attachments is true and complete to the best of my knowledge. I understand that failure to comply with conditions set forth by the Department in an approval of the application shall render this variance null and void.

Greenwich Street Project, LLC.
Print Name of Owner

Airtek Environmental Corp.
Print Name of Applicant (If not owner)

Signature of Owner Date

Signature of Applicant Date

Work involving a variance may not commence prior to the receipt of the Department's approval of the application. Any violation of the terms of any variance issued pursuant to Title 15, Chapter 1 of the RCNY Section 1-03 is considered a violation of the lettered subdivision modified by the variance.

ACP1
2/2001

ASBESTOS PROJECT NOTIFICATION

Division of Safety & Health
Asbestos Control Bureau
Building 12, Room 157
State Campus
Albany, NY 12240

STATE OF NEW YORK
DEPARTMENT OF LABOR

A. TYPE OF NOTIFICATION

Check only one type of notification below.

- ☒ Initial Complete all sections and submit 10 calendar days prior to starting date.
☐ Amended Submit amended notification with all sections completed and amended item(s) circled.
☐ Cancelled Complete Section G and attach copy of initial notification or complete all sections.
☐ Emergency You must first call the Program Manager's office of the Asbestos Control Bureau at 518-457-1255 for prior approval of emergency status, then complete and return this form including:
 Date (____/____/____) Time (____) Emergency Status Granted
 Authorized by: _____ (From Asbestos Control Bureau)

B. CONTRACTOR INFORMATION

Provide all information requested below.

1. FEIN P11
 2. Asbestos Lic. No. 99 - 0148
 3. Contractor Name and Address
Hazardous Elimination Corp
195H Central Avenue
Farmingdale, New York 11735
 4. Mailing Address (if different)
Same
 5. Duly Authorized Representative
 Name Donald Gold
 Title Vice President
 Phone No. (631) 752-2898
 6. Will Sub-Contractor(s) be used
☒ No ☐ Yes (if yes, complete lines below)
 Name _____
 Asbestos Lic. No. -
 Name _____
 Asbestos Lic. No. -
 7. Party for Whom Work is Being Performed: Name The Cooper Group, Inc.
 Address 666 Fifth Avenue, New York, NY 10103

C. PROJECT SITE INFORMATION

Provide all information requested below for the building/site at which the asbestos project will be conducted.

8. Project Location: County New York
 Name of building _____
 Room or other specific location Entire Basement, 1st and 2nd floors, roof and facade
 Street address 23 Thames Street
 City, town or village New York, New York 10006
 9. Building Information
 Current use Commercial Building age _____
 Prior Use Commercial Building size _____ sq. ft.
 10. Building Representative/ Site Contact: Name Chanan Rozenbaum Phone No. (212) 208-4614

SH-483 (10-03)



D. PROJECT DETAILS

Provide all information requested below relating to specifics of asbestos removal.

11. Project Dates: Starting date _____ Completion date _____

If amended: Starting date _____ Completion date _____

Is this a phased project: ☒ No ☐ Yes (If yes, list scope, location, and starting and completion dates for each phase in Section F, Remarks)

12. Do You Anticipate Doing: ☐ Night work ☐ Weekend work ☒ Shift work

(Provide details in Section F.)

13. Dollar Amount of Contract Between Parties Named in Item 3 and Item 7 \$ _____

14. If work is being conducted under a variance, check appropriate box and supply variance number.

☐ Applicable Variance No. _____ ☐ Individual Variance Petition No. _____

15. Asbestos Dissemination Prevention Methods (use Section F, Remarks, and attach additional sheets if necessary)

a) Type of equipment & ventilation systems used

Equipment:	Manufacturer:	Model Number:	Quantities:
HEPA Vacuums	N/A	N/A	2
Portable Decon Unit	N/A	N/A	1
Respirators	Various	N/A	8
Negative Air Unit	Various	N/A	1

b) Name of air monitoring firm Airtek Environmental Corp. Asbestos Lic. No. 99-0589

c) Laboratory performing the analysis

Name Airtek / ATC Associates ELAP Registration No. 11040 / 10879

16. Type of Asbestos Work (check all that apply)

☒ Pipe related ☒ Roofing/flashing ☐ Caulking/mastic ☐ Clean-up
☐ Vessel covering ☐ Siding ☐ VAT ☐ Sprayed-on insulation
☐ Demolition - if site survey was previously submitted, provide Reference No. _____
☒ Other (specify) WTC Dust, window caulking and coping stone caulking

17. Type and Amount of Asbestos-Containing Material Involved

Friable linear feet	<u>57</u>	Friable square feet	<u>17,651</u>
Non-friable linear feet	+ _____	Non-friable square feet	+ <u>671</u>
Total linear feet	= _____	Total square feet	= <u>18,322</u>



E. FEE SCHEDULE

Refer to item 17 to calculate your required fees. This fee is non-refundable. Check one box for linear feet and one box for square feet.

18. Fee Schedule: a) Linear feet

b) Square feet

- | | |
|---|---|
| ☒ 0 - 259 (\$0) | ☐ 0 - 159 (\$0) |
| ☐ 260 - 429 (\$100) | ☐ 160 - 259 (\$100) |
| ☐ 430 - 824 (\$200) | ☐ 260 - 499 (\$200) |
| ☐ 825 - 1649 (\$500) | ☐ 500 - 999 (\$500) |
| ☐ 1650 or more (\$1000) | ☒ 1000 or more (\$1000) |

19. Total Fee Due for Project \$ 1000.00 (add 18a and 18b)



F. REMARKS

Use this area to provide additional information.

Asbestos Abatement shall be performed utilizing NYC DEP Sub-Chapter G Regulations and site specific variance.

All waste shall be double bagged for disposal purposes.

Waste Disposal Site: Meadowfill Landfill, Route 2, Box 68, Bridgeport, WV.
BFI Imperial Landfill- PO Box 47, Route 980 & Boggs Rd., Imperial PA
Cumberland County Landfill - 620 Newville Rd, Newburgh, PA 17242

Waste Hauler/Transporter: DJM, Inc. 109-113 Jacobus Ave., Kearny, NJ 07032



G. SIGNATURE

I certify that the information specified on this notification is true and accurate and that the project will be conducted in compliance with the requirements of Code Rule 56.

Signature of the Contractor or Duly Authorized Representative

June 9th, 2005

Date

Print Name of the Contractor or Duly Authorized Representative

See next page for submission instructions and notification information.

NOTIFICATION OF DEMOLITION AND RENOVATION			
Operator Project #	Postmark	Date Received	Notification
I. TYPE OF NOTIFICATION (O = Original/ R = Revised) : O			
II. FACILITY INFORMATION (Identify owner, removal contractor, and other operator)			
OWNER Greenwich Street Project, LLC.			
Address: 666 Fifth Ave.			
City: New York	State: NY	ZIP: 10103	
Contact: Chanan Rozenbaum	Tel: (347) 643-9960		
REMOVAL CONTRACTOR:			
Owner: Hazardous Elimination Corp.			
Address: 195 H Central Ave.			
City: Farmingdale	State: NY	ZIP: 11735	
Contact: Donald Gold	Tel: 631-752-2898		
OTHER OPERATOR:			
Address:			
City:	State:	ZIP:	
Contact:			
III. TYPE OF OPERATION (D = Demolition/R = Renovation):			
IV. IS ASBESTOS PRESENT? (YES/NO) Yes			
V. FACILITY DESCRIPTION (include building name, number, and floor or room number):			
Building name:			
Address: 23 Thames St.			
Address:			
City: New York	State: NY	County: Manhattan	
Site Location: Entire			
Building Size: Sq. meter:	SqFt:	# of Floors	Age in Yrs.
Present Use: Commercial	Prior Use: Same		
VI. PROCEDURE, INCLUDING ANALYTICAL METHOD, IF APPROPRIATE, USED TO DETECT THE PRESENCE OF ASBESTOS MATERIAL:			
Bulk Sampling to analyze PLM.			
VII. APPROXIMATE OF RACM TO BE REMOVED AND NON-FRIABLE ASBESTOS MATERIAL THAT WILL BE REMOVED. SPECIFY THE AMOUNT OF ASBESTOS BELOW:			
	RACM to be Removed	non-friable Asbestos Material to be removed Category I	Category II
Linear feet Cable wrap insulation, cable insulation	57		
window caulking/glazing. Transite conduit.			
Surface Area- Square Feet WTC Dust	9,064		
Roof flashing/tar, window/coping stone caulk		682	
Surface Area- Square Feet Façade WTC Dust	8,576		
Volume RACM off Facility Component-Cubic Feet			
VIII. SCHEDULE DATES OF ASBESTOS REMOVAL (MM/DD/YY)		Start:	Completion:
IX. SCHEDULED DATES OF DEMOLITION/RENOVATION: (MM/DD/YY)		Start:	Completion:

NOTIFICATION OF DEMOLITION AND RENOVATION (continued)

X. DESCRIPTION OF PLANNED DEMOLITION OR RENOVATION WORK, AND METHOD(S) TO BE USED:

All work to be done in accordance with the applicable New York State Industrial Code Rule 56, NYC-DEP Sub-Chapter G utilizing a site specific variance.

XI. DESCRIPTION OF WORK PRACTICES AND ENGINEERING CONTROLS TO BE USED TO PREVENT EMISSIONS OF ASBESTOS AT THE DEMOLITION AND RENOVATION SITE:

A HEPA Vacuum shall be kept on site at all times.

WASTE TRANSPORTER #1 DJM

Address: **109-113 Jacobus Avenue**

City: **Kearny**

State: **NJ**

ZIP: **07032**

Contact: **Vito Pesce**

Telephone: **201-997-8870**

XIII. WASTE DISPOSAL SITE Meadowfill Landfill Corp.

Address: **Rt. 2 Box 68 Dawson Drive**

City: **Bridgeport**

State: **WVA**

ZIP: **26330**

Contact: **John McGarvey**

Telephone: **304-842-2784**

XIII. WASTE DISPOSAL SITE Cumberland County Landfill

Address: **620 Newville Road**

City: **Newburgh**

State: **PA**

ZIP: **17242**

Contact:

Telephone:

XIII. WASTE DISPOSAL SITE

Address:

City:

State:

Contact:

Telephone:

XIV. IF DEMOLITION IS ORDERED BY A GOVERNMENT AGENCY, PLEASE IDENTIFY THE AGENCY BELOW

Name:

Title:

Authority:

Date if Order (MM/DD/YY):

Date Ordered to Begin (MM/DD/YY)

XV. FOR EMERGENCY RENOVATIONS

Date and Hour of Emergency (MM/DD/YY):

Description of the Sudden, Unexpected Event:

Explanation of How the Event caused Unsafe Conditions or Serious Disruption of Industrial Operation:

XVI. DESCRIPTION OF PROCEDURE TO FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR PREVIOUSLY NON-FRIABLE ASBESTOS BECOMES CRUMBLLED, PULVERIZED, OR REDUCED TO POWDER:

WORK WILL BE STOPPED IMMEDIATELY, NEW ENGINEERING CONTROL AND CLEAN-UP AS PER ICR-56 WILL BE IMPLEMENTED IMMEDIATELY, NEW ABATEMENT METHOD WILL BE EVALUATED TO ADDRESS NEW SITUATION PROPERLY.

XVII. I CERTIFY THAT AN INDIVIDUAL TRAINED IN THE PROVISIONS OF THE REGULATION (40CR PART 61 SUBPART M) WILL BE ON-SITE DURING THE DEMOLITION OR RENOVATION AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON WILL BE AVAILABLE FOR INSPECTION DURING NORMAL BUSINESS HOURS. (Required 1 year after promulgation).

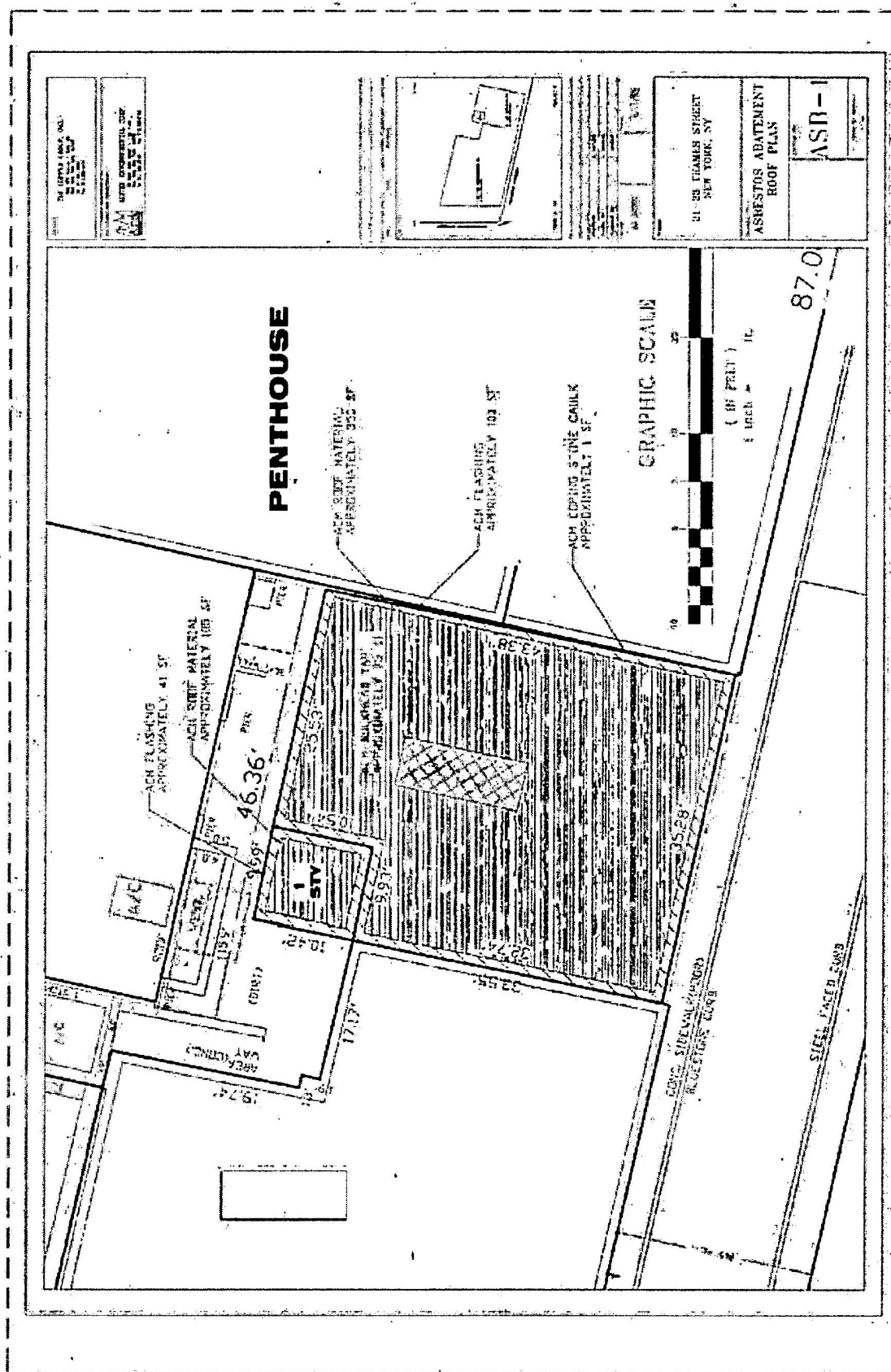
Signature of Owner /Operator

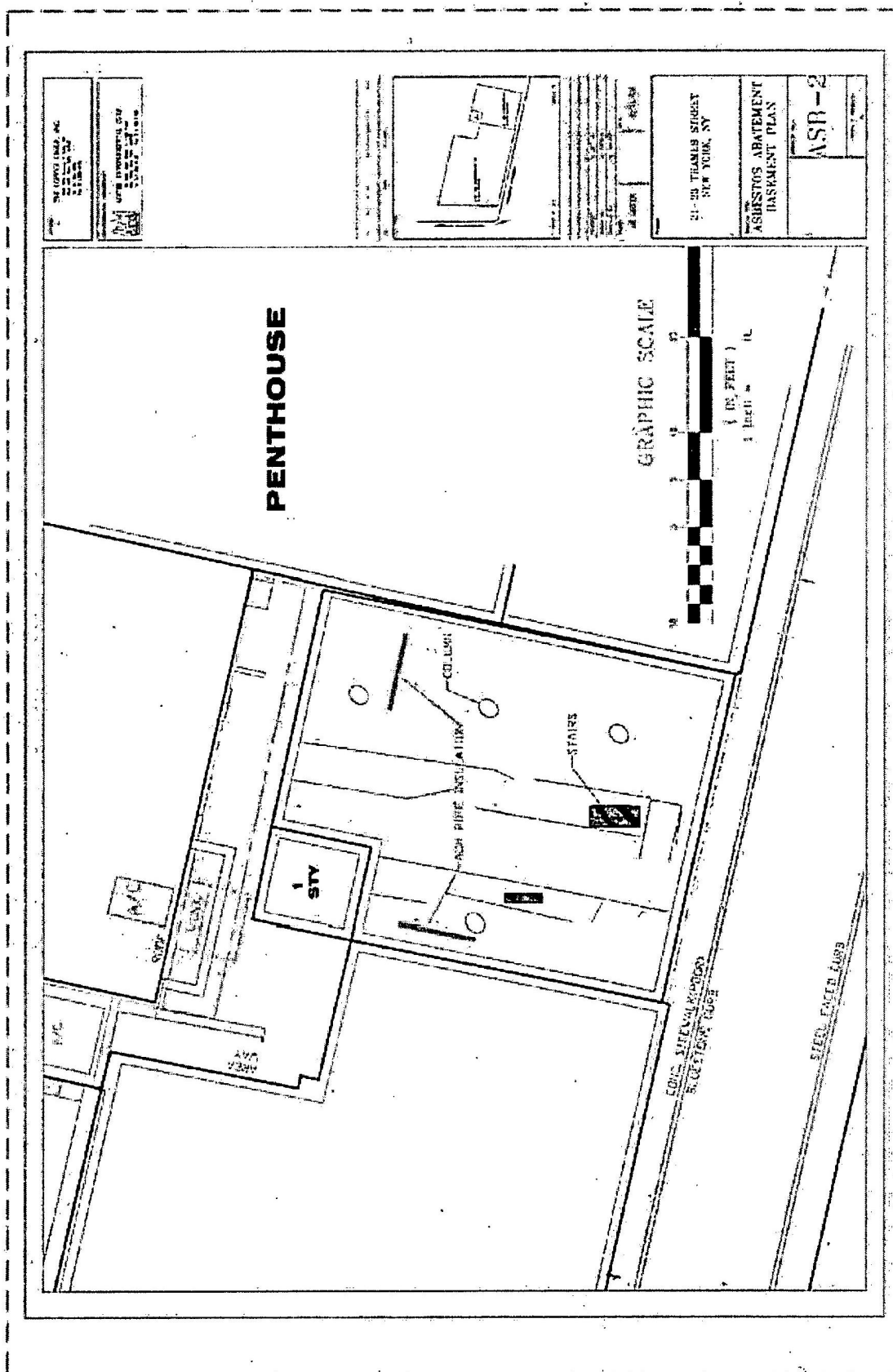
Date

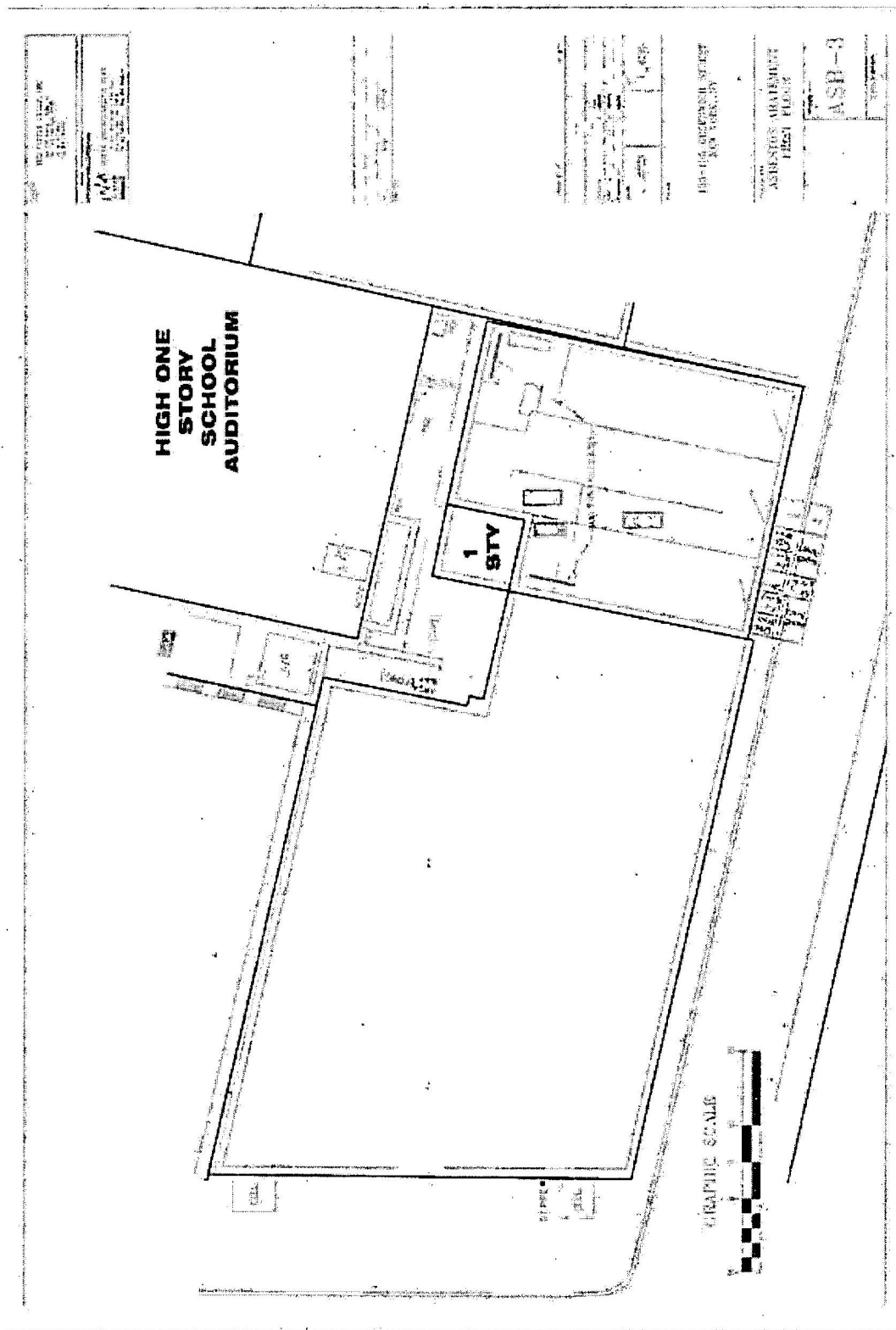
XVIII. I CERTIFY THAT THE ABOVE MENTIONED INFORMATION IS CORRECT.

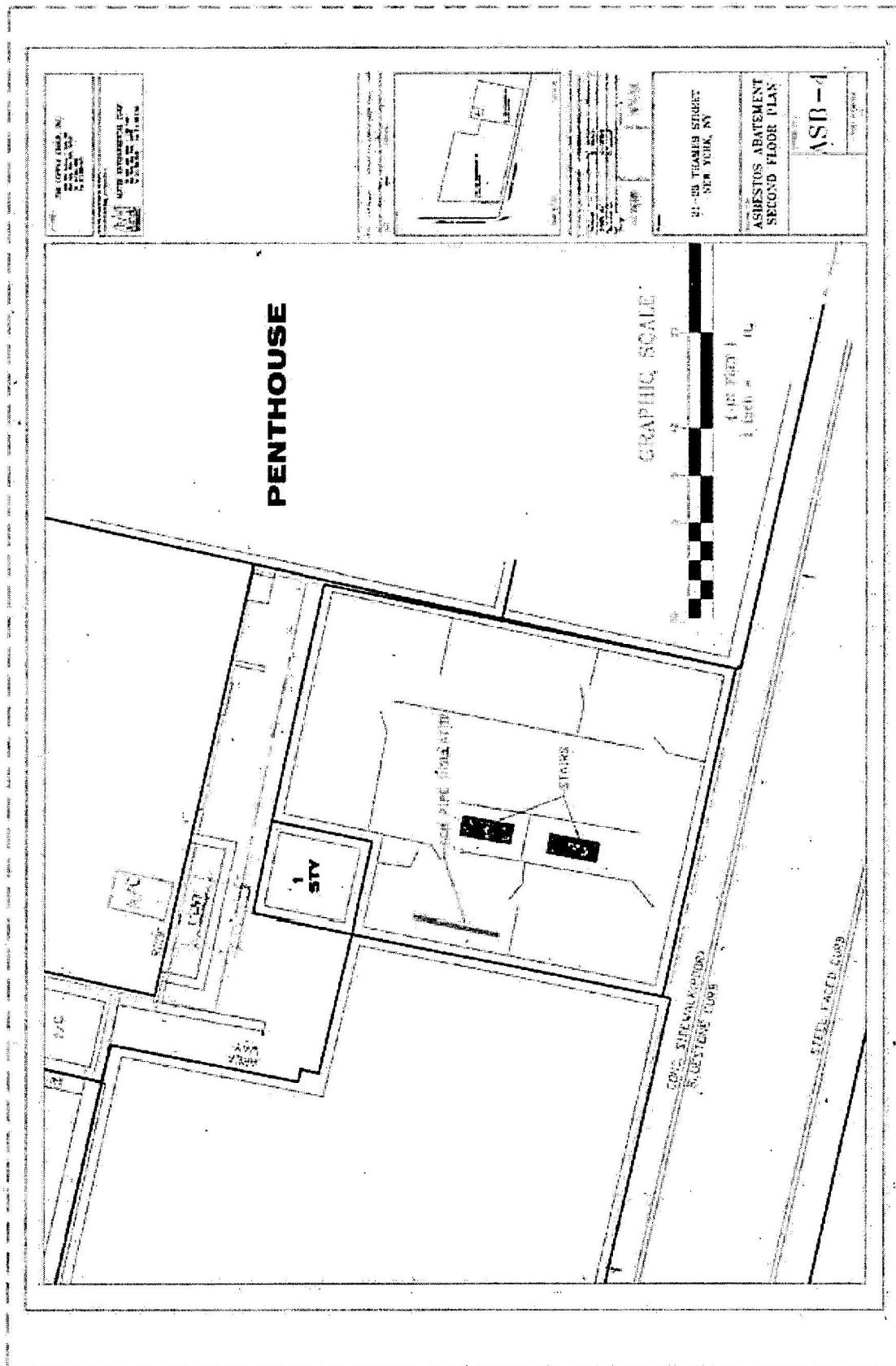
Signature of Owner /Operator

Date









Attachment II

August 3, 2005

Mr. Chris D'Alimonte
New York City Department of Education
Division of School Facilities
44-36 Vernon Boulevard, 5th Floor
Long Island City, NY 11101

Re: 90 & 100 Trinity Place (HS of Economics & Finance)
133-135 Greenwich Street & 21-23 Thames Street

Dear Mr. D'Alimonte:

Enclosed is a set of documents outlining a scope of work that calls for temporarily altering existing duct work and fresh air intakes at 90 & 100 Trinity. This plan was deemed acceptable by the Board of Education at an August 3rd meeting with the BOE, Copper Group and Airtrek Environmental. The Copper Group has agreed to incur the cost of making these necessary alterations. Please review the scope outlined by Aitrek and the drawing prepared by Eastern Air; should you have any questions please feel free to contact me at 347-643-9960.
Sincerely,

Chanan Rozenbaum
Project Developer

August 3, 2005

Mr. Rick Landman
New York University
70 Washington Square South, Room 1204
NY, NY 10012

Re: 90 & 100 Trinity Place (HS of Economics & Finance)
133-135 Greenwich Street & 21-23 Thames Street

Dear Mr. Landman:

Enclosed is a set of documents outlining a scope of work that calls for temporarily altering existing duct work and fresh air intakes at 90 & 100 Trinity. This plan was deemed acceptable by the Board of Education at an August 3rd meeting with the BOE, Copper Group and Airtex Environmental. The Copper Group has agreed to incur the cost of making these necessary alterations. Please review the scope outlined by Airtex and the drawing prepared by Eastern Air; should you have any questions please feel free to contact me at 347-643-9960 Sincerely,

Chanan Rozenbaum
Project Developer



AIRTEK ENVIRONMENTAL CORP.

39 WEST 38TH STREET, 12TH FLOOR, NEW YORK, NY 10018
 PHONE (212) 768-0516 FAX (212) 768-0759
 WWW.AIRTEKENV.COM

August 3, 2005

Mr. Chris D'Alimonte
 New York City Department of Education
 Division of School Facilities
 44-36 Vernon Boulevard
 Long Island City, NY 11101

Re: 90 & 100 Trinity Place (HS of Economics & Finance)
 Possible Air Infiltration from the Decontamination & Destruction of
 133-135 Greenwich Street and 21-23 Thames Street

Dear Mr. D'Alimonte:

A thorough inspection of the subject structures and the adjacent structures has been conducted on July 6, 2005. Communicating openings, air intakes, and other potential pathways of contamination have been identified for inclusion in the decontamination design. Facility managers for the adjacent structures have been contacted so that engineering controls may be implemented to protect occupants. Of particular concern are air intakes of the school building directly to the east of the project site. These concerns have been addressed cooperatively with the Department of Education.

The Copper Group's Asbestos Contractor will apply a hard barrier (plywood) over the existing 7th floor fresh air intake louver on the West side of 100 Trinity, anchor it to the masonry, and then apply two layers of 6-mil polyethylene sheeting over the hard barrier. Since the fresh air intake louver will be covered, three (3) windows, in areas not occupied by students, on the 8th floor (i.e. kitchen), will be opened to allow fresh air to penetrate the 8th floor. The air from the opened windows on the 8th floor will go thru a dropped ceiling which is the return air plenum for the 7th floor MER with ducts that lead directly to the two (2) units. This will supply adequate make-up fresh air to the two units.

The Copper Group's Mechanical Contractor will blank off the two fresh air intake ducts attached to the fresh air intake louver (approximately 12" x 6" each) on the 6th floor (Exterior Fresh Air Louver on Thames Street is inaccessible) of 90 Trinity. It is the understanding that the HVAC unit in question is not in operation (has not been in operation for at least three years), and will not be put back into operation. Therefore, no make air is required. The Copper Group's Mechanical Contractor will also provide a temporary extension to the fresh air intake duct (100 Trinity) and extend it towards Cedar Street over the Auditorium Roof.

If you have any questions or require further clarification, please do not hesitate to contact me.

Sincerely,
Airtek Environmental Corp.

Michael Porter

Michael Porter,
 Senior Project Manager

Cc: Chanan Rozenbaum, The Copper Group
 05-0701

ENVIRONMENTAL CONSULTANTS

08/02/2005 22:07 . 2

EASTERN

PAGE 02



EASTERN AIR INC.

260 JOHNSON AVENUE, BROOKLYN, NEW YORK 11208 • TEL: (718) 821-3838 • FAX: (718) 821-8104

August 3, 2005

Copper Construction
Jim Pershin
752 Pacific Street
Brooklyn, N.Y. 11238

Re: Roof Duct Work at Greenwich & Thames

Dear Jim,

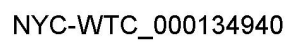
Please find the following drawing for proposed fresh air duct alterations.
Also note above mentioned alterations are temporary. The existing duct will
be re-installed back to present configuration.

Please see additional specifications attached.

Sincerely,

A handwritten signature in black ink, appearing to read "Ilya Meshchaninov".

Ilya Meshchaninov
Eastern Air Inc.



Part II

**Environmental Community Air Monitoring Plan
During the Abatement and Demolition of
133-135 Greenwich Street and 21-23 Thames Street**

Prepared for:

The Greenwich Street Project, LLC
666 Fifth Avenue
New York, New York

Prepared by:

Airtek Environmental Corp.
39 West 38th Street
New York, NY 10018

212-768-0516

Date: June 27, 2005
Comments August 4, 2005
Re-submittal August 11, 2005

Part II - Environmental Community Monitoring Plan
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Environmental Community Air Monitoring

1.0 General:

Environmental air monitoring and visual observation will be conducted during the abatement and demolition of the buildings located at the 133-135 Greenwich Street/21-23 Thames Street site (The Site). The proposed program consists of two primary forms of environmental monitoring: Work Area Monitoring required by law for environmental remediation projects and intended to monitor the efficacy of project engineering controls; and voluntary Community Monitoring intended to gauge and document the impact (or lack thereof) of the project to the surrounding area.

1.1 Operations to be Monitored

The project schedule for The Site includes four weeks of soft-strip contaminants of potential concern (COPCs) abatement and removal, asbestos abatement and removal under a variance from the NYCDEP, and four weeks of conventional demolition. All work will be monitored for visible emissions by the Environmental Consultant's Site Hygienist. The Abatement Phase regulated under NYC DEP will be monitored under both a Community Air Monitoring Program, and a Work Area Monitoring Program. The Demolition phase of the project will be monitored under the Community Air Monitoring Program. All air monitoring conducted under this plan will be conducted by the Environmental Consultant's New York State DOL certified air sample technicians under the supervision of the Environmental Consultant's Certified Industrial Hygienist (CIH).

1.2 Project Monitoring

Monitoring of this project will include all standard monitoring functions for environmental remediation projects including observations for visible emissions, air sampling and analyses, inspection and monitoring of the contractor's work practices, and reporting to the Owner and the Regulators. These general monitoring functions will be applied to both the Abatement Phase and Demolition Phase of this project.

1.3 Neighboring Properties

The Environmental Community Monitoring Plan described in this document is intended to address the impact of the project to the surrounding area. In addition to that effort, properties directly adjacent to the project site have been given particular attention by this plan.

1.3.1 Trinity Place Schools

Extensive effort and cost has been invested in working with the NYC Department of Education to provide engineering controls and testing support to protect the educational facilities at 100 and 90 Trinity Place. Detailed information on these efforts is included in Attachment II to Part I of this submittal – “Work Plan.”

1.3.2 125 Greenwich Street

Specific measures are planned to monitor the impact of the project on the 125 Greenwich Street building. One of the Environmental Community Air Monitoring stations specified in this document (school auditorium roof station) is directly adjacent to this building (within 20’). In addition, the Environmental Consultant will conduct Abatement Phase work area monitoring continuously during abatement phase work shifts between the project site and the 125 Greenwich Street building.

1.3.3 Bldg. South of Thames Street

This building, across Thames Street from the Project Site, will be separated from the project site by two Environmental Community Air Monitoring stations. In addition, during the Abatement Phase, extensive work area monitoring will be conducted on Thames Street.

1.4 Environmental Sampling and Analytical Methodologies

Sampling and analytical methodologies utilized for this Project, will comply with published protocols from EPA and/or National Institute of Occupational Safety and Health (“NIOSH”). Where appropriate other published standards may be substituted and project-specific adjustments to protocols may be made. Generally, sampling will be conducted once every 24-hour work period, except for asbestos (TEM samples), which will be taken for the duration of every work shift and once a day during non-work days during the abatement phase. Real-time particulate monitoring will be on a continuous basis. Instantaneous mercury readings will be obtained to evaluate the air quality around the work site at multiple locations each work day.

2.0 Visible emissions

2.1 Abatement Phase

At the commencement of each work shift, the Environmental Site Hygienist will conduct a thorough inspection of all engineering control systems including containment barriers, and negative air control systems, and exterior. If any visible emission is noted on the exterior of the work area, all work will be stopped and not restarted until an evaluation of engineering controls has identified and corrected the cause of the emission. The evaluation may include, but is not limited

to, work activities and smoke testing of the isolation barriers. Any damaged or malfunctioning engineering control will be repaired immediately. The work will not be restarted until engineering controls are repaired or determined to be functioning properly.

2.2 Demolition Phase

During each work shift, the Environmental Consultant will observe demolition operations to monitor visible dust in the air and suppression measures being applied by the demolition contractor. The Environmental Consultant may, depending on the severity and duration of dust condition, order a stoppage of the work or require modified work practices to reduce visible dust.

2.3 Notification

The EPA Region 2 office and NYCDEP will be notified as promptly as reasonably possible of any visible emission observed by the Environmental Consultant to cross the property line of the Buildings. The Environmental Consultant will promptly advise the EPA Region 2 office and the NYCDEP of the corrective actions taken. A report of inspection results and corrective actions taken will be provided to the EPA Region 2 office and NYCDEP within 2 business days of any incident showing any visible emissions.

3.0 Abatement Phase Air Monitoring

3.1 Visible Emissions

Monitoring for visible emissions will be conducted as described above in Section 2.0 of this specification.

3.2 Community Air Monitoring

Prior to the commencement of any site work, one week of background community air monitoring will be conducted as detailed in *Table 1 – Community Air Monitoring* in Attachment A (Community Monitoring) to this specification. Community Air Monitoring as detailed in Table 1 will continue through the Abatement Phase and until completion of the Demolition Phase.

Community Monitoring locations are identified on the drawing included in Attachment A (Community Monitoring) to this specification. The locations include the roof of the school auditorium on Cedar Street, and the sidewalk bridge on Thames Street.

If the environmental air monitoring locations need to be changed during the abatement phase due to site conditions, NYC DEP and USEPA Region 2 office

our rules allow
the use of TEM
in lieu of PCM.

will be notified promptly. The community air monitoring locations will not be moved until NYCDEP and the USEPA Region 2 office accept the change.

3.3 Abatement Work Area Monitoring

Air monitoring per the requirements of NYC DEP Title 15 will be conducted with the exception that Transmission Electron Microscopy (TEM) will be utilized as the analytical method for asbestos. Sample locations will be selected by the Site Hygienist in accordance with Title 15 and based on the configuration of the abatement containment areas. Containment area monitoring of additional Contaminants of Potential Concern (COPCs) that are not regulated under Title 15 will be conducted voluntarily by the Owner. The COPCs to be monitored are: Asbestos (TEM), Metals (ICP-AES) and crystalline silica (XRD).

This monitoring is detailed in *Table 3 - Abatement Work Area Monitoring* in Attachment B (Work Area Monitoring) to this specification.

4.0 Demolition Phase Air Monitoring

4.1 Visible Emissions

Monitoring for visible emissions will be conducted as described above in Section 2.0 of this specification.

4.2 Community Air Monitoring

Community Air Monitoring will be conducted as detailed in *Table 1 – Community Air Monitoring* in Attachment A (Community Monitoring) to this specification. Community Air Monitoring will continue through the completion of the Demolition Phase.

Initial Community Air Monitoring locations are identified on the drawing included in Attachment A (Community Monitoring) to this specification. If the environmental air monitoring locations need to be changed during the demolition phase due to site conditions, NYC DEP and USEPA Region 2 office will be notified promptly. The community air monitoring locations will not be moved until NYCDEP and the USEPA Region 2 office accept the change.

5.0 Interpretation of Sample Data

The Target Air Quality Levels and EPA Site Specific Trigger Levels for the Site are set forth in Attachment A, Table 2.

The following actions will be taken if there is an exceedance of Target Air Quality Level. If there is an exceedance of both the Target Air Quality Level and the EPA Site Specific

replace w/
corrective
action

delete highlight

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Trigger Level, actions under the EPA Site Specific Trigger Level heading below will govern.

5.1 Target Air Quality Levels

Any 24-hour PM_{2.5} and PM₁₀ value in excess of the Target Air Quality Level will be considered an "exceedance" and the actions described below will be taken.

During the first week of sampling any sample of an analyte other than PM_{2.5} and PM₁₀ in excess of 3 times the Target Air Quality Level for that analyte, unless superceded by an EPA Site-Specific Trigger Level, will be considered an exceedance and the actions described below will be taken.

Following the first week of sampling, a "rolling average" will be established based initially on the first week's results, to which will be added daily values as results are received from the laboratory. A rolling average value for any analyte, other than PM_{2.5} and PM₁₀, in excess of the relevant Target Air Quality Level will be considered an exceedance of Target Air Quality Level and the actions described below will be taken.

Exceedance of an established Target Air Quality Level for any analyte calculated as provided above will result in an evaluation of engineering controls and work techniques in the source area. This evaluation shall include but not be limited to the evaluation of work activities that may be causing the exceedance, smoke testing of the isolation barriers in question, and inspection and repair of any faulty isolation barriers.

5.2 EPA Site Specific Trigger Levels

Any 24-hour value (work shift value on work days or four hour value on non-work days in the case of asbestos) in excess of the EPA Site Specific Trigger Level will be considered an "exceedance." Exceedances of EPA Site Specific Trigger Levels will result in a stoppage of work associated with the exceedance until an evaluation of emission controls is performed and corrective action is in place. The EPA Site Specific Trigger Levels are applicable to individual sample result. If any of the individual sample results exceed an EPA Site Specific Trigger Level, then notification must be made to the USEPA Region 2 office and the NYCDEP. Work will be reinitiated once the USEPA Region 2 office has agreed (and NYC DEP during the Abatement Phase in the case of asbestos exceedances) to the corrective action(s) proposed to prevent the potential for exceedances in future work and such corrective actions have been implemented.

5.3 Notification

The US EPA Region 2 office and the NYCDEP will be notified as promptly as reasonably possible of any exceedance of either a Target Air Quality Level or an

DEP	Abatement		
	Asbestos	Project	
	Samples		

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EPA Site Specific Trigger Level and will be notified promptly of any corrective actions taken in connection with a Target Air Quality Level exceedance and the implementation of corrective actions in connection with an EPA Site Specific Trigger Level exceedance.

5.4 Monitoring Data

All sampling results collected pursuant to this specification, in suitable electronic form, will be promptly provided to the USEPA Region 2 office weekly and exceedances will be reported as provided above. The Environmental Consultant will provide 24 hour averages and graphical data for all continuous sampling data collected.

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Attachment A

Table 1 – Community Air Monitoring

Location	Parameter(s)	Sample Frequency	Analysis Method	Comment
Site Area	Mercury	Each work day	Lumex, portable mercury analyzer	Lumex results are real-time data logged
Site Area	Particulate (Visible dust emissions)	Continuous during working shifts	Visual Observation	Visual Notations on site log
Site Perimeter-three fixed locations listed below	Particulate PM-2.5, PM-10	Daily	Laser dispersion Real time analysis, E-BAM	
Site perimeter-one of the fixed locations below.	Particulate PM-2.5, PM-10	Each work day	FRM filter analysis (gravimetric)	Comparison data for E-BAMs.
1. Waste load-out area on the Southwest corner of the Buildings 2. Roof of HS Auditorium 3. East end of Thames Sidewalk Bridge	1. Asbestos 2. Silica 3. Metals 4. Total Dust 5. Organics	ACM each work shift, and each off-day. Daily Daily Daily Organics – See footnote 2 below	1. TEM 2. XRD 3. ICP/MS 4. Microbalance 5. PCB (EPA TO-7A) Dioxin (EPA T0-9A (mod)) and PAH (EPA TO-13A)	Sampling durations may be modified based on Site Conditions. See footote 1 below

Footnote 1: Sampling duration and/or flow rates may be modified to provide optimum analyte loading for analysis based on results of ongoing analyses. Initial Sampling flow rates should be in accordance with rates prescribed in the sampling method.

Footnote 2: Organics will be sampled as provided below under “Notes on the Community Air Monitoring Table” below.

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Notes on Community Air Monitoring Table:

General: Blanks will be processed in accordance with the analytical methodologies and standard industry practice.

Asbestos:

Asbestos sample collection will be performed in accordance with NIOSH 7402, "Asbestos by TEM". Asbestos analysis will be performed utilizing Transmission Electron Microscopy ("TEM") analysis specified in 40 CFR Part 763, Asbestos Hazard Emergency Response Act, ("AHERA"), with the following modifications:

1. The sensitivity on TEM air samples will be less than 0.002 s/cc.
2. Both the length and width of all asbestos fibers will be recorded.
3. Confirmation by EDS and/or SAED will be performed for each fiber analyzed.
4. The minerology of the fibers will be noted and recorded.

Dust:

Airborne dust and particles at the Site will be monitored using real-time air monitoring instrumentation. Real-time air monitoring for PM-2.5 and PM-10 will be accomplished with direct reading particulate in air monitors. Data from Met One 9012 Particle Counters are to be data logged. At one location the Met One 9012 Particle Counter data will be compared against PM-2.5 results from either laboratory analysis of paired sample filters obtained using an appropriate Federal Reference Method or PM-2.5 direct read results obtained using a Met One BAM 1020 monitor or Rupprecht and Papashnick TEOM instrument. At another location, the Met One 9012 Particle Counter data will be compared against PM-10 results from either laboratory analysis of paired sample filters obtained using an appropriate Federal Reference Method or PM-10 direct read results obtained using a Met One BAM 1020 monitor or Rupprecht and Papashnick TEOM instrument. This equipment will be operated for at least one week before the Demolition Phase begins. Prior to the commencement of the Demolition Phase, the EPA Region 2 office will be provided with the results of comparing the data from the Met One 9012 with the alternative sample collector or instrument and the proposal of a correction factor, if needed.

Respirable Dust/Crystalline Silica – Metals – Total Dust:

Respirable dust and crystalline silica sampling will be performed according to NIOSH Method 0600 protocol with analysis following NIOSH Method 7500 (XRD).

Metals sampling and analysis will be performed following NIOSH 7300 "Elements by ICP," except that ICP-MS will be utilized. A hot block/acid digestion will be utilized. Metals to be analyzed by ICP-MS and reported are: Antimony, Barium, Beryllium,

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Cadmium, Chromium, Copper, Lead, Manganese, Mercury (particulate), Nickel and Zinc.

Total Dust sampling and analyses will be conducted by NIOSH 0500.

Mercury:

In addition to metals monitoring for mercury particulate using air filters, real-time monitoring will be performed. The readings will be entered into the PDA program for inclusion with the daily download of sample collection data.

Real-time monitoring will be performed daily throughout the project. Mercury monitoring will be performed utilizing a Lumex RA 915+ direct read instrument.

The Lumex RA915+ will be utilized to obtain detection levels below established Site air contaminant criteria. At a minimum, mercury readings will be taken twice a shift at the fixed air monitoring locations. At the discretion of the Environmental Consultant and as daily Site conditions may dictate, additional mercury readings may be taken.

Organic Compounds (Dioxin/PCBs/PAHs):

Organic compounds samples will be collected at specified points along the project schedule as follows:

1. On the first day of the Background Phase, one sample of each organic compound at each community monitoring location will be collected (three total samples per location). The samples from the location with the highest particulate readings will be analyzed.
2. Organics samples will be collected weekly during the Abatement Phase and Demolition Phase. Samples from the location with the highest particulate readings for that day will be submitted for analysis. This will result in the processing of the samples that have the best likelihood of representing the "worst case." A total of three samples per week, one Dioxin, one PCB, one PAH will be analyzed.
3. Samples for organic compound analyses will be analyzed within fourteen days under normal laboratory analysis turn-around time

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Attachment A

Table 2- Data Reference Levels for Community Monitoring

Analyte	Target Air Quality Levels See Note 1	EPA Site Specific Trigger Levels – See Note 2
Metals		
Antimony	5 ug/m3	14 ug/m3
Barium	5 ug/m3	5 ug/m3
Beryllium	0.02ug/m3	0.2ug/m3
Cadmium	0.04 ug/m3	2 ug/m3
Chromium – See Note 3	0.6 ug/m3	60 ug/m3
Chromium VI		0.6 ug/m3
Copper	10 ug/m3	100 ug/m3
Lead	1.5 ug/m3	5 ug/m3
Manganese	0.5 ug/m3	0.5 ug/m3
Mercury	0.3 ug/m3	3 ug/m3
Nickel	0.2ug/m3	28 ug/m3
Zinc	16 ug/m3	160 ug/m3
Particles and Dusts		
Asbestos	0.00028 f/cc (SEM PCMe fibers)	70 S/mm2 (TEM AHERA structures)
Particulate PM-10 (24 hour average)	150 ug/m3	150 ug/m3
Particulate PM-2.5 (24 hour average)	40 ug/m3	65 ug/m3
Respirable Silica (crystalline)	10 ug/m3	10 ug/m3
Organics (semi-volatiles)		
Dioxins/Furans (2,3,7,8 – TCDD equiv.)	0.00025 ng/m3	0.025 ng/m3
PCB (total Aroclors)	0.12 ug/m3	12 ug/m3
PAH (benzo-a-pyrene equivalent)	0.034 ug/m3	3.4 ug/m3

Note 1: A rolling average after the first week of sampling, except for PM-10 and PM-2.5.

Note 2: A 4-hour value.

Note 3: If a chromium value is in excess of the Target Air Quality Level (0.6 ug/m3), this will result in a stoppage of work; and, that sample will be speciated for chromium VI to determine that its concentration does not exceed the USEPA Site Specific Trigger Level for chromium VI, and the appropriate actions pertaining to an exceedance of the USEPA Site Specific Trigger Level will continue to be conducted.

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Attachment B

Table – 3: Abatement Phase Work Area Monitoring

Location	Parameter(s)	Sample Frequency	Analysis Method	Comment
Site Area	Visible Dust emissions	Each Work Day	Visual Observation	
All sample points required by NYC DEP Regulations for ACM as determined by Site Hygienist	Asbestos	Work shifts and once a day on non-work days	1. TEM	
Waste Decon Clean-room at Greenwich Street	1. Asbestos 2. Silica 3. Metals	ACM each work day. Alternate Silica & Metals	1. TEM 2. XRD 3. ICP/AES	
Personnel Decon Clean Room at Greenwich Street	1. Asbestos 2. Silica 3. Metals	ACM each work day. Alternate Silica & Metals	1. TEM 2. XRD 3. ICP/AES	
Rotating Basis at Negative Air Exhaust nearest interior abatement	1. Asbestos 2. Silica 3. Metals	ACM each work day. Alternate Silica & Metals	1. TEM 2. XRD 3. ICP/AES	
Blanks	1. Asbestos 2. Silica 3. Metals	2 blanks per day 1 blank per week 1 blank per week	1. TEM 2. XRD 3. ICP/AES	

Notes to Table 3:

Work Area Monitoring for Asbestos will be conducted under AHERA Rules and referenced to the 70 s/cc EPA Site Specific Trigger Level.

Work Area Monitoring for all COPCs will be referenced to the applicable OSHA Standard and the EPA Site-Specific Trigger Levels (Table 2).

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Attachment C

Quality Assurance Program Plan
133-135 Greenwich Street/21-23 Thames Street Deconstruction
Community Monitoring Program

Revision 1
Effective Date: August 11, 2005

Prepared By: _____ Date: _____

Clifford A. Cooper, CIH - Quality Coordinator

Reviewed By: _____ Date: _____

Michael Porter, Senior Project Manager

Approved By: _____ Date: _____

Benn Lewis, Vice President

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1.0 OVERVIEW

The Quality Assurance Project Plan (QAPP) documents the methods and procedures by which the Environmental Community Air Monitoring Plan (ECAMP) operations during the deconstruction activities at 133-135 Greenwich Street & 21-23 Thames Street (the Site) are implemented and assessed with respect to quality.

The ECAMP, which is used in conjunction with this QAPP, contains specifics about the numbers and types of samples to be collected, decontamination procedures, sampling procedures, and all field activities to be performed during this program.

The Airtek Industrial Hygiene Staff are assigned the responsibility of taking many environmental samples in support of our clients.

In order to use data gathered during sampling and analysis information about the samples must be tracked methodically. Sample tracking systems integrate all data and records that relate to one sample, from the field logs to the final analytical laboratory reports. Sample tracking provides a mechanism for Airtek personnel to determine the ongoing status of a given sample.

2.0 *SAMPLE TRACKING DATA MANAGEMENT*

Information gathering and tracking begins before the sample is taken and is completed when the final laboratory analysis results are accepted by Airtek. When information concerning a sample is obtained, it is entered into an electronic database. This information is available for review, generation of reports, or trend analysis. This procedure addresses the following activities and applies to all environmental samples collected as part of Airtek sampling programs:

- Sample initiation
- Chain of custody
- Sample tracking
- Collection input
- Lab analysis data input
- Data review
- Record keeping

2.1. *Definitions*

Chain-of- Custody Form (COC): A document that follows the sample from the point of assembly through sample shipment to final disposition. Custody of the sample is indicated on the document by signature and dates of possession.

Composite Collection Form: The document used by the Sample Collection staff to record field notes regarding composites. This form contains information about the composite which may not be given to the analytical laboratories such as site location, total sample volume, and flow through the composite sampler. This form is used only when the

collection contains composite samples. If the collection consists solely of grab samples all information is entered on the Sample Collection Form (see below).

Composite Sampler: A sampling apparatus which is used to collect a sample over time. Information associated with the composite sampler, for example sampling start and stop times, or total flow through the sampler, is recorded on the Composite Collection Form.

Data Manager: Individual responsible for the operation and maintenance of Airtek electronic data collection, storage, and reporting systems, including databases.

IH Quality Coordinator/QA Officer: Individual responsible for ensuring that sample shipments are complete and that all documentation is correct prior to shipment of the samples; coordinating sample shipments to and results reception from analytical laboratories; and ensuring that results reports are complete and received on time.

Sample Collection Form: The document used by the Sample Collection staff to record field notes regarding collected samples. This form contains information about the samples which may not be given to the analytical lab, such as sampling site location and sample collection notes. The Sample Collection Form is used in conjunction with the Composite Collection Form if the collection contains composited samples, or alone if the collection is composed solely of grab samples. In the former case information associated with the composite (such as flow data, total elapsed time, etc.) is recorded on the Composite Collection form, while information associated with the individual samples (such as any notes associated with the individual samples) would be recorded on the sample collection form.

Sample Collection Staff: Individual or group of individuals responsible for the collection of environmental samples.

Sample Team Lead: An individual within Airtek who is responsible for the routine sampling, analysis and reporting.

2.2 Responsibilities

2.2.1 Project Manager

- Manages the overall sample tracking and data management system.
- Assesses procedure implementation.
- Receives and checks all samples and chain-of-custody documents prior to shipment to analytical laboratories.
- Maintains hard copies of sample collection data.
- Monitors sampling activities.
- Establishes sample collection schedules and needed analyses.
- Resolves any questions regarding validity of samples.
- Coordinates sample submission to and results received from analytical laboratories
- Ensures all records identified by this procedure are retained and archived as specified in Section 7.3 of this procedure.
- Provides backup sample collection when required.

2.2.2 Sample Collection Staff

- Collects routine samples according to applicable policies and procedures (e.g., NIOSH, EPA, ASTM, OSHA)
- Collects all required quality control samples.
- Collects special investigation samples, as needed.

Asbestos
Certification
← Lead Certification

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- Prepares chain-of-custody document.
- Enters all required sample collection information into field log and database.
- Maintains and calibrates sampling equipment.

2.2.3 *IH Quality Coordinator / QA Officer*

- Ensures that this procedure is kept up to date.
- Assesses procedure implementation.
- Receives and checks all samples and chain-of-custody documents prior to shipment to analytical laboratories.
- Coordinates sample submission to and results received from analytical laboratories
- Ensures all records identified by this procedure are retained and archived as specified in Section 7.3 of this procedure.
- Provides backup sample collection when required.
- Maintains hard copies of sample collection data.

2.2.4 *Data Manager*

- Administers the sample tracking database.
- Resolves collection data entry problems and assists the Sample Team Lead with collection creation or modifications.
- Loads electronic result files into database and checks data for correctness and completeness.
- Develops reports for review of sample tracking information.
- Maintains electronic files of all sample data.

2.3 *Policy*

2.3.1 *Basic Health and Safety Policy:*

All Airtek personnel must comply with applicable OSHA health and safety policies and other applicable federal, state, and local fire, health, safety, emergency preparedness, pollution prevention, and environmental protection regulations and policies.

2.3.2 *Training Requirements and Documentation:*

All sampling personnel receive job-specific training by reviewing the appropriate procedures. At a minimum, this training consists of the following elements:

- Personnel safety and use of personal protective equipment
- Location of equipment and monitoring stations
- Monitoring and sampling equipment operation
- Sample handling and preparation
- In addition, commercially available generic training is taken, when needed.
- All training must be documented in the Berkeley Lab training database. All required documentation must be kept up to date.

2.3.3 *Analysis Requirements:*

NYSDOH | NVUAP?

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All samples must be analyzed by an analytical laboratory that is state-certified in the analytical methods appropriate for the samples being collected.

2.34 Equipment Maintenance and Inspection:

All equipment used for sampling and analysis must be routinely inspected and maintained to ensure its accuracy. Procedures for calibration and maintenance of Airtek sampling equipment can be found in manufacturers procedures. Calibration frequency is tracked in the IH Instrumentation and Calibration tracking log.

2.4 Procedure

Sample collections are documented using the Sample Collection Form and Composite Collection Form and each collection is divided into shipments, each of which has its own Chain of Custody Form. The shipments are sent to a commercial lab for analysis. Results are received via hard copy and/or electronic data deliverables, entered into the sample tracking database, and reviewed for completeness and accuracy. The following procedure describes the workflow for routine samples.

2.4.1 Sample Collection and Data Entry

Airtek Sample Team Lead

Specifies collection sites, samples, and frequency of collection.

Specifies analyses to be performed, analytical laboratories to be used, and required turnaround time for receipt of results.

Airtek Sample Collection Staff

Initiates collection in database and prints out Sample and Composite Collection Forms and sample vial labels.

Records all of the required information on the appropriate Sample and Composite Collection Forms while taking samples.

Enters data from the Sample and Composite Collection Forms into the database. Consults with the Sample Team Lead regarding questionable samples and ensures all questions regarding samples are resolved before proceeding. Generates and prints chain of custody documents.

Transfers samples and all documentation to the Airtek Quality Coordinator. Signs and records date and time on Chain-of-Custody Form under “Relinquished by.”

Airtek Project Manager

Accepts samples and documentation from Sample Collection Staff. Signs and records date and time on Chain-of-Custody Form under “Accepted by.”

Verifies samples collected and entries on sample collection and Chain-of Custody Forms for correctness and completeness. Resolves any problems with Sample Collection Staff, Sample Team Lead, and Data Manager as necessary.

2.4.2 Sending Samples to Analytical Laboratories

Airtek Project Manager

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Generates and prints shipping documents for samples being sent to commercial analytical laboratories.

Transports samples to Contract Laboratory; arranges with offsite laboratories for courier pickup; or arranges with Airtek Clerical Personnel for offsite shipment of samples.

Signs and records date and time on Chain-of-Custody Form under “Relinquished by.”
Relinquishes samples and Chain-of-Custody Form to the analytical laboratory representative or Shipping Department for common carrier .

Commercial lab representative

Accepts samples and Chain-of-Custody Form; signs and records date and time on form under “Received by.”

Completes analysis of samples.

Delivers sample results to Airtek Staff via electronic transfer or diskette to Data Manager and hard copy to Quality Coordinator.

2.4.3 Receipt of analytical results

Airtek Data Manager

Receives electronic data deliverables from analytical laboratories.

Loads data into database (electronically or manually).

Performs validation checks for timeliness, completeness and correctness on electronic results, after resolving or documenting all validation problems, passes electronic results to Sample Team Leads by advancing the data state to “Wait Authenticate.”

Airtek Quality Coordinator

Receives hard copy results reports from analytical laboratories.

Reviews hard copy results for timeliness and completeness.

Passes results to appropriate Sample Team Leads, if requested.

2.5. Quality Control

2.5.1 Airtek Data Manager

Performs validation checks for timeliness, completeness and correctness for all electronic data.

Reviews Quality Assurance Quality Control (QA/QC) measures such as percent recoveries, duplicate analyses and laboratory blanks reported in the data entered into the database.

2.5.2 Airtek Quality Coordinator/QA Manager

Performs validation checks for timeliness, completeness and correctness for all hard copy data reports.

↑ Do the field logs contain observations of

activities and monitors
notes if so separate
here.

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Reviews Quality Assurance Quality Control (QA/QC) measures such as percent recoveries, duplicate analyses and laboratory blanks reported in the hard copy data reports.

2.6 Records

2.6.1 Records Created

The following records may be created by this procedure:

- Sample and Composite Collection forms and/or field logs
- Chain-of-Custody Forms
- Shipping documents
- Laboratory analysis results
- Electronic files.

2.6.2 Records Retention

The Airtek Quality Coordinator retains hard copies of all the records created by this procedure.

The Data Manager maintains electronic records and ensures that periodic backups and archiving of electronic files is done.

2.6.3 Records Care and Maintenance

The Airtek Quality Coordinator is responsible for the care, maintenance, and disposition of records according to Airtek record management policies and procedures.

Records must be retained in an organized system so that the records are protected and easily accessed when needed.

2.6.4 When Records Transferred to Archives for Storage

All records created by this procedure are reviewed after three years for transfer to the Airtek Archives.

3.0 QUALITY ASSURANCE PROCEDURES

All samples will be immediately placed in storage/transport containers or housings following completion of the sampling period and prior to being recorded on chain-of-custody forms and placed in chilled coolers. Samples will be preserved according to the specific method requirements and delivered to the laboratory within 24 hours of collection.

Daily field audits will be carried out by a designated QA Coordinator to ensure compliance during the performance of the sampling procedures. QA Coordinator will note and will bring to the attention of the Field Manager and the Project Manager any deviations from the approved plans. All deviations will be recorded in the QA Coordinator's log and in the field notebook of the sampling team being audited.

Examples of non-compliance include not wearing appropriate PPE; Improper documentation; Failure to collect field blanks or duplicates; Improper sampling equipment; Unauthorized changes in sampling locations or sampling procedures; Improper field equipment decontamination; not properly calibrating equipment; and improper handling of samples or equipment.

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The following QA/QC documentation must be met for all samples:

- Sample documentation (location, date and time of collection, etc.);
- Chain of Custody;
- Initial and continuing calibration;
- Sampling design approach;
- Determination and documentation of detection limits;
- Analyte(s) identification;
- Analyte(s) quantification;
- QC and Performance Evaluation samples.

3.1 Chain of Custody

All samples must be transferred without exception to the appropriate analysis station under chain of custody. Standard Chain of Custody must be used for this purpose.

3.2 Sample Shipment

Samples are to be treated in an appropriate and suitable manner for delivery to the analytical laboratory. All packaging and labels shall comply with Federal Department of Transportation regulations as provided in 49 CFR 171-178. Specific requirements for sample shipment are outlined in the QAPP.

3.3 Quality Assurance Manual Methods for PM₁₀

These are measures Airtek staff take to ensure the quality of data from manual PM₁₀ samplers. The same procedures may be used for TSP and lead samplers when monitoring for those. Because of US EPA requirements, a different set of procedures is used for PM_{2.5}. A manual PM monitoring system consists of a sampling system at the site, an analysis system at a central location and a transportation system to get the sample filters from one to the other.

The sampling system consists of a sampler (one or more at each site) and a human sample collection staff who loads new (unexposed) filters into the sampler, sets it to sample the filter for 24 hours (normally midnight to midnight) on a specified day, and retrieves the exposed filter afterward.

The gravimetric analysis system consists of a laboratory balance and a human analyst trained to operate it. The weighing should take place in controlled temperature and humidity. Before being weighed, both unexposed and exposed filters must be conditioned for at least 24 hours in this environment.

The unexposed and exposed sample filters are transported in their cartridges to reduce the chance of contamination.

- **Traceability of standards:**
 - flow: orifices certified against a NIST-traceable displacement meter
 - pressure drop: manometers certified NIST-traceable annually

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- masses and balances NIST-traceable
- temperature and pressure NIST-traceable
- **Calibrations:** The sample collection staff performs a multi-point flow calibration of each particulate sampler using an orifice unit (quarterly, after maintenance or repairs and when indicated).
- **Precision checks** through collocation: A second sampler is placed the monitoring station.
- **Performance audits:**
 - Quarterly audits: An IH Quality Coordinator does a one-point flow audit quarterly on all samplers, using a different orifice unit than the one used to calibrate the sampler.
- **Data audit:** Data Manager reviews all the data for anomalies.

3.4 Quality Assurance for $PM_{2.5}$

These are measures to ensure the quality of data gathered using manual samplers of $PM_{2.5}$. (Speciated $PM_{2.5}$ sampling is done under a different set of procedures.) A manual $PM_{2.5}$ monitoring system consists of a sampling system at the site, an analysis system at a central location and a transportation system to get the sample filters from one to the other.

The sampling system consists of a sampler (one or more at each site) with attached temperature and pressure instruments and a human operator who loads new (unexposed) filters into the sampler, programs it to sample each filter for 24 hours (normally midnight to midnight) on a specified day, and retrieves the exposed filters afterward. "Sequential" samplers may be used, capable of automatically changing filters to sample for several days in a row. Sequential samplers can run continuously, except for maintenance and QA checks.

The gravimetric analysis system consists of a microbalance in a climate-controlled weighing room and a human analyst trained to operate it. The weighing must take place within a narrow range of temperature and humidity. Before being weighed, both unexposed and exposed filters must be conditioned for at least 24 hours in this environment.

The exposed sample filters are transported in a cooler to limit the loss of volatile material, and are then kept in a refrigerator if they are cannot be weighed within 10 days of sampling (they still must be weighed within 30 days of sampling to be valid). Unexposed filters are taken out to the site under similar controlled conditions (usually in a cooler, although this is not necessary).

- **Data requirements:**
 - 75% data recovery.
 - Data quality objective: 10% coefficient of variation. The coefficient of variation, CV, is the standard deviation as a fraction of the mean:

$$CV = \frac{s}{\bar{x}}$$

- **Measures of Accuracy and Bias:**

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- Check of flow rate (quarterly)
- Audit by collocation with a portable FRM sampler.
- **Measures of Precision:**
 - Check of flow rate (every 2 weeks)
 - Collocation (see below).
- **Collocation:**
 - Monitors have a second monitor collocated at the same site, rotated between sites.
 - The second ("duplicate") sampler runs every 6 days.
 - Collocated particulate samplers must be less than 4 m apart but more than 1 m apart.

The PM_{2.5} sampler requires enhanced quality control measures because of its unique design and operational attributes. Examples of these QC measures include:

- Filter equilibration temperature control of +/-2 °C over 24 hours
- A pre-sampling filter weighing within 30 days of sampling period
- Retrieving the filter from the sampler within 96 hours of collection
- A post-sampling filter equilibration and re-weighing within 240 hours after the sampling period

The precision check for manual methods is based on a comparison of the concentrations measured by two samplers that collected data side-by-side during the same specific time period. To ensure that the two collocated samplers duplicate similar conditions during monitoring specific rules are enforced: The two collocated PM_{2.5} samplers must be within 4 meters of each other and particulate matter samplers must be at least 1 meter apart to preclude airflow interference. This 1-meter separation is based on the low volume of sampling. Currently, the PM_{2.5} FRM monitors have a sampling volume of 16.67 L/min. At low concentrations, agreement between the measurements of collocated samplers, since they are expressed as percent differences, may be relatively poor. For this reason, collocated measurements are selected for use in the precision calculations only when both measurements are above 6 g/m³ for PM_{2.5}.

The accuracy check for manual methods involves checking the flow rate of the sampler each calendar quarter.

3.5 Quality Assurance for Gaseous Pollutants

These are some of the measures AIRTEK staff take to ensure the quality of data from the continuous gas analysis systems. A "monitoring system" for a given pollutant at a given site usually consists of an inlet tube (called a "probe"), an automatic electronic analyzer and a data acquisition system (possibly connected to multiple instruments) and/or a strip chart recorder.

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- **Traceability of standards:**

- Gaseous pollutant concentration standards (in compressed-gas cylinders or in permeation tubes) traceable to a NIST-traceable reference material (NTRM) or to a NIST-certified gas manufacturer's internal standard (GMIS)
- Ultraviolet photometers (for ozone) certified against a NIST-certified reference UV photometer at EPA
- mass flow meters (inside multigas dilution/gas phase titration calibrators) certified traceable to NIST standards
- flow calibrators (bubble meters and/or dry flow calibrators) certified NIST-traceable
- temperature, pressure, etc. certified NIST-traceable

- **Multipoint calibrations:** The sample collection staff notes the monitoring system's response to multiple known concentrations, adjusting the system if necessary to read correctly. This is done quarterly, after maintenance or repair and when a zero/span check is out of range.

- **Zero/span checks:** The sample collection staff or an automated system records the monitoring system's response to pure air, then to a concentration near its upper range limit (at least once every 2 weeks).

- **Precision checks:** The sample collection staff or an automated system records the monitoring system's response to a known concentration of a roughly consistent value (every 2 weeks). (In practice, this is usually combined with the zero/span check.)

- **Performance audits:**

- Quarterly audits: The IH Quality coordinator using a different calibrator and different gas standards (or a different photometer) notes the monitoring system's response to multiple concentrations. Normally, this is done quarterly for each monitor.

- **Data audit:** Airtek Data Manager (not the operator of the monitoring system in question) verifies the highest and one random hourly reading each day for each parameter, and reviews all the data for anomalies.

4.0 DATA REPORTS

The laboratories shall provide all deliverables in a format that will allow ready compilation and assessment of the data, as appropriate. The laboratory will report all quality control sample results for each batch of samples. The laboratory will not know which samples are duplicates and will report them as primary samples. Data for all samples will be provided with a copy of the Chain of Custody form. For each record sample, the laboratory report will include, at a minimum:

- Sample identification number assigned by the field sampling team;
- Date the sample was collected;
- Date the sample was extracted;
- Date the sample was analyzed;
- List of all target analytes for the method that lists the following data for each target

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analyte:

- quantity (concentration) found in sample,
- units of measure (e.g., micrograms per liter, milligrams per kilogram),
- detection limit with unit of measure,
- analytes reported below detection limit, etc.; and
- Non-conformance summary identifying any known failure to comply with the QAPP or Sampling and Analysis Plan such as the following:
 - exceeded holding times,
 - failure to achieve required detection limits,
 - poor surrogate recovery or poor duplicate precision,
 - unidentified samples or custody forms,
 - broken custody seals, and
 - uncalibrated or improperly calibrated instruments.

4.1 Laboratory Reports and Chain of Custody Forms

The laboratory will send copies of reports to the Airtek QA Officer for data validation and a copy to the Airtek Project Manager for the project files. These reports will include a copy of the Chain of Custody form. The laboratory will retain a copy of all data reports and Chain of Custody forms.

5.0 DATA VALIDATION AND QUALITY ASSURANCE AUDIT

This section outlines the procedures necessary for the data validation and quality assurance audit, which ensures the accuracy of the results.

5.1 Data Validation

Data validation is a systematic procedure of reviewing a body of data against a set of established criteria so as to provide a specified level of assurance of its validity prior to its intended use. The review of the data will include an audit of the quality control samples—the laboratory's method blanks, field blanks, spikes, and surrogate recoveries. These quality control samples allow a direct check on the variability in the methods of analysis and sampling and in the sample matrix itself. The data will be reviewed by the laboratory's QA Officer for compliance to the technical specifications and completeness. The laboratory will provide a non-conformance summary as appropriate for the analytes determined. Included in the non-conformance summary will be notification of sample receipts. This will include information regarding problems with sample packaging, Chain of Custody and sample preservation. A preliminary review for deviations from method protocols including holding times, surrogate recoveries, and spike recoveries will be reviewed.

The QA Officer will evaluate a number of criteria including the following:

- Chain of Custody completeness;
- Analyses completed versus analyses planned;
- Time held versus holding times;
- Laboratory blanks (method and instrument);
- Laboratory Control Sample;
- Trip and field blank results; and
- Duplicate analyses precision.

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Deficiencies discovered by the contracted laboratory QA Officer will be documented and communicated to the Airtek QA Officer, the Project Manager, and the Laboratory. The impact of deficiencies on use of the data will be evaluated by the Airtek QA Officer and the Project Manager.

5.2 Laboratory Audits

During the laboratory analyses, Airtek QA Officer will be in direct contact with the laboratory to check on the project status. Any technical concern will be discussed during these updates, and formalized in writing by the contracted laboratory. A telefax may be used. Any significant problems impacting either the holding times, or the analytical methodologies, or the deliverable package will be determined.

5.3 Field Audits

The purpose of QA field audits is to ensure compliance with the approved SAP and QAPP. During the performance of the sampling procedures, the QA Officer will make on site audits. Deviations from the approved plans will be brought to the attention of the Field Manager and the Project Manager. All deviations will be recorded in the QA Officer's log and field notebook of the sampling team being audited. Examples of non-compliance or deviations from the plans are given below:

- Not wearing appropriate PPE;
- Improper documentation;
- Failure to collect field blanks or duplicates;
- Improper sampling equipment;
- Unauthorized changes in sampling locations or sampling procedures; and
- Improper field equipment decontamination.

6.0 CORRECTIVE ACTION

If the validity of the data should become suspect during performance of the QA/QC procedures identified in this plan, then corrective actions will be initiated. The actual trigger, as well as the form of the appropriate corrective action, is dependent on the specific method/procedures, time at which the error was detected and the type of the error that has occurred. For analytical instruments, the corrective action may include:

- Recalibration or standardization of the instrument;
- Preparation of new standards; Repair or replacement of equipment, including columns, detectors, etc.; and
- Reanalysis of samples.

The laboratory's internal Standard Operating Procedures define corrective action. These procedures will be requested by all laboratories providing analytical services to Airtek under this project and will be appended to the QAPP when received.

Upon determining that deviations from the prescribed protocols contained in the QAPP have occurred, the Laboratory Data Validation Officer will be notified. Within 48 hours, written confirmation of the occurrence and the corrective action taken will be provided to the client.

Site logs.

Part III

Health and Safety Plan
for
133-135 Greenwich/21-23 Thames Street
Abatement Phase Decontamination Project

Prepared for:

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abatement and | |

1.0 INTRODUCTION

This Health and Safety Plan (HASP) presents the practices and procedures that the Contractor shall implement and enforce during the deconstruction of the buildings located at 133-135 Greenwich/21-23 Thames Street in New York City (the Buildings). This HASP will be applicable to all persons entering the Buildings and to all persons working in and around the Buildings. The deconstruction of the Buildings will occur in two phases:

The Abatement Phase of the Deconstruction Project will occur while the work area is placed under negative pressure containment and includes the following general categories: (a) the general area cleanup of WTC dust and debris, (b) removal and disposal of installed porous and certain non-porous building materials and components, (c) cleaning and salvage of certain installed non-porous building equipment and components, (d) removal of building materials containing asbestos which were present in the Building prior to September 11, 2001 (referred to herein as “ACBM”), primarily within the Building interior, (e) packaging of asbestos and other regulated waste at generation points, movement of containers to the decontamination unit and movement of decontaminated containers to waste loading by hand.

The proposed clean-up and abatement will be conducted so that the Building can be safely deconstructed in compliance with applicable law to allow for redevelopment of the site. This HASP covers the activities to be undertaken as part of the Abatement Phase; a separate HASP will address Conventional Demolition Phase Deconstruction activities.

The Contractor shall be supported on this project by the Owner’s Environmental Consultant who will provide environmental testing, air sampling and asbestos project monitoring and serve the function of Environmental Consultant/Project Monitor.

1.1 BACKGROUND

The events of September 11, 2001, which caused the destruction of the WTC Towers generated massive debris and dust. While not physically damaged, some of this WTC dust entered into the 133-135 Greenwich/21-23 Thames Street Buildings. The Buildings had been partially reoccupied after September 11, 2001 following clearance of debris and unspecified cleaning to permit re-occupancy.

1.1.1 Environmental Characterization

The Owner contracted with Airtek Environmental Corp. to conduct Asbestos Surveys and General Building Characterization for the 133-135 Greenwich/21-23 Thames Street buildings. Due to the proximity of these buildings to the WTC, and the extensive environmental tests carried out at the adjacent 130 Liberty Street (Deutsche Bank) Building, it is assumed for the purpose of this HASP that similar potentially contaminated WTC dust is present at this site. The settled dust in and on the Building may contain elevated levels of five COPCs designated by the United States Environmental Protection Agency (USEPA) as being associated with the WTC

Should there be a discussion
here about the other bldgs near
the other side.

but not limited to | |

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dust (asbestos, dioxin, lead, polycyclic aromatic hydrocarbons [PAHs], and crystalline silica) as well as other contaminants suspected of being present in the Buildings including polychlorinated biphenyls (PCBs) and heavy metals (antimony, barium, beryllium, cadmium, chromium, copper, manganese, mercury, nickel and zinc).

The Owner has retained Airtek Environmental Corp. to conduct Environmental Investigations of the buildings for additional unidentified asbestos containing building materials (ACBM). These environmental reports are included as Attachment 2 to this HASP.

The requirements outlined within this Abatement Phase Health and Safety Plan are based upon the data collected to date. As additional information is obtained during the course of the Phase I activities, these requirements will be amended if necessary to protect workers or the public.

1.2 SITE DESCRIPTION

The Property is currently developed for a combination of commercial and multi-family residential use. The Property includes a vacant two-story commercial building that was constructed on the northwestern portion of the Property circa 1980. The building was most recently occupied by a pizza shop, a coffee shop, a Japanese restaurant, an Indian restaurant, a shoe repair shop, and second floor professional (doctors') offices. The Property also includes a vacant five-story building that was constructed on the southeastern portion of the Property prior to 1894. This building includes two ground floor tenant spaces most recently occupied by a sandwich shop, a Western Union office, and approximately eight residential units.

The Property is located within the urban commercial downtown Financial District of Manhattan, New York City, immediately south of the former World Trade Center site and adjacent to the vacant Deutsche Bank Building. The Property is bound to the northwest by the Deutsche Bank building (1-13 Albany Street; 122-146 Greenwich Street; 126-138 Liberty Street; 133-151 Washington Street; and 1 Bankers Trust Plaza), a vacant high-rise commercial building that was heavily damaged by the September 2001 terror attacks.

1.3 PURPOSE

This document presents the safety procedures and practices to be followed during all Abatement Phase site activities to ensure the safe completion of tasks. The procedures and practices herein are designed to prevent occupational injuries and exposures to chemical, physical and biological hazards to workers at the Site. The procedures are presented to ensure compliance with all applicable government agencies and regulations, including requirements and protocols established by: the Occupational Safety and Health Administration (OSHA); the National Institute of Occupational Safety and Health (NIOSH); the United States Environmental Protection Agency (USEPA); the New York State Department of Conservation (NYSDEC); the State of New York, New York State Department of Labor (NYSDOL); the New York City Department of Environmental Protection (NYCDEP); and the City of New York.

including personal,
environmental samplings & field data

and consultation with
regulatory agencies & others w/ jurisdiction

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This document incorporates relevant health and safety guidance developed for the Lower Manhattan Development Corporation's 130 Liberty Street building Phase I Deconstruct Project as described in their May 2005 Health and Safety Plan for that project.

Compliance with this HASP is required due to hazards associated with the Buildings' current condition and anticipated Abatement Phase activities. This HASP is based upon current knowledge of conditions at the Site and will be updated as new information becomes available and/or conditions change within the Building.

2.0 HEALTH AND SAFETY PROCEDURES

This section identifies the principal hazards associated with the tasks to be performed during the cleaning, asbestos and COPC abatement, and interior component removal activities, and establishes standard safety and health procedures for the Contractor, the Subcontractors and anyone who comes onto the site. The content of this HASP is designed to anticipate, identify, evaluate, and control safety and health hazards for the work activities to be performed during this project. All on-site work activities by any Subcontractors and their designees shall be performed in accordance with this HASP, and in accordance with applicable federal, state, and local regulations.

The levels of personal protection and the procedures specified in this Plan are based on the best information available from validated reference sources (i.e., OSHA, NIOSH) and current site data. Therefore, the guidelines presented in this HASP represent the minimum health and safety requirements to be observed by all on-site personnel engaged in this project. Discovery of currently unknown site conditions or changes in the scope of work will necessitate the reassessment of the protection levels, controls, and procedures stated herein. All amendments to this HASP must have prior written approval by the Environmental Consultant's Certified Industrial Hygienist (CIH) and the Contractor's Project Manager.

2.1 PERSONNEL RESPONSIBILITIES

The Contractor, Subcontractor and other personnel on-site shall review and understand this document prior to working on-site.

All personnel shall:

1. Participate in initial site orientation/training as described in Section 2.9.1, and daily safety meetings, and shall provide any required documentation, medical clearance, fit test, asbestos certification, etc. prior to starting work on the site. Documentation requirements are determined by activities to be performed.
2. Sign the HASP Acknowledgement Form and other required documents after orientation to indicate that they participated in orientation and understood the information presented in orientation.

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3. Follow the designated safety and health procedures; be alert to the hazards associated with working on the site, and exercise reasonable caution at all times.
4. Any questions or concerns about this HASP shall be directed to the on-site Contractor and/or the Site Safety Officer.
5. Take all reasonable precautions to prevent injury to themselves and to their fellow employees, and being alert to potentially harmful situations.
6. Obey all applicable laws and regulations relating to health and safety.
7. Ensure that activities do not impact the neighboring community.
8. Perform only those tasks that they have been trained to complete and can do safely.
9. Notify their supervisor of any special medical conditions (i.e., allergies, contact lenses, diabetes) that may affect their ability to perform certain tasks.
10. Notify their supervisor of any prescription and/or non-prescription medication that they may be taking that might cause drowsiness, anxiety, or other unfavorable side affects.
11. Learn and comply with Site security requirements.
12. Comply with the Site's prohibition on drug and alcohol use, smoking, horseplay, and restricted eating/drinking areas.
13. Practice good housekeeping by keeping the work areas neat, clean and orderly.
14. Immediately reporting all injuries, incidents and near-misses to the designated supervisor.
15. Properly use PPE specified by the contractor and this HASP, based on the results of air monitoring.
16. Properly maintain their designated PPE per manufacturers' recommendations.
17. Comply with the HASP and all health and safety recommendations and precautions.
18. Notify their supervisor of any Site conditions or concerns which are not addressed by the protective measures specified in this HASP, or which are addressed but the employee does not understand the protective requirements specified herein.

2.1.1 Contractor

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1. The Contractor Project Manager shall have overall responsibility for ensuring health and safety protection on the site and for ensuring that all elements of the HASP are implemented during all phases of the daily on-site activities of this project.
2. The Contractor Project Manager shall oversee the Contractor's responsibility to monitor for visible emissions.
3. The Contractor shall notify the Environmental Consultant's CIH of any need to change or amend any aspect of this HASP and/or seek input with regard to interpretations of the HASP in concert with the designated Safety Officers of the Subcontractors.
4. The Contractor shall consult with and coordinate any modifications to the HASP with the Environmental Consultant's CIH; will recommend corrective actions for identified deficiencies; and will oversee the implementation of any corrective actions.
5. The Contractor shall coordinate the health and safety activities of all the Contractor and Subcontractor personnel to ensure the requirements of the HASP are followed and shall communicate with all parties when changes occur on-site or when conditions impacting the site occur concerning the response actions to be taken.
6. The Contractor shall direct the implementation and enforcement of this HASP and consult with the Subcontractors regarding the health and safety procedures and practices to be used on this project.
7. The Contractor shall enforce the requirements of this HASP with respect to health and safety, air monitoring requirements and waste management requirements.
8. The Contractor shall perform on-site training and the day-to-day on-site implementation and enforcement of the HASP.
9. The Contractor shall ensure site compliance with federal/state/local regulations and all aspects of this HASP including, but not limited to; Performing activity hazard analyses, Providing guidance concerning the use of PPE, Ensuring site control, Developing standard operating procedures to minimize hazards such as the use of engineering controls.

10. Provide PPE FOR EMPLOYEES
AUTHORIZED VISITORS
LEG.

2.1.2 Contractor's Site Safety Officer (CSO)

1. The Contractor shall have a Site Safety Manager (CSO) on-site during the project on a full time basis for the entire duration of on-site field activities. If operations are performed during more than one work shift per day, a qualified Contractor Site Manager shall be present for each shift.
2. The CSO shall have authority to stop any and all work activities if unacceptable health and safety conditions exist or if actions occur that may affect safety and health conditions for personnel or the environment. The authority to stop work shall include an automatic work stoppage if visible emissions leave the Site perimeter.

but should verify that
the subcontractor did it.

certification check
req. for abatement phase

are there any permit
confined spaces? or not

is the plan to have each
sub-submit a plan for
review - Reconsider?

During abatement phase
Supervisor must be on site
during all work - certified

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3. The CSO shall act as the primary contact during any on-site emergency situation.
4. The CSO shall conduct accident investigations and prepare accident reports, prepare and maintain records of corrective actions taken on-site and document health findings into a project-dedicated logbook
5. Additionally, the CSO is responsible for logging all site visitors, checking for current medical and fit test certifications and applicable federal/state/local asbestos training for all those entering containment. The CSO does not provide specialized training for specific cleaning, abatement or interior component removal portions of the work. This shall be provided by each Subcontractor for its personnel.
6. The CSO shall document each orientation performed and requires that each person receiving the orientation complete, sign and date the HASP acknowledgement.
7. The CSO shall review the following documentation from each Subcontractor to complete the administrative record for the site: name of Subcontractor's safety officer; list of emergency contact phone numbers; confirmation of current worker fit tests, medical clearances and asbestos training for each Subcontractor employee; and Subcontractor HASP, including Hazard Communication Program, Fall Protection Program, Respiratory Protection Program, personal air monitoring program, and confined space program (when necessary).

2.1.3 Owner's Environmental Consultant

The Owner's Environmental Consultant shall provide a Certified Industrial Hygienist (CIH) and field industrial hygiene personnel during the project fieldwork. The CIH shall manage developing and modifying this HASP, directing field industrial hygiene personnel responsible for the execution and monitoring of any health and safety activities at the site, review of monitoring data generated during the site work, walk-through safety and health spot field inspections, and advising the Owner and Contractor of unacceptable conditions identified that may affect safety and health for personnel or the environment. The responsibilities of the Owner's Environmental Consultant shall include monitoring for visible emissions as detailed in the Environmental Monitoring Specification.

2.1.4 Subcontractors

Each Subcontractor on the job is responsible for:

1. Preparing a Subcontractor HASP specific for their scope of work (SOW).
2. Having a supervisor on-site who understands the scope of the work to be performed, potential health and safety issues associated with that SOW and the strategies for managing and controlling the health and safety issues.

This statement reads like
both the Safety Officer & the
Attorney will be onsite.

Identify somewhere in
the plan how many contractors
are expected on the site

for some subs - they
won't have anyone in this
job category.

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3. Planning all work activities to prevent personal injury, health impairment and property damage.
4. Providing a Subcontractor Safety Officer and Alternate Safety Officer who shall remain on-site for the entire duration of the Subcontractor's SOW and ensure employee compliance with the provisions of this HASP and the Subcontractor HASP.
5. Ensuring that Subcontractor personnel are qualified to perform the SOW that they are assigned.
6. Communicating with the Contractor personnel and other potential affected Subcontractors when work on-site conditions are identified that can impact health and safety on the job.
7. Ensuring training (asbestos, HAZWOPER, Hazard Communication, etc.) of the Subcontractor's employees in the recognition, avoidance and control of chemical, biological and physical hazards present at the Site.
8. Maintaining records for Subcontractor employees as required by this HASP (including but not limited to) medical, training and fit-test records.
9. Providing daily health and safety briefings to their personnel.
10. Providing specified PPE, including training for correct use and maintenance of that equipment.
11. Providing adequate weather protective gear for their personnel as required for their work activities.
12. Maintaining a system of prompt detection and correction of unsafe practices and conditions for their SOW and employees.
13. Ensuring that Subcontractor's subcontractors and suppliers comply with the conditions of this HASP upon entrance to the Site.
14. Collecting personal air samples for both asbestos and other COPCs for HASP and OSHA compliance. Each Subcontractor's CIH or qualified Industrial Hygienist (IH) is responsible for the development and implementation of a personal air-monitoring program in accordance with OSHA Standard 29 CFR§1926.1101 and 29 CFR §1910.1000 and good industrial hygiene practices.

2.2 HEALTH AND SAFETY HAZARD ANALYSIS AND RISK ASSESSMENT

2.2.1 Preliminary Evaluation

boom lift | | | | |
↓

includes perimeter site
monitoring and community
← monitoring.

Maintenance of | | | |

General Deconstruction
after abatement ^{under} separate

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The work to be conducted at 133-135 Greenwich/21-23 Thames Street comprises construction activities and, as such, falls under Title 29 of the Code of Federal Regulations, Part 1926 (29 CFR 1926), the OSHA Construction Standard.

An evaluation of the anticipated general work activities was performed (discussed later in this section) that included a Hazard Analysis for each general task/activity to identify associated hazardous conditions, appropriate employee protection methods and PPE requirements. The evaluation of potential site conditions and activity hazards is an ongoing process and shall continue throughout the duration of the project.

Potential hazards during the Abatement Phase effort include the following:

- Physical – Excessive noise; inclement weather; heat stress; cold stress; manual lifting; slips and falls; structural integrity; working at elevation; electrical safety; heavy equipment operation; and other general construction hazards.
- Chemical – Asbestos, silica, PAHs, dioxins, man-made vitreous fibers (MMVF), antimony, cadmium, nickel, lead, barium, chromium, zinc, manganese, copper, beryllium, PCBs, mercury, copper, zinc, cristobalite and quartz.
- Biological – Mold; rodents; insects.
- Radiological – None anticipated.

2.2.2 Task Hazard Analysis

The scope of work for the 133-135 Greenwich/21-23 Thames Street project consists of three general tasks, as follows:

- Task 1: Environmental Consultant monitoring including work area air sampling during Phase I activities; clearance air sampling when cleaning of each floor is completed; and waste characterization sampling.
- Task 2: Maintain temporary services including water risers, fire protection systems building communication system, GFCI protected electrical systems
- Task 3: General area cleanup of WTC dust and debris, which shall be treated as asbestos (at a minimum) and which may contain other COPCs; removal and disposal of installed porous and certain non-porous building materials and components contaminated by WTC dust and debris; cleaning and salvage of certain installed non-porous building equipment and components contaminated by WTC dust and debris; removal of ACBM primarily within the Building interior; and cleaning of the exterior surfaces of the buildings.

should also incl. site procedures that Contractor should incl.

↳ Respiratory Protection / PPE

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Table 2-1

Task 1: Environmental Consultant Air Monitoring and Waste Characterization

Equipment Required: Air sampling equipment, Waste Characterization e.g. (scoops, bowls, scale, safety blades, sample containers), PPE

Subtask #	Activities	PPE Requirements	Hazards	Preventative Mechanism	Procedure**
1	Mobilization (Transporting employees, materials and equipment to site)	Level D	Use of vehicles	Vehicle and driving safety	Contractor Specific
2	Unloading equipment on the ground level	Level D	Lifting	Proper lifting techniques	Contractor Specific
			Site Security	Site Security	Contractor Specific
			Pinch points	Materials Handling	Contractor Specific
			Insects	Biological hazard monitoring	Contractor Specific
3	Waste Characterization Sampling	Level C***	Chemical COPC	Hazard Communication PPE	Contractor Specific
			Heat Stress	Heat monitoring	Contractor Specific
			Cold Stress	Cold monitoring	Contractor Specific
			Slip, trip, fall	Housekeeping	Contractor Specific
			Trespassers	Site Security	Contractor Specific
			Pinch Points	Materials Handling	Contractor Specific
			Hand Tools	Proper use techniques	Contractor Specific
			Inadequate lighting	Illumination	Contractor Specific
4	Area air sampling during abatement activities	Level C***	Asbestos, Silica & Metals	Avoidance Monitoring	Contractor Specific
			Noise	Hearing Protection	Contractor Specific
			Heat Stress	Heat monitoring	Contractor Specific
			Cold Stress	Cold monitoring	Contractor Specific
			Slip, trip, fall	Housekeeping	Contractor Specific
			Trespassers	Site Security	Contractor Specific
			Pinch Points	Materials Handling	Contractor Specific
			Hand Tools	Proper use techniques	Contractor Specific
			Inadequate lighting	Illumination	Contractor Specific
			Mold	Avoidance	Contractor Specific
5	Clearance air sampling	Level C***	Asbestos	Avoidance Monitoring	Contractor Specific
			Chemical COPC	Hazard Communication PPE	Contractor Specific
			Heat Stress	Heat monitoring	Contractor Specific
			Cold Stress	Cold monitoring	Contractor Specific
			Slip, trip, fall	Housekeeping	Contractor Specific
			Trespassers	Site Security	Contractor Specific
			Pinch Points	Materials Handling	Contractor Specific
			Hand Tools	Proper use techniques	Contractor Specific
			Inadequate lighting	Illumination	Contractor Specific
			Asbestos	Avoidance Monitoring	Contractor Specific

*As described in Section 2.5

** Procedures are part of Contractors Safety Program

***Per 2.7.2 Personal Monitoring

+ breaks, fluids etc.
layers, gloves, covering.

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Task 2: Maintaining Temporary Services

Equipment required: Hand and power tools, ladders, PPE

Subtask #	Activities	PPE Requirements*	Hazards	Preventative Mechanism	Procedure**
1	Mobilization (Transporting employees, materials and equipment to site)	Level D	Vehicle Incidents	Vehicle and driving safety	Motor Vehicles and Equipment Program
2	Unloading equipment on the ground level	Level D	Lifting	Proper lifting procedures	
			Heat Stress	Heat monitoring	
			Cold Stress	Cold monitoring	
			Slip trip fall	Housekeeping	Housekeeping Program
			Trespassers	Site security	
			Pinch points	Materials handling	
			Hand tools	Proper use techniques	
3	Maintain basic utilities to include: Temporary GFCI protected electrical systems Elevator Operation stand pipe Building communication system, etc.	Level C ***	Chemical (OPC plus plumbing chemicals)	Hazard Communication PPE	Hazard Communication Program, 29 CFR 1910.120 (a) (1)
			Slip trip fall	Housekeeping	Housekeeping Program
			Pinch points	Materials handling	
			Work from elevation	Fall protection, Proper ladder use.	Elevated work-Fall Protection Program
			Hand tools	Proper use techniques	
			Hot Work	Hot Work permitting Fire prevention	Welding, Cutting and Burning - Hot-Work Procedure
			Wet feet	Avoidance techniques	
			Electrical safety	Electrical safety - LOTO	Electric - Temporary
			Stored hazardous energy	LO TO program	Lockout Tagout Procedures
			Elevator malfunction	Maintain certification and operate according to manufacturer instructions	

*As described in Section 2.5

** Procedures are part of Contractor's Project Safety Plan.

*** Per 2.7.2 Personal Monitoring

Asbestos Restricted Handler or
HANDLER.

Note - More than one Contractor
to use ~~in scaffold~~ - Air Monitor +
Abatement - Do you expect both to
cover - who reviews for the consistency

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Task 3: General area cleanup of WTC dust and debris which, as stated by the Regulators, must be treated as asbestos (at a minimum) and which may contain other COPCs; removal and disposal of installed porous and certain non-porous building materials and components contaminated by WTC dust and debris; cleaning and salvage of certain installed non-porous building equipment and components contaminated by WTC dust and debris; removal of ACBM primarily within the Building interior; packaging of regulated waste at generation points; movement of containers to decontamination unit and movement of decontaminated containers to waste loading area; and cleaning of the building's exterior surfaces.

Equipment required: Heavy cleaning equipment, HEPA vacuums, hand/power tools, ladders, scaffolding, lifting equipment, PPE

Subtask #	Activities	PPE Requirements*	Hazards	Preventative Mechanism	Procedure**
1	Mobilization (Transporting employees, materials and equipment to site)	Level D	Vehicle use	Vehicle and driving safety	Contractor Specific
2	Unloading equipment on the ground level	Level D	Lifting Heat Stress Cold Stress Slip trip fall Trips/falls Pinch points Hand tools	Proper lifting techniques Heat monitoring Cold monitoring Housekeeping Site security Materials handling Proper use techniques	Contractor Specific Contractor Specific Contractor Specific Contractor Specific Contractor Specific Contractor Specific Contractor Specific
3	Constructing containment areas and placing air handling units on the floors	Level C***	Chemical COPC plus adhesives Heat Stress Cold Stress Use of ladders Noise Slip trip fall Electrical sources Lifting Pinch points Work from elevation Use of scaffolds Hand and power tools Inadequate lighting	Hazard Communication PPE Heat monitoring Cold monitoring Ladder safety Hearing protection Housekeeping Electrical safety - L.O. TO Proper lifting techniques Materials handling Fall protection Scaffold safety Proper use techniques Illumination	Contractor Specific Contractor Specific Contractor Specific Contractor Specific Contractor Specific Contractor Specific Contractor Specific Contractor Specific Contractor Specific Contractor Specific Contractor Specific Contractor Specific
4	Area cleanup of WTC dust and debris	Level C***	Chemical COPC Heat Stress Cold Stress High pressure water Electrical sources Pinch points Use of ladders Hand tools Noise Inadequate lighting Asbestos Lead PCBs Mercury Other chemicals Mold Crane Lifting Equipment	Hazard Communication PPE Heat monitoring Cold monitoring Pressurized systems Electrical safety - L.O. TO Materials handling Ladder safety Proper use techniques Hearing protection Illumination Avoidance monitoring PPE Avoidance monitoring PPE Avoidance monitoring PPE Avoidance monitoring PPE Avoidance monitoring PPE Avoidance monitoring PPE Crane lifting safety	Contractor Specific Contractor Specific Contractor Specific Contractor Specific Contractor Specific Contractor Specific Contractor Specific Contractor Specific Contractor Specific Contractor Specific Contractor Specific Contractor Specific Contractor Specific Contractor Specific Contractor Specific Contractor Specific Crane, Hoist, and Rigging Standard Operating Procedure

Noise Std. | | | |

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5	Removal and disposal of installed porous and certain non-porous building materials and components contaminated by WTC dust and debris	Level C****	COPC, silica and lead	Follow procedures	Contractor Specific
			Lifting	Proper lifting techniques	
			Noise	Hearing protection	
			Heat stress	Heat monitoring	
			Cold stress	Cold monitoring	
			Slip trip fall	Housekeeping	
			Structural damage	Structural integrity - PE inspection	
			Demolition	Follow demolition plan	General Safety Regulations
			Pinch points	Materials handling	
			Work at elevation	Fall protection	Fall Protection Plan
			Hand tools	Proper use techniques	
			Inadequate lighting	Illumination	
			Cranes/Lifting Equipment	Crane lifting safety	Crane, Hoist, and Rigging Standard Operating Procedure
			COPC, silica and lead	Follow procedures	Contractor Specific
			Lifting	Proper lifting techniques	
6	Cleaning and salvage of certain installed non-porous building equipment and components contaminated by WTC dust and debris	Level C****	Noise	Hearing protection	
			Heat stress	Heat monitoring	
			Cold stress	Cold monitoring	
			Slip trip fall	Housekeeping	
			Structural damage	Structural integrity - PE inspection	
			Demolition	Follow demolition plan	General Safety Regulations
			Pinch points	Materials handling	
			Work at elevation	Fall protection	Fall Protection Plan
			Hand tools	Proper use techniques	
			Inadequate lighting	Illumination	
			Cranes/Lifting Equipment	Crane lifting safety	Crane, Hoist, and Rigging Standard Operating Procedure
			Torch Cutting	Generation of lead or other toxics, fire	Compliance with OSHA Lead and cadmium in Construction Standard, Hot work procedures, Cutting procedures
			COPC, silica and lead	Follow procedures	Contractor Specific
			Lifting	Proper lifting techniques	
			Noise	Hearing protection	

Task 3: Cont'd:

Subtask #	Activities	PPE Requirements*	Hazards	Preventative Mechanism	Procedure**
7	Removal of building materials contaminated with asbestos and ACBM.	Level C****	Chemical COPC	Hazard Communication PPE	Contractor Specific
			Working from Elevations	Fall Protection	Contractor Specific
			Heat Stress	Heat monitoring	Contractor Specific
			Cold Stress	Cold monitoring	Contractor Specific
			High pressure water	Pressurized systems	Contractor Specific
			Electrical sources	Electrical safety - LOTO	Contractor Specific
			Pinch points	Materials handling	Contractor Specific
			Use of ladders	Ladder safety	Contractor Specific
			Hand tools	Proper use techniques	Contractor Specific
			Noise	Hearing protection	Contractor Specific
			Inadequate lighting	Illumination	Contractor Specific
			Asbestos	Avoidance monitoring PPE	Contractor Specific
			Lead	Avoidance monitoring PPE	Contractor Specific
			PCBs	Avoidance monitoring PPE	Contractor Specific
			Mercury	Avoidance monitoring PPE	Contractor Specific
			Other chemicals	Avoidance monitoring PPE	Contractor Specific
			Mold	Avoidance monitoring PPE	Contractor Specific
			Cranes/Lifting Equipment	Crane lifting safety	Crane, Hoist, and Rigging Standard Operating Procedure
8	Packaging of regulated wastes identified from waste sampling during removal work.	Level C****	Chemical COPC	Hazard Communication PPE	Contractor Specific
			Working from Elevations	Fall Protection	Contractor Specific
			Heat Stress	Heat monitoring	Contractor Specific
			Cold Stress	Cold monitoring	Contractor Specific
			High pressure water	Pressurized systems	Contractor Specific
			Electrical sources	Electrical safety - LOTO	Contractor Specific
			Pinch points	Materials handling	Contractor Specific
			Use of ladders	Ladder safety	Contractor Specific
			Hand tools	Proper use techniques	Contractor Specific
			Noise	Hearing protection	Contractor Specific
			Inadequate lighting	Illumination	Contractor Specific
			Asbestos	Avoidance monitoring PPE	Contractor Specific
			Lead	Avoidance monitoring PPE	Contractor Specific
			PCBs	Avoidance monitoring PPE	Contractor Specific
			Mercury	Avoidance monitoring PPE	Contractor Specific
			Other chemicals	Avoidance monitoring PPE	Contractor Specific
			Mold	Avoidance monitoring PPE	Contractor Specific
			Cranes/Lifting Equipment	Crane lifting safety	Crane, Hoist, and Rigging Standard Operating Procedure

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utilities cut and to
be brought from
outside

handling not
use .

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9	Exterior Wash Down	Level C ***	Working from Elevations	Fall Protection	Fall Protection
			Heat Stress	Heat monitoring	
			Cold Stress	Cold monitoring	
			Slip/trip/fall	Housekeeping	
			Lifting	Proper lifting techniques	
			Electrical Sources	Electrical Safety LOTO	Lock-out Tag-out Program
			Pinch points	Materials handling	
			Hand tools	Proper use techniques	
			Inadequate lighting	Illumination	
10	Removal of Miscellaneous Hazardous Materials (bulbs, ballasts, batteries, mercury-containing thermostats, etc)	Level C***	Chemical COPC	Hazard Communication/PPE	Hazardous Materials Communication Program and 29 CFR 1910.120(a)(i)
			Structural damage	Structural integrity	
			Trespassers	Site security	
			Pinch points	Materials handling	
			Hand tools	Proper use techniques	
			Heat stress	Heat monitoring	
			Cold stress	Cold monitoring	
			Asbestos	Avoidance/monitoring/PPE	

*As described in Section 2.5

** Procedures are part of Contractors Project Safety Plan

***Per 2.72

+Due to enclosure and unknown airborne silica concentrations work will have to be performed using PAPR with P100 cartridges and local exhaust ventilation or work will be performed under Level B until air sampling allows otherwise.

If site conditions change during the course of the deconstruction project, the Environmental Consultant will evaluate the new conditions and discuss appropriate amendments to the HASP with the Contractor. The proposed amendments shall be reviewed and approved by the Environmental Consultant's CIH and the Contractor Project Manager.

2.2.3 Physical Hazards

While the buildings at 133-135 Greenwich/21-23 Thames Street suffered no significant damage from the WTC Collapse, numerous physically hazardous conditions exist related to the deteriorated, run-down condition of much of the space in these buildings. These hazards include damaged electrical sources and components, falling hazards due to openings in the floors, or the possibility of materials falling from overhead. The primary physical hazards that may be encountered during this project are related to the Abatement Phase activities and include: heavy equipment operation; excessive noise; excessive heat or cold; inclement weather; manual lifting/handling of heavy objects; poor housekeeping; rough terrain; compromised structural integrity; traffic; cranes, hoists and other lifting equipment; aerial lifts and manlifts; working at elevation; use of scaffolding; hazardous materials use; potential utility and electrical sources; use of hand and power tools; slips and falls; etc.

Due to the existence of these hazards, the Contractor shall ensure that all site employees receive hazard awareness training. Additionally, the Contractor shall insure that Subcontractors perform the following operations under the direct on-site supervision of OSHA Competent Persons (provided by the Subcontractors for each task as necessary):

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- General Construction (29 CFR 1926.20)
- Unsanitary Conditions (29 CFR 1926.27)
- Rigging (29 CFR 1926.251)
- Scaffolding (29 CFR 1926.450)
- Ladders (29 CFR 1926.1053)
- Personal Fall Arrest Systems (29 CFR 1926.500 and .502)
- Ear Protection (29 CFR 1926.101)
- Cranes and Derricks (29 CFR 1926.550)
- Materials Hoists, Personnel Hoists and Elevators (29 CFR 1926.552)
- Demolition (29 CFR 1926.850)
- Welding/Cutting on surfaces covered by protective coatings (29 CFR 1926.354)
- Excavation (29 CFR 1926.650)
- Lead (29CFR 1926.62)
- Asbestos (29 CFR 1926.1101)
- Cadmium 1926.1127
- Powered Platforms for Building Maintenance, 29 CFR 1910.66
- Hazardous Waste Operations and Emergency Response, 29 CFR 1926.65

2.2.4 Chemical Hazards

A chemical hazard that may be encountered during this project is asbestos. Based upon the most recent pre-demolition asbestos survey conducted by Airtek environmental Corp., approximately 50 linear feet of friable, and 400 square feet of non-friable asbestos-containing material has been identified. In addition, WTC dust with assumed varying concentrations of COPCs, has been identified during visual inspection of the site. Therefore, the Contractor shall ensure that all site employees receive the required training concerning asbestos as well as all applicable Hazard Communication training.

In addition, personnel who have the potential to disturb ACBM shall be trained concerning the procedures to be used and requirements for notifications in accordance with federal, state and local regulations. Personnel who handle ACBM on this job shall have the required documented training and certificates. Each employee involved in abatement activities must have completed City of New York asbestos training, shall be a certified asbestos worker and/or supervisor by the City of New York, and shall be certified asbestos handler and/or supervisor by the New York State Department of Labor. Additionally, personnel who will conduct cleaning and abatement activities must have additionally received the required 40-hour training as outlined by 29 CFR 1910.120(a) (i) (HAZWOPER requirement) and appropriate annual refresher training as required. This HAZWOPER training requirement may be removed, should sampling indicate training requirement downgrade is appropriate. Training, medical and license documentation for each Subcontractor employee shall be verified by the CSO prior to start of work by the Subcontractor.

2.2.4.1 Additional Identified Chemicals

Based on data collected from
other sites, i.e. in rc dust

What are these ---
Should not be used in
asbestos abatement project.

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Other chemicals identified as potential contaminants that may be encountered during the initial site cleaning activities are PAHs, dioxins, antimony, cadmium, nickel, barium, chromium, lead, zinc, manganese, copper, beryllium, PCBs, mercury, copper, zinc, cristobalite and quartz.

Environmental sampling in the neighboring 130 Liberty Street Building has verified the presence of these chemical contaminants in WTC dust in concentrations exceeding USEPA's Residential Cleanup Criteria.

Additional chemical hazards generated from deconstruction activities would be lead, cadmium, and chromium from coated surfaces. Subcontractors shall perform personnel monitoring for all COPCs as required by OSHA. In addition, Subcontractors must provide applicable OSHA training for the identified hazards. Documentation of this training must be provided by the Subcontractor.

Precautions to be taken during the removal of miscellaneous hazardous materials (bulbs, ballasts, batteries, mercury-containing thermostats, etc) are found in Table 2-1, Task 3. Respiratory protection, as identified within Table 2-1, represents the minimum level of protection for all identified tasks.

There may also be hazardous chemicals brought on-site and used in the deconstruction. The requirements of the OSHA Hazard Communications Standard (29 CFR 1910.1200) shall apply. *Section 2.8* provides information concerning the management of hazardous chemicals on-site and the site Hazard Communication Program.

2.2.5 Biological Hazards

Biological concerns in the work area are primarily, insects, rodents, and mold/fungi.

2.2.5.1 Insects

The presence of insects shall be addressed by personnel as the insects are encountered. When a stinging or poisonous insect, such as a bee or spider, is identified, personnel should exercise caution to avoid being bitten or stung for example by using tools to move material. In the event that a person is stung or bitten, the incident shall be reported to the Site Manager for the Subcontractor who shall report the incident to the CSO. The Site Manager for the Subcontractor shall initiate actions to manage and address the bite or sting. Personnel who are allergic to insect bites and stings should identify their allergy to their employer.

2.2.5.2 Rodents

In the event that rodents or animal pests are identified or observed on-site, the Subcontractor Manager should report the incident to the Contractor CSO. The Contractor shall be responsible for evaluating the condition and implementing steps to eliminate rodents on the site.

2.2.5.3 Mold/Fungi

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The initial building walk-through by Airtek environmental identified mold contaminated building materials/components within the Building. The identification of additional mold/fungi on-site will be made based on visual inspections of building materials. When mold/fungi are identified, the removal of impacted materials shall be addressed concurrently with Asbestos Abatement Activities. Removal and handling measures shall be consistent with the NYC Department of Health and Mental Hygiene “Guidelines on Assessment and Remediation of Fungi in Indoor Environments.”

2.3 ENGINEERING CONTROLS

Engineering controls will be used as primary protective mechanisms to protect the safety and health of all employees whenever technically feasible, and prior to the implementation of Administrative Controls and/or personal protective equipment. Each Subcontractor shall be responsible for the provision and implementation of the following:

- Construction/demolition dust suppression materials and equipment to include:
 - HEPA-filtered air filtration devices to reduce area dust levels.
 - Vacuum cleaners equipped with HEPA filters.
 - Fume extractors attached to HEPA filters for all hand-powered tools.
- Removal of all lead-based painted materials (if necessary), and adequate exhaust ventilation provided during torching or cutting activities.
- Barricades, railings or other devices to prevent employee exposure to fall hazards or moving equipment per 29 CFR 1926.
- Other task-specific engineering controls as recommended by OSHA guidelines or as recommended by the Contractor or the CIH.

2.4 ADMINISTRATIVE CONTROLS AND WORK PRACTICES

Each Subcontractor shall utilize administrative controls and work practices as a secondary means of ensuring worker health and safety when engineering controls do not provide sufficient protection or are technically infeasible. Each Subcontractor shall be responsible for the provision and/or implementation of the following:

Ensuring all employees are enrolled in a medical monitoring program as required by OSHA, including medical monitoring for blood lead levels as outlined in Section 2.13 of this HASP.

Ensuring all employees have current fit-test and training certifications.

Implementing work practices that avoid generating dust whenever possible.

will be used as
required by NYCDOP and
OSHA on asbestos abatement
and demolition at a minimum.

Table 2.1 does not
specify the PPE.

Statement - must comply
w/ MIN. REQ SET FORTH IN
OUR RULES.

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Requiring that all employees implement decontamination procedures, including washing hands, face, hair and neck upon leaving the work area and before eating, drinking or smoking.

Removing lead based paint or coatings before cutting, grinding or other activities that would be expected to disturb the lead-based materials, or complying with the provisions of 29 CFR 1926.62.

Use of the Buddy System will be required for all employees working within the Exclusion Zone, as defined in Section 2.8.1 below, or while performing non-standard tasks as designated by the Subcontractor's Safety Officer.

2.5 PERSONAL PROTECTIVE EQUIPMENT (PPE)

Personal protective equipment will be used to provide adequate personnel protection only after feasible engineering and administrative control options have been exhausted. All personnel engaged in the project work activities will use the appropriate level of protection as required by the activity to be performed and are presented in the "Activity Hazard Analysis" presented in Table 2-1.

All PPE requirements for site activities are based upon available historical site characterization data and knowledge of the anticipated hazards. Changes in levels of PPE and changes in the PPE requirements for specific areas shall be made based upon the results of monitoring, visual observations and the nature of the site operations, including the presence of or potential for previously unidentified chemicals or conditions.

In accordance with OSHA 29 CFR 1910.132-138 and 1926.28 (Personal Protective Equipment), all PPE shall be provided, used, and maintained in a sanitary and reliable condition. All PPE shall be of construction, design, and material to protect employees against known or anticipated hazards. PPE shall be selected that properly and appropriately fits the employee.

2.5.1 Basic PPE Requirements

Each employee will wear a hard hat and safety glasses or other eye protection at all times while onsite, except for designated "safe" areas. Eye protection includes safety glasses, safety goggles, welding goggles, welding hoods, or full-face respirators. Prescription or non-prescription eyeglasses and sunglasses are not approved for eye protection. All acceptable eye protection must include side shields and must be ANSI-approved.

Unless in designated safe locations, all personnel shall have with them and/or wear the following PPE when entering the site:

Work clothes without loose sleeves and cuffs

American National Standards Institute (ANSI) - approved safety boots

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ANSI - approved safety glasses

ANSI - approved hard hat with bill facing forward

Work gloves (either leather or cotton)

Hearing protection (as necessary)

The above listed PPE ensemble, defined as Level D, shall be worn during all outdoor site activities and inside of the building after clearance testing has been completed.

2.5.2 Level C PPE

Level C PPE shall be worn when working inside of the building (with the exception of previously cleaned areas such portions of the basement occupied by field offices) during all Phase I activities, except for concrete jack hammering in enclosures . Level C PPE consists of:

Full-face powered air-purifying respirator (PAPR) with HEPA filter approved by the National Institute for Occupational Safety and Health (NIOSH)/Mine Safety and Health Administration (MSHA)¹. Half-face air-purifying respirators (APR) may be used during work preparation activities.

Gloves - nitrile inner; chemical resistant outer (nitrile or neoprene)

ANSI-approved safety boots

ANSI-approved Eye protection – safety glasses or goggles

ANSI-approved Hard hat with bill facing forward

Tyvek coveralls with head cover (Two layers Tyvek or equivalent)

Water-resistant overboots which are treaded to provide slip protection

Hearing protection (as necessary)

2.5.3 Level B PPE

Level B PPE may be required during jack hammering concrete in enclosures during the installation of the cement chute unless engineering controls are instituted incorporating local exhaust ventilation at the point of dust generation until personal air monitoring confirms that the level of silica is below the OSHA action level. Level B PPE consists of:

Self-Contained Breathing Apparatus (SCBA) or combination airline/SCBA approved by the National Institute for Occupational Safety and Health (NIOSH)/Mine Safety and Health Administration (MSHA).

Gloves - nitrile inner; chemical resistant outer (nitrile or neoprene)

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ANSI-approved safety boots

ANSI-approved Eye protection – safety glasses or goggles

ANSI-approved Hard hat with bill facing forward

Tyvek coveralls with head cover (Two layers Tyvek or equivalent)

Water-resistant overboots which are treaded to provide slip protection

NOTE: If air sampling data proves that the level of asbestos and COPCs are consistently below the action level, respiratory protection may be downgraded to an appropriate level of protection.

Hearing protection (as necessary)

2.5.4 Level A PPE

Use of this type of PPE is not anticipated at this site. Should work conditions and personnel sampling exceed action levels for a PPE upgrade to Level A, operations shall cease in that area until site conditions can be re-evaluated by the Contractor and the Environmental Consultant's CIH.

2.6 SAFETY EQUIPMENT

The following emergency equipment will be located in the CRZ: fire extinguishers, spill control equipment, communications and alarm systems, and decontamination equipment.

The requirements for PPE on this job may be refined and changed to address the conditions identified when tasks are performed. The Subcontractors will work with the Contractor to ensure the proper PPE is maintained and available on-site at all times, and that personnel are trained to use the PPE and understand the procedures and practices for the safe and effective use of PPE. The Subcontractors will provide the required PPE for their employees.

The PPE requirements presented in this HASP are the minimally acceptable for the specified activity. Subcontractors can make individual decisions to upgrade the equipment requirements for each PPE level to ensure the hazards presented by an activity are controlled and exposure is minimized. Engineering and administrative controls will be identified and implemented for each activity prior to use of PPE.

2.6.1 Respiratory Protection Program

Respiratory protection is required whenever work is performed inside the building to protect the workers from exposures to contaminants, primarily asbestos, which may be present. Half-face negative pressure air purify respiration particulate filters that are HEPA or P100 shall be required during work preparation activities (i.e. installation of isolation barriers) and PAPR will be used during other Abatement Phase activities, unless Level B is required. Environmental Consultant's CIH or qualified subcontractor IH personnel will evaluate the need for additional protection such

factor | | | | |

MUST BE PROPER
FILTER FOR MANUFACTURE

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as adding organic vapor cartridges based on their respiratory protection programs and chemicals they may be using. The following practices will be conveyed to all employees and enforced by the Contractor and the CSO respect to respiratory equipment for this project:

1. Subcontractors whose personnel ~~may have the need to~~ wear respiratory protection on this job, shall have a written respiratory protection program that meets the requirements of the OSHA Standard (29 CFR 1910.134) and has been developed by a Competent Person as defined by OSHA.
2. Personnel who may need to wear respiratory protection shall be fit-testing, medically qualified and trained, as required by the Standard, to use respiratory protection. The Subcontractor shall identify personnel who may use respiratory protection and documentation of fit-testing, medical qualification and training shall be provided for each person who may need to wear respiratory protection on the job.
3. The Subcontractor shall review with the Contractor CSO the procedures for the handling, storage and maintenance of respiratory protective equipment to be used on-site, including the process for reporting and repairing or replacing defective equipment and the locations where respiratory equipment will be stored.
4. Subcontractors will provide employees with adequate respiratory protection as required by each task.
5. A respirator of lesser protection than is required for the task/activity may not be used.
6. Each employee will change his/her respirator filter at the end of each work shift. The Subcontractor will provide an adequate supply of approved filters for daily replacement for each employee's respirator.
7. Each Subcontractor will ensure the adequacy of respiratory protection for his employees based upon the verified results of personal air sampling.
8. If at any time air sampling data indicates airborne exposures exceeding one-half the OSHA Permissible Exposure Limit, all affected employees' respiratory protection will be upgraded.

2.6.1.1 Respirator Testing

Each individual who must wear a respirator will be required to be clean-shaven where the sealing areas of the respirator face piece contacts the face. Each respirator user will be respirator fit-tested in accordance with 29 CFR 1910.134 at least annually. Upon donning the respiratory device or before entering any restricted work area, each respirator wearer will be required to perform a manual negative and positive-pressure test. Subcontractor employees who fail the negative/positive pressure test because they are not clean shaven will be required to leave site for the day or to shave on-site immediately preceding entry into the work area.

2.6.1.2 Respirator Inspection, Sanitization, and Maintenance

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All respirators will be cleaned, sanitized, inspected, assembled, and maintained ready for use on a daily basis. Each respirator will be stored in a clean and sanitary container. Prior to use, the wearer will inspect the respirator, including the valves, valve covers, nosepiece, straps, eyepiece (for full-face respirators), face piece and its snaps, cylinders, and canisters to insure that the respirator can be worn. The Subcontractor will provide initial training concerning the use of respirator equipment, but each employee will be responsible for cleaning, inspecting, maintaining, sanitizing, and storage of his/her respirator equipment.

If a respirator becomes chemically contaminated or malfunctions, the respirator will be replaced by the employer with a clean and sanitized respirator, and the contaminated/defective respirator shall be decontaminated and repaired before reuse, or tagged “out of service” and disposed of. The respirator wearer shall inspect the replacement respirator for defective parts and leaks and will be fit tested if the replacement respirator is of a different make, model or size than the original.

2.6.2 Medical Response Equipment

The following medical response equipment shall be available on-site for the duration of the site activities. The locations of these equipment stations shall be determined at the site and incorporated into this HASP upon initiation of each task. The Contractor CSO shall maintain responsibility for the incorporation of this information into this HASP.

- Eyewash Stations: The location of emergency eyewash stations shall be determined. Each station shall provide a continuous spray of a rate of 0.4 gallons per minute for at least 15 minutes. This station shall be inspected daily to ensure proper operation.
- First Aid Kits: The locations of fixed and/or portable kits shall be determined. As a general guideline, each Subcontractor shall provide, at minimum, one first aid kit for every 20 employees and shall station it within the work area (for Level D operations) or directly outside the decontamination area (contaminant reduction zone) (for Level C or Level B operations).

The locations of eyewashes and first aid kits and the procedures for using and reporting an incident shall be presented during the initial on-site training. The Contractor CSO shall make all personnel aware of the locations and use of this equipment prior to engaging in site work activities.

2.7 PERSONAL AIR MONITORING

Each Subcontractor and trade employer shall perform personnel air sampling for the following contaminants during Phase I of the project: particulates as TSP, metals as TSP, asbestos, PAHs, D/Fs, PCBs, mercury, lead and silica. Additionally, daily personnel sampling for lead, cadmium, chromium and mercury shall be performed during all cutting and torching operations as required by 29 CFR 1926.62(d)(2)(iv) and the Cadmium in construction standard [29 CFR 1926.112]. The results of personnel monitoring will be reviewed on a daily basis by the Subcontractor Safety Officer to determine if current levels of respiratory protection are adequate. The subcontractor

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safety officer shall provide written documentation of this review to CSO and the subcontractor must immediately report any results that trigger PPE upgrades. The following table lists the OSHA PEL, site specific Action Level, and trigger levels:

Table 2-2

Contaminants	OSHA PEL	Action Level (Half value of OSHA PEL)	10 X OSHA PEL (Protection factor for Half- face APR)	100 X OSHA PEL (Protection Factor for Full- face PAPR)
Asbestos	0.1 f/cc	0.05 f/cc	1 f/cc	10 f/cc
Antimony	0.5 mg m ⁻³	0.25 mg m ⁻³	5 mg m ⁻³	50 mg m ⁻³
Barium	0.5 mg m ⁻³	0.25 mg m ⁻³	5 mg m ⁻³	50 mg m ⁻³
Beryllium	0.002 mg m ⁻³	0.001 mg m ⁻³	0.02 mg m ⁻³	0.2 mg m ⁻³
Cadmium	0.005 mg m ⁻³	0.0025 mg m ⁻³	0.05 mg m ⁻³	0.5 mg m ⁻³
Chromium (III)	0.5 mg m ⁻³	0.25 mg m ⁻³	5 mg m ⁻³	50 mg m ⁻³
Copper	1 mg m ⁻³	0.5 mg m ⁻³	10 mg m ⁻³	100 mg m ⁻³
Lead	0.05 mg m ⁻³	0.025 mg m ⁻³	0.5 mg m ⁻³	5 mg m ⁻³
Manganese	5 mg m ⁻³	2.5 mg m ⁻³	50 mg m ⁻³	500 mg m ⁻³
Mercury	0.1 mg m ⁻³	0.05 mg m ⁻³	1 mg m ⁻³	10 mg m ⁻³
Nickel	1 mg m ⁻³	0.5 mg m ⁻³	10 mg m ⁻³	100 mg m ⁻³
Zinc	5 mg m ⁻³	2.5 mg m ⁻³	50 mg m ⁻³	500 mg m ⁻³

2.8 SITE CONTROL

Site control measures shall be implemented to protect the public and personnel working on-site. The aspects of site control shall address general access to the site; and access to the building and site during the deconstruction phase.

Fences, guardrails and access devices, including ladders, stairways, and walking surfaces shall be provided and maintained throughout the project activities in accordance with 29 CFR 1926. In addition, barricades, warning signs and devices, temporary lighting and other safety measures shall be provided, as required, to protect site personnel.

All visitors to the site shall report first to the Contractor field office. Visitor access shall be limited to the Support Zone and Level D operation areas only, and shall be allowed only with the prior consent of the Contractor NYCSSM and the Contractor Site Manager.

No visitor shall enter a work area unescorted by a Subcontractor or Contractor representative. The presence of any regulatory agency on-site shall be reported immediately to the Contractor Site Manager.

2.8.1 Work Zones

Entry into the work zones begins once a person comes on-site. This approach reflects the dynamic nature of the operations and the need for everyone to be aware of the conditions while on-site. Using the concept of three zones for the site, the following areas are identified:

DEFINE THE CRZ
AS THE DECON FOR
AS A TREATMENT PHASE

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- **Support Zone** – This area starts at the project/property fence line and extends to the entry to where personnel enter the building to complete the work tasks. This area includes the ground outside of the building and any office spaces. In this area all personnel shall wear Level D PPE. Within this area exclusion zones may be established depending on the operations, for example: where material handling is performed, where hoisting equipment is located or where equipment is staged.
- **Contamination Reduction Zone (CRZ)** – This area shall be located subject to approval of the variance. The CRZ shall exist until the completion of Abatement Phase activities. Personnel shall be aware of and follow all site control procedures with respect to entering and exiting the CRZ, to ensure that they are not exposed to contaminants and to minimize the potential for contamination of personnel and the spread of contamination outside the Exclusion Zone (EZ). These measures include having personnel follow the proper procedures for donning and removal of PPE and washing in the CRZ. The measures also address the decontamination procedures for use when moving equipment between zones. The CRZ shall consist of an area to drop off equipment, plastic bags to dispose of protective clothing, adequate soap and water for personnel and equipment decontamination and a means of capturing wash water generated during decontamination. The CRZ shall also have a first-aid kit, fire blanket and fire extinguisher (20-lb ABC type).
- **Exclusion Zone (EZ)** – This area extends from the side of the CRZ facing the building and includes all areas on each floor of the building. This definition of the EZ shall remain effective until Phase I activity on each floor is completed. No employee shall enter the Exclusion Zone without the required training and PPE. No employee shall eat, drink, chew gum, apply cosmetics, smoke or use other tobacco products while in the Exclusion Zone. The employee must first exit the Exclusion Zone and follow decontamination procedures (Section 2.8.2.1) in the CRZ before engaging in any of the above actions. In the event that an employee in the EZ requires a replacement or his/her protective suit or respirator filters, the employee shall exit the EZ and utilize proper decontamination procedures in the CRZ, replace or repair the defective PPE, then reenter the EZ.

2.8.2 Personnel and Equipment Decontamination

When exiting the EZ, personnel shall be aware of and follow the procedures used to decontaminate personnel, equipment, and sampling containers. Subcontractors shall ensure that their employees follow proper decontamination and waste disposal procedures. Disposal of PPE and other items shall be performed in accordance with Section 3 of this HASP, with material placed in appropriately sized and labeled containers. Specific decontamination procedures are presented in the following subsections.

2.8.2.1 Personnel Decontamination Procedure

Personnel entering containment are required to follow proper decontamination procedures. All employees who leave the Exclusion Zone shall follow the decontamination process as outlined below.

REFERENCE	ENTRY
TITLE IS CHAPT	EXIT

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All employees shall remove all gross contamination and debris from disposal protective clothing and equipment by vacuuming prior to leaving the EZ. All employees must be HEPA vacuumed before entering the CRZ. Upon entering the CRZ, each employee shall remove the first layer of protective clothing and place it in the appropriate container. If the employee performs duties and becomes “grossly contaminated”, the decontamination procedure will include an Alconox (soapy) wash and a tap water rinse of the outer suit, gloves and overboots prior to removal of the outer layer.

After employees remove the first layer of tyvek and gloves, they shall then move into a second decon area where the second tyvek and gloves shall be removed and placed in the appropriate waste container. After this decontamination, personnel shall proceed to a washing facility to take full showers. The employee shall dispose of all protective clothing upon exiting the decontamination unit; all half-face APR respirator cartridges, if used, shall be changed out, as needed, but on a daily basis at a minimum. Full-face PAPR cartridges may be utilized more than one day if functioning as designed and sealed and decontaminated after each use.

2.8.2.2 Equipment Decontamination Procedure

Since equipment decontamination is difficult, unnecessary equipment shall not be brought into the controlled areas. All materials used in the regulated area shall be properly HEPA vacuumed and wet-wiped before leaving the first decontamination zone. All equipment that becomes “grossly contaminated”, will require an Alconox wash and tap rinse.

2.8.3 Safety Meetings

A safety meeting shall be held each day with the Contractor and each Subcontractor prior to initiating the scheduled activities and at the beginning of each day. The topics and content for the Safety Meeting shall be prepared in advance by the subcontractors and submitted to the Contractor for approval. The safety meeting shall review elements in the site HASP and the procedures for working on-site, and address the impacts of changes to the site conditions.

Topics to be addressed include:

- Use and maintenance of PPE
- Evacuation routes;
- Warning signals;
- Maintaining line-of-sight and communications;
- Rehearsal of scheduled activities;
- Hospital routes;
- Locations of safety equipment;
- Previous violations of the safety plan and procedures or changes to the program to correct the violation;
- Anticipated hazards for the day’s work activities;
- Any changes to the requirements for levels of PPE;
- The locations of work zones; and
- General site conditions.

No. 1 ENTIRE
~~BUDG.~~

All safety meetings shall be documented in the site H&S logbook. Meeting participants shall sign an attendance sheet.

2.9 TRAINING PLAN

All personnel directly involved in the project site activities shall be trained for the tasks they will perform, as required by applicable federal/state/local regulations. Refresher training will be performed at least yearly. In addition, all site personnel shall participate in site-specific training and participation of personnel in training shall be documented, with proof of training maintained on-site. The topics of training required are dependent on the SOW. This training shall be administrated by the Contractor, the Subcontractor, or certified training facilities.

2.9.1 Health and Safety Awareness Training

Each Subcontractor shall be responsible for presenting and discussing the elements of this HASP with their personnel and subcontractors, and ensuring that personnel follow the elements of this HASP when working on-site. Prior to the start of work activities, or whenever a new hazard is introduced into the work area, employees shall be provided with the information indicated below. The Contractor or HASP CIH shall be available to address any questions or assist in the presentation of the HASP information to project employees. Information to be addressed during this training shall include, but not be limited to:

- Hazardous chemicals present at the work site and their associated health risks.
- Potential physical hazards associated with the work activities, and proper safety practices.
- Proper use of all tools and equipment to complete the scope of work activities.
- Requirements of the site Hazard Communication Program, including the labeling of containers.
- Site alarm system, emergency response procedures, and location of emergency lay down Area.
- Proper PPE to be used during work activities.
- Location of the MSDS files.
- How to reduce or prevent exposure to hazardous chemicals through the use of procedures, work practices, and personal protective equipment.

2.9.2 Asbestos Training

ACBM was determined to be in several building components per the Airtek Building Asbestos Survey. Building Personnel entering containment shall be trained to identify ACBM and the hazards associated with asbestos in accordance with the OSHA Asbestos Standards (29 CFR 1910.1001 and 29 CFR 1926.1101) and state/local certification requirements. This training provides personnel with a better understanding of asbestos and the steps to be taken to protect themselves and the public. In areas that ACBM was identified, required NYSDOL and NYCDEP procedures shall be followed.

Purpose of "visit" Don't
Cross restricted line

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2.9.3 HAZWOPER Training

Personnel entering the exclusion or contamination zones for the purpose of performing cleanup abatement activities must have received the required 40 hour training as outlined by 29 CFR 1910.120(a) (i) and appropriate annual refresher training as required. This HAZWOPER training requirement may be removed, should sampling indicate training requirement downgrade is appropriate.

2.10 PERSONAL PROTECTIVE EQUIPMENT TRAINING

Each Subcontractor shall provide training concerning the use of PPE to their personnel, as specified by this plan, to address the general PPE requirements and any specific requirements for PPE they may use, such as fall protection. The Contractor SSM or HASP AM can assist with this training, and any concerns regarding the use of appropriate PPE shall be brought to the attention of the Contractor SSM. Further discussion of the types of PPE is presented in Subsection 2.5 of this HASP

2.10.1 Emergency Response Training

Emergency response training, in accordance with the Emergency Action Plan found within Section 2 of this HASP, shall be provided to all on-site-personnel as part of the site-specific safety and health awareness training. The emergency response training shall be conducted by each Subcontractor's Safety Officer for her respective employees. At a minimum, the topics of this training shall include the following:

- Location of all site emergency equipment
- Response procedures for fires
- Response procedures for injuries and accidents
- On-site/off-site response resources
- Emergency site operations shut down procedures
- On-site "Chain of Command"
- Designated on-site emergency meeting location
- Recognition of evacuation signals and alarms

2.10.2 Visitor Training

Site visitors are defined as persons who are not employed at the project site, who do not routinely enter restricted work areas, or whose presence is of short duration (i.e., one to two days per month).

During the Abatement Phase all visitors entering the EZ must provide proof of an up-to-date fit-testing and medical clearance, and completion of asbestos certifications required for the employee's scope of work. In addition each visitor will receive site-specific training by the Contractor SSM or HASP AM that includes:

↑ Safety Officer should
↓ be assigned duty of review

and use of alternatives

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- Location and description of potential hazards and risks
- Required PPE
- Areas of the site that may be closed to visitors
- The site evacuation plan and emergency procedures
- Other Topics as deemed appropriate by the Contractor SSM

2.10.3

Because of lead and cadmium being identified as COECs and the potential for lead fumes or dust to be produced in deconstruction from building materials, subcontractors will provide proof of training required in OSHA Specific Standards 29 CFR 1926.65 (Lead in Construction) and 1926.1127 (Cadmium).

2.11 HAZARD COMMUNICATION

The Contractor and Subcontractors shall notify the Contractor SSM of any hazardous products prior to bringing the chemical on site and shall provide a MSDS for each product. These MSDSs shall be maintained by the Contractor SSM and shall be kept in a site master file. In addition, each Subcontractor shall maintain a copy of the MSDS for each product that they bring on-site.

The Subcontractor shall review with the Contractor SSM the procedures for handling, using and storing the chemicals brought on-site, and shall review with their personnel the proper procedures for handling, using and storing the chemicals before the product is used on-site. This includes but is not limited to all commercial products brought on-site by Subcontractors, including commercial cleansers, degreasers, lubricants and paints.

2.11.1 Container Labels

All containers of hazardous materials shall be labeled in accordance with appropriate standards. The labels on containers provided by the manufacturer, importer, or distributor shall be used.

Labels affixed to containers of hazardous materials shall:

- Identify the material using a name with which workers are familiar,
- Identify the hazards associated with the material, including toxicity information
- Identify the material using a name with which workers are familiar.
- Identify the hazards associated with the material, including toxicity information that indicates symptoms and target organs.
- Identify the name, address, and telephone number of the manufacturer, importer or distributor where more information may be obtained.

Labels shall not conflict with Hazardous Materials Transportation Act (HMTA) labeling requirements and shall meet the requirements of OSHA substance-specific health standards, where required.

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Labeling shall be required of all portable/temporary hazardous materials containers at all times. For non-hazardous materials only, labels are not required on portable containers filled from a correctly labeled container if the worker uses the material from that container only during that work shift. However, the subcontractor shall prepare a container label when the contents of the container are not used on the shift during which the container was filled and when the container label is defaced or illegible. The prepared temporary label shall indicate pertinent chemical identification and health information as required by OSHA.

All hazardous materials containers shall be labeled for content, hazard, and storage prohibitions, such as those relating to temperature range and chemical incompatibility with other materials and/or wastes. The labels shall be in compliance with requirements of New York State law. Containers containing hazardous waste shall also be labeled or marked clearly with the words, "Hazardous Waste".

2.11.2 Material Safety Data Sheets (MSDSs)

All MSDSs shall be submitted by the Subcontractors and shall be maintained by the Contractor SSM within a site master file. In addition, each Subcontractor shall maintain a copy of the MSDS for each product that they bring on-site. In addition, each Subcontractor shall also retain a log of MSDSs for chemicals used on this project and this log shall be kept on-site. The location of the MSDS folder shall be made known to all project employees.

Each Subcontractor shall review incoming MSDSs for new or significant health and safety information and shall ensure that any new information is communicated to affected employees, the Contractor SSM and other subcontractors. If an MSDS is not received at the time of initial shipment of materials, the material may not be used until the MSDS has been obtained from the manufacturer.

Employees shall be instructed to notify their Site Manager if an MSDS is not available. When a revised MSDS is received, the Site Manager shall immediately replace the old MSDS. Subcontractors shall insure that the MSDSs on file for their chemicals are current (updated within the last two years)

2.12 ACCIDENT PREVENTION & INVESTIGATION

A vital element of maintaining safe work practices is accident prevention. The following four actions are instrumental to accident prevention, and shall be communicated to all project personnel:

- Eliminate unsafe conditions. Efforts shall be initiated and implemented throughout the project to identify conditions that can contribute to an accident, and to remove exposure to these conditions. Each Subcontractor Safety Officer shall audit the work area prior to each shift to identify and correct any unsafe conditions.
- Reduce unsafe acts. Personnel shall make a conscious effort to work safely. A high degree of safety awareness shall be maintained so that safety factors are an integral part

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of each task. Daily safety briefings shall be designed to heighten general safety awareness and will be tailored to the individual audiences and tasks each day.

- Inspect frequently. Regular safety inspections of the work site, material, equipment, and operations by qualified persons (i.e., Contractor SSM) shall be performed to ensure early detection of unsafe conditions. Safety and health deficiencies shall be corrected as soon as possible, or site activities shall be suspended. All inspections shall be documented and the records retained by the Subcontractor for, at a minimum, the duration of the project. Copies of the inspection reports shall be provided to the Contractor SSM or Contractor Project Manager upon request.
- Educate personnel concerning the requirements of the HASP. The HASP and all site health and safety education shall be provided by each Subcontractor, the Contractor SSM and HASP AM.

All minor accidents (i.e., small fires, injuries, and near misses) shall be investigated by the Subcontractor Site Manager or Safety Officer and communicated to the Contractor SSM immediately when reported to the Subcontractor. The Contractor should also be contacted as soon as possible. An accident investigation shall include reviewing the accident/incident report, questioning the injured employee(s) as well as other personnel witnessing the occurrence, identifying all contributing acts and conditions, determining underlying reasons for their existence or occurrence, and implementing corrective actions. A report documenting the investigation shall be written and forwarded by the Subcontractor to the Contractor SSM and the Contractor Project Manager. Recommendations for accident prevention shall also be made in the report and communicated to all site personnel during periodic safety briefings and training sessions.

2.13 MEDICAL SURVEILLANCE PLAN

All persons involved in Abatement Phase activities shall be enrolled in an HAZWOPER and/or asbestos medical monitoring program, as appropriate, prior to working on-site. This requirement ensures that personnel are protected from asbestos and other COPCs that have been identified. In the event that air sampling confirms the presence of asbestos levels above the OSHA PEL, then guidance concerning the requirements for annual medical examinations shall be provided by the Contractor SSM.

2.13.1 Respiratory Protection

All personnel having to wear a respirator must have a medical evaluation as required by 29 CFR 1910.134 to determine fitness to use respiratory protective equipment prior to initiation of work activities. Documentation of fit-testing, medical qualification and training shall be provided for each person who may need to wear respiratory protection on the job. Each Subcontractor shall maintain a written Respiratory Protection Program developed by a competent Person as required by 29 CFR 1926.103.

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2.13.2 Hearing Conservation

All personnel exposed to noise levels above 85 dBA must have a baseline audiometric evaluation in accordance with 29 CFR 1926.52 and 101. Personnel shall receive awareness training concerning the hazards of noise and the procedures to properly use and maintain hearing protection. If any subcontractor exposes his employees to noise levels above 85dba, the Subcontractor must establish a written Hearing Conservation Program developed by a competent person as required by 29 CFR 1926.101 and 29 CFR 1910.95

2.13.3 First Aid

On-site First Aid/CPR/AED support shall be provided by the Contractor SSM. Additionally, each Subcontractor shall have on-site at least one person who has current training in first aid, CPR, and AED use.

2.13.4 Medical Emergency

The first worker who notices that a medical emergency or personal injury has occurred shall immediately make a subjective decision as to whether the emergency is life threatening and/or otherwise serious.

2.13.5.1 Life-Threatening and/or Otherwise Serious Incident

If a life-threatening incident occurs, those persons recognizing the situation should do whatever actions in their capabilities to reduce the threat and then the Contractor SSM shall be contacted. The Contractor SSM shall immediately notify the Emergency Medical Services (EMS) and implement emergency action procedures to have someone meet and guide EMS to the incident location. The Contractor shall be notified of the incident as early as possible.

The Contractor SSM shall be kept apprised of the situation and the location of the victim(s).

As the Contractor SSM proceeds to the accident scene, communications channels shall be opened and kept on standby until the Contractor SSM has surveyed the scene and performed a primary survey of the victim.

The Contractor SSM shall provide emergency action guidance consistent with the injury and shall relay the appropriate information to the site person meeting the EMS. Depending on the nature of the injury and the location at which the injury occurred, the Contractor SSM shall determine whether the person can be moved or whether the EMS team will need to come into the work area to assist the victim. Should the victim be injured in the Exclusion Zone, all appropriate life-saving methods shall be exercised in that area before attempting decontamination of the victim. The extent of emergency decontamination performed shall depend on the severity of the injury or illness and the nature of the contamination. If the emergency is such that emergency decontamination cannot be performed safely, the victim shall be given necessary first-aid treatment and wrapped in a blanket prior to transportation by EMS. If heat stress is a factor in a victim's injury/illness, all protective clothing shall be removed from the victim immediately.

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2.13.5.2 Non-Life-Threatening Incident

Should it be determined that no threat to life is present, a co-worker will assist the injured person and contact the Contractor SSM as soon as reasonably possible. Should the victim be injured in the Exclusion Zone, a rapid decontamination consisting of Tyvek, glove and respirator removal shall be performed in the Contamination Reduction Zone prior to initiation of medical assistance. For all non-life-threatening injuries, all medical assistance shall be provided in the Support Zone to reduce the spread of contamination to medical personnel or equipment.

2.13.6 Bloodborne Pathogens

When an emergency occurs that involves the potential for contact with bodily fluids, personnel shall use procedures and PPE that minimize the potential for exposure.

All personnel who provided direct support to an injured person shall participate in a post-incident exposure review during which their role in the event and the potential for contact with bodily fluids shall be evaluated. The information relating to exposure shall be documented for each individual. The procedures for the post-exposure consultation identified in the OSHA Bloodborne Pathogens Standard (29 CFR 1910.1030) shall be followed.

All personnel on-site shall receive awareness training concerning Bloodborne Pathogens (BBP) and the procedures to be followed to respond to emergencies that occur on-site. This awareness training shall be provided by each Subcontractor prior to the initiation of work activities and when new employees are introduced to the Site. In addition, each Subcontractor must have a BBP plan.

3.0 DOCUMENTATION

Each Subcontractor shall maintain documentation, as established by the Contractor, which shall record, at a minimum, the following information:

- The Subcontractor employees on Site, including arrival and departure times and their destination at the Site.
- Information required to be maintained by the OSHA respiratory protection standard, including medical clearance documents, training and certification records, fit-test records, and the results of personal air monitoring used to determine employee exposures. Additionally, all medical and sampling documentation required by OSHA's Lead in Construction standard must be maintained.
- Area air testing results
- Incidents and unusual activities that occur at the Site, including but not limited to injuries, illnesses, accidents, spills, breaches of security, equipment failures, weather-related problems and near-misses.

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- Records of daily safety briefings, including attendance documentation for all employees required to attend.
- Records of health and safety inspections by governmental agencies
- Records of corrective actions performed in response to any deficiencies noted through government agency inspection or by the Contractor SSM.

Attachment 1

List of Acronyms

ABIH	American Board of Industrial Hygiene
ACGIH	American Conference of Governmental Industrial Hygienists
ACBM	Asbestos Containing Building Materials
AL	Action Level
ANSI	American National Standards Institute
APR	Air-Purifying Respirator
CFR	Code of Federal Regulations
CGI	Combustible Gas Indicator
CIH	Certified Industrial Hygienist
COPCs	Contaminants of Potential Concern
CPR	Cardiopulmonary Resuscitation
CRZ	Contamination Reduction Zone
dBA	decibels adjusted (decibels on the “A” scale)
EC	Emergency Coordinator
EMS	Emergency Medical Service
EMT	Emergency Medical Technician
ER	Emergency Response
ERT	Emergency Response Team
EZ	Exclusion Zone
f/cc	Fibers per cubic centimeter
FEC	Facility Emergency Coordinator
GFCI	Ground Fault Circuit Interrupter
H&S	Health and Safety
HAZWOPER	Hazardous Waste Operations and Emergency Response
HCP	Hazard Communication Program
HCS	Hazard Communication Standard
HEPA	High Efficiency Particulate Air
HMTA	Hazardous Materials Transportation Act
IC	Incident Commander
IDLH	Immediately Dangerous to Life and Health
IH	Industrial Hygienist
lbs	pounds
LEL	Lower Explosive Limit
MAWP	Maximum Allowable Working Pressure
mg/m ³	milligrams per cubic meter
MSDS	Material Safety Data Sheet
MSHA	Mine Safety and Health Administration
NIOSH	National Institute for Occupational Safety and Health
NYCDEP	New York City Department of Environmental Protection

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SSM	Site Safety Manager
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limits
PM	Project Manager
ppm	parts per million
psia	pounds per square inch, absolute
psig	pounds per square inch, gauge
Q&P	Quality and Protection
SAR	supplied air respirator
SCBA	self-contained breathing apparatus
SOW	Scope of Work
SSHO	Site Safety and Health Officer
STEL	Short-Term Exposure Limit
SZ	Support Zone
TWA	Time-Weighted Average
WTC	World Trade Center

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Attachment 2

Asbestos Surveys



AIRTEK ENVIRONMENTAL CORP.

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FINAL ASBESTOS REPORT

Conducted at:

**133-135 GREENWICH STREET
NEW YORK, NY 10006**

Conducted for:

**GREENWICH STREET PROJECT LLC.
666 FIFTH AVENUE - SUITE 180
NEW YORK, NY 10103**

Prepared By:

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**AIRTEK PROJECT NUMBER
05-0701**

MAY 31, 2005



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1.0 BACKGROUND:

Airtek Environmental Corp. has conducted an asbestos survey for the presence of Asbestos-Containing Materials (ACM) at the following building(s):

Address: 133-135 Greenwich Street AKA 25-29 Thames Street (2-Story)

Borough: Manhattan

The Investigator responsible for this project was:

Moyna Ali:	NYC Asbestos Investigator #97088	Expires: 03/12/06
	NYS Asbestos Inspector #AH 89-01641	Expires: 03/06

Site Visit(s): 5/26/05 & 5/27/05

Report Date: 5/31/05

Revision Date: N/A

Field Procedures and Analysis Methodology:

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 as per the AHERA concept of Homogeneous Area (HA). A HA is defined as a suspect material of similar age, appearance, function and texture. Each material was grouped together as a specific HA, sampled and then assessed for condition.

Bulk samples of suspect ACM were analyzed by Polarized Light Microscopy (PLM) with dispersion staining, as described in 40 CFR Part 763 and the National Emissions Standard for Hazardous Air Pollutants (NESHAPS).

The New York State Department of Health has recently revised the PLM Stratified Point Counting Method. The new method, "Polarized Light Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples" can be found as item 198.1 in the ELAP Certification manual.

The State of New York ELAP has determined that analysis of Non-friable, Organically Bound Materials (NOB) are not reliably performed by PLM. Therefore, if PLM analysis of a NOB yields a negative result, it must be further confirmed by Transmission Electron Microscopy (TEM).

All samples were initially analyzed by PLM. Samples which produced a negative PLM result and which are classified as a NOB were then re-analyzed utilizing the TEM methodology.

2.0 SCOPE OF WORK:

The following areas which may be affected by the proposed demolition were inspected for ACM:

1. Interior & exterior of the building

The inspection was characterized by a close visual inspection of all accessible areas. Suspect materials were sampled and inventoried for quantity, condition and friability. Materials examined included:

1. Ceiling Tiles

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2. Floor Coverings
3. Sheetrock & Joint Compound
4. Pipe Insulation
5. Electrical Wire Insulation
6. Roofing Products
7. Brick Mortar
8. Window Caulk & Glazing

Based on the currently recommended sampling and analytical procedures, Airtek recommends that additional sampling is necessary, in order to determine the asbestos content of building materials.

3.0 SUMMARY OF AIRTEK ENVIRONMENTAL'S INSPECTION RESULTS:

The asbestos inspection was conducted on 5/26/05 & 5/27/05 and involved a thorough visual examination of all areas and sampling of suspect materials that would be impacted during the proposed demolition.

Airtek Laboratory analysis confirmed the presence of asbestos in the amount greater than 1% within the samples collected from the following material:

1. Bulkhead Tar

Airtek laboratory analysis determined the samples collected from the following materials to contain less than one percent (<1%) asbestos.

1. Textured Ceiling
2. Carpet Mastic
3. Ceiling Tiles
4. Floor Tile Grout
5. Tar on HVAC Ducts
6. Wall Tile Grout
7. Wall Tile Glue
8. 12" x 12" Floor Tiles & Mastic
9. Electric Wire Insulation
10. Sheetrock & Joint Compound

4.0 CONCLUSIONS AND RECOMMENDATIONS:

Asbestos-containing materials, which will be affected by the scope of work, have been positively identified at various locations throughout the building(s).

Proper asbestos abatement procedures shall be implemented prior to the commencement of demolition work. All asbestos abatement work shall be performed in accordance with all applicable Federal, State and Local rules and regulations. The abatement project shall be filed with all agencies having jurisdiction over this project, such as USEPA, NYSDOL and NYCDEP.

A licensed abatement contractor must perform the removal of all friable and non-friable ACM. Airtek believes that the implementation of these recommendations will serve to best protect human health and the environment.

To assure that the removal of the aforementioned ACM is properly and effectively carried out, the following recommendations are proposed by Airtek:

- A. Develop and implement a schedule that outlines the time frame for removal of ACM.

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- B. Develop complete and concise specifications to effectively deal with removal of the ACM. These specifications should be developed to comply with all applicable Federal, State and Local regulations.
- C. Retain the service of an independent testing laboratory to monitor the air for possible asbestos contamination before, during and after the removal work. Retain all documentation and correspondence from the removal contractor, the testing laboratory and related items in a permanent record.

5.0 ASBESTOS QUANTITY SCHEDULE:

Approximate asbestos quantity schedules are presented on the following table:

TABLE 1 SUMMARY OF INSPECTION RESULTS FOR ASBESTOS 133-135 GREENWICH STREET				
PROPOSED WORK	SUSPECT ACM THAT MAY BE AFFECTED	LAB RESULT	APPROXIMATE ACM QUANTITY	NOTES/SPECIFIC LOCATION
	Textured Ceiling	ND	0 SF	
	Carpet Mastic	ND	0 SF	
	Floor Tile Grout (Bath & Lobby)	ND	0 SF	
	Floor Tile Grout (Kitchen)	ND	0 SF	
	Bulkhead Tar	ACM	10 SF	
	Tar on HVAC Ducts	ND	0 SF	
	Flashing	ND	35 SF	Not Sampled – Previously Confirmed ACM. Material still exists sporadically along perimeter.
	Roof Material	ND	0 SF	Not Sampled – Previously Confirmed Non-ACM
	Wall Tile Grout	ND	0 SF	
	Floor Tile Grout (Cellar)	ND	0 SF	
	12" x 12" Tan Floor Tile	ND	0 SF	Sushi Restaurant
	12" x 12" Tan Floor Tile Mastic	ND	0 SF	Sushi Restaurant
	Ceiling Tile	ND	0 SF	
	Electric Wire Insulation	ND	0 SF	
	Sheetrock & Joint Compound	ND	0 SF	
	Floor Tile Grout (Pizza Shop 1 st & Bsmt)	ND	0 SF	
	Wall Tile Grout (Pizza Shop 1 st & Bsmt)	ND	0 SF	
	Ceiling Tile (Pizza Shop)	ND	0 SF	
	Wall Tile Mastic (Indian Rest.)	ND	0 SF	
	Tile Grout (Indian Rest.)	ND	0 SF	
	Tile Grout (Shoe Store)	ND	0 SF	
	Wall Tile Glue	ND	0 SF	
	Fiberglass Pipe Insulation	N/A	0 LF	Non-suspect Material
	Pipe Insulation in Chases & Wall Cavities	PACM	Amount to be determined	Pipe insulation in chases and wall cavities is assumed ACM. Material to be tested and amount to be determined once demolition commences.
Total Approximate Quantity of ACM			45 SF	

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6.0 AREAS NOT ACCESSIBLE:

Airtek inspected and sampled materials, which were observable and accessible to the survey team. Any materials that have not been tested and/or found positive for asbestos must be assumed ACM.

7.0 REPORT CERTIFICATIONS:

Airtek certifies that the information contained herein is based on the physical and visual inspections conducted by Airtek and data collected during the inspection survey and file review.



Moyra Ali
Moyra Ali,
NYC Investigator

Michael Porter
Michael Porter,
Senior Project Manager

Efren Martinez
Efren Martinez,
Lab Manager

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APPENDIX A

8.0 Analytical Results and Chain of Custody Certificates of Analysis

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LABORATORY RESULTS

Homogeneous Area	Sample #	Location	Material	PLM Results	PLM-NOB	TEM-NOB
A	1	2 nd Floor Greenwich Side	Textured Ceiling	ND	-	-
A	2	2 nd Floor Thames Side	Textured Ceiling	ND	-	-
A	3	2 nd Floor Thames Side	Textured Ceiling	ND	-	-
B	4	2 nd Floor Greenwich Side	Carpet Mastic	-	Inconclusive	ND
B	5	2 nd Floor Thames Side	Carpet Mastic	-	Inconclusive	ND
B	6	2 nd Floor Thames Side	Carpet Mastic	-	Inconclusive	ND
C	7	Bathroom Lobby	Floor Tile Grout	ND	-	-
C	8	Bathroom Lobby	Floor Tile Grout	ND	-	-
C	9	Bathroom Lobby	Floor Tile Grout	ND	-	-
D	10	Kitchen	Floor Tile Grout	ND	-	-
D	11	Kitchen	Floor Tile Grout	ND	-	-
D	12	Kitchen	Floor Tile Grout	ND	-	-
E	13	Roof	Bulkhead Tar	-	5.1% Chry	-
E	14	Roof	Bulkhead Tar	-	NA/PS	-
E	15	Roof	Bulkhead Tar	-	NA/PS	-
F	16	Roof	Tar on HVAC Ducts	-	Inconclusive	<1.0% Chry
F	17	Roof	Tar on HVAC Ducts	-	Inconclusive	<1.0% Chry
F	18	Roof	Tar on HVAC Ducts	-	Inconclusive	<1.0% Chry
G	19	Void	Previously Confirmed ACM			
G	20	Void	Previously Confirmed ACM			
G	21	Void	Previously Confirmed ACM			
H	22	Void	Previously Confirmed Non-ACM			
H	23	Void	Previously Confirmed Non-ACM			
H	24	Void	Previously Confirmed Non-ACM			
I	25	1 st Floor Deli	Wall Tile Grout	-	Inconclusive	ND
I	26	1 st Floor Deli	Wall Tile Grout	-	Inconclusive	ND
I	27	1 st Floor Deli	Wall Tile Grout	-	Inconclusive	ND
J	28	1 st Floor Deli	Floor Tile Grout	ND	-	-
J	29	1 st Floor Deli	Floor Tile Grout	ND	-	-
J	30	1 st Floor Deli	Floor Tile Grout	ND	-	-
K	31	Sushi Restaurant	12"x12" Tan Floor Tile	-	Inconclusive	ND
K	32	Sushi Restaurant	12"x12" Tan Floor Tile	-	Inconclusive	ND
K	33	Sushi Restaurant	12"x12" Tan Floor Tile	-	Inconclusive	ND
L	34	Sushi Restaurant	12"x12" Tan Floor Tile Mastic	-	Inconclusive	ND
L	35	Sushi Restaurant	12"x12" Tan Floor Tile Mastic	-	Inconclusive	NA
L	36	Sushi Restaurant	12"x12" Tan Floor	-	Inconclusive	NA

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Homogeneous Area	Sample #	Location	Material	PLM Results	PLM-NOB	TEM-NOB
			Tile Mastic			
M	37	Sushi Restaurant	Ceiling Tile	ND	-	-
M	38	Sushi Restaurant	Ceiling Tile	ND	-	-
M	39	Sushi Restaurant	Ceiling Tile	ND	-	-
N	40	Basement	Electric Wire Insulation	-	Inconclusive	ND
N	41	Basement	Electric Wire Insulation	-	Inconclusive	NA
N	42	Basement	Electric Wire Insulation	-	Inconclusive	NA
O	43	1 st Floor	Sheetrock	ND	-	-
P	44	1 st Floor	Joint Compound	ND	-	-
O	45	Void				
P	46	2 nd Floor	Sheetrock	ND	-	-
O	47	2 nd Floor	Joint Compound	ND	-	-
P	48	Void				
Q	49	Basement	Sheetrock	ND	-	-
Q	50	Basement	Joint Compound	ND	-	-
Q	51	Void				
R	52	Pizza Shop 1 st Floor	Floor Tile Grout	ND	-	-
R	53	Pizza Shop 1 st Floor	Floor Tile Grout	ND	-	-
R	54	Pizza Shop 1 st Floor	Floor Tile Grout	ND	-	-
S	55	Pizza Shop Basement	Floor Tile Grout	ND	-	-
S	56	Pizza Shop Basement	Floor Tile Grout	ND	-	-
S	57	Pizza Shop Basement	Floor Tile Grout	ND	-	-
T	58	Pizza Shop 1 st Floor	Wall Tile Glue	-	Inconclusive	ND
T	59	Pizza Shop 1 st Floor	Wall Tile Glue	-	Inconclusive	ND
T	60	Pizza Shop 1 st Floor	Wall Tile Glue	-	Inconclusive	ND
U	61	Pizza Shop 1 st Floor	Ceiling Tile	ND	-	-
U	62	Pizza Shop 1 st Floor	Ceiling Tile	ND	-	-
U	63	Pizza Shop Basement	Ceiling Tile	ND	-	-
V	64	Pizza Shop Basement	Wall Tile Grout	ND	-	-
V	65	Pizza Shop Basement	Wall Tile Grout	ND	-	-
V	66	Pizza Shop Basement	Wall Tile Grout	ND	-	-
W	67	Indian Restaurant	Wall Tile Mastic	-	Inconclusive	ND
W	68	Indian Restaurant	Wall Tile Mastic	-	Inconclusive	ND
W	69	Indian Restaurant	Wall Tile Mastic	-	Inconclusive	ND
X	70	Indian Restaurant	Tile Grout	ND	-	-
X	71	Indian Restaurant	Tile Grout	ND	-	-
X	72	Indian Restaurant	Tile Grout	ND	-	-
Y	73	Shoe Store	Tile Grout	ND	-	-

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Homogeneous Area	Sample #	Location	Material	PLM Results	PLM-NOB	TEM-NOB
Y	74	Shoe Store	Tile Grout	ND	-	-
Y	75	Shoe Store	Tile Grout	ND	-	-

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BULK HANDLING AND CARRIER OF CONTAMINATED MATERIAL

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CLIENT ADDRESS		PROJECT NAME		PROJECT NO.		DATE	
133-135 Greenwich Street		133-135 Greenwich Street		05-		5/26/05	
WORK AREA		2nd Floor		2nd Floor			
INSPECTOR		Michael R. Rafter		Michael R. Rafter			
ADDRESS ALL		ADDRESS ALL		ADDRESS ALL			
PROJECT LEADER		PROJECT LEADER		PROJECT LEADER			
Method of Disposal		Method of Disposal		Method of Disposal			
USE TO WASTE IN		USE TO WASTE IN		USE TO WASTE IN			
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Part III - Health & Safety Plan
 133-135 Greenwich Street/21-23 Thames Street
 Airtek Project 05-0701 - Rev 1, August 11, 2005

Project Name: **WEEK HAUPPELENG AND CANTON ON CANTONARY TOWER**

Project # **05-0701**

Page **1** of **1**

Project Address: **133-135 Greenwich Street**

Work Area: **Basement**

Problem Area: **Basement**

Problem Area: **Basement**

Functional Group	Material	Material Description	Material Location	Quantity (Yr)	Material Type	Material
13	Basement	Basement	Basement	11	Basement	Basement
14	Basement	Basement	Basement	11	Basement	Basement
15	Basement	Basement	Basement	11	Basement	Basement
16	Basement	Basement	Basement	11	Basement	Basement
17	Basement	Basement	Basement	11	Basement	Basement
18	Basement	Basement	Basement	11	Basement	Basement
19	Basement	Basement	Basement	11	Basement	Basement
20	Basement	Basement	Basement	11	Basement	Basement
21	Basement	Basement	Basement	11	Basement	Basement
22	Basement	Basement	Basement	11	Basement	Basement

Project Name: **WEEK HAUPPELENG AND CANTON ON CANTONARY TOWER**

Project # **05-0701**

Page **1** of **1**

Project Address: **133-135 Greenwich Street**

Work Area: **Basement**

Problem Area: **Basement**

Problem Area: **Basement**

Functional Group	Material	Material Description	Material Location	Quantity (Yr)	Material Type	Material
13	Basement	Basement	Basement	11	Basement	Basement
14	Basement	Basement	Basement	11	Basement	Basement
15	Basement	Basement	Basement	11	Basement	Basement
16	Basement	Basement	Basement	11	Basement	Basement
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19	Basement	Basement	Basement	11	Basement	Basement
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21	Basement	Basement	Basement	11	Basement	Basement
22	Basement	Basement	Basement	11	Basement	Basement

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CLIENT ADDRESS		PROJECT NAME		DATE	
PROJECT INFORMATION (fill out if applicable)		PROJECT NAME		DATE	
33	17566	138-125	138-125	5/26/05	
34	67	138-125	138-125	5/26/05	
35	68	138-125	138-125	5/26/05	
36	67	138-125	138-125	5/26/05	
37	70	138-125	138-125	5/26/05	
38	71	138-125	138-125	5/26/05	
39	72	138-125	138-125	5/26/05	
40	73	138-125	138-125	5/26/05	
41	74	138-125	138-125	5/26/05	
42	75	138-125	138-125	5/26/05	

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SELECTED ANSWERS TO QUESTIONS

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 Airtek Project 05-0701 – Rev 1, August 11, 2005

Page 1 of 2

Page 1 of 2

Table 1
 Summary of Bulk Adhesives Analysis Results
 133-135 Greenwich

AmesTech Lab Ref: 205050344

Client Name: Altek Environmental Corporation

AmesTech Sample ID	Client Sample Location	Height Area	Sample Weight	Heat Shrinkage (C/gm)	Heat Shrinkage (%)	Moisture Absorption (g/g)	Adhesion to Substrate (MPa)	Adhesion to Substrate (MPa)	Adhesive Type
01	1	0.11	0.11	88.11	4.29	7.11	0.45	0.45	EAAD
02	2	0.10	0.10	88.11	0.55	0.29	0.45	0.45	EAAD
03	3	0.08	0.08	92.50	4.17	0.28	0.45	0.45	EAAD
04	4	0.10	0.10	91.86	2.41	1.40	0.45	0.45	EAAD
05	5	0.10	0.10	91.86	2.41	0.40	0.45	0.45	EAAD
06	6	0.10	0.10	91.86	2.41	0.40	0.45	0.45	EAAD
07	7	0.10	0.10	91.86	2.41	0.40	0.45	0.45	EAAD
08	8	0.10	0.10	91.86	2.41	0.40	0.45	0.45	EAAD
09	9	0.10	0.10	91.86	2.41	0.40	0.45	0.45	EAAD
10	10	0.10	0.10	91.86	2.41	0.40	0.45	0.45	EAAD
11	11	0.10	0.10	91.86	2.41	0.40	0.45	0.45	EAAD
12	12	0.10	0.10	91.86	2.41	0.40	0.45	0.45	EAAD
13	13	0.10	0.10	91.86	2.41	0.40	0.45	0.45	EAAD

See following pages for details

Part III - Health & Safety Plan
133-135 Greenwich Street/21-23 Thames Street
Airtek Project 05-0701 - Rev 1, August 11, 2005

Page 2 of 2

Submitted to: H. B. BOSTON
Client: Black Environmental Corporation

Table 1
Summary of Bulk Asbestos Analysis Results
133-135 Greenwich

Client Sample Location	Area	Sample Weight	Heat Stable Organic %	Acid Soluble Inorganic %	Asbestos % by Weight	Asbestos % by Volume
14 Vinyl Floor Tile Matrix (Lab ID: 133-135-14)	14	1.00	0.00	0.00	0.00	0.00
15 Vinyl Floor Tile Matrix (Lab ID: 133-135-15)	15	1.00	0.00	0.00	0.00	0.00
16 Vinyl Floor Tile Matrix (Lab ID: 133-135-16)	16	0.136	56.67	5.80	0.00	0.00
17 Bulk Wipe (Lab ID: 133-135-17)	17	0.00	0.00	0.00	0.00	0.00
18 Bulk Wipe (Lab ID: 133-135-18)	18	0.00	0.00	0.00	0.00	0.00
19 Bulk Wipe (Lab ID: 133-135-19)	19	0.00	0.00	0.00	0.00	0.00
20 Bulk Wipe (Lab ID: 133-135-20)	20	0.00	0.00	0.00	0.00	0.00
21 Bulk Wipe (Lab ID: 133-135-21)	21	0.00	0.00	0.00	0.00	0.00

Asbestos is a naturally occurring mineral fiber that is found in many types of building materials. Asbestos fibers are microscopic and can be inhaled, ingested or absorbed through the skin. Asbestos fibers can cause lung disease, including asbestosis, lung cancer, and mesothelioma. Asbestos fibers can also cause other health problems, such as heart disease and kidney failure. Asbestos fibers are found in many types of building materials, including asbestos-containing materials (ACM), asbestos-containing products (ACP), and asbestos-containing waste (ACW). Asbestos fibers are found in many types of building materials, including asbestos-containing materials (ACM), asbestos-containing products (ACP), and asbestos-containing waste (ACW). Asbestos fibers are found in many types of building materials, including asbestos-containing materials (ACM), asbestos-containing products (ACP), and asbestos-containing waste (ACW).

Black Environmental Corporation

Part III – Health & Safety Plan
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APPENDIX B

9.0 Company & Personnel Licenses

Part III - Health & Safety Plan
 133-135 Greenwich Street/21-23 Thames Street
 Airtek Project 05-0701 - Rev 1, August 11, 2005

STATE OF NEW YORK - DEPARTMENT OF LABOR
 DIVISION OF SAFETY AND HEALTH
 License and Certificate Unit
 BUILDING 12, STATE CAMPUS
 ALBANY, NY 12240

ASBESTOS-HANDLING LICENSE

RESTRICTED LICENSE-ASBESTOS
 REMOVAL NOT PERMITTED

LICENSE NUMBER: 99-0589
 DATE OF ISSUE: June 28, 2004
 EXPIRATION DATE: June 30, 2005

Contractor: AIRTEK ENVIRONMENTAL CORP.
 Address: 39 West 38th Street
 12th Floor
 New York, NY 10018

Duty Authorized Representative: SAAD ZOUARI

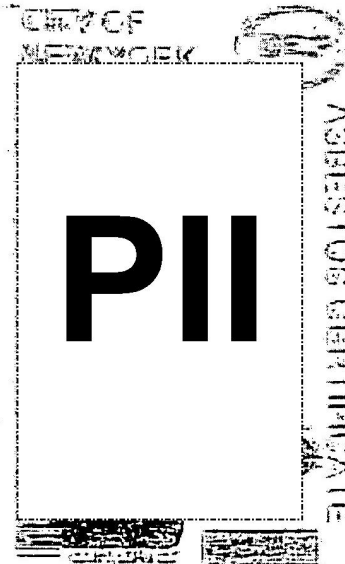
This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (22NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the handling of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos materials.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.

Anthony Germano

Anthony Germano, Acting Director
 FOR THE COMMISSIONER OF LABOR

Part III – Health & Safety Plan
133-135 Greenwich Street/21-23 Thames Street
Airtek Project 05-0701 – Rev 1, August 11, 2005



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HAIR
EOT



IF FOUND RETURN TO:
NYSDOL - LABOR DIV
ROOM 151 BUILDING 12
STATE OFFICE CAMPUS
ALBANY NY 12240

If found return to:

New York City Dept. of
Environmental Protection
Asbestos Control Program
86-17 Junction Blvd. 8th
Floor Corona NY 11368

This certificate must be
shown to a Department
representative upon
request. Reproduction
immediately. Renew
license as required by
expiration date.

Tampering and/or
alteration of this
certificate is a CRIMINAL
offense.

NYSDOL - LABOR DIV
ROOM 151 BUILDING 12
STATE OFFICE CAMPUS
ALBANY NY 12240
EXP. DATE: 3/12/2006



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APPENDIX C

10.0 Laboratory Accreditations

Part III - Health & Safety Plan
133-135 Greenwich Street/21-23 Thames Street
Airtek Project 05-0701 - Rev 1, August 11, 2005



The American Industrial Hygiene Association



acknowledges that

-- Airtek Environmental Corporation

New York City, NY
Laboratory #100275

has fulfilled the requirements of the AIHA Laboratory Quality Assurance Program (LQAP), thereby conforming to the ISO/IEC 17025 International Standard, *Conformity Requirements for the Competence of Testing and Calibration Laboratories*. The above named Laboratory has been Accredited by AIHA in the following

ACCREDITATION PROGRAMS

AI INDUSTRIAL HYGIENE	Accreditation Expires 01/01/2006
CI ENVIRONMENTAL LEAD	Accreditation Expires
CI ENVIRONMENTAL MICROBIOLOGY	Accreditation Expires
CI FOOD	Accreditation Expires
CI OTHER	Accreditation Expires

Specific categories of testing, within each Accreditation Program, for which the above named Laboratory maintains accreditation is confined to the attached Scope of Accreditation. Continued accreditation is contingent upon successful compliance with LQAP requirements. This certificate is not valid without the attached Scope of Accreditation.

Robert J. Dwyer
Robert A. Dwyer, PhD
Chief Executive, Analytical Accreditation Board

Gayle J. McClellan
Gayle J. McClellan, CHL, CSP, PhD, RPH, CEP
President, AIHA

Date Issued: 01/01/2006

Part III – Health & Safety Plan
133-135 Greenwich Street/21-23 Thames Street
Airtek Project 05-0701 – Rev 1, August 11, 2005

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Antonio C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2005
Issued April 01, 2005

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 202 Public Health Law of New York State

MR. SAAD ZOUAK
AIRTEK ENVIRONMENT CORP
39 WEST 35TH ST 12TH FLOOR
NEW YORK NY 10018 UNITED STATES

NY Lab Id No: 11040
EPA Lab Code: NY01361

Is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved subcategories and/or analytes are listed below:

Miscellaneous

Asbestos in Friable Material

EPA 600/M4/82C00

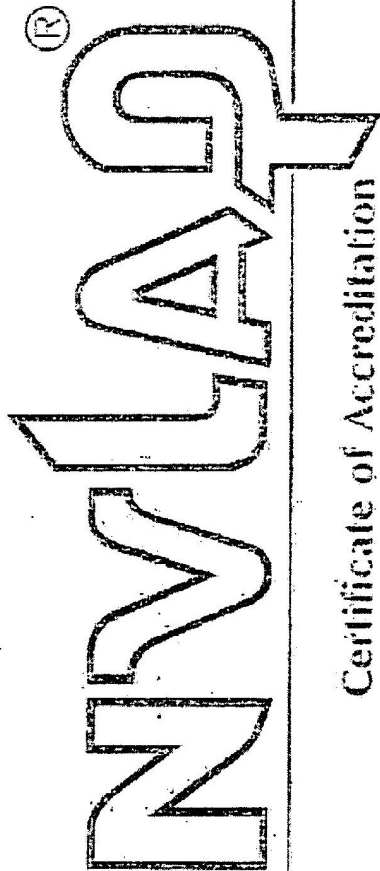
Serial No.: 25342

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Used certificates have a raised seal. Continued acceptance depends on successful ongoing participation in the Program. Consumers are urged to call (516) 455-6570 to verify laboratory's accreditation status.

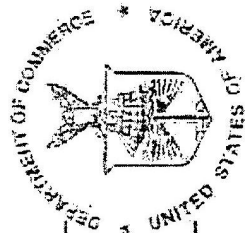
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 133-135 Greenwich Street/21-23 Thames Street
 Airtek Project 05-0701 – Rev 1, August 11, 2005

United States Department of Commerce
 National Institute of Standards and Technology



ISO/IEC 17025:1999
 ISO 9002:1994



AIRTEK ENVIRONMENTAL CORP.
 NEW YORK, NY

Is recognized by the National Voluntary Laboratory Accreditation Program
 for satisfactory compliance with criteria set forth in NIST Handbook 150:2001,
 all requirements of ISO/IEC 17025:1999, and relevant requirements of ISO 9002:1994.
 Accreditation is awarded for specific services, listed on the Scope of Accreditation, for:

BULK ASBESTOS FIBER ANALYSIS

March 31, 2006

Ends here through:

W. P. W. L. D.

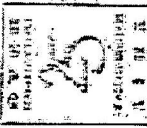
For the National Institute of Standards and Technology
 NVLAP Lab Code: 102011-0

NVLAP-012 600 011

Part III - Health & Safety Plan
 133-135 Greenwich Street/21-23 Thames Street
 Airtek Project 05-0701 - Rev 1, August 11, 2005



The American Industrial Hygiene Association



AmeriSci New York

117 East 30th Street, New York, NY 10016

Telephone: 212-1028-1111

has fulfilled the requirements of the AIHA Laboratory Quality Assurance Program (LQAP), thereby maintaining its the ISO/IEC 17025 International Standard, General Requirements for the Competence of Testing and Calibration Laboratories. The above named laboratory has been accredited by AIHA in the following:

ACCREDITATION PROGRAMS

AI	INDUSTRIAL HYGIENE	Accreditation Expires: 06/30/2006
CI	ENVIRONMENTAL LEAD	Accreditation Expires
CI	ENVIRONMENTAL BIOCHEMISTRY	Accreditation Expires
CI	FOOD	Accreditation Expires
CI	UNIQUE SCOPE	Accreditation Expires

Specific categories of testing, within each Accreditation Program, for which the above named laboratory maintains accreditation is outlined on the attached Scope of Accreditation. Continued accreditation is contingent upon successful ongoing compliance with LQAP requirements. This certificate is not valid without the attached Scope of Accreditation.

Handwritten Signature

Madeline J. Rubin, GHT
 Chairperson, Accredited Accreditation Board

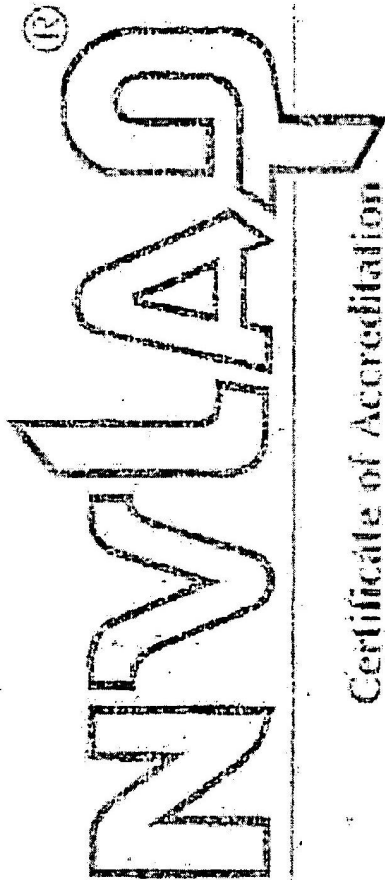
Handwritten Signature

Thomas G. Grunstein, CH
 President, AIHA

Date Issued: 05/01/2006

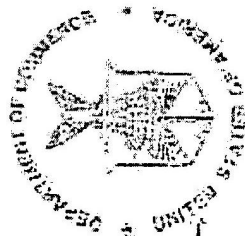
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United States Department of Commerce
 National Institute of Standards and Technology



ISO/IEC 17025:1999
 ISO 9003:1994

Certificate of Accreditation



AMERISCI NEW YORK
 NEW YORK, NY

*is recognized by the National Voluntary Laboratory Accreditation Program
 for satisfactory compliance with criteria set forth in NIST Handbook 150.2061,
 all requirements of ISO/IEC 17025:1999, and relevant requirements of ISO 9002:1994.
 Accreditation is awarded for specific services listed on the Scope of Accreditation, here*

BULK ASBESTOS FIBER ANALYSIS

June 30, 2005

(Effective through)

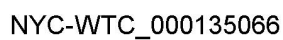
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For the National Institute of Standards and Technology
 NVLAP Lab Code: 205536-0

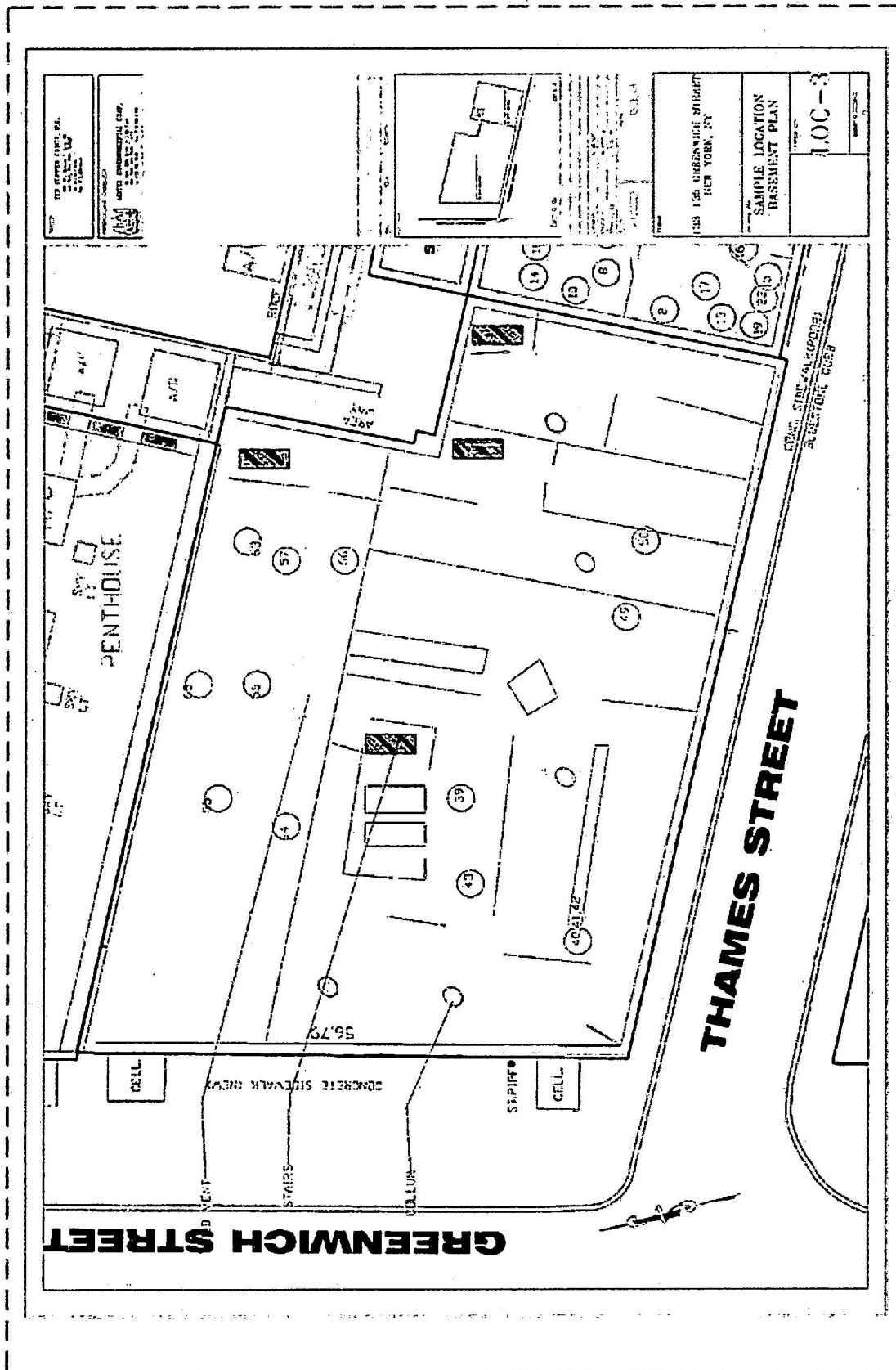
Part III – Health & Safety Plan
133-135 Greenwich Street/21-23 Thames Street
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APPENDIX D

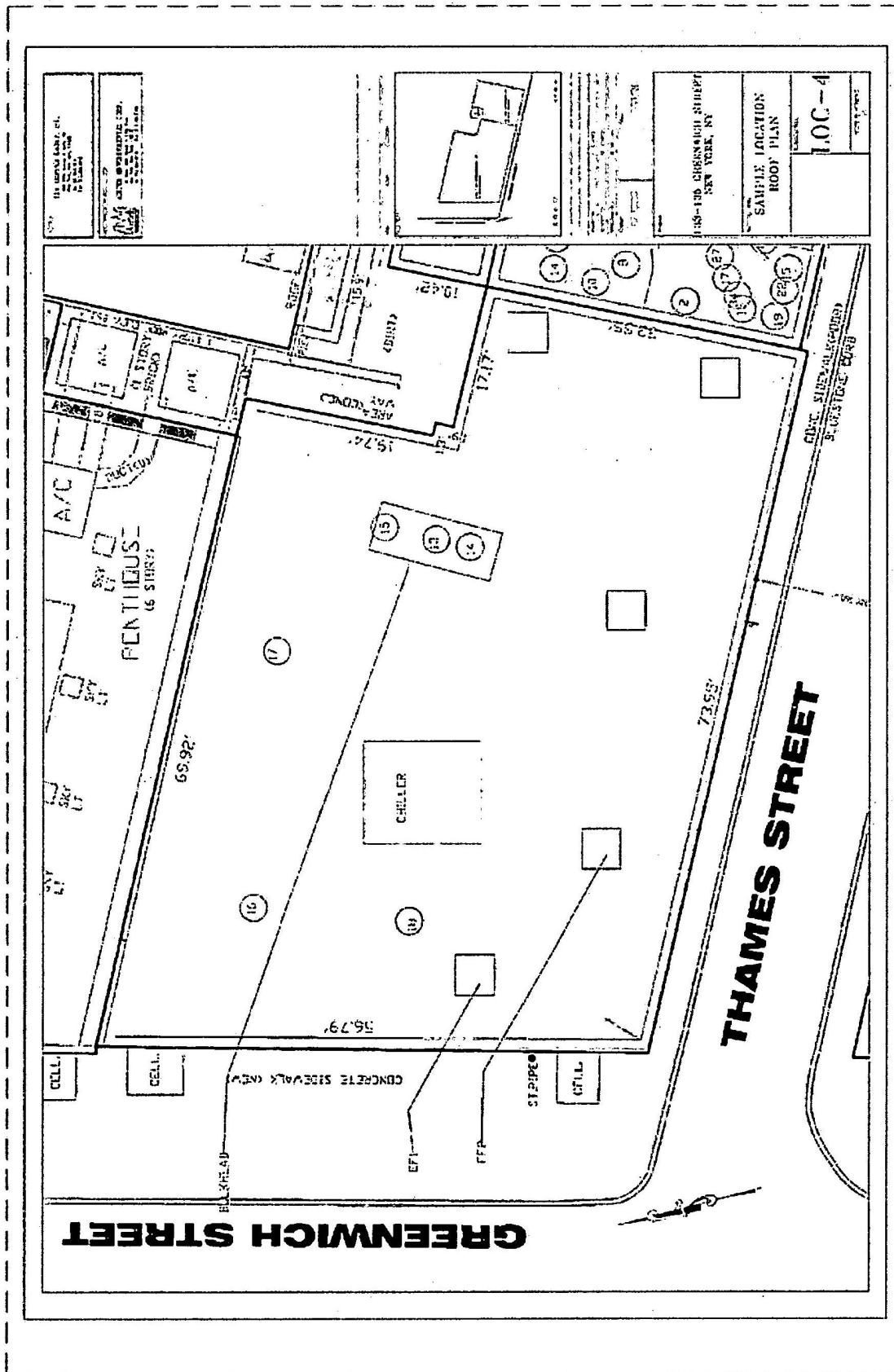
11.0 Sample Location Drawings



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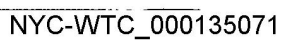
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133-135 Greenwich Street/21-23 Thames Street
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APPENDIX E

12.0 ACM Location Drawings



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AIRTEK ENVIRONMENTAL CORP.

39 WEST 38TH STREET, 12TH FLOOR NEW YORK, NY 10018
PHONE (212) 758-0515 FAX (212) 758-0759
WWW.AIRTEKENV.COM

FINAL ASBESTOS REPORT

Conducted at:

21-23 THAMES STREET
NEW YORK, NY 10006

Conducted for:

GREENWICH STREET PROJECT LLC.
666 FIFTH AVENUE – SUITE 180
NEW YORK, NY 10103

Prepared By:

AIRTEK ENVIRONMENTAL CORP.
39 WEST 38TH STREET – 12TH FLOOR
NEW YORK, NY 10018

AIRTEK PROJECT NUMBER
05-0701

MAY 31, 2005



ENVIRONMENTAL CONSULTANTS

Part III – Health & Safety Plan
 133-135 Greenwich Street/21-23 Thames Street
 Airtek Project 05-0701 – Rev 1, August 11, 2005

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2.0 SCOPE OF WORK.....	1
3.0 SUMMARY OF AIRTEK'S INSPECTION RESULTS.....	2
4.0 CONCLUSIONS AND RECOMMENDATIONS.....	2
5.0 ASBESTOS QUANTITY SCHEDULE.....	3
6.0 AREAS NOT ACCESSIBLE	Error! Bookmark not defined.
7.0 REPORT CERTIFICATIONS.....	Error! Bookmark not defined.

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9.0 APPENDIX B: Personnel Licenses	77
10.0 APPENDIX C: Laboratory Accreditation.....	83
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Part III – Health & Safety Plan
 133-135 Greenwich Street/21-23 Thames Street
 Airtek Project 05-0701 – Rev 1, August 11, 2005

1.0 BACKGROUND:

Airtek Environmental Corp. has conducted an asbestos survey for the presence of Asbestos-Containing Materials (ACM) at the following building(s):

Address: 21-23 Thames Street (5-Story)

Borough: Manhattan

The Investigator responsible for this project was:

Moyna Ali:	NYC Asbestos Investigator #97088	Expires: 03/12/06
	NYS Asbestos Inspector #AH 89-01641	Expires: 03/06

Site Visit(s): 5/26/05 & 5/27/05

Report Date: 5/31/05

Revision Date: N/A

Field Procedures and Analysis Methodology:

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 as per the AHERA concept of Homogeneous Area (HA). A HA is defined as a suspect material of similar age, appearance, function and texture. Each material was grouped together as a specific HA, sampled and then assessed for condition.

Bulk samples of suspect ACM were analyzed by Polarized Light Microscopy (PLM) with dispersion staining, as described in 40 CFR Part 763 and the National Emissions Standard for Hazardous Air Pollutants (NESHAPS).

The New York State Department of Health has recently revised the PLM Stratified Point Counting Method. The new method, "Polarized Light Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples" can be found as item 198.1 in the ELAP Certification manual.

The State of New York ELAP has determined that analysis of Non-friable, Organically Bound Materials (NOB) are not reliably performed by PLM. Therefore, if PLM analysis of a NOB yields a negative result, it must be further confirmed by Transmission Electron Microscopy (TEM).

All samples were initially analyzed by PLM. Samples which produced a negative PLM result and which are classified as a NOB were then re-analyzed utilizing the TEM methodology.

2.0 SCOPE OF WORK:

The following areas which may be affected by the proposed demolition were inspected for ACM:

1. Interior & exterior of the building

The inspection was characterized by a close visual inspection of all accessible areas. Suspect materials were sampled and inventoried for quantity, condition and friability. Materials examined included:

1. Roofing Products

#1, 9, 10 | | | | |

Part III – Health & Safety Plan
 133-135 Greenwich Street/21-23 Thames Street
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2. Brick Mortar
3. Coping Stone Mortar
4. Coping Stone Caulk
5. Window Caulk & Glazing
6. Wall & Ceiling Plaster (White & Brown Coat)
7. Pipe Insulation
8. Floor Coverings
9. Sheetrock & Joint Compound
10. Pipe Insulation
11. Duct Insulation

Based on the currently recommended sampling and analytical procedures, Airtek recommends that additional sampling is necessary, in order to determine the asbestos content of building materials.

3.0 SUMMARY OF AIRTEK ENVIRONMENTAL'S INSPECTION RESULTS:

The asbestos inspection was conducted on 5/26/05 & 5/27/05 and involved a thorough visual examination of all areas and sampling of suspect materials that would be impacted during the proposed demolition.

Airtek Laboratory analysis confirmed the presence of asbestos in the amount greater than 1% within the samples collected from the following material:

2. Flashing
3. Bulkhead Tar
4. Roofing Material
5. Coping Stone Caulk
6. Window Caulk
7. Aircell Pipe Insulation
8. White Block Pipe Insulation

Airtek laboratory analysis determined the samples collected from the following materials to contain less than one percent (<1%) asbestos.

11. Brick Mortar
12. Coping Stone Mortar
13. Window Glazing
14. Wall Plaster White Coat
15. Wall Plaster Brown Coat
16. Ceiling Plaster White Coat
17. Ceiling Plaster Brown Coat
18. Rubber Tile Mastic
19. Sheetrock & Joint Compound
20. Cementitious Duct Insulation
21. Tile Grout

4.0 CONCLUSIONS AND RECOMMENDATIONS:

Asbestos-containing materials, which will be affected by the scope of work, have been positively identified at various locations throughout the building(s).

Proper asbestos abatement procedures shall be implemented prior to the commencement of demolition work. All asbestos abatement work shall be performed in accordance with all applicable Federal, State and Local rules and regulations. The abatement project shall be filed with all agencies having jurisdiction over this project, such as USEPA, NYSDOL and NYCDEP.

680	57	Ref	on		
		ACPT			

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A licensed abatement contractor must perform the removal of all friable and non-friable ACM. Airtek believes that the implementation of these recommendations will serve to best protect human health and the environment.

To assure that the removal of the aforementioned ACM is properly and effectively carried out, the following recommendations are proposed by Airtek:

- D. Develop and implement a schedule that outlines the time frame for removal of ACM.
- E. Develop complete and concise specifications to effectively deal with removal of the ACM. These specifications should be developed to comply with all applicable Federal, State and Local regulations.
- F. Retain the service of an independent testing laboratory to monitor the air for possible asbestos contamination before, during and after the removal work. Retain all documentation and correspondence from the removal contractor, the testing laboratory and related items in a permanent record.

5.0 ASBESTOS QUANTITY SCHEDULE:

Approximate asbestos quantity schedules are presented on the following table:

TABLE 1 SUMMARY OF INSPECTION RESULTS FOR ASBESTOS 21-23 THAMES STREET				
PROPOSED WORK	SUSPECT ACM THAT MAY BE AFFECTED	LAB RESULT	APPROXIMATE ACM QUANTITY	NOTES/SPECIFIC LOCATION
	Flashing	ACM	100 SF	5 th Floor Roof
	Bulkhead Tar	ACM	75 SF	5 th Floor Roof
	Roofing Material	ACM	350 SF	5 th Floor Roof
	Flashing	ACM	41 SF	1 st Floor Roof
	Roofing Material	ACM	105 SF	1 st Floor Roof
	Brick Mortar	ND	0 SF	Entire
	Coping Stone Mortar	ND	0 SF	5 th Floor Roof
	Coping Stone Caulk	ACM	1 SF	5 th Floor Roof – 15 LF total
	Window Caulk	ACM	9 SF	Masonry Openings - 210 LF total
	Window Glazing	ND	0 LF	Entire
	Wall Plaster (White & Brown Coats)	ND	0 SF	Entire
	Aircell Pipe Insulation	ACM	50 LF	2 nd Floor, Storefront between Indian Rest. & Eat & Run, Basement, Apartments – This is the amount that was visible to the investigator. Pipe Insulation is assumed to exist behind/in the wall cavities/chases.
	Ceiling Plaster (White & Brown Coats)	ND	0 SF	Entire
	Sheetrock & Joint Compound	ND	0 SF	Entire
	Rubber Tile Mastic	ND	0 SF	Between Indian Restaurant and Eat & Run
	Cementitious Duct Insulation	ND	0 SF	Eat & Run
	White Block Pipe Insulation	ACM	8 LF	Eat & Run
	Tile Grout	ND	0 SF	Eat & Run
Total Approximate Quantity of ACM			681 SF & 58 LF	

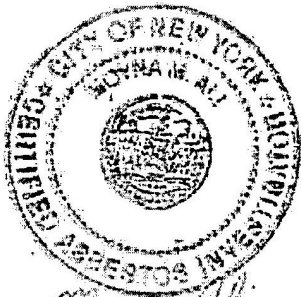
Part III – Health & Safety Plan
133-135 Greenwich Street/21-23 Thames Street

6.0 AREAS NOT ACCESSIBLE:

Airek inspected and sampled materials, which were observable and accessible to the survey team. Any materials that have not been tested and/or found positive for asbestos must be assumed ACM.

7.0 REPORT CERTIFICATIONS:

Airek certifies that the information contained herein is based on the physical and visual inspections conducted by Airek and data collected during the inspection survey and file review:



Moyné Ali
Moyné Ali,
NYC Investigator

Michael Porter
Michael Porter,
Senior Project Manager

Eiren Martinez
Eiren Martinez,
Lab Manager

Part III – Health & Safety Plan
133-135 Greenwich Street/21-23 Thames Street
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APPENDIX A

8.0 Analytical Results and Chain of Custody Certificates of Analysis

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LABORATORY RESULTS

Homogeneous Area	Sample #	Location	Material	PLM Results	PLM-NOB	TEM-NOB
A	1	5 th FI Roof	Flashing	-	5.2% Chry	-
A	2	5 th FI Roof	Flashing	-	NA/PS	-
A	3	5 th FI Roof	Flashing	-	NA/PS	-
B	4	5 th FI Roof	Bulkhead Tar	-	4.8% Chry	-
B	5	5 th FI Roof	Bulkhead Tar	-	NA/PS	-
B	6	5 th FI Roof	Bulkhead Tar	-	NA/PS	-
C	7	5 th FI Roof	Roof Material	-	4.5% Chry	-
C	8	5 th FI Roof	Roof Material	-	NA/PS	-
C	9	5 th FI Roof	Roof Material	-	NA/PS	-
D	10	5 th FI Roof	Brick Mortar	ND	-	-
D	11	5 th FI Roof	Brick Mortar	ND	-	-
D	12	5 th FI Roof	Brick Mortar	ND	-	-
E	13	5 th FI Roof	Coping Stone Mortar	ND	-	-
E	14	5 th FI Roof	Coping Stone Mortar	ND	-	-
E	15	5 th FI Roof	Coping Stone Mortar	ND	-	-
F	16	5 th FI Roof	Coping Stone Caulk	-	2.2% Chry	-
F	17	5 th FI Roof	Coping Stone Caulk	-	NA/PS	-
F	18	5 th FI Roof	Coping Stone Caulk	-	NA/PS	-
G	19	5 th Floor	Window Caulk	-	2.2% Chry	-
G	20	3 rd Floor	Window Caulk	-	NA/PS	-
G	21	2 nd Floor	Window Caulk	-	NA/PS	-
H	22	5 th Floor	Window Glazing	-	Inconclusive	<1.0% Anth Trace Chry
H	23	3 rd Floor	Window Glazing	-	Inconclusive	<1.0% Anth Trace Chry
H	24	2 nd Floor	Window Glazing	-	Inconclusive	<1.0% Anth Trace Chry
I	25	5 th Floor	Wall Plaster White Coat	ND	-	-
I	26	4 th Floor	Wall Plaster White Coat	ND	-	-
I	27	3 rd Floor	Wall Plaster White Coat	ND	-	-
I	28	2 nd Floor	Wall Plaster White Coat	ND	-	-
I	29	1 st Floor	Wall Plaster White Coat	ND	-	-
I	30	1 st Floor	Wall Plaster White Coat	ND	-	-
I	31	Basement	Wall Plaster White Coat	ND	-	-
J	32	5 th Floor	Wall Plaster Brown Coat	ND	-	-
J	33	4 th Floor	Wall Plaster Brown Coat	ND	-	-
J	34	3 rd Floor	Wall Plaster Brown Coat	ND	-	-
J	35	2 nd Floor	Wall Plaster Brown Coat	ND	-	-
J	36	1 st Floor	Wall Plaster Brown Coat	ND	-	-
J	37	1 st Floor	Wall Plaster Brown Coat	ND	-	-
J	38	Basement	Wall Plaster Brown Coat	ND	-	-
K	39	2 nd Floor	Aircell Pipe Insulation	24% Chry	-	-
K	40	Storefront	Aircell Pipe Insulation	NA/PS	-	-
K	41	Basement	Aircell Pipe Insulation	NA/PS	-	-
L	42	5 th Floor	Ceiling Plaster White Coat	ND	-	-
L	43	4 th Floor	Ceiling Plaster White Coat	ND	-	-
L	44	3 rd Floor	Ceiling Plaster White Coat	ND	-	-
L	45	2 nd Floor	Ceiling Plaster White Coat	ND	-	-
L	46	1 st Floor	Ceiling Plaster White Coat	ND	-	-
L	47	1 st Floor	Ceiling Plaster White Coat	ND	-	-
L	48	Basement	Ceiling Plaster White Coat	ND	-	-
M	49	5 th Floor	Ceiling Plaster Brown Coat	ND	-	-
M	50	4 th Floor	Ceiling Plaster Brown Coat	ND	-	-

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Homogeneous Area	Sample #	Location	Material	PLM Results	PLM-NOB	TEM-NOB
M	51	3 rd Floor	Ceiling Plaster Brown Coat	ND	-	-
M	52	2 nd Floor	Ceiling Plaster Brown Coat	ND	-	-
M	53	1 st Floor	Ceiling Plaster Brown Coat	ND	-	-
M	54	1 st Floor	Ceiling Plaster Brown Coat	ND	-	-
M	55	Basement	Ceiling Plaster Brown Coat	ND	-	-
N	56	Basement	Aircell Pipe Insulation	27% Chry	-	-
N	57	Basement	Aircell Pipe Insulation	N/PS	-	-
N	58	Basement	Aircell Pipe Insulation	N/PS	-	-
O	59	1 st Floor	Rubber Tile Mastic	-	Inconclusive	ND
O	60	1 st Floor	Rubber Tile Mastic	-	Inconclusive	ND
O	61	1 st Floor	Rubber Tile Mastic	-	Inconclusive	ND
P	62	5 th Floor	Sheetrock	ND	-	-
P	63	3 rd Floor	Sheetrock	ND	-	-
P	64	1 st Floor	Sheetrock	ND	-	-
Q	65	5 th Floor	Joint Compound	ND	-	-
Q	66	3 rd Floor	Joint Compound	ND	-	-
Q	67	1 st Floor	Joint Compound	ND	-	-
R	68	1 st Floor	Cementitious Duct insulation	ND	-	-
R	69	1 st Floor	Cementitious Duct insulation	ND	-	-
R	70	1 st Floor	Cementitious Duct insulation	ND	-	-
S	71	1 st Floor	White Block Pipe Insulation	16% Amo 4% Chry	-	-
S	72	1 st Floor	White Block Pipe Insulation	N/PS	-	-
S	73	1 st Floor	White Block Pipe Insulation	N/PS	-	-
T	74	1 st Floor	Tile Grout	ND	-	-
T	75	1 st Floor	Tile Grout	ND	-	-
T	76	1 st Floor	Tile Grout	ND	-	-

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BULK SAMPLING AND CHART OF CURRENTLY BORING

PROJECT INFORMATION (fill out ALL information)

CLIENT ADDRESS: **133-135 GREENWICH STREET, 21-23 THAMES STREET, NEW YORK, NY 10006**

PROJECT ADDRESS: **133-135 GREENWICH STREET, 21-23 THAMES STREET, NEW YORK, NY 10006**

PROJECT NAME: **133-135 GREENWICH STREET, 21-23 THAMES STREET**

DATE: **8/19/05**

PROJECT NO: **05-0701**

Comments: **SEE AT 1st FIVEFIVE**

Location	Depth (ft)	Sample Location	Quantity (lb)	Notes
1	13	ROOF	100	5/1/05
2	14	ROOF	100	5/1/05
3	15	ROOF	100	5/1/05
4	16	ROOF	100	5/1/05
5	17	ROOF	100	5/1/05
6	18	ROOF	100	5/1/05
7	19	ROOF	100	5/1/05
8	20	ROOF	100	5/1/05
9	21	ROOF	100	5/1/05

LABORATORY

Revised by: **133-135 GREENWICH STREET, 21-23 THAMES STREET**

Project No: **05-0701**

Project Name: **133-135 GREENWICH STREET, 21-23 THAMES STREET**

Project Address: **133-135 GREENWICH STREET, 21-23 THAMES STREET**

Project Date: **8/19/05**

Project Status: **133-135 GREENWICH STREET, 21-23 THAMES STREET**

Project Manager: **133-135 GREENWICH STREET, 21-23 THAMES STREET**

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2010-08-01
 2010-08-01
 2010-08-01

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BUILDING SAMPLES AND CHART OF CONTAMINATION

PROJECT INFORMATION		CLIENT ADDRESS		PROJECT ADDRESS		PROJECT ADDRESS		PROJECT ADDRESS		PROJECT ADDRESS	
PROJECT NAME	PROJECT ADDRESS	PROJECT ADDRESS	PROJECT ADDRESS	PROJECT ADDRESS	PROJECT ADDRESS	PROJECT ADDRESS	PROJECT ADDRESS	PROJECT ADDRESS	PROJECT ADDRESS	PROJECT ADDRESS	PROJECT ADDRESS
10	10/13	10/13	10/13	10/13	10/13	10/13	10/13	10/13	10/13	10/13	10/13
11	11/13	11/13	11/13	11/13	11/13	11/13	11/13	11/13	11/13	11/13	11/13
12	12/13	12/13	12/13	12/13	12/13	12/13	12/13	12/13	12/13	12/13	12/13
13	13/13	13/13	13/13	13/13	13/13	13/13	13/13	13/13	13/13	13/13	13/13
14	14/13	14/13	14/13	14/13	14/13	14/13	14/13	14/13	14/13	14/13	14/13
15	15/13	15/13	15/13	15/13	15/13	15/13	15/13	15/13	15/13	15/13	15/13
16	16/13	16/13	16/13	16/13	16/13	16/13	16/13	16/13	16/13	16/13	16/13
17	17/13	17/13	17/13	17/13	17/13	17/13	17/13	17/13	17/13	17/13	17/13
18	18/13	18/13	18/13	18/13	18/13	18/13	18/13	18/13	18/13	18/13	18/13

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WATER SAMPLING AND CHLORINE CONTINUITY FORM

PROJECT ADDRESS: 133-135 GREENWICH STREET
 WORK AREA: 21-23 THAMES STREET
 PROJECT NO: 05-0701
 DATE: 8/11/05

PROJECT REQUESTED FOR ANALYSIS: 133-135 GREENWICH STREET
 CHLORINE: 21-23 THAMES STREET

Sample No.	Location	Material Description	Method of Sampling	Time of Day	Time of Year	Time of Day	Time of Year	Quantity (g)	Quantity (mL)	Results
58	CONCRETE	CONCRETE	DRILL	11:00	11:00	11:00	11:00	3.57E	3.57E	ND
59	CONCRETE	CONCRETE	DRILL	11:00	11:00	11:00	11:00	3.57E	3.57E	ND
60	CONCRETE	CONCRETE	DRILL	11:00	11:00	11:00	11:00	3.57E	3.57E	ND
61	CONCRETE	CONCRETE	DRILL	11:00	11:00	11:00	11:00	3.57E	3.57E	ND
62	CONCRETE	CONCRETE	DRILL	11:00	11:00	11:00	11:00	3.57E	3.57E	ND
63	CONCRETE	CONCRETE	DRILL	11:00	11:00	11:00	11:00	3.57E	3.57E	ND
64	CONCRETE	CONCRETE	DRILL	11:00	11:00	11:00	11:00	3.57E	3.57E	ND
65	CONCRETE	CONCRETE	DRILL	11:00	11:00	11:00	11:00	3.57E	3.57E	ND
66	CONCRETE	CONCRETE	DRILL	11:00	11:00	11:00	11:00	3.57E	3.57E	ND

ANALYST: [Signature]
 DATE: 8/11/05

LABORATORY: [Signature]
 DATE: 8/11/05

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Index

STATE OF NEW YORK

W. H. H. H.

Analysis Sample #	Chart Sample Location	Area	Wgt	Sample Weight	Wet % Moisture	Yield % Soluble	Non-soluble % Insoluble	% Addition as by 12.42.05	% Addition as by 12.42.05
01	22	1	1	0.417	16.78	65.10	17.77	16A	16.78
02	23	1	1	0.411	15.11	67.79	16.54	16A	15.11
03	24	1	1	0.749	14.77	68.64	16.59	16A	14.77
04	29	2	2	0.695	12.32	7.23	30.11	16A	12.32
05	30	2	2	0.693	10.18	7.93	23.06	16A	10.18
06	31	2	2	0.693	70.97	5.10	21.06	16A	70.97

DEPT. OF AGRICULTURE

1. The first step in the process of identifying a problem is to recognize that a problem exists. This is often done by comparing current performance with a desired state or goal. For example, if a company's sales are declining, it may indicate a problem with its marketing strategy or product quality.

2. Once a problem is identified, the next step is to define it clearly. This involves specifying the scope of the problem, the affected parties, and the desired outcome. For instance, if the problem is declining sales, the definition might be "Sales have decreased by 10% over the last six months, and we need to increase them by 15% within the next quarter."

3. The third step is to analyze the problem. This involves identifying the causes of the problem and the factors that are contributing to it. For example, if sales are declining, the analysis might reveal that the company's product is outdated, its pricing is too high, or its marketing is ineffective.

4. The fourth step is to develop a solution. This involves brainstorming ideas and evaluating them to determine the best course of action. For instance, if the analysis shows that the product is outdated, the solution might be to develop a new product line.

5. The fifth step is to implement the solution. This involves putting the chosen solution into action and monitoring its progress. For example, if the solution is to develop a new product line, the implementation might involve hiring a new team, conducting market research, and launching the new product.

6. The final step is to evaluate the results. This involves comparing the actual outcomes with the desired outcomes to determine the effectiveness of the solution. For instance, if the new product line is successful, the evaluation might show that sales have increased by 15% and the company's market share has grown.

—

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APPENDIX B

9.0 Company & Personnel Licenses

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STATE OF NEW YORK - DEPARTMENT OF LABOR
 DIVISION OF SAFETY AND HEALTH
 License and Certificate Unit
 BUILDING 12 STATE CAMPUS
 ALBANY, NY 12240

ASBESTOS HANDLING - LICENSE

RESTRICTED LICENSE-ASBESTOS
 REMOVAL NOT PERMITTED

LICENSE NUMBER: 99-0589
 DATE OF ISSUE: June 28, 2004
 EXPIRATION DATE: June 30, 2005

Contractor: AIRTEK ENVIRONMENTAL CORP.
 Address: 39 West 38th Street
 12th Floor
 New York NY 10018

Duly Authorized Representative: SAAD ZOUARI

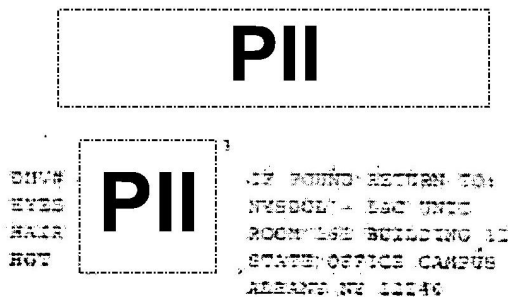
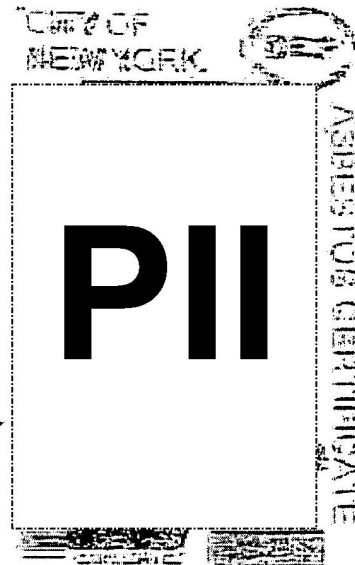
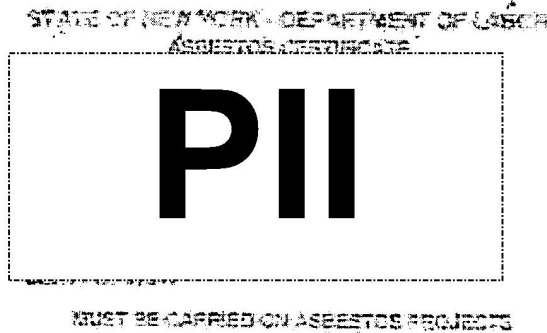
This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (22NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos materials.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate appropriate for the type of work they perform, by the New York State Department of Labor.

Anthony Germano

Anthony Germano, Acting Director
 FOR THE COMMISSIONER OF LABOR

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If found return to:
 New York City Dept. of
 Environmental Protection
 Asbestos Control Program
 49-17 Janssen Blvd. 8th
 Floor Corona NY 11358

This certificate must be
 shown to a Department
 representative upon
 request. Report loss
 immediately. Renew
 license 60 days prior to
 expiration date.

Tampering and/or
 alteration of this
 certificate is a CRIMINAL
 offense.

EXPIRATION DATE: 3/12/2006



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APPENDIX C

10.0 Laboratory Accreditations

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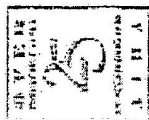
The American Industrial Hygiene Association



At Knowledge, the

Airtek Environmental Corporation

New York City, NY
 Laboratory #00275



has fulfilled the requirements of the AIAA Laboratory Quality Assurance Program (LQAP), thereby conforming to the ISO/IEC 17025 International Standard, *General Requirements for the Competence of Testing and Calibration Laboratories*. The above named laboratory has been accredited by AIAA in the following:

ACCREDITATION PROGRAMS

1. INDUSTRIAL HYGIENE	Accreditation Expires: 01/01/206
2. ENVIRONMENTAL LEAD	Accreditation Expires:
3. ENVIRONMENTAL MICROBIOLOGY	Accreditation Expires:
4. FOOD	Accreditation Expires:
5. OTHER	Accreditation Expires:

Specific categories of testing, within each Accreditation Program, in which the above named Laboratory accreditation recognition is confined are the attached Scope of Accreditation. Continued accreditation is contingent upon successful ongoing compliance with LQAP requirements. This certificate is not valid without the attached Scope of Accreditation.

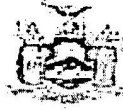
Richard A. Delgado
 Richard A. Delgado, PhD
 Chairman, Analytical Accreditation Board

Carol E. McChesley
 Carol E. McChesley, CHL, CSP, PhD, BCCH, QEP
 President, AIAA

Date Issued: 01/01/03

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER
Antonio C. Novello, M.D., M.P.H., D.P.H.



Expires 12:01 AM April 01, 2006
Issued April 01, 2005

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. SAAD ZOUAK
AIRTEK ENVIRONMENT CORP
39 WEST 38TH ST. 12TH FLOOR
NEW YORK NY 10018 UNITED STATES

NY Lab ID No: 11040
EPA Lab Code: NY01361

is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved subcategories and/or analytes are listed below:

Miscellaneous

Asbestos in Frangible Material

EPA 800/M412/010

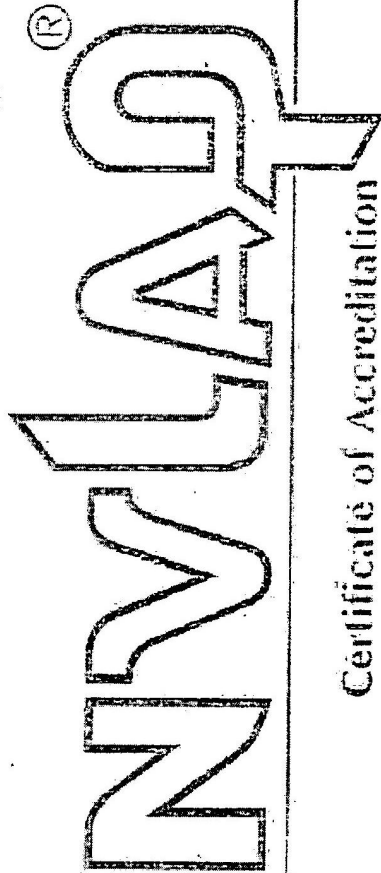
Serial No.: 25342

Property of the New York State Department of Health. Valid only at the address shown. Must be
renewed annually. Valid certificates have a raised seal. Continued accreditation depends on
successful ongoing participation in the Program. Consumers are urged to call (516) 465-4500 to
verify laboratory's accreditation status.

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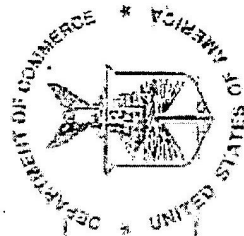
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United States Department of Commerce
 National Institute of Standards and Technology



ISO/IEC 17025:1999
 ISO 9002:1994

Certificate of Accreditation



AIRTEK ENVIRONMENTAL CORP.
 NEW YORK, NY

*is recognized by the National Voluntary Laboratory Accreditation Program
 for satisfactory compliance with criteria set forth in NIST Handbook 150:2001,
 all requirements of ISO/IEC 17025:1999, and relevant requirements of ISO 9002:1994.
 Accreditation is awarded for specific services, listed on the Scope of Accreditation, for:*

BULK ASBESTOS FIBER ANALYSIS

March 31, 2006

Effective through

W. P. W. L. D.

For the National Institute of Standards and Technology
 NVLAP Lab Code: 102011-0

NVLAP 015-101

Part III – Health & Safety Plan
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 Airtek Project 05-0701 – Rev 1, August 11, 2005



The American Industrial Hygiene Association



Amerisci New York

117 East 30th Street, New York, NY 10016
 Laboratory ID: 102841

has fulfilled the requirements of the AIHA Laboratory Quality Assurance Program (LQAP), thereby confirming its compliance with the requirements of the AIHA Laboratory Quality Assurance Program (LQAP) for the Competency of Testing and Calibration Laboratories.

ACCREDITATION PROGRAMS

☒ INDUSTRIAL HYGIENE	Accreditation Expires: 06/30/2006
☒ ENVIRONMENTAL LEAD	Accreditation Expires: 06/30/2006
☒ ENVIRONMENTAL BIOCHEMISTRY	Accreditation Expires: 06/30/2006
☒ FOOD	Accreditation Expires: 06/30/2006
☒ UNIQUE SCOPE	Accreditation Expires: 06/30/2006

Specific categories of testing, within each Accreditation Program, for which the above named laboratory holds this accreditation is outlined on the attached Scope of Accreditation. Continued participation in this function is contingent upon successful ongoing compliance with LQAP requirements. This certificate is not valid without the attached Scope of Accreditation.

Elizabeth J. Smith
 Elizabeth J. Smith, CHH
 Chairperson, Analytical Accreditation Board

Thomas G. Grubbs, CHH
 Thomas G. Grubbs, CHH
 President, AIHA

Date Issued: 05/01/2006

Part III – Health & Safety Plan
133-135 Greenwich Street/21-23 Thames Street
Airtek Project 05-0701 – Rev 1, August 11, 2005

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER
Antonio G. Novello, M.D., M.P.H., D.P.H.



Expires 12:01 AM April 01, 2006
Issued April 01, 2005

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

(Issued in accordance with and pursuant to Section 1302 Public Health Law of New York State)

MR. PAUL MUCHA
AMERICA SCIENCE TEAM NEW YORK INC
117 EAST 30TH ST
NEW YORK NY 10016 UNITED STATES

NY Lab ID No: 11460
EPA Lab Code: NYC1976

is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved subcategories and/or analytes are listed below:

Miscellaneous

Analytes in Plastic Material	EPA 401-WAC-2000
Analytes in Non-Plastic Material	USEPA 105-A OF MANUAL

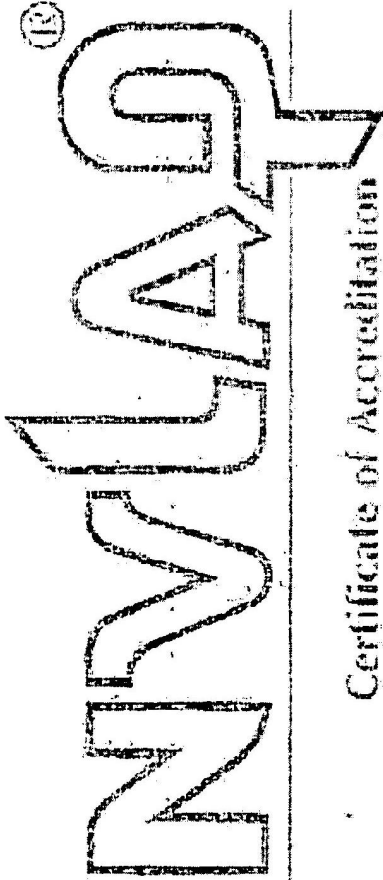
Serial No.: 25736

Property of the New York State Department of Health. Valid only at the address shown. Must be continuously renewed. This certificate has a three (3) year term. Certificate renewal depends on compliance with the provisions of the Program. Certificates are voided to call (816) 486-3170 to verify regulatory & accreditation status.

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United States Department of Commerce
 National Institute of Standards and Technology



ISO/IEC 17025:1999
 ISO 9001:1994

Certificate of Accreditation

AMERISCI NEW YORK
 NEW YORK, NY

is recognized by the National Voluntary Laboratory Accreditation Program
 for satisfactory compliance with criteria set forth in NIST Handbook 150.2061,
 all requirements of ISO/IEC 17025:1999, and relevant requirements of ISO 9001:1994.
 Accreditation is awarded for specific services, listed on the Scope of Accreditation, but

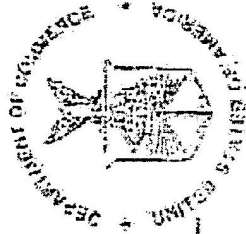
BULK ASBESTOS FIBER ANALYSIS

June 30, 2005

Effective through

[Signature]

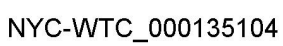
for the National Institute of Standards and Technology
 NVLAP Lab Code: 240546-0



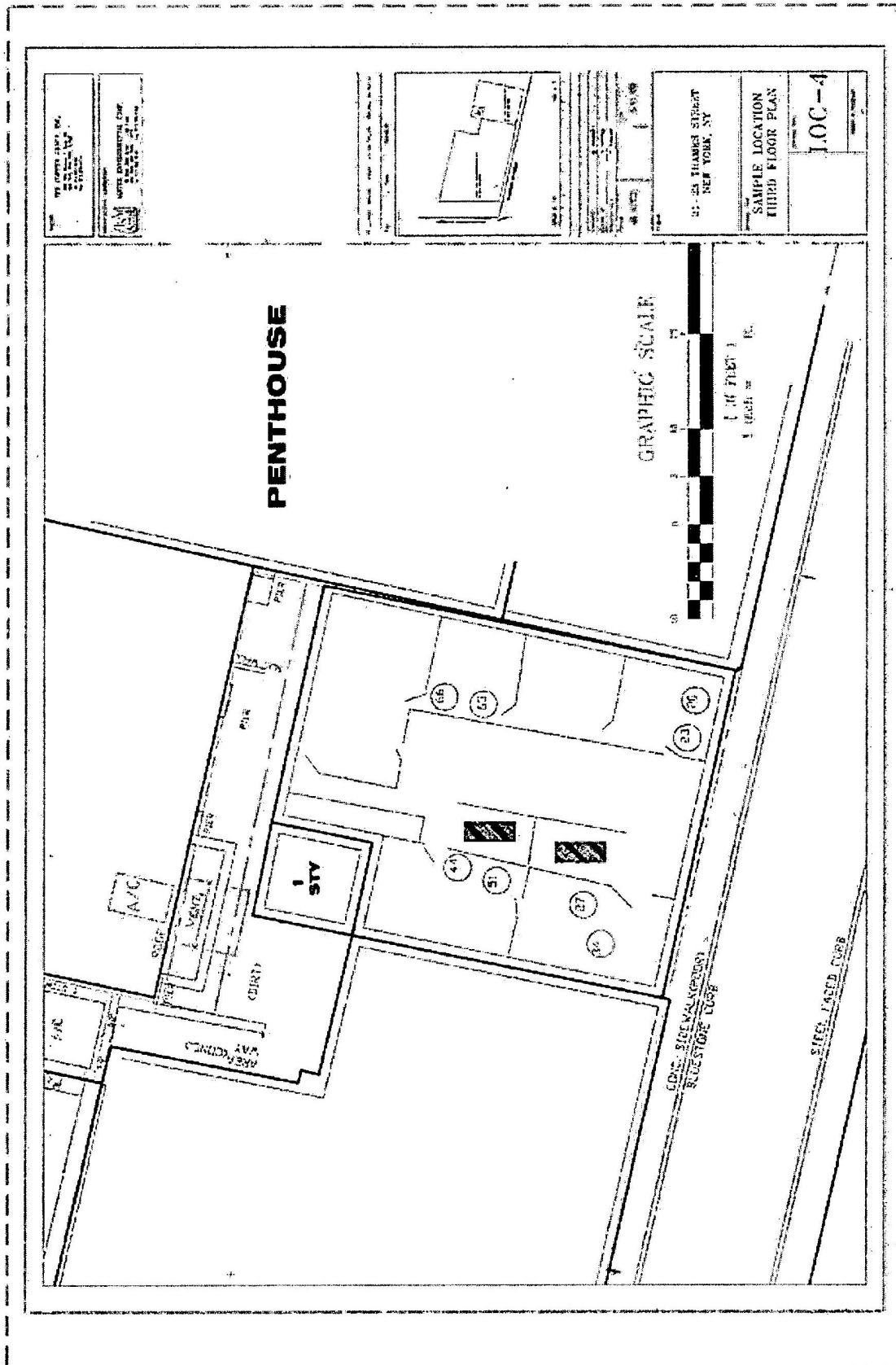
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APPENDIX D

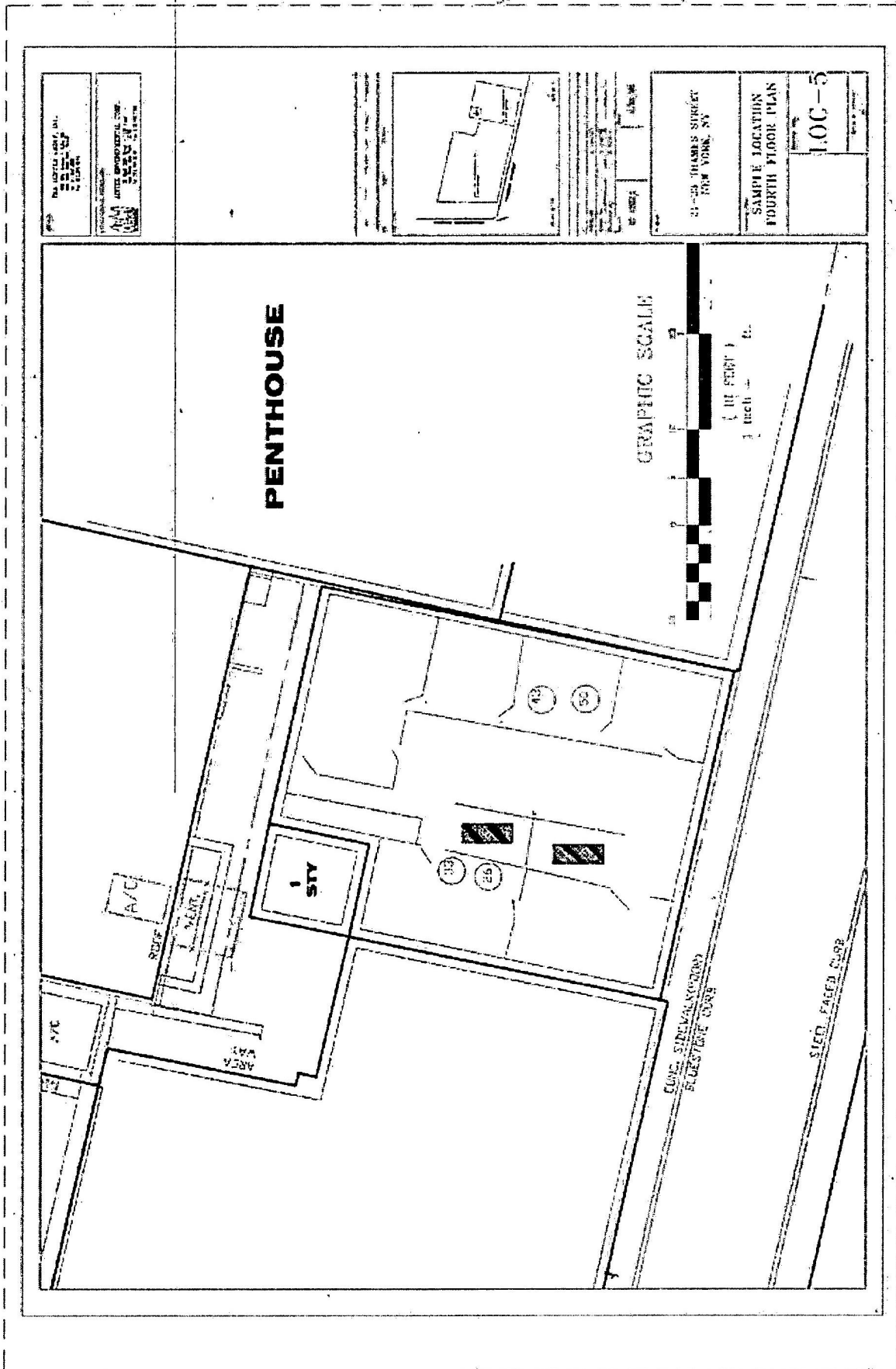
11.0 Sample Location Drawings



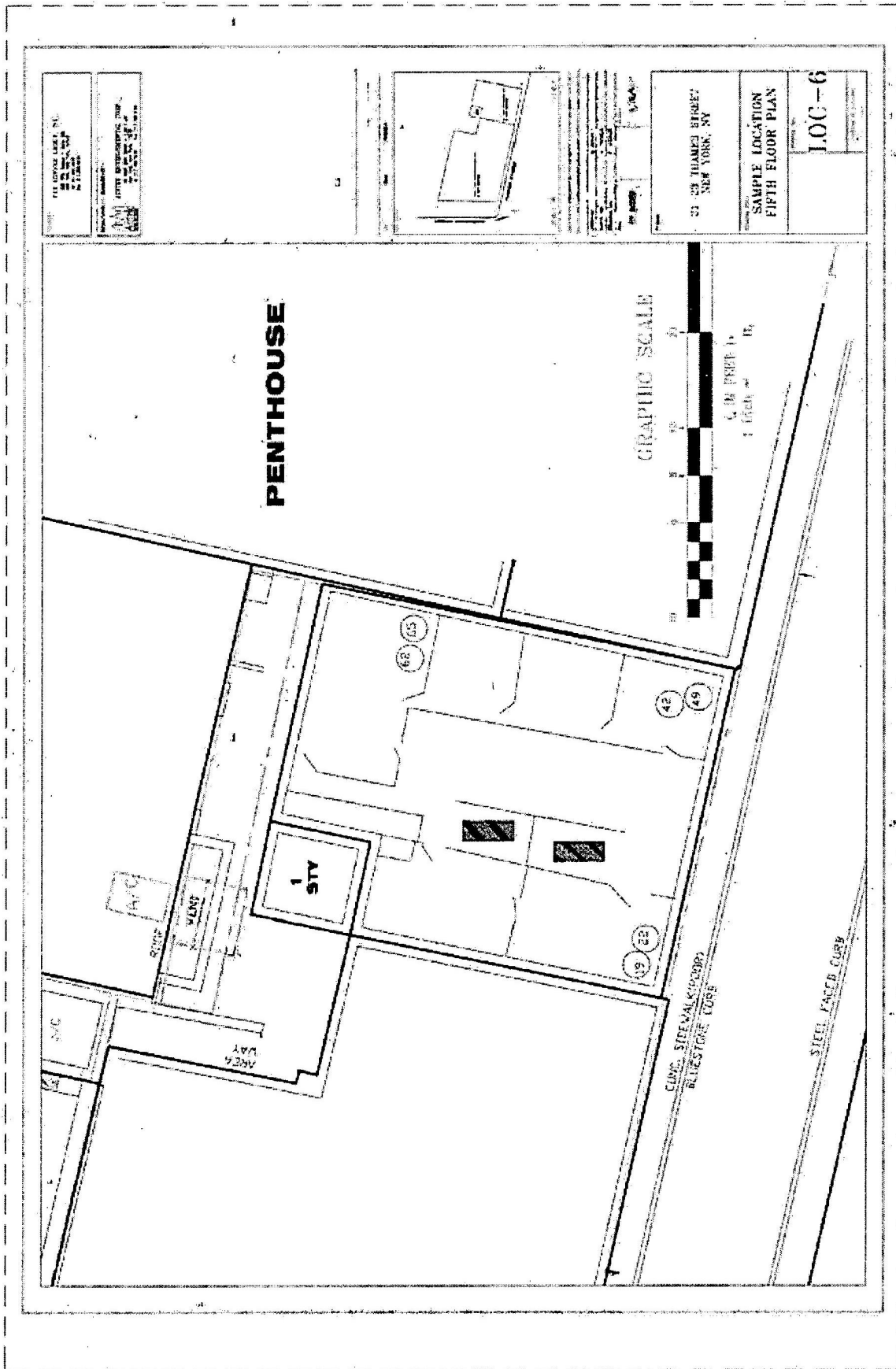
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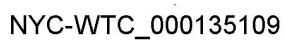


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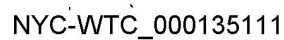




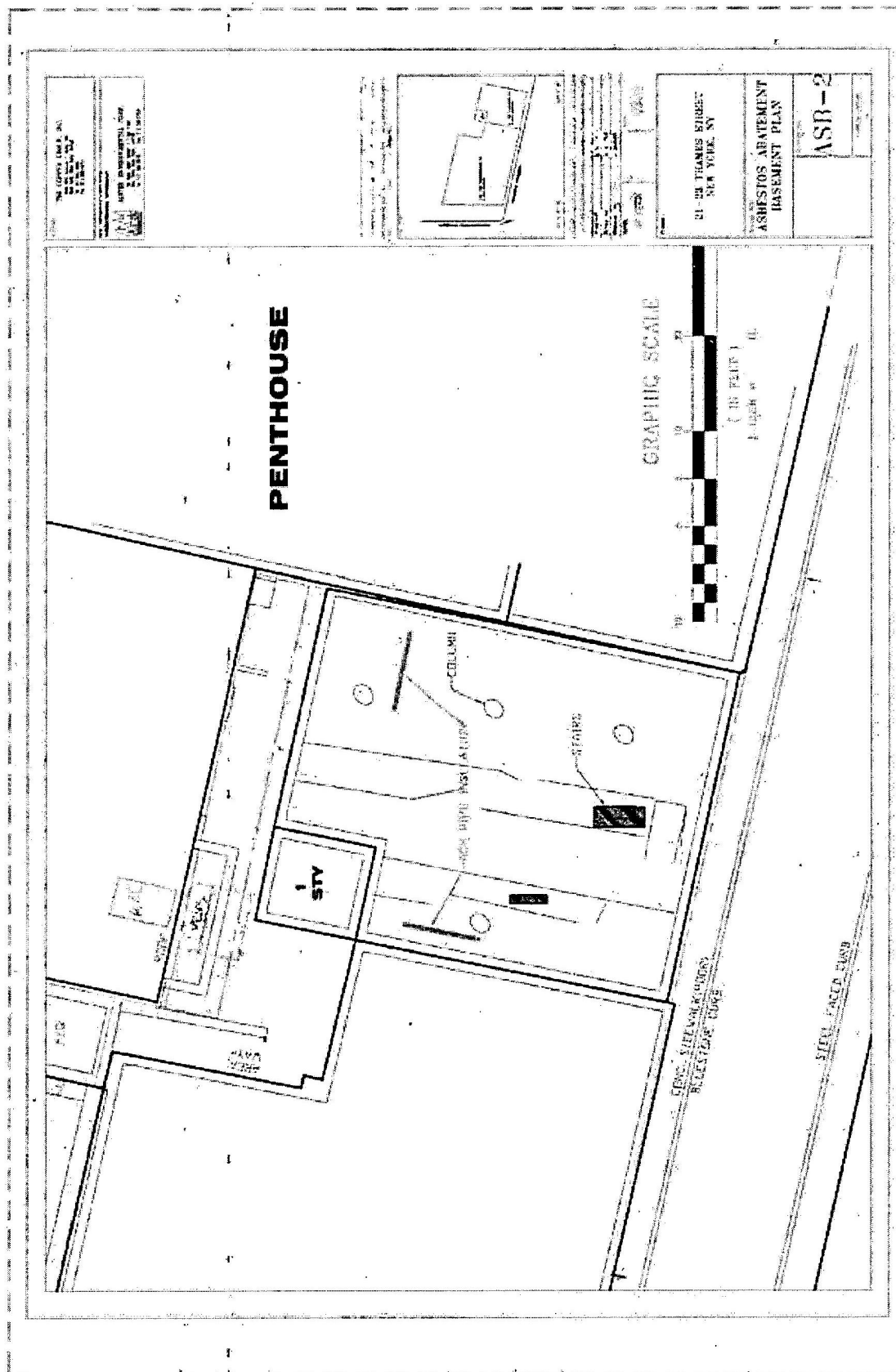
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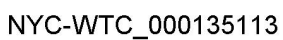
APPENDIX E

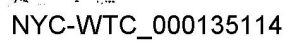
12.0 ACM Location Drawings



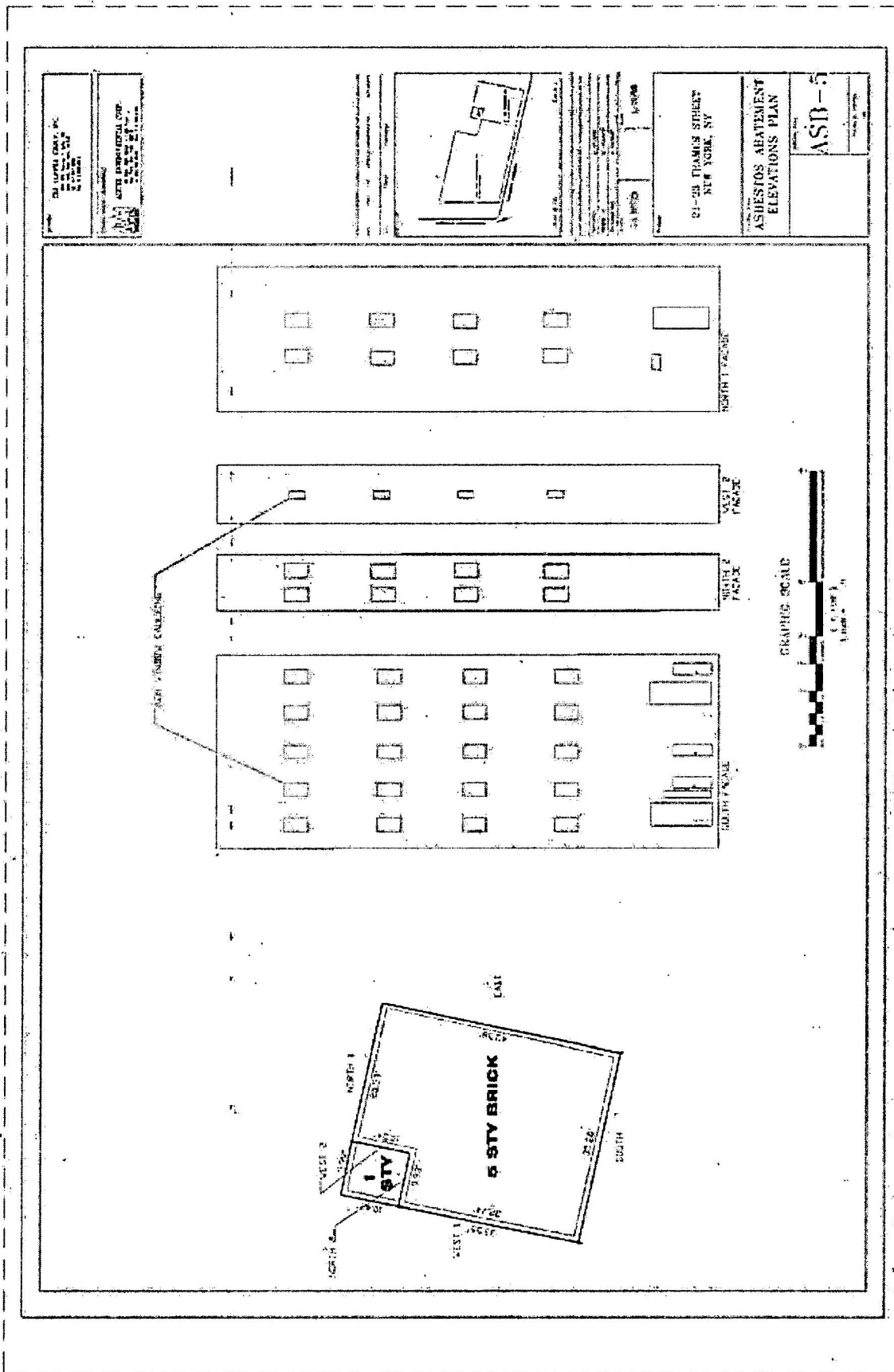
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Attachment 3
HASP Acknowledgement Form

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ATTACHMENT 3
Contractor/Sub-Contractor/Visitor HASP Acknowledgement

HASP Received by: _____ Date: _____

Print Name _____

Affiliation: _____

Address _____ Phone _____

HASP Received by: _____ Date: _____

Print Name _____

Affiliation: _____

Address _____ Phone _____

HASP Received by: _____ Date: _____

Print Name _____

Affiliation: _____

Address _____ Phone _____

HASP Received by: _____ Date: _____

Print Name _____

Affiliation: _____

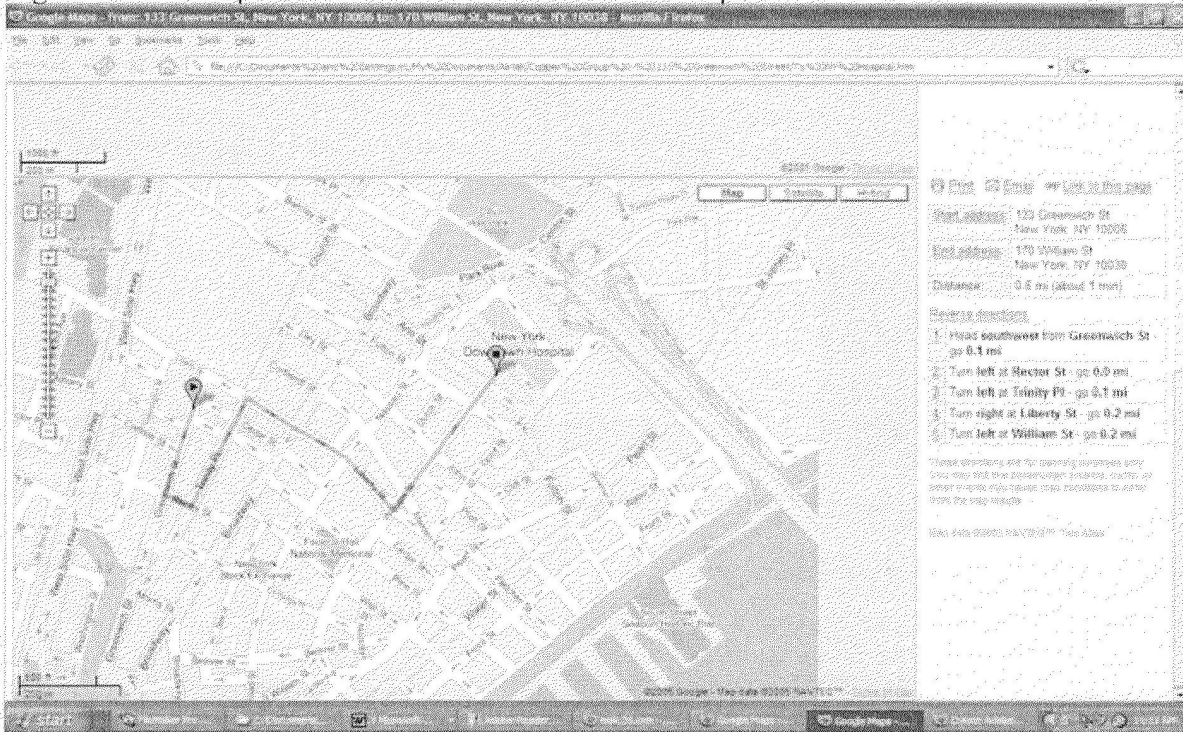
Address _____ Phone _____

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_____ is the designated Contractor Safety Officer (IH) for this project. His contact numbers are _____ as indicated in Attachment A. These are the primary Contractor emergency contact phone numbers, and both are 24-hour contact numbers. The SSO's base of operations will be the Contractor's field office (trailer). In the event that Mr. _____ is not on site, an alternate SSO will be designated and will be responsible for ensuring proper implementation of this HASP.

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Figure 1-1 Site Map and Directions to NY Downtown Hospital



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Attachment 4

CONTACTS/EMERGENCY TELEPHONE NUMBERS

PROJECT NAME: 133-135 GREENWICH/21-23 THAMES STREET PHASE I DECONSTRUCTION PROJECT

THE FOLLOWING ARE THE BUSINESS AND HOME TELEPHONE NUMBERS WHERE PROJECT PERSONNEL CAN BE REACHED AT ALL TIMES. IN ADDITION, THE EMERGENCY TELEPHONE NUMBERS OF OTHER VITAL AGENCIES ARE LISTED.

AIRTEK CORPORATION (212)768-0516

PRINCIPAL:	Benn Lewis	MOBILE	(917) 295-0810
SENIOR PROJECT MANAGER:	Mike Porter	MOBILE	(917) 337-4325
ALT. PRINCIPAL:	Mike Zouak	MOBILE	(917) 495-9242
CIH	Clifford Cooper	MOBILE	(914) 388-9796

CONSTRUCTION MANAGER:	TBD
HEALTH & SAFETY OFFICER:	TBD

CONTRACTOR

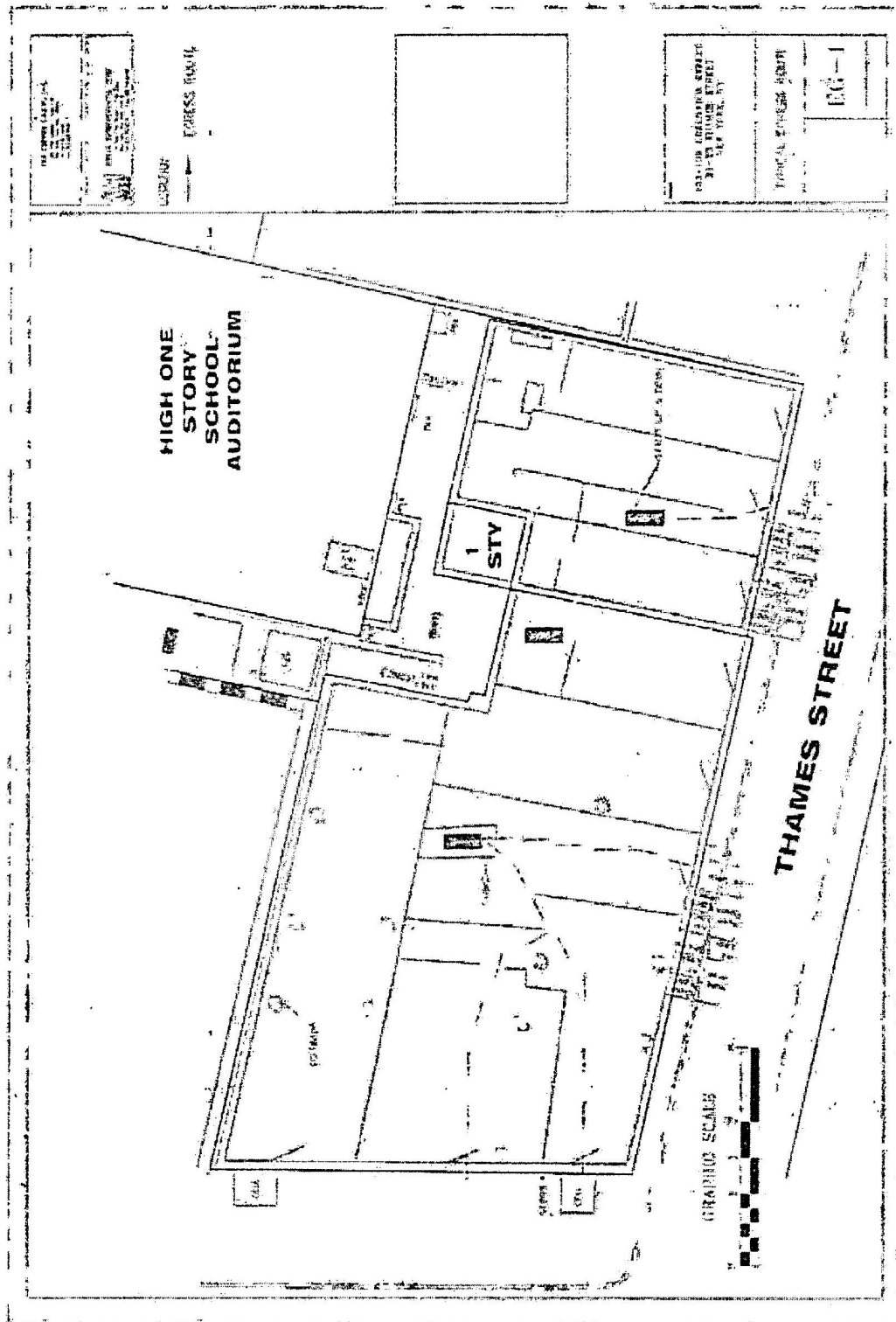
SITE MANAGER	TBD
CONSTRUCTION SAFETY OFFICER (CSO)	TBD

LOCAL EMERGENCY TELEPHONE NUMBERS

FIRE	911			
AMBULANCE	911			
HOSPITAL	NYU Downtown Hospital	170 William St	911	OR (212) 312-5000
POLICE	NYC Police Dept	2 Lafayette St	911	OR (917) 454-1100
NYSDEC Spill Response	(800) 457-7362			
Poison Control Center	(800) 962-1253			
National Response Center	(800) 424-8802			

Part III – Health & Safety Plan
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Attachment 5



Part IV- Waste Management Plan
133-135 Greenwich Street/21-23 Thames Street
Airtek Project 05-0701 – August 10, 2005

Part IV
Waste Sampling and Management Plan
for
the Abatement and Demolition of
133-135 Greenwich Street and 21-23 Thames Street

Prepared for:

The Greenwich Street Project, LLC
666 Fifth Avenue
New York, New York

Prepared by:

Airtek Environmental Corp.
39 West 38th Street
New York, NY 10018

212-768-0516

Date: August 11, 2005

Part IV- Waste Management Plan
 133-135 Greenwich Street/21-23 Thames Street
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1.0 General

1.1 Objective

The objective of the Waste Management Plan (WMP) is to characterize, manage, containerize, and legally transport and dispose of waste streams that will be generated as part of the 133-135 Greenwich Street/21-23 Thames Street Deconstruction Project.

1.2. Background

The Copper Group, Inc. has engaged Airtek Environmental Corp. (Airtek) to prepare the following project plan in support of the de-construction of the buildings located at 133-135 Greenwich Street and 21-23 Thames Street, New York, NY. This plan is in response to a request by the WTC Regulators for a documented approach to the project.

Though they sustained little physical damage, the buildings at 133-135 Greenwich Street and 21-23 Thames Street were impacted in places by fallout from the events of September 11, 2001. It is the Owner's intent to conduct abatement of in-place asbestos, and to effect a decontamination of the interior of the building so that conventional demolition activities can be completed.

1.3 Abatement Phase

The Abatement Phase of the project includes the cleaning and removal of all interior surfaces and non-structural elements within the building under containment. The cleanup and abatement will be conducted so that the building can be safely deconstructed to allow for redevelopment of the Site. The abatement Phase project will occur negative pressure containment and includes the following general categories: (a) the general area cleanup of WTC dust and debris, (b) removal and disposal of installed porous and certain non-porous building materials and components, (c) cleaning and salvage of certain installed non-porous building equipment and components, (d) removal of building materials containing asbestos which were present in the Building prior to September 11th, 2001 (e) packaging of asbestos and other regulated waste including, but not limited to light bulbs, lighting ballasts, batteries, mercury-containing thermostats, etc.) at generation points, movement of containers to the decontamination unit and movement of decontaminated containers to waste loading by hand.

1.4 Conventional Demolition Phase

The Conventional Demolition Phase of the project includes the structural deconstruction of the remaining cleaned and encapsulated wood framing, and the masonry façade.

okay
Going out as ACM?
Same Stream?? B.B.

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1.5 Waste Determinations

The Environmental Consultant will characterize the waste streams to be generated. Based on the results of this characterization, once analytical results are received, the Environmental Consultant will issue an addendum to the Plan, if necessary. The Contractor or its authorized representative will ensure proper handling and disposal activities as described in this Plan.

2.0 Building Components

This WMP has been developed to address the removal of all building contents and components, including waste generated by the Abatement Phase (i.e., asbestos and COPC removal abatement, and soft strip/interior gut) and the Conventional Demolition Phase (structural framing and masonry façade). Anticipated waste streams are listed below:

2.1 Regulated Contaminants

ACBM
 WTC Impact COPCs

2.2 Deconstruction Waste:

Wall and Ceiling Plaster
 Suspended ceiling tiles and support grid
 Carpeting and other permeable flooring
 Gypsum Wall Board (GWB) and associated partition framing
 Fiberglass and other misc. insulation
 Door Systems and Window Systems
 Mechanical Electrical Plumbing (MEP) components including, but not limited to, heating, ventilation and air conditioning [HVAC] systems, plumbing, wiring, refrigeration equipment and kitchen components.

2.3 Miscellaneous Materials

Due to the small scale, simple use, and relative antiquity of the buildings and their systems, additional regulated and/or hazardous waste is anticipated to be very limited in nature and scope. Irregardless, the WMP addresses the potential for regulated waste in the following categories:

Light ballasts
 Lamps
 Refrigerants
 Bagged accumulated waste
 Fire extinguishers

2.4 Structure & Façade

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At completion of the Abatement Phase only the wooden framing and exterior masonry & metal façade materials of the buildings will remain. The interior materials will have been spray-encapsulated, and the exteriors will have been low-pressure washed.

The classification of building components and contents will be an ongoing effort and will be conducted by the Environmental Consultant in accordance with applicable New York City, New York State and federal laws, rules, and regulations. This Plan is intended as a working document to be used during ongoing operations at the Site, and will be updated as necessary as new information becomes available.

3.0 Waste Characterization Background Data

While WTC impact varied to a degree from site to site, results of COPC sampling around the WTC zone exhibited more similarity than difference with regard to RCRA Characteristics.

3.1 Corollary Data – 130 Liberty Street

The TRC Preliminary Waste Characterization Study conducted at 130 Liberty Street, 50 feet from the subject site, indicated the following:

“Fourteen representative composite bulk dust (six samples) and anticipated waste stream/building material (eight) samples were collected on various floors of the Building and analyzed for Resource Conservation and Recovery Act (RCRA) Characteristics and full Toxicity Characteristic Leaching Procedure (TCLP) analysis. Results of the 14 samples were compared to criteria provided in 40 CFR Part 261 sections 21 through 24 and Environmental Protection Agency Publication SW 846 Chapter 7. None of the 14 samples collected exceed the criteria provided in 40 CFR Part 261 sections 21 through 23 or SW 846 Chapter 7. None of the eight building material samples exceeded the Maximum Concentration of Contamination for the Toxicity Characteristics provided in 40 CFR section 261.24. One of the six composite bulk dust samples, collected in a mechanical room on the 40th floor, exhibited levels of cadmium that exceeded 40 CFR section 261.24. This sample exceeded the cadmium maximum concentration of 1.0 mg/L with a result of 6.2 mg/L. (Additional sampling will be conducted to determine whether specific equipment or surface coatings in the 40th Floor mechanical room contributed to the cadmium levels.)”

3.2 Site Data

Although dust available for sampling at the subject site is very limited (WTC Dust impact was noted only in the kitchen of the second floor of the 133-135 Greenwich Street Building), dust sampling and TCLP analysis was conducted on one sample composited from samples collected in three areas of the above-referenced kitchen. Compositing of the samples was required in order to meet the total mass requirements of the analytical method. There was simply not enough capturable WTC dust to run three samples.

Results of the sample are pending and will be compared to criteria provided in 40 CFR Part 261 sections 21 through 24 and Environmental Protection Agency

remove. ↓

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Publication SW 846 Chapter 7. It is anticipated that the sample will not exceed the criteria provided in 40 CFR Part 261 sections 21 through 23 or SW 846 Chapter 7.

3.3 Preliminary Conclusion

Based on the above corollary data from 130 Liberty Street, waste disposal information from the recent deconstruction of 4 Albany Street, and the confirming results from WTC Dust samples collected at the subject site, it is anticipated that all waste noted in subsection 2.1 and 2.2 above will be disposed of as ACM Waste. In the case of stainless steel kitchen fixtures, equipment and other impermeable materials it may be possible to decontaminate and dispose as C&D/recyclable waste. Miscellaneous waste noted in subsection 2.3 above will be characterized, handled, transported and disposed according to waste characterization conducted by the Environmental Consultant. *okan*

4.0 Waste Characterization Strategy

Waste generated during the project will be characterized, managed, transported and disposed of in compliance with this Waste Management Plan and applicable regulations.

4.1 Regulated Contaminants

Full-building asbestos surveys have been conducted. In-place ACM has been identified, located and included in the Project Plan. No further characterization will be conducted unless site conditions reveal additional suspect materials not addressed in the ACM surveys.

The limited WTC Dust that exists at the site has been sampled and tested for RCRA characteristics. Results are discussed above, and the documentation is included in Attachment I.

4.2 Deconstruction Waste

Dust sampling for hazardous waste characteristics has been performed in advance of sampling of materials impacted by dust. It is anticipated that the dust classification sampling will indicate that the dust is not a characteristic hazardous waste, and then by extension, any non-hazardous materials potentially impacted by dust (i.e., the Deconstruction Waste listed in subsection 2.2 above) would also not be hazardous. Random confirmatory sampling of the various deconstruction waste categories will be conducted to confirm this prior to commencement of any site work, as was done at 130 Liberty Street.

Those materials would then not be sampled for Resource Conservation and Recovery Act (RCRA) characteristics unless there is an independent

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concern that they might be hazardous waste due to the inherent composition of the component, subcomponent or waste stream (e.g., light ballasts which may contain PCBs, items coated with lead-based paint).

Non-Porous Deconstruction Waste may be managed by either of two options. The Abatement Subcontractor may choose to clean the non-porous surfaces in accordance with procedures outlined in the Asbestos and COPC Abatement Plan of the Work Plan. The resulting cleaned material will not be sampled unless it is painted; in that instance, sampling will be performed as described in Section 7.0 of this Plan. Alternatively, based on field conditions and decisions regarding the use of its labor force, the Abatement Subcontractor may choose to not clean the surfaces and instead manage those uncleaned non-porous materials as asbestos waste at a minimum or otherwise, if required, as determined by the RCRA characteristics sampling.

4.3 Miscellaneous Materials

Due to the small scale, simple use, and relative antiquity of the buildings and their systems, additional miscellaneous regulated and/or hazardous waste is anticipated to be very limited in nature and scope. The Environmental Consultant will conduct daily inspections of the abatement work area to identify suspect components for segregation and testing and/or other determination.

Any material classified as “unknown” during the project will require sample collection and analysis for full RCRA characteristics in accordance with 40 CFR Part 261 (as described in Section 4.1.3 of this Plan) and will be disposed of based upon the results of that sampling and the nature of the waste. If the material is classified as RCRA hazardous waste, additional sampling may be required for “total” concentrations of specific contaminants to determine whether the waste may be land filled or is “land banned”; the contaminants to be analyzed for will depend on the specific waste classification of the waste.

4.4 Structure and Façade

Dust sampling for hazardous waste characteristics has been performed in advance of sampling of materials impacted by dust. It is anticipated that the dust classification sampling will indicate that the dust is not a characteristic hazardous waste, and then by extension, any non-hazardous materials potentially impacted by dust (i.e., the Structure & Façade of the building would also not be hazardous. Random confirmatory sampling of the various deconstruction waste categories will be conducted to confirm the status of the structure and façade as C&D waste.

For materials requiring sampling, a random sampling strategy will be used and composite samples representative of the final waste streams will be collected. The locations and frequency of samples to be combined into composite samples shall be determined by the Environmental Consultant such that a representative sample of the waste type has been obtained. All sampling personnel shall be familiar with sample collection and waste storage protocols and shall have undergone Hazard Communication training in accordance with 29 CFR section 1910.1200 as well as being trained appropriately per the Health and Safety Plan.

The waste classification samples will be sent to a New York State Environmental Laboratory Approval Program (ELAP) certified (6 NYCRR Section 370.1(f)) and qualified laboratory for waste classification analysis (e.g., TCLP and RCRA characteristics) to determine appropriate waste classification and handling requirements (40 CFR section 262.11). Other sampling and laboratory analysis may be required by the disposal facility prior to waste acceptance. The laboratory subcontracted to perform the analysis will be also be certified through the National Environmental Laboratory Accreditation Program (NELAP) for the analytical parameters being analyzed, so there is assurance that the laboratory has passed a nationally recognized quality assurance program that includes audits, analysis of blind performance samples to check data quality and meeting certain minimum technical standards for the qualifications of testing personnel.

Upon receipt of analytical results, determination of waste classification and identification of disposal facilities, the Environmental Consultant will identify applicable regulatory requirements for waste handling, worker training and protection (e.g., specific training/certifications, personal protection equipment [PPE]), packaging (e.g., type of packaging, marking, labeling), transporting (e.g., placarding, shipping papers), waste routing and disposing of these wastes. Since waste classification samples will be collected from in-place materials, on-site storage of deconstruction wastes for waste classification will not be required. Rather, all removed materials will be placed into their applicable disposal containers/vehicles for off-site shipment. All potentially hazardous waste will be managed as hazardous waste until analytics prove otherwise.

If greater than 1000 kg/month of hazardous waste is generated during the deconstruction process, Contractor will comply with , among other things, 6 NYCRR Part 373, Subpart 373-3, section 373-3.3(b).

If results of waste characterization sampling and analysis dictate that waste material must be managed and disposed of as both an asbestos and a hazardous waste, both asbestos and hazardous waste management and disposal requirements will be met. If there are conflicts between the requirements for asbestos and hazardous waste that preclude compliance with both, then the hazardous waste requirements will dictate specific management and disposal requirements.

5.0 Analytical Methodologies

Analyses conducted to support waste characterization will be performed according to the following methodologies. Where more than one method is identified, each analytical method is valid per the regulations. All allowable methods are included in this plan to allow for flexibility in selecting an analytical laboratory(ies).

5.1 Ignitability

The characteristic of ignitability carries the RCRA waste code of D001, and may be analyzed for using American Society of Testing Materials (ASTM) method D-93-79 or D-93-80 or D-3278-78.

5.2 Corrosivity

The characteristic of corrosivity carries the RCRA waste code of D002, and may be analyzed using Method 9045C as set forth in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846. SW-846 method 9040 (whether B or C) is for aqueous wastes and multiphase waste where the aqueous phase constitutes at least 20% of the total volume of the waste; 9045C is for soils and waste samples where the waste may be solids, sludges, or non-aqueous liquids. The aqueous phase must be less than 20% of the total volume of the waste.

5.3 Reactivity

The characteristic of reactivity carries the RCRA waste code of D003, and may be analyzed using the analytical methods outlined in sections 7.3.3.2 or 7.3.4.2 of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846. The referenced sections are from SW-846 Chapter Seven: Characteristics Introduction and Regulatory Definitions. They are specifically for Reactivity. Chapter Seven was revised to reflect the withdrawal of the reactive cyanide and sulfide guidance in sections 7.3.3 ("Interim Guidance for Reactive Cyanide") and 7.3.4 ("Interim Guidance for Reactive Sulfide"), and to replace certain characteristic explanatory text with referrals to the regulations themselves. This change can be found in the Proposed Update IIIB to SW-846.

5.4 Toxicity

The characteristics of toxicity carry the RCRA waste codes of D004 through D043. Each waste code identifies the specific chemical component for which the waste is classified as toxic. The samples to be analyzed for the characteristic of toxicity must be prepared using the Toxicity Characteristic Leaching Procedures (TCLP) per Method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846. The analytical method applied to the resulting leachate depends on the type of chemical being analyzed for, as follows:

Are there any in
buildings?

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- Volatile organic compound (VOC) toxic constituents will be analyzed by Method 8260B of “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW-846. VOC toxic constituents include benzene (D018), carbon tetrachloride (D019), chlorobenzene (D021), chloroform (D022), 1,4-dichlorobenzene (D027), 1,2-dichloroethane (D028), 1,1-dichloroethylene (D029), methyl ethyl ketone (D035), tetrachloroethylene (D039), trichloroethylene (D040), and vinyl chloride (D043).

- Semivolatile organic compound (SVOC) toxic constituents will be analyzed by Method 8270C of “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW-846. SVOC toxic constituents include 2,4-dinitrotoluene (D030), hexachlorobenzene (D032), hexachlorobutadiene (D033), hexachloroethane (D034), o-cresol (D023), m-cresol (D024), p-cresol (D025), cresol (D026), nitrobenzene (D036), pentachlorophenol (D037), pyridine (D038), 2,4,5-trichlorophenol (D041), and 2,4,6-trichlorophenol (D042).

- Pesticide toxic constituents will be analyzed by Method 8081A of “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW-846. Pesticide toxic constituents include chlordane (D020), endrin (D012), heptachlor and its epoxide (D031), lindane (D013), methoxychlor (D014), and toxaphene (D015).

- Herbicide toxic constituents will be analyzed by Method 8151A of “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW-846. Herbicide toxic constituents include 2,4-D (D016) and 2,4,5-TP (also known as Silvex, D017).

- Mercury (D009) will be analyzed by Method 7470A (aqueous samples) of “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW-846.

- Metals/inorganics other than mercury will be analyzed by Method 6010B of “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW-846. These constituents include arsenic (D004), barium (D005), cadmium (D006), chromium (D007), lead (D008), selenium (D010), and silver (D011).

Generally, building components would not be considered as possible RCRA characteristic wastes except for the potential that exists due to impacts by WTC dust. The notable exceptions to this would be painted surfaces, which would typically be sampled for TCLP lead, cadmium and chromium analysis as well as miscellaneous materials containing hazardous components prior to WTC impact (such as transformers, ballasts, lamps, etc.).

ACM Sampling not
nec. since will be
treated as ACM.

The results of RCRA characteristic analyses, the classification of the material based on historical information, as well as the material's status as presumptively asbestos-contaminated, will be used as the basis for the Waste Profile for the particular waste stream.

6.0 Sampling Frequencies

6.1 Regulated Contaminants

The limited ACBMs at the site have been identified and located. The Limited WTC Dust at the site has been sampled to the degree possible.

6.2 Deconstruction Waste

For each of the Deconstruction Waste Materials listed in section 2.2 above, five confirmatory waste samples will be collected and composited for analysis (one analysis per material). Results will be available prior to the commencement of site work.

6.3 Miscellaneous Materials

Due to the small scale, simple use, and relative antiquity of the buildings and their systems, additional miscellaneous regulated and/or hazardous waste is anticipated to be very limited in nature and scope. The Environmental Consultant will conduct daily inspections of the abatement work area to identify suspect components for segregation and testing and/or other determination. The Environmental Consultant will make determinations as to the appropriate testing required to characterize any materials encountered.

In general, the following will apply:

6.3.1 Light Ballasts:

During deconstruction activities, as ballasts are removed from lighting fixtures, the Abatement Subcontractor shall clean the surfaces of dust and containerize ballasts for disposal as PCB waste. All ballasts, including those labeled "No PCB" will be containerized for disposal as PCB waste due to the presence of potting material. For potentially PCB-containing equipment other than ballasts, PCB samples may be required to determine whether the dielectric fluid contains more than 50 parts per million (ppm) PCBs, which would make the equipment subject to the PCB regulations. SW-846 Method 8082, Analysis of Polychlorinated Biphenyls by Gas Chromatography is specified by regulation for determining the concentration of PCBs in wastes.

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Ballasts (all assumed to contain PCBs) shall be handled, packaged and labeled as required for disposal as a PCB regulated waste. All hauler, transportation and disposal facility requirements shall also conform to the requirements for this category of waste.

Shipments of PCB waste must be in properly labeled and marked containers, the waste must be shipped under a properly executed manifest and Land Disposal Restriction (LDR) form, the transporter must have a valid EPA Identification number and must have a valid New York State Part 364 transporter permit as well as the latest version of U.S. Department of Transportation's Emergency Response Guide (2004). The vehicle in which PCB wastes are being shipped must be properly placarded and marked to reflect that it is transporting PCBs and must also be marked with the New York State waste transporter permit number on its sides and rear.

Disposal facilities that accept PCB wastes must have an EPA Identification number and have received TSCA authorization from the EPA and any additional state permits for the disposal/management of PCBs applicable to the state in which the facility is located. The disposal facility must comply with all manifesting requirements specified in the regulations and must prepare a certificate of destruction and send it to the generator or the generator's agent.

6.3.2 Universal Waste

Only minor quantities of materials that could be categorized as Universal Waste are anticipated to be encountered at this site. In the event that such materials are encountered, they are addressed by this WMP.

40 CFR Part 273 and 6 NYCRR Section 374.3 establish requirements for managing universal wastes. Universal wastes are those wastes that would reasonably be expected to be classified as hazardous wastes but, due to their universal use in industrial and residential properties, regulations were created that would ensure that they were managed in a manner that prevented harm to the environment while reducing the regulatory burden on generators of these wastes.

Universal wastes include the following waste types:

- (1) Batteries as described in 40 CFR section 273.2 and 6 NYCRR Section 374-3.1(b)
- (2) Pesticides as described in 40 CFR section 273.3 and 6 NYCRR Section 374-3.1(c)

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(3) Thermostats as described in 40 CFR section 273.4 and 6 NYCRR Section 374-3.1(d)

(4) Lamps as described in 40 CFR section 273.5 and 6 NYCRR Section 374-3.1(e)

Given that such wastes will be minor in quantity at this site, these wastes, if encountered, will be managed according to hazardous waste regulations.

6.3.3 Refrigerant-containing Equipment

Non-hazardous construction and demolition materials may contain regulated refrigerant including, but not limited to, possible refrigerant in the air conditioning and refrigeration systems. The refrigerant will be removed prior to disposal. Material would be considered an appliance and is excluded from definition of C&D debris. For refrigerant-containing equipment the following procedures shall be followed:

Verify refrigerant has been removed. If not, a licensed refrigerant removal service must be called to properly dispose of refrigerant.

Equipment that contains refrigerant and will be staged in a clearly demarcated on-site area until the refrigerant has been removed by a licensed refrigerant removal service.

*HEPA &
wipe*

Remove door on refrigerators and freezers.

6.3.4 Bagged Accumulated Waste

The building currently contains miscellaneous bagged accumulated waste, primarily associated with occupancy by transient (squatting) occupants. Studies conducted by the building owner's team indicate that these are primarily clothing and used food containers. These materials will be disposed of as asbestos-containing wastes.

6.3.5 Fuel

No Fuel Storage is known to exist at the site.

6.3.6 Fire Extinguishers

If discharged, spent fire extinguishers can be treated as normal C&D debris. If fire extinguishers have not been discharged, the manufacturer of the fire extinguisher should be contacted for the proper discharge and disposal method. If fire extinguishers are found, the Environmental Consultant will make a determination.

6.4 Structure & Façade

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For each of the structural and façade material categories noted at the site, five confirmatory waste samples will be collected and composited for analysis (one analysis per material). Results will be available prior to the commencement of site work.

7.0 Non-porous (cleanable) Waste

For cleaned (wet-wiped/HEPA-vacuumed) non-porous deconstruction waste, samples will not be collected unless the non-porous components are painted and to be disposed of. Cleaned painted scrap metals that are recycled are exempt from the below described waste characterization sampling and analysis. For non-porous components that are painted, one composite sample made up of a minimum of four grab samples of each distinct painted non-porous building component (based on paint color, building component type and zone in which the component is located) will be collected for RCRA lead, chromium and cadmium analysis. Each grab sample will be collected as a core sample (i.e., both painted surface and building component matrix) and sent to the lab under COC for analysis.

Likewise, cleaned, painted, non-porous deconstruction waste with TCLP lead, chromium and cadmium results of less than applicable standards would also be classified, managed and recycled/disposed of as non-hazardous C&D debris.

Cleaned, painted, non-porous deconstruction waste with TCLP lead, chromium and cadmium results greater than applicable standards would be classified, managed and disposed of as hazardous waste with the toxicity characteristic of lead, chromium and/or cadmium.

Non-cleaned, non-porous deconstruction waste will be disposed of as asbestos waste at a minimum for the reasons indicated previously. Should results of the settled dust classification sampling indicate that the dust results exceed the regulatory threshold for one or more RCRA characteristics, the waste will be managed as both a RCRA waste of the appropriate waste code as well as asbestos waste.

8.0 Storage

For the most part, waste will be live-loaded from the site. If necessary, an enclosed, locked area will be maintained on site for the storage of waste material prior to off-site disposal. Waste streams will be separated and stored as described below. The waste storage area will be enclosed and located away from the point of waste generation. Incompatible wastes will not be stored next to each other. Containers or incompatible wastes will be segregated. All containers in the waste storage area will have proper labeling, which included information such as waste type and accumulation start date. Weekly inspections will be conducted to confirm that containers are properly stored. The condition of each individual container, any secondary containment within the storage area, and posted signs will be inspected. Each inspection will be documented on a weekly inspection log to demonstrate compliance.

Ref. Title is Chapter 1 packaging
and waste decon.

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8.1 Hazardous Waste

Hazardous waste will be placed in containers (e.g., USDOT approved drums, bags, roll-off containers) and transferred to the waste storage area prior to off-site disposal. Drums will be closed at all times during storage, except when waste is added or removed. Drums will be stored in manner to prevent ruptures or leaks in the waste storage area. Containers will be inspected to ensure containers are not over packed or leaking.

Hazardous waste may be kept in the waste storage area for up to 90 days from the accumulation start date. If the generator status should change from large quantity generator to small quantity generator, then up to 13,200 pounds of waste may be stored in the waste storage area for up to 180 days from the accumulation start.

8.2 Universal Waste

Universal waste will be treated according to hazardous waste regulations. See 8.1 above.

8.3 Asbestos Waste

Waste containing asbestos will be wet down to prevent visible emissions of asbestos dust into the air. The asbestos waste will be sealed while wet in a leak-tight container. A supply of leak tight containers will be kept in the waste storage area to provide adequate repackaging if a break in the container should occur. Storage area shall be maintained under a negative pressure ventilation system. Daily inspections of the waste storage area shall be required.

Storage of asbestos waste will not exceed 50 cubic yards. Authorization from the New York City Department of Sanitation (NYCDOS) and additional requirements, per code, will be required if accumulation of asbestos is anticipated to be greater than 50 cubic yards. Containers holding asbestos waste will be inspected daily to ensure no visible emissions of asbestos dust in the air or breaks in the container.

8.4 PCB Waste

Non-leaking waste PCB waste will be placed in containers and maintained in the waste storage area prior to disposal. Any leaking PCB articles or containers will be transferred to properly marked, non-leaking containers or an over-pack containers. Leaking waste PCB articles and equipment that cannot be transferred to a non-leaking container or over pack container will be placed in a containment pad with sorbent material and tarp. PCB bulk product waste, including fluorescent light ballasts, may be kept in the waste storage area up to 180 days.

9.0 Transportation Requirements

← worker training records.

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All waste materials will be transported in accordance with applicable local, state and federal DOT regulations including, but not limited to, bills of lading, manifests, placards, etc. All wastes will be shipped using properly permitted vehicles operated by drivers with Commercial Drivers Licenses (CDLs) and Hazardous Materials endorsements. All hazardous waste will be shipped using transporters with RCRA identification numbers. The actual modes of transportation to be utilized will be determined following the identification of all anticipated waste streams and will take into account the location and distance to the selected disposal facility as well as cost considerations. All off-site shipments of waste will adhere to the site-specific transportation requirements. As required by NYSDEC (6 NYCRR Part 364) all hazardous and asbestos wastes will be transported using Part 364 permitted haulers. All haulers will be required to submit for approval and follow a Spill Contingency Plan.

10.0 Travel Routes

Travel route(s) will be determined following discussion with the appropriate regulatory agencies (e.g., New York City Department of Transportation), and the Lower Manhattan Construction Command Center (LMCCC). The selected waste transporter(s) will follow the designated travel routes. The Abatement Subcontractor has submitted to the Contractor for acceptance waste removal and transportation procedures, which are currently under review. Upon approval of the proposed Abatement Subcontractor's *Proposed Waste Removal and Transportation Procedures*, the approved procedures will be appended to this plan and incorporated by reference. All waste travel routes will be consistent with the approved procedures.

11.0 Disposal Requirements

Waste recycling/disposal facilities will be selected based on several factors including waste types, facility acceptance criteria, regulatory compliance history, etc. Only those facilities that have valid federal/state/local permits to accept the waste type proposed for recycling/disposal at the facility will be used.

12.0 Documentation

All applicable local, state and federal documentation and record keeping requirements/guidelines will be followed. Documentation for hazardous waste disposal includes Hazardous Waste Manifesting, EPA Generator ID, EPA transporter ID, EPA ID for waste disposal facility and waste storage locations and capacities. Also documented will be emergency notification and operating procedures, worker training records (HAZWOPER, Asbestos, etc.), organizational chart, unexpected waste procedures, contractor involvement list and copies of the regulatory requirement certifications of transporters, disposal facilities, etc. Specific regulatory documentation may change depending on the types and amounts of waste to be generated. The Contractor shall be responsible for document management.